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ABSTRACT

This law review article provides useful guidance on learning strategies for law students drawing heavily on the literature of educational psychology and learning theory. An introductory section describes the traditional law school approach which has been for professors to inundate students with substantive and procedural rules of law but rarely if ever to provide any guidance on methods of learning but rather to disregard learning theory to the point of disdaining it. Part I of the article principally discusses "metacognition", the awareness by learners of the learning process itself. Part II discusses several studying and learning strategies, including strategies for teacher study, time management, efficient reading, note taking review, and problem solving all of which rely upon and develop metacognitive capacities. Part III concentrates on study strategies of particular usefulness to law students, including "component" legal analysis and case briefing. Again, metacognition plays a crucial role in the use of these strategies. The article concludes with a reiteration of its basic points: the studying strategies discussed are in fact adaptable to law school learning processes and law school students can benefit from the use of these strategies. Included are 11 figures and 183 footnotes. (JB)

LEARNING STRATEGIES FOR LAW STUDENTS

Paul T. Wangerin

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Paul T. Wangerin*

INTRODUCTION

Several years ago a critic of higher education wrote:

> It is strange that we expect students to learn yet seldom teach them anything about learning. We expect students to solve problems yet seldom teach them about problem solving. And, similarly, we sometimes require students to remember a considerable body of material yet seldom teach them the art of memory.[1]

Law school professors display especially strong parochialism in this context.[2] They inundate students with substantive and procedural rules of law, but rarely if ever provide any guidance or instruction in methods of learning. Indeed, as one law school commentator

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[1] Norman, *Cognitive Engineering and Education*, in PROBLEM SOLVING AND EDUCATION: ISSUES IN TEACHING AND RESEARCH 97 (D. Tuma & F. Reif eds. 1980).

[2] *See* Feinman & Feldman, *Pedagogy and Politics*, 73 GEO. L.J. 875, 875 (1985) [hereinafter Feinman & Feldman, *Pedagogy*] (containing some of the most candid remarks about this kind of law school parochialism). Interestingly, when this same essay was reprinted in the principal journal of legal education, the authors' critical comments about law school parochialism were deleted. *See generally* Feinman & Feldman, *Achieving Excellence: Mastery Learning in Legal Education*, 35 J. LEGAL EDUC. 528 (1985) [hereinafter Feinman & Feldman, *Achieving Excellence*]. Legal educators alone, however, are not the only people to comment about parochialism in the law schools. Indeed, in 1963 this issue came up in the context of a general discussion of various kinds of professional education. *See* M. Cardozo, Remarks given at Northwestern University Conference, in CROSSFIRE IN PROFESSIONAL EDUCATION: STUDENTS, THE PROFESSION AND SOCIETY 39, 47 (B. Boley ed. 1977). The "best teaching," according to an informal survey of students, was found in law schools, but this finding was not attributed to any inventiveness on the part of law school professors. Their better marks were attributed instead to their concentration on the classroom function. A committee of the AALS studied how law is taught by those who were known as "good teachers" and reported that they possessed qualities that were not learnable. One of the participants in the conference quoted a committee report of the AALS which stated that the " 'good teacher remains ineffable, an artist with qualities too ethereal to be susceptible to analysis or training. . . . Let's complete the record, good teachers are born, not made' " *Id.* (quoting Report of the Curriculum Committee, Proceedings, AALS Annual Meeting, pt. 1, at 81, 82 (1963)).

recently noted, legal educators not only disregard learning theory, they positively disdain it.[3] Unfortunately, disregard and disdain by legal educators for the sophisticated ideas of learning theorists and educational psychologists produces a serious problem for law school students anxious to maximize the value of their study time. Most materials on law school study, including justly famous works like *The Bramble Bush*,[4] contain little more than tips on studying and learning which draw from the teaching or studying experiences of the authors themselves, and which rest on neither sound theories about learning and studying nor upon careful empirical research.[5] These law school works, and the prevailing practices of law school professors, therefore cannot be considered serious attempts, at least from an educational theory perspective, to systematically explain good law school studying techniques.

This article provides useful guidance in this area, drawing heavily on the literature of educational psychology and learning theory.[6] Part I principally discusses "metacognition," a topic which in the last ten years or so has taken the world of education theory by storm. Metacognition is the awareness by learners of the learning process itself.[7] Part II discusses several studying and learning strategies, including strategies for teacher study, time management, efficient reading, note

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[3] *See* Feinman & Feldman, *Pedagogy*, *supra* note 2, at 875.

[4] K. LLEWELLYN, THE BRAMBLE BUSH (3d ed. 1969).

[5] *See, e.g.*, J. DELANEY, HOW TO DO YOUR BEST ON LAW SCHOOL EXAMS (1988) (helping in exam preparation through learning focused on a particular skill); S. KINYON, INTRODUCTION TO LAW STUDY AND LAW EXAMINATIONS (1971) (nutshell series) (discussing study and exam-taking techniques based on the author's experience as a first year law student and as a teacher); T. SILVER & H. SACKS, YOUR KEY TO SUCCESS IN LAW SCHOOL (1981) (a workbook that seeks to develop legal reasoning for law students; considered to be one of the best study skills books even though it contains only very short references to education theory); Bell, *Law School Exams and Minority-Group Students*, 7 BLACK L.J. 304 (1981) (containing a short anecdotal discussion of racially related difficulties of law school for minorities and containing an appendix which outlines studying and test-taking tips); W. Miller, The Bar Exam/Essay—Writing Primer (2d ed. 1983) (discussing among many other things "issue spotting techniques" useful for law school and bar exams).

[6] Legal educators can obtain many of the materials cited in this article in undergraduate libraries or specialized libraries for schools of education. To locate these sources, the "OCLC" catalogue computerized system aids researchers in identifying Library of Congress call numbers. It also helps researchers locate sources when local libraries do not own them. Two other tools that will help the reader locate sources, the *Current Index to Journals in Education* and the *Education Index*, are kept current on a monthly basis.

[7] Sanacore, *Metacognition and the Improvement of Reading: Some Important Links*, 27 J. READING 706, 706 (1984). Joseph Sanacore provides the following definition of metacognition: "Understanding text is both a subconscious and a conscious act. As individuals become increasingly aware of processes involved, they can exercise degrees of control over some of them. Such conscious control is referred to as metacognition . . . ." *Id.* at 706. *See infra* notes 11-27 and accompanying text (defining and discussing metacognition).

taking, review, and problem solving. Though relatively straightforward to use, all of these learning strategies rely upon and develop metacognitive capacities. Part III concentrates on studying strategies principally useful to law school students, including "component" legal analysis and case briefing. Again, metacognition plays a crucial role in the use of these strategies. The article concludes with a reiteration of its basic point: the studying strategies discussed are in fact adaptable to law school learning processes and law school students can benefit from the use of these strategies.

This article has five intended audiences. First, this article provides law students with useful information about learning strategies that can help them improve their academic performance. Second, this article provides teachers of first-year law school courses with fresh ideas on how to best address studying strategies. Third, law school administrative personnel and faculty responsible for first-year orientation programs and "Introduction to Law" courses or workshops will find that this article helps fill the current void in education theory that exists in connection with such programs and courses. Fourth, teachers of legal writing courses will find detailed discussions of argumentation, case briefing, and review techniques, along with important justifications for, or significant theoretical criticisms of, many of the approaches commonly used by legal writing instructors. Finally, organizers of "academic support programs" will find that this article provides useful insights into the application of learning theory to the study of law, and contains helpful references to other sources. In recent years this area has become a topic of considerable interest to legal educators. These programs principally address the academic problems of specially admitted minority students or students who received poor grades early in law school.[8] The thoughtful use of the learning strategies discussed in this article can significantly increase the effectiveness of learning and teaching by each audience.

Before the literature of educational psychology and learning theory is described,[9] however, a cautionary point must at once be made.

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[8] For an exhaustive discussion of such programs, and of the social science literature discussing them, see Wangerin, *Law School Academic Support Programs*, 40 HASTINGS L.J. — (1989) [hereinafter Wangerin I].

[9] Readers interested in finding excellent, albeit lengthy, discussions of learning strategies and study skills will find such discussions in the following works: T. DEVINE, TEACHING STUDY SKILLS: A GUIDE FOR TEACHERS (2d ed. 1987) (discussing various topics associated with study skills as they impact daily life as well as the relationship between self-concept and achievement); G. GIBBS, TEACHING STUDENTS TO LEARN: A STUDENT-CENTRED APPROACH (1981) (discussing how to teach students to learn and the theory behind these methods); K. GRAHAM & H. ROBINSON, STUDY SKILLS HANDBOOK: A GUIDE FOR ALL TEACHERS (1984) (predating some

Researchers working with college, high school, and even elementary students in developing study skills and learning strategies cannot provide legal educators with all of the answers they need to help their students study effectively. Law school professors expect law students to digest information and learn skills that differ significantly from the information and skills that students in other kinds of educational institutions must acquire.[10] Nevertheless, legal educators interested in helping law students learn how to study need not reinvent the studying and learning wheel.

I. METACOGNITION

"Metacognition" has become one of the hottest topics in the literature of education in recent years.[11] In a general sense it refers to

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research on metacognition and primarily designed for teachers of younger students who want to develop independent learners); M. MAXWELL, IMPROVING STUDENT LEARNING SKILLS (1979) (summing up work by a pioneering theorist and researcher about learning and studying at the college level and support programs designed to help students). *See also Symposium: Academic Performance and Study*, 12 CONTEMP. EDUC. PSYCHOLOGY 279 (1987) (discussing recent studies and theories attempting to analyze how studying affects achievement at high school and college levels); Heinrichs & LaBranche, *Content Analysis of 47 College Learning Skills Textbooks*, 25 READING RESEARCH & INSTRUCTION 277 (1986) (examining books published between 1982 and 1985).

An important theorist who deserves individual reference in this context is Noel Entwistle. Entwistle has been writing about study skills and learning strategies for many years. *See, e.g.*, N. ENTWISTLE, UNDERSTANDING CLASSROOM LEARNING (1987) (summarizing the most recent research on learning from the learner's perspective); N. ENTWISTLE & P. RAMSDEN, UNDERSTANDING STUDENT LEARNING (1983) (discussing how college students learn).

[10] *See* W. Miller, *supra* note 5, at 27 (noting the uniqueness of the law school exam); Gensler, *I.R.A.C.: One More Time*, 24 DUQ. L. REV. 243, 243 (1985) (discussing the fact that law school tests are different from other tests and explaining the analysis needed to answer a classic law school question). *See generally* Wangerin, *Skills Training in "Legal Analysis": A Systematic Approach*, 40 U. MIAMI L. REV. 409 (1986) (discussing many different approaches to legal education and containing exhaustive references to legal education literature) [hereinafter Wangerin II].

[11] Baker & Brown, *Metacognitive Skills and Reading*, in HANDBOOK OF READING RESEARCH 353 (P. Pearson ed. 1984).

Claire Weinstein's work at the University of Texas epitomizes recent research on metacognition. It is, therefore, a good place to start reading about this topic. *See generally* Weinstein, *Fostering Learning Autonomy Through the Use of Learning Strategies*, 30 J. READING 590 (1987); Weinstein & Mayer, *The Teaching of Learning Strategies*, in HANDBOOK OF RESEARCH ON TEACHING 315 (M. Wittrock 3d ed. 1986) (discussing strategies designed to further the development of metacognition). Virtually all of the articles in a recent Symposium contain extensive references to the idea of metacognition and to earlier work in this area. *See Symposium: Academic Performance and Study*, *supra* note 9.

Readers interested in finding good general discussions of metacognition may find such discussions throughout the following works: J. NISBET & J. SHUCKSMITH, LEARNING STRATEGIES

an awareness by learners of the learning process. For example, students using metacognitive processes would recognize that class assignments should be read one way if the goal of reading is memorization, and another way if the goal of reading is generation of ideas

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(1986) (teaching learning strategies to further metacognition); Alvermann, *Metacognition*, in RESEARCH WITHIN REACH: SECONDARY SCHOOL READING. A RESEARCH GUIDED RESPONSE TO CONCERNS OF READING EDUCATORS 153 (D. Alvermann, D. Moore & M. Conley eds. 1987); Biggs, *Learning Strategies, Student Motivation Patterns, and Subjectively Perceived Success*, in COGNITIVE STRATEGIES AND EDUCATIONAL PERFORMANCE 111 (J. Kirby ed. 1984) (finding that students' motivations are somewhat determinative of their ability or inclination to select effective learning strategies, and concluding that less motivated students should be *taught* how to select learning strategies); Brown, Bransford, Ferrara & Campione, *Learning, Remembering, and Understanding*, in 3 HANDBOOK OF CHILD PSYCHOLOGY 77 (P. Mussen, J. Flavell & E. Markman eds. 1983) (discussing the interactive and dynamic nature of "academic cognition"—a cognitive process that (1) focuses primarily on deliberate attempts to learn, (2) is concerned with how individuals become capable of learning on their own, and (3) concentrates primarily on knowledge and strategies necessary for efficiency); Brown & Palincsar, *Inducing Strategic Learning from Texts by Means of Informed, Self-Control Training*, 2 TOPICS IN LEARNING & LEARNING DISABILITIES 1 (1982) (discussing the relationship between metacognition and learning disabilities); Dansereau, *Learning Strategy Research*, in 1 THINKING AND LEARNING SKILLS: RELATING INSTRUCTION TO RESEARCH 209 (J. Segal, S. Chipman & R. Glaser eds. 1985) (discussing ways to improve a student's capacity to acquire and use information presented in college-level science textbooks through strategy training); Sanacore, *supra* note 7 (discussing the relationship between metacognition and reading comprehension); Schmitt & Newby, *Metacognition: Relevance to Instructional Design*, 9(4) J. INSTRUCTIONAL DEV. 29 (1986) (providing a clear definition of metacognition, describing how the metacognitive processes work, and describing how a metacognitive system is helpful for teachers); Van Rossum, Deijkers & Hamer, *Students' Learning Conceptions and Their Interpretation of Significant Educational Concepts*, 14 HIGHER EDUC. 617 (1985) (discussing a study from which the authors conclude that students' perceptions of learning and teaching are strongly related to their views of good teaching and the way they prepare for exams).

For a somewhat different approach, see Levin, *Four Cognitive Principles of Learning-Strategy Instruction*, 21 EDUC. PSYCHOLOGIST 3 (1986). Joel Levin distinguishes between what a learner must know to wisely and independently select and deploy a learning strategy (i.e., what he calls metacognition), and what strategies are effective and the reasons that underlie that effectiveness (i.e., cognition). This article is directed exclusively at the "cognitive cog" of learning strategy instruction, which he describes in terms of four basic principles: (1) "different learning strategies serve different cognitive purposes"; (2) "effective learning strategies should have identifiable components"; (3) "learning strategies must be considered in relation to student's knowledge and skills"; and (4) "thought-to-be-effective learning strategies require empirical validation." *Id.* In concluding, Levin states that these principles address only one of the two "cogs" of learning strategy instruction and acknowledges that once the two "cogs" are defined, the task of interfacing them must follow. *Id.* at 14.

Another recent work, Kember & Harper, *Implications for Instruction Arising From the Relationship Between Approaches to Studying and Academic Outcomes*, 16 INSTRUCTIONAL SCI. 35 (1987), examines the way a student's approach to studying effects academic performance and persistence.

Discussions of the history of research in metacognition can be found in, Brown, Bransford, Ferrara & Campione, *supra*, at 79-85, and in Shuell, *Cognitive Conceptions of Learning*, 56 REV. EDUC. RES. 411 (1986) (depicting a more recently updated history on current thinking about learning history).

for an original research paper.[12] More particularly, the term metacognition has been used to refer to two separate but related processes or "clusters of activities," one aimed at developing "knowledge about cognition" and the other focused on the "regulation of cognition."[13]

The first process, knowledge about cognition, has been described as referring to "a person's knowledge about his or her own cognitive resources and the compatibility between the person as a learner and the learning situation."[14] This aspect of metacognition calls for the student to be introspective, focusing on his or her own abilities and faults with respect to various learning tasks, and devising a studying strategy that is suited to his or her personal characteristics. Accordingly, theorists of studying believe that effective studying comes from an understanding of the processes of learning and a realization that different kinds of learning processes can bring about different results.[15] For example, students using this metacognitive process would scan an assignment, identify familiar subjects, and note whether the assignment deals with material he or she usually learns quickly.

The second metacognitive process involves the ability to engage in self-regulation of cognitive activities.[16] It is not enough for the student

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[12] *See* Sanacore, *supra* note 7, at 707. Schmitt & Newby, *supra* note 11, at 29-30 (discussing this distinction generally).

[13] Baker & Brown, *supra* note 11, at 353.

[14] *Id.* Schmitt and Newby shed some light on this first cognitive process by considering the process in terms of the kinds of knowledge used. *See* Schmitt & Newby, *supra* note 11. They state that "[f]or metacognitive awareness, the learner needs three kinds of knowledge: declarative knowledge (knowing *what*), procedural knowledge (knowing *how*) . . . and conditional knowledge (knowing *when* and *why*)." *Id.* at 29 (emphasis in original). To demonstrate how these three types of knowledge function in the learning process, the authors describe the following hypothetical:

> Suppose that a proficient learner is faced with the task of reading an article about rodents, about which he must prepare a simple oral report. The learner demonstrates declarative knowledge of personal resources when he thinks, "I already know something about rodents," and "I usually remember informational-type text easier than I do stories." Declarative knowledge of task characteristics is evident when the learner thinks, "Reporting on the information in this article will require that I understand and remember it," and "This type of text usually consists of main ideas and supporting details." In order to match an appropriate strategy with the task, the learner calls on this store of task-related declarative and conditional knowledge, thinking, "I know that outlining and summarizing informational text is a good strategy for organizing and remembering the information because it forces me to identify the important details, so it should work well in this case." (encompassing the what, when and why). Procedural knowledge is what accounts for the learner's ability to execute the skill of summarizing or outlining.

Id. at 29-30.

[15] *See* Baker & Brown, *supra* note 11, at 353-54; Brown & Palincsar, *supra* note 11, at 1; Sanacore, *supra* note 7, at 706.

[16] Baker & Brown, *supra* note 11, at 353; Brown & Palincsar, *supra* note 11, at 1; Sanacore, *supra* note 7, at 707; Weinstein, *supra* note 11, at 591. "These indexes of metacognition include *checking* the outcome of any attempt to solve the problem, *planning* one's next move, *monitoring*

to be aware of his or her abilities and learning processes; the student must be able to monitor those studying activities during the learning process and be able to make appropriate adjustments. In other words, because good learners recognize that different kinds of learning processes exist and that those different kinds of processes accomplish different things,[17] good learners have the ability to monitor their own studying activities and make appropriate adjustments in them.[18] Thus, for example, students engaging in this sort of self-regulation would determine whether they are reading for memorization or for generation of original ideas and could then make mid-course changes in studying techniques when the studying activity is not yielding satisfactory results.

Regrettably, most students taught to use traditional study skills, and virtually all law students taught by law school professors about studying activities, are never taught to engage in these two kinds of metacognitive activities. This is so because most traditional study skills courses and books, and most law school materials, give no thought to metacognition. Rather, traditional study skills materials almost always describe studying skills as essentially static activities—not changing from one situation to the next. For example, traditional materials describe a standardized method for studying, note taking, and review.[19] Furthermore, traditional study skills materials generally do not teach students to monitor and then change their learning and studying activities as the situation demands.[20] Unfortunately, as long as students are led to believe that studying consists of standardized approaches to different tasks, they will perceive no need to monitor their study activities and to modify those activities as the situation demands.

Ironically, differences between metacognitive learning strategies and more traditional study methods can perhaps best be seen by reference to testing instruments that educational psychologists use to measure

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the effectiveness of any attempted action, and *testing*, *revising*, and *evaluating* one's strategies for learning." Baker & Brown, *supra* note 11, at 354 (emphasis in original).

[17] *See* Brown & Palincsar, *supra* note 11, at 1 (referring to this process as "knowledge about cognition").

[18] *See id.* at 2; Schmitt & Newby, *supra* note 11, at 30.

[19] *See, e.g., supra* note 5 (listing the law school study skills books advocating a standardized approach). *See also* J. APPS, STUDY SKILLS FOR THOSE ADULTS RETURNING TO SCHOOL (1978) (containing additional examples of materials advocating such standardized approaches); M. GALL. STUDY FOR SUCCESS (1985); V. VOEKS. ON BECOMING AN EDUCATED PERSON: THE UNIVERSITY AND COLLEGE (4th ed. 1979) (using the author's own college experience this classic precollege book helps the reader understand what to expect in college).

[20] *See* Brown & Palincsar, *supra* note 11, at 3-4 (containing examples of children who fail to engage in metacognitive behavior).

students' knowledge of studying techniques and to predict students' academic success in relation to the use of such techniques. A widely used traditional instrument, the "Survey of Study Habits and Attitudes" (SSHA), tends to view studying itself as a relatively static activity.[21] Thus, this instrument does not in any significant way measure metacognitive activity. Conversely, a more recently developed instrument, the "Learning and Study Strategies Inventory" (LASSI),[22] places enormous emphasis on metacognitive activities. Hence, time and effort management, note taking, efficient review, and other technical skills, while emphasized on the SSHA, are significantly downplayed on the LASSI instrument.[23] The LASSI is to be applauded for its emphasis on metacognition and other learning strategies. It is an important step toward a recognition of the value of such techniques.

Accepting that students should be given more responsibility for directing their education, educators should provide students with the tools to understand, monitor, and adapt their study activities to accomplish particular academic goals.[24] College and graduate students at most schools have been given increasing control over their curriculum, presumably as the result of a widespread recognition that autonomous learning is a laudable objective. Clare Weinstein has written an excellent article on the role of metacognition in autonomous learning.[25] Speaking from her position as a teacher, she wrote: "If we agree that helping students to accept more responsibility for their own learning is an important goal, then we must help them develop the competencies and attitudes needed for self directed learning."[26]

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[21] A recent discussion of this instrument can be found in Pollock & Wilkinson, *Enrollment Differences in Academic Achievement for University Study Skills Students*, 22 COLL. STUDENT J. 76 (1988). *See* 2 THE NINTH MENTAL MEASUREMENT YEARBOOK 1509 (J. Mitchell ed. 1985) (giving specific information about what behavior is scored, as well as the appropriate age level for use of this instrument).

[22] *See* Mealey, *Test Review: Learning and Study Strategies Inventory (LASSI)*, 31 J. READING 382 (1988); *see also* Haynes, Comer & Hamilton-Lee, *Gender and Achievement Status Differences on Learning Factors Among Black High School Students*, 81 J. EDUC. RES. 233 (1988) (containing an important recent discussion of this learning instrument); Weinstein & Underwood, *Learning Strategies: The How of Learning*, in 1 THINKING AND LEARNING SKILLS: RELATING INSTRUCTION TO RESEARCH 241, 247-48 (J. Segal, S. Chipman & R. Glaser eds. 1985).

[23] *See* Mealey, *supra* note 22, at 383 (discussing the ten test items scaled which do not include these traditional skills and reviewing the LASSI). Another recently proposed study skills instrument designed to assess study behaviors, the "Study Behavior Inventory," is described in Bliss & Mueller, *Assessing Study Behaviors of College Students: Findings from a New Instrument*, 11(2) J. DEVELOPMENTAL EDUC. 14 (1987). For a comprehensive discusssion of many instruments for measuring students' development, see MEASURING STUDENT DEVELOPMENT (G. Hanson ed. 1982).

[24] *See* Weinstein, *supra* note 11, at 590.

[25] *Id.*

[26] *Id.*

Ms. Weinstein is not alone in her belief that educators should take a more active role in teaching students how to become "good learners." If students are to know which of the various learning strategies are most appropriate for a particular kind of learning, they must first be taught to develop understanding of their own learning processes (knowledge about cognition), then they must be taught to monitor their learning and change their learning strategies when necessary (regulation of cognition). In this way students will maximize their study time and be more likely to "succeed" in school.

This sort of autonomous learning can be developed in two ways. Either students can take the initiative to read materials on metacognitive study methods and apply what they read to their courses on a trial-and-error basis, or educators can build autonomous learning strategies into their classes. As Ms. Weinstein discusses, educators can "tak[e] advantage of the everyday occurrences in the classroom to help students develop a more effective repertoire of learning skills."[27] In law school, a professor teaching a substantive area of the law is obviously in the best position to help the student understand the material. This can be accomplished by directing the student to read assigned material in a particular way, to concentrate on the rationale of a line of cases rather than on the facts or the rule of law, to use diagrams to help visualize a particular concept, or to discuss certain material with a group of classmates. By taking a few minutes to address the cognitive aspects of a substantive lesson, the law school professor can significantly improve the ability of students to teach themselves the substantive area of the law through a few select learning strategies. The balance of this article will address some useful strategies—based on thoughtfully constructed learning theories—that have led to good results in other areas of education and that are readily adaptable to law school teaching.

A. The Autonomous Learning Model

Perhaps the best example of the work presently being done by educational psychologists in connection with the metacognitive aspects of studying skills and learning strategies, and certainly the most easily understood discussion for law school professors and students, is the

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[27] *Id.* at 594.

work of John Thomas and William Rohwer.[28] They have developed the "Autonomous Learning Model" for studying and learning, which requires students to take into account four separate sets of variables: (1) studying outcomes, (2) study activities, (3) course characteristics, and (4) student characteristics.[29] The Autonomous Learning Model,[30] illustrated by the following chart[31] and described in detail below, can easily be used by law school teachers who wish to help law students learn how to study most effectively.

1. Outcomes

If studying is to include a metacognitive element, it must start with an understanding of different "outcomes" that students wish to achieve.[32] Thomas and Rohwer have labelled these outcomes "informational products" and "performance capabilities."[33] Informational products are forms of knowledge that will come from study activities. Performance capabilities are the ways in which students can act upon the knowledge derived from studying. Students may study to achieve

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[28] Thomas & Rohwer, *Academic Studying: The Role of Learning Strategies*, 21 EDUC. PSYCHOLOGIST 19 (1986) [hereinafter Thomas & Rohwer, *Academic Studying*]. *See also* Thomas & Rohwer, *Grade-Level and Course-Specific Differences in Academic Studying: Summary*, 12 CONTEMP. EDUC. PSYCHOLOGY 381 (1987) [hereinafter Thomas & Rohwer, *Grade-Level and Course-Specific Differences*] (discussing the effect on studying of age, grade level, course characteristics, student characteristics, and achievement); Thomas, *Proficiency at Academic Studying*, 13 CONTEMP. EDUC. PSYCHOLOGY 265 (1988) (discussing the interacting roles of course features and student characteristics).

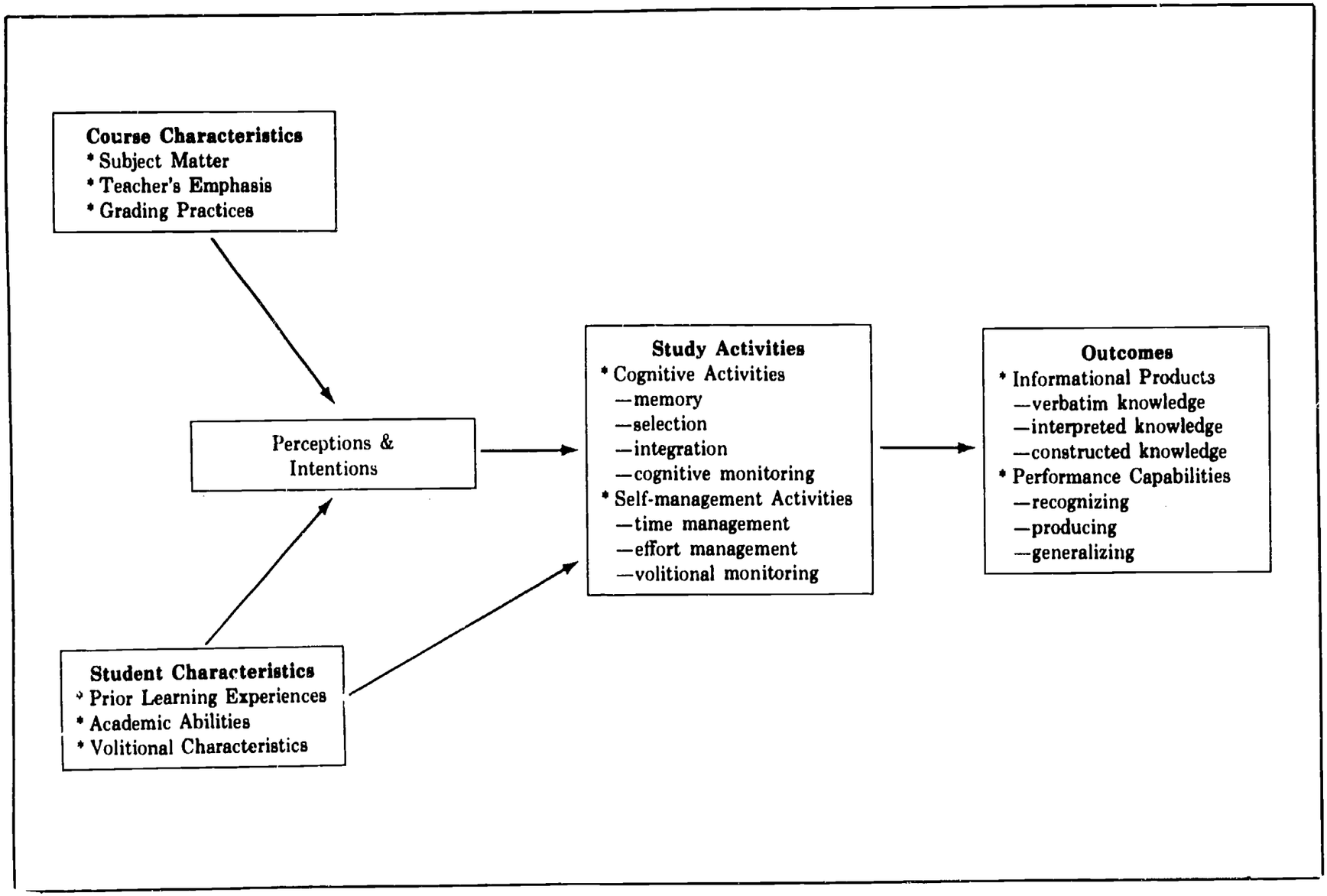
[29] *See* Thomas & Rohwer, *Academic Studying*, *supra* note 28, at 22.

[30] Teachers who attempt to explain the basic tenets of the Autonomous Learning Model to students will not find it to be an easy task. Perhaps, however, Thomas and Rohwer can provide some help. They believe that effective studying must always involve metacognitive activities and that effective studying under the Autonomous Learning Model must include consideration of four distinct variables. First, the study method must be specific to the studying outcome being sought, to the course being studied, and to the student doing the studying. *Id.* at 33. Second, studying for the most part should be "generative" in nature. *Id.* at 34. In other words, studying for the most part is a process in which students initially learn information, then reformulate it and see connections between different parts of the information learned. *Id.* Third, good studying should involve executive monitoring. *Id.* at 34-35. Students must be able to recognize the need to use different kinds of learning strategies in different kinds of learning situations and then must be able to assess the quality of work being done pursuant to use of such differing strategies. Finally, good studying should involve a sense of personal efficacy. *Id.* at 35. Students will not study well unless they gradually come to believe that they have control over their own learning, and that they, the students, have responsibility for their own intellectual lives. *Id.*

[31] This chart is a modified version of the chart appearing in Thomas and Rohwer's article. *See id.* at 22-23.

[32] *Id.* at 22.

[33] *Id.*


Course Characteristics
* Subject Matter
* Teacher's Emphasis
* Grading Practices
Perceptions & Intentions
Study Activities
* Cognitive Activities
—memory
—selection
—integration
—cognitive monitoring
* Self-management Activities
—time management
—effort management
—volitional monitoring
Outcomes
* Informational Products
—verbatim knowledge
—interpreted knowledge
—constructed knowledge
* Performance Capabilities
—recognizing
—producing
—generalizing
Student Characteristics
* Prior Learning Experiences
* Academic Abilities
* Volitional Characteristics

one or both of these outcomes. Each of these forms of studying outcomes consists of three subcategories.

According to Thomas and Rohwer, three kinds of informational products exist: verbatim, interpreted, and constructed knowledge.[34] Each of these, in turn, plays an important role in law school classes. Students who seek to develop the first kind of informational product, "verbatim knowledge," attempt to learn and remember what is specifically said in class or specifically written in reading assignments.[35] Although many law school professors insist that they have no interest whatsoever in helping students develop verbatim knowledge, possession of such knowledge is, in fact, extremely important in virtually all law school classes because verbatim knowledge serves as the foundation for all other learning.

"Interpreted knowledge," the second kind of informational product outcome described by the Autonomous Learning Model, is knowledge that allows people to paraphrase information and state the general point or rule of materials read.[36] In effect, interpretation is simply a translation of information from one form to another. In law school, students develop interpreted knowledge when they learn how to state the rule or holding in a particular case, or when they try to describe in somewhat different words the essence of a particular statute.

"Constructed knowledge," the last and most important of the three informational product outcomes, involves an understanding of the relationships that exist between seemingly unrelated bits of information.[37] This kind of knowledge is by far the kind that most law school classes try to develop. However, it is the kind of knowledge that most law students have a difficult time developing—perhaps because their undergraduate educations placed little or no emphasis on this kind of knowledge.

The second kind of outcome in the Autonomous Learning Model is what Thomas and Rohwer have called performance capabilities.[38] Performance capabilities, like informational products, come in three varieties. The first involves "recognizing" already learned informa-

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[34] *Id.*

[35] According to Thomas and Rohwer, when dealing with verbatim information the student "attempts to discriminate exact from inexact reoccurrences of information supplied or to reproduce the information precisely." *Id.*

[36] *Id.*

[37] *Id.* Thomas and Rohwer describe "constructed information" as consisting of at least three subvarieties: "(a) underlying presuppositions, intentions, and entailments; (b) within-text connections, such as inferences and comparisons; and (c) connections of textual information with prior, extratext knowledge." *Id.*

[38] *Id.* at 23.

tional products.[39] This capability plays an important role in law school classes in which professors emphasize issue spotting on examinations. The second variety of performance capability consists of "producing" already learned informational products.[40] This capability plays a particularly crucial role in courses in which professors give closed book examinations. In such exam situations, students must produce informational products from memory. Regardless of how many issues they recognize, students will not do well on law school exams unless they can also produce substantial amounts of information. The third kind of performance capability is "generalizing." It is the most important one because it requires students to apply learned information to wholly new factual situations. Students in virtually all law school courses will succeed only if they are capable of generalizing about the informational products already learned.[41] This is so because law school exams rarely ask students simply to recognize or recall information learned.

Thomas and Rohwer believe that students must study differently depending on the studying outcomes sought. Thus, for example, students who wish primarily to develop verbatim knowledge must go over their class and reading notes again and again. This is the only way memorization can occur. Conversely, students who wish primarily to develop constructed knowledge must constantly look for relationships between seemingly unrelated bits of information. Likewise, students who anticipate exam questions that principally require recognition of learned information, and recall of similar information from memory, must study differently from students who anticipate exam questions that require generalizations from learned information.

Notwithstanding the important role that analysis of studying outcomes plays in the overall activity of studying, outcomes are just the first of the variables that students must consider when planning learning activities. Analysis of these other variables in effect provides students with the actual mechanisms for modifying studying activities in light of the different outcomes sought. Therefore, they must be given equal emphasis.

2. Study Activities

"Study activities," the second of the four basic studying variables formulated by Thomas and Rohwer, are the actual studying methods

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[39] *Id.*
[40] *Id.*
[41] *Id.*

used to produce different studying outcomes.[42] Study activities, in turn, come in two varieties: one involves "cognitive" activities and the other consists of "self-management" activities.[43]

Thomas and Rohwer believe that different cognitive activities produce different studying outcomes.[44] For example, students using the cognitive activity of "memory" will produce the informational product of verbatim knowledge. Students using the cognitive activity of "selection," however, which involves differentiation among and within sources of information according to importance, produce interpreted knowledge. Alternatively, constructed knowledge is generated when students using the cognitive activity of "integration" study new material in light of previously studied material.[45] The most important kind of cognitive activity, "cognitive monitoring," occurs when students continually assess the need for and adequacy of different kinds of cognitive activities in different kinds of learning situations. In other words, cognitive monitoring is metacognition personified. It is, indeed, thinking about thinking itself.

Self-management activities are activities which "maintain and enhance the attention, effort, and time students devote to learning."[46] These activities are much more mundane in nature than the cognitive activities just described. They make it possible, however, for students to engage in efficient cognitive activities. Time management and effort management are the most basic forms of self-management studying activities.[47] If students cannot manage their time effectively, no cognitive activity can occur. Likewise, if students do not get enough rest, or work too hard on one assignment and not hard enough on others, they are not maximizing their learning potential.

The last kind of self-management activity described by the Autonomous Learning Model, volitional monitoring,[48] parallels the last kind of cognitive activity, cognitive monitoring. Just as cognitive monitoring serves as a metacognitive check on the cognitive activities of memory, selection and integration, volitional monitoring provides a metacognitive check on the self-management activities of time and effort

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[42] *Id.* at 23-25. According to Thomas and Rohwer, "[s]tudy activities consist of the universe of processes and behaviors, both covert and overt, that come into play during a study episode." *Id.* at 23.

[43] *Id.* at 25.

[44] *See id.*

[45] *See id.* at 22.

[46] *Id.* at 25.

[47] *Id.* (see Table 1). Effort management is the ability to minimize competing demands and to insure "adequate attention and effort investment." *Id.* (Table 1).

[48] *Id.* (Table 1).

management.[49] In short, volitional monitoring consists of assessment of the need for and adequacy of self-management activities.

3. Course Characteristics

The third set of variables in the Autonomous Learning Model involves "course characteristics" issues.[50] Different courses can be intellectually very different. For example, property courses frequently require students to learn a lot of specific and ancient rules entailing a great deal of memorization. Conversely, contracts courses require memorization of only a handful of basic rules and emphasize instead the application of these rules to different factual situations. Also, different professors may teach the same course in very different ways. For example, some professors place great emphasis on particular rules of law while others place great emphasis on the policies behind the rules. In addition, even if professors were to teach courses similarly, learning strategies would have to take into consideration the fact that they often administer different kinds of exams, or grade similar exams differently.[51] Additionally, some professors give a high percentage of good grades, or poor grades, and others give more evenly distributed grades.

Consequently, a student's choice of learning strategy should be made on the basis of the material to be covered and in light of factors peculiar to the professor. This approach is inherent in the philosophy of the Autonomous Learning Model, which insists that students seek different studying outcomes and different study activities to account for varying course and teacher characteristics.

4. Student Characteristics

The fourth and last variable in the Autonomous Learning Model involves consideration of "student characteristics." The model suggests that students with different types of "cognitive characteristics" should study differently.[52] This is because students' cognitive characteristics

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[49] *Id.* (Table 1).

[50] *Id.* at 26.

[51] Although most law teachers place great emphasis on the ability to spot issues when grading exams, some teachers pay that skill little mind. Furthermore, while some law teachers expect students to engage in elaborate discussions of policy issues on exams, others find such discussion worthless.

[52] *See* Thomas & Rohwer, *Academic Studying*, *supra* note 28, at 27-28.

come in different forms.[53] Different students have different academic abilities and prior experiences in study activities. In addition, students differ in volitional characteristics: some have more physical or mental energy than others. Moreover, students have varying levels of self-confidence and varying perceptions of their own studying ability. The Autonomous Learning Model insists that students tailor their study methods according to their personal characteristics.[54] For example, law students with very good memories need not devote as much time to developing verbatim knowledge about particular rules and laws. Conversely, students with poor memories should spend more time drilling themselves on rules. Law students whose undergraduate experience involved lengthy reading assignments may be able to breeze through law school reading assignments. Conversely, students whose undergraduate backgrounds principally involved courses in scientific or technical areas may need initially to spend more time plowing through reading assignments. Finally, students with more undergraduate experience with essay exams will have to devote less time to developing that skill and can devote more time to other skills.

Because of the sophistication of the Autonomous Learning Model, one serious problem exists in connection with its use. It is an incredibly daunting thing to teach to students and law school professors who are caught up in the day-to-day activity of law school. Nevertheless, its tremendous value to students easily justifies the time it would take to become acquainted with the model and its uses.

Other less complex and less comprehensive models exist; however, from a theoretical point of view, the Autonomous Learning Model is the best. The "PORPE" studying system[55] is an example of a studying

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[53] *See id.*

[54] *Id.* at 26-27.

[55] Recently, for example, a number of important theorists in this field have argued for the use of a studying system called "PORPE," a system they claim has produced statistically significant academic gains by students. *See* Simpson, Hayes, Stahl, Connor & Weaver, *An Initial Validation of a Study Strategy System*, 20(2) J. READING BEHAV. 149, 149 (1988). PORPE requires students to do five things when preparing for essay exams:

PREDICT	Predict possible essay questions on the material to clarify purposes for subsequent study, identify critical aspects of text, and focus on major content.
ORGANIZE	Organize key ideas pertinent to the self-predicted essay question using one's own words, structure, and methods. Summarize and synthesize ideas via maps, charts, outlines.
REHEARSE	Rehearse the organizational structure and key ideas via active self-recitation.
PRACTICE	Practice by writing an essay answer to the self-predicted question from recall.

model that might be useful to law students who are less concerned about the theoretical reasons underlying sound studying strategies. The PORPE model is an independent study strategy consisting of five synergistic steps in which the student predicts, organizes, rehearses, practices, and evaluates to maximize comprehension of course material. Another interesting model is Donald Dansereau's "MURDER" model.[56]

B. "MURDER"

For the most part, Dansereau's conclusions about studying and learning are very similar to those of Thomas and Rohwer. Dansereau's ideas, however, differ in two significant ways. First, Dansereau believes that students gain substantial studying benefits when they study cooperatively rather than individually.[57] Second, Dansereau has taken all of his ideas about studying and turned them into an easily understood and mastered studying system, with component parts identified by the acronym MURDER.[58]

Dansereau's MURDER system attempts to bring to the surface of students' consciousness the metacognitive aspects of studying.[59] The system does so by asking students who are studying together to play one of two roles. One plays the "recaller," a person who orally summarizes the facts and ideas in a piece of studied text, and the other plays the "listener-facilitator," a person who corrects errors, notes omissions, and who helps elaborate upon and organize information.[60] After reading each section of text—law students might

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EVALUATE	Evaluate with a checklist the completeness, accuracy, and appropriateness of the essay. A positive evaluation indicates a readiness for the test. A negative evaluation indicates a need to loop back into the previous steps of PORPE.

Id. at 153.

[56] *See* Lambiotte, Dansereau, Rocklin, Fletcher, Hythecker, Larson & O'Donnell, *Cooperative Learning and Test Taking: Transfer of Skills*, 12 CONTEMP. EDUC. PSYCHOLOGY 52 (1987) [hereinafter Lambiotte, Dansereau] (discussing the MURDER concept of learning). *See also* Dansereau, *supra* note 11, at 218-24 (containing an overview of the strategies involved in the MURDER system).

[57] Dansereau, *Transfer from Cooperative to Individual Studying*, 30 J. READING 614, 614-15 (1987). Interestingly, Dansereau's research suggests that cooperative study may improve grades for *both* studying partners. *Id.* at 615. Thus, partners of significantly different abilities can work together quite well in this context. *Id.* at 618. Moreover, good students benefit from such work as much as the poor students they are helping. *See id.* at 615.

[58] Lambiotte, Dansereau, *supra* note 56, at 54 (see Table 1).

[59] *See id.* at 53.

[60] *Id.*

consider each appellate court decision in an assignment as a section of text—the studying partners alternately play each of these roles.[61] Dansereau believes that while reading text, and then while playing each of the two roles just described, studying partners should systematically do six things, each of which encourages overt metacognitive activity.[62] The following chart describes these six activities.

Mood	Establish positive mind-set for reading and studying.
Understand	While reading, grasp main ideas and facts.
Recall	Without looking at text, summarize what was read.
Detect	Check for errors and omissions in recall (metacognitive activity).
Elaborate	Facilitate memory by adding mental imagery, prior knowledge, etc.
Review	Go over material to be remembered.[63]

Dansereau believes that MURDER works best when it is used cooperatively,[64] though he is not precisely sure why it works better under these circumstances.

> Our speculations . . . have focused on the opportunities for observational learning provided by cooperative activity. Generally, reading and learning processes are covert, so students seldom get to view the thinking activities of others. This is unfortunate, since the best way of learning most skills appears to be to observe others performing them.
>
> Although the cooperative approach does not make the student's processing totally public, it does provide a window into activities that are usually hidden. In some ways cooperative studying results in a type of cognitive racquetball where both participants get to practice their shots and observe their partner's approaches.[65]

Cooperative study seems, in short, to promote something that educational psychologists call "transfer." Transfer in this context means that learning skills acquired by a student during cooperative study

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[61] *Id.*

[62] *Id.*

[63] *Id.* at 54 (Table 1). This table sets forth the attributes of what Dansereau and his co-authors call "first degree MURDER" which deals with cooperative learning; there is a counterpart strategy called "second degree MURDER" which is a strategy for test taking. The latter is beyond the scope of this article and therefore will not be discussed. *See id.* at 54-55.

[64] *Id.* at 54.

[65] Dansereau, *supra* note 57, at 615 (citation omitted).

activities are transferred to that student's individual study activities.[66]

A crucial point about both the MURDER system and cooperative study should be noted. Neither the MURDER strategy itself, nor the cooperative activity itself, produce transfer; rather, a combination of the two is required.[67] Dansereau thinks this combination is needed for two reasons:

> [F]irst, it is likely that in a cooperative situation partners adhere to the suggested strategy more completely because they must practice aloud and "perform" overtly, so they later follow more of the strategy when they study alone. Second, partners are given an opportunity to observe each other's processing capabilities, persistence, and cognitive effort, and thus they act as models for one another.[68]

Interestingly, Dansereau's reasons for the MURDER system's cooperative transfer-inducing effect may sound surprisingly similar to explanations many law school professors give for use of the socratic method and a number of other established law school teaching techniques. Teachers who require students to stand in class, for example, and respond under pressure to confrontational questions, may inadvertently be promoting both metacognitive activity and transfer in the speakers and listeners.

Unfortunately, Dansereau's cooperative MURDER system is not a complete studying system. This is so for a number of reasons. It does not expressly include reference to differing studying outcomes, nor does it take into account differences in course material, teacher characteristics, or student characteristics. It does not expressly address some of the points made by other study skill researchers.[69] It does

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[66] Lambiotte, Dansereau, *supra* note 56, at 53-54.

[67] *Id.* at 54.

[68] *Id.*

[69] Readers interested in studying general works on study skills should see *supra* note 9, and the following materials: K. MCWHORTER, COLLEGE READING AND STUDY SKILLS (3d ed. 1986) (discussing college reading and study skills that are also suitable for law school use); J. MULLEN, COLLEGE READING AND LEARNING SKILLS (1987) (recent college text discussing stress and time management, comprehension and study skills, which are suitable for law school use); N. WOOD, COLLEGE READING AND STUDY SKILLS: A GUIDE TO IMPROVING ACADEMIC COMMUNICATION (1986) (primarily designed for college students but also suitable for law school use). Interesting recent journal articles on this topic include Gadzella & Williamson, *Study Skills, Self-Concept, and Academic Achievement*, 54 PSYCHOLOGICAL REP. 923 (1984) (discussing a study which found that "study skills, self-concept, and academic achievement correlate significantly with each other"); Heffernan & Richards, *Self-Control of Study Behavior: Identification and Evaluation of Natural Methods*, 28 J. COUNSELING PSYCHOLOGY 361 (1981) (discussing self-control techniques to improve study behavior); Jackson & Van Zoost, *Self-Regulated Teaching of Others as a Means of Improving Study Habits*, 21 J. COUNSELING PSYCHOLOGY 489 (1974) (implicating procedures for developing academic self-management skills); Malett, Kirschenbaum & Humphrey, *Description*

not expressly deal with systematic reading methods that help students improve reading comprehension. In addition, it does not expressly advise students on how they should take notes while reading text, or during class lectures or discussions.

This list of the shortcomings of the MURDER system highlights a very important point. Law students for the most part gain admission to law school because they achieved significant academic success as undergraduates. A logical conclusion made by most law students, therefore, is that their personal undergraduate academic success was achieved at least in part because of their use of good studying skills, not because of the use of any particular studying strategy. For that reason, many law students believe they already know everything they need to know about studying. Consequently, mere references to the MURDER system or to the Autonomous Learning Model may do little to disabuse students of these beliefs.

Mistaken beliefs about study skills can cause law students very quickly to get into serious academic trouble. This is so for three reasons. First, most students entering law school have been able to cover up any study skill deficiencies with intellectual ability. Since law school is so competitive, however, such natural ability alone will not always suffice. Second, in virtually all law school classes students receive essentially no feedback regarding their individual performance until the course ends. Often, the entire grade for the course turns on one final exam.[70] Thus, law students who are studying poorly in a particular class have no way of knowing this until they get their grades. By then, of course, it is too late to change studying habits. Third, in law school, unlike virtually any other kind of educational institution, grades received at the beginning of the overall course of study are far more important than grades received farther down the line. Grades received in the first two semesters, for example, generally determine who will qualify for law review and other special activities.

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and Subjective Evaluation of an Objectively Successful Study Improvement Program, 61 PERSONNEL & GUIDANCE J. 341 (1983) (early work by a leading figure, Kirschenbaum); Nist, Simpson & Hogrebe, *The Relationship Between the Use of Study Strategies and Test Performance*, 17 J. READING BEHAV. 15 (1985) (discussing the correlation between use of positive study strategies and test performance); Perry & Downs, *Skills, Strategies and Ways of Learning: Can We Help People Learn How to Learn?*, 22 PROGRAMMED LEARNING & EDUC. TECH. 177 (1985) (discussing the fact that learning strategies can be learned and transferred); Stahl, Hynd & Henk, *Avenues for Chronicling and Researching the History of College Readin. and Study Skills Instruction*, 29 J. READING 334 (1986) (an excellent description of the kinds of things that law school researchers interested in analyzing the effectiveness of study skills within the law school community must consider).

[70] For a criticism of the traditional law school examination process, see Motley, *A Foolish Consistency: The Law School Exam*, 10 NOVA L.J. 723, 749-51 (1986).

For law students, no margin for error exists in which good study skills can be learned by trial and error. Therefore, entering law students must, as quickly as possible, learn good learning strategies and study skills, or refresh their memories about skills long neglected.

II. Basic Studying Strategies

Educators who help students develop good learning strategies frequently begin their work by teaching students complicated methods for reading and note taking, or by providing students with elaborate descriptions of test-taking strategies. By doing this, however, these teachers overlook the obvious fact that students cannot use any good or bad study skills without the expenditure of time. And time, at least for most law students, is the most scarce and precious of all commodities. Furthermore, students cannot study well and do well on exams, regardless of the amount of time allotted for study, unless they realize that their studying must be specific to the task itself.

This article approaches study skills and learning strategies in an order that differs significantly from the order frequently used. The discussion begins with the most basic studying skill, time and effort management. The successful use of this skill serves as a foundation for all the rest. Next, the idea of "teacher study," another foundational idea, is discussed. After students understand the value of these two ideas, students can then learn about efficient reading, note taking, review, and problem solving.

A. Time and Effort Management

Students who are trained to think about time and effort management —trained in volitional monitoring, to use the phrase of Thomas and Rohwer—will quickly realize that studying itself must involve constant concentration on cognitive and self-management activities. If studying does not involve such concentration, it will be inefficient.

Extensive empirical research has been undertaken in the area of time and effort management activity.[71] This research suggests, but

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[71] For a good place to start reading about time and effort management, see Desmond & Glenwick, *Time-Budgeting Practices of College Students: A Developmental Analysis of Activity Patterns*, 28 J. Coll. Student Personnel 318 (1987) (containing a recent survey of the literature on time management); Kirschenbaum, Tomarken & Ordman, *Specificity of Planning and Choice Applied to Adult Self-Control*, 42 J. Personality & Social Psychology 576 (1982)

does not directly prove, two things about time and effort management. First, research shows that more time spent studying does not necessarily result in good grades.[72] In short, students who get good grades do not necessarily study more than students who get lower grades. Second, research shows that students who carefully prepare written schedules of their time,[73] and who then conscientiously stick to those schedules, study much more efficiently than students who study with a catch-as-catch-can approach.[74] Not surprisingly, these students also seem to get better grades.

It is suggested that students probably should prepare two different kinds of studying schedules.[75] The first kind of schedule, a weekly schedule,[76] helps students account for and efficiently use small blocks of time. This kind of schedule also allows students consciously to divide up their time between courses in light of differing course characteristics. In addition, since different kinds of studying activities produce different kinds of informational products, weekly schedules allow students to set aside blocks of time for particular cognitive activities. On such a schedule, for example, students might block out a certain amount of time for developing verbatim knowledge for a particular course, and a certain block of time for developing constructed knowledge for that course. As they use these schedules, students then will constantly be aware of the different kinds of

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(discussing long-term studying plans); Kremer, Aeschleman & Petersen, *Enhancing Compliance with Study Skill Strategies: Techniques to Improve Self-Monitoring*, 24 J. COLL. STUDENT PERSONNEL 518 (1983) (discussing a study of the effect of reminders on task compliance); Mount & Tirrell, *Improving Examination Scores through Self-Monitoring*, 71 J. EDUC. RES. 70 (1977) (discussing a study that addressed self-monitoring desirable versus undesirable behavior and the effectiveness of combined versus separate methods of self-monitoring); Richards, McReynolds, Holt & Sexton, *Effects of Information Feedback and Self-Administered Consequences on Self-Monitoring Study Behavior*, 23 J. COUNSELING PSYCHOLOGY 316 (1976) (discussing a study which found that students who were already knowledgeable about their study behavior benefited less from self-monitoring than those students who did not). *See generally* A. JUHASZ, EFFECTIVE STUDY 1-10 (1966) (a straightforward discussion of time management).

[72] *See* J. DEESE & E. DEESE, HOW TO STUDY 13-19 (1979); F. ROBINSON, EFFECTIVE STUDY 78 (4th ed. 1970).

[73] Interestingly, the world of law and lawyers provides a perfect tool for encourgaging law students to use studying schedules. Because lawyers often charge fees based on the number of hours spent working on a project, most lawyers keep careful records of how they spend their time. Furthermore, careful lawyers quickly train themselves to keep these records on an hourly basis.

[74] *See* J. DEESE & E. DEESE, *supra* note 72, at 17-18.

[75] *See* J. MULLEN, *supra* note 69, at 5, 7-9 (providing suggested forms for the schedules). *See also* Kirschenbaum, Tomarken & Ordman, *supra* note 71, at 583-84 (empirical study reveals evidence favoring daily and monthly planning).

[76] *See* K. MCWHORTER, *supra* note 69, at 16-17.

cognitive activities in which they can engage while studying.[77] The second kind of schedule that students should use, semester long schedules, helps students organize large periods of time.[78] For example, students can use semester long schedules to set aside large blocks of time for writing a paper, extensive review, or for taking self-developed or teacher-developed practice exams. Students also can use semester schedules to set aside large blocks of time, perhaps three-day weekends, to get away completely from their studying.

One final point about studying schedules, implicitly made by the literature of metacognition, deserves emphasis. Students should set aside specific blocks of time on their weekly and semester schedules to engage in cognitive and volitional monitoring.[79] During these blocks of time students should consider, perhaps after reviewing their time sheets, whether they have used their studying time efficiently, and whether they should make changes. Furthermore, students can use these blocks of monitoring time to determine whether they have been spending too much or too little time engaging in certain kinds of

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[77] Technical aspects of the use of weekly studying schedules can be quickly summarized. Good weekly schedules, probably should contain spaces for every half hour of every day of the week. *See* W. PAUK, HOW TO STUDY IN COLLEGE 25 (2d ed. 1974) (Figure 3-2). Students beginning to work with schedules like this should initially block out class time and necessary time for commuting, lunch, supper, etc., and for any absolutely necessary employment. *Id.* at 24-25 (providing an example of a master schedule); J. DEESE & E. DEESE, *supra* note 72, at 16. After blocking out time for these things, students should block out specific times for specific studying tasks. For example, law students might block out a specific chunk of time on Tuesday afternoons to do Torts homework for Wednesday classes. Students should keep three things clearly in mind when they prepare weekly studying schedules. First, time away from study must be scheduled. *See id.* J. MULLEN, *supra* note 69, at 11. Thus, students should not set aside long uninterrupted periods of time for studying, but rather students should schedule several short blocks of studying time—blocks of one hour—in which you study for 50 minutes interrupted by short scheduled breaks—of ten minutes. J. DEESE & E. DEESE, *supra* note 72, at 13; W. PAUK, *supra*, at 23. Students should also schedule long breaks—one and a half hours—once or twice a day. The presence in the schedule of breaks, particularly breaks that require students to be involved in strenuous physical activity, *id.* at 29, actually seems to do students more good than uninterrupted studying. In short, studying in this manner is more efficient than studying continuously. Second, students should block out large amounts of time on their schedules, usually on Friday or Saturday nights, or both nights, simply as times entirely away from studies. Again, such time away from homework actually seems to improve learning rather than detract from it. Third, students should always block out on their weekly schedules several blocks of "emergency" time—time that can be used to make up for missed time on other parts of the schedule. Emergencies, of course, do not occur according to schedules. However, emergencies always occur and always take time away from scheduled studying activities. If an emergency should occur, students who have built emergency time into their schedules can simply make up for the missed studying time during the emergency blocks.

[78] W. PAUK, *supra* note 77, at 28-30; Kirschenbaum, Tomarken & Ordman, *supra* note 71.

[79] This point is alluded to indirectly in the discussion of executive monitoring in Thomas & Rohwer, *Academic Studying*, *supra* note 28, at 34. Thomas and Rohwer use executive monitoring as one of the fundamental principles that govern the impact of learning strategies on academic studying. *Id.*

cognitive activity. They might try to determine, for example, whether they have been spending an appropriate amount of time developing verbatim knowledge.

B. Studying Teachers

Regardless of how efficiently they manage their time and effort, students will not maximize the value of their study efforts unless they study in a manner that is "specific" to the task.[80] One type of task-specific studying involves "teacher study"—learning about what a particular teacher expects students to learn and what value the teacher places on particular skills and understanding. Students who engage in teacher study believe that exams, and particularly essay exams,[81] test students not only on *what* students know about the substance and skills taught in the course, but also on *who* they know—that is, on the idiosyncracies of individual teachers. Teacher study is a facet of the "course characteristic" variable of Thomas and Rohwer's Autonomous Learning Model.[82]

Teacher study, though usually condemned by teachers, does several very worthwhile things. First, teacher study highlights for students the importance of metacognitive activities because it forces students to come to grips with the fact that they must study differently in different classes. Realization of that fact, in turn, forces students to

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[80] *Id.* at 33 (discussing the applicability of the specificity principle).

[81] The use of essay exams as the primary means of assessing student progress has been criticized vehemently as subjective, *see* Motley, *supra* note 70, at 726-31; Wood, *Measurement of Law School Work*, 24 COLUM. L. REV. 230 (1950), and as a measure of "skills and/or abilities which are not clearly within the instructional objectives of the teacher." Motley, *supra* note 70, at 728 n.6 (citing M. Josephson, Learning and Evaluation in Law School, submitted to the AALS Annual Meeting, Teaching Methods Section (Jan. 1984)).

Law school teachers primarily use essay exams, it is suggested, for two principal reasons. First, there is an assumption that constructed and interpreted knowledge cannot be tested on multiple choice exams because only verbatim knowledge is susceptible to that kind of testing. Actually, however, well written multiple choice tests—the Multistate Bar Examination, for example—can test for constructed and interpreted knowledge. Unfortunately, legal educators for the most part do not have the training necessary to write multiple choice exams that test for these kinds of knowledge. Thus, essay exams almost certainly are preferable. Second, many law school teachers believe—and this writer certainly shares this belief—that law school teaching in part should help students realize that several correct answers to the same question exist, and that lawyers usually can produce reasonably solid arguments on all sides of every issue. The use of objectively graded exams, almost by definition, undermines this particular teaching goal. On this later point, see Wangerin, *Objective, Multiplistic, and Relative Truth in Developmental Psychology and Legal Education*, 62 TUL. L. REV. 1237 (1988) [hereinafter Wangerin III].

[82] *See* Thomas & Rohwer, *Academic Studying*, *supra* note 28, at 25-26 (Table 1).

think generally about the different kinds of studying and learning activities that they must engage in to succeed in school. Second, students who engage in teacher study gradually come to understand the personal and intellectual foibles of their teachers. As they do this, students come to realize that they personally do not stand completely alone in terms of intellectual inadequacies. This realization, in turn, helps students build much needed confidence in themselves.

One of the best ways to help law students begin to understand the importance of teacher study is to participate in a seemingly silly exercise. Students might be asked to imagine that all of their professors have asked them to answer exactly the same essay question, a question perhaps calling on them to describe the law school's main lobby. Students confronting this exercise who do not understand the concept of teacher study will assume that they can simply write out one answer and then duplicate it for all the professors. Obviously, this strategy will not work, as students familiar with teacher study will immediately know. The student should consider what information about the lobby would have the most relevance in the eyes of that particular professor. For a particular property professor, for example, students might have to prepare an analysis of the history of the law school building itself, and of the historical background of the various furnishings and artifacts in the lobby. Conversely, for a particular teacher of torts the students might have to draft essays examining facts relevant to liability questions. In turn, these students might have to create essays for a particular teacher of a procedure course describing in numbing detail the sequential actions taken by the carpenters, electricians, and painters. And for their contracts professor, the students would perhaps have to discuss the set of contracts that were necessary to complete the construction of the lobby.

A cautionary word about teacher study is appropriate at this point. Some students place very heavy reliance on teacher study. They do this because they think an understanding of the teacher can take the place of an understanding of the studied material, and because teacher study is easier and less time consuming than other kinds of studying. Sometimes excessive reliance on teacher study works. For example, students can sometimes mislead easygoing professors into believing that grand generalizations about studied material can be substituted for specific knowledge. Usually, however, excessive reliance on teacher study does not work because, as the Autonomous Learning Model clearly demonstrates, the course characteristics variable of teacher study is only one of four studying variables.

C. *Efficient Reading*

Anyone familiar with legal education knows that law students must read and comprehend volumes of complex written material. Good reading skills, therefore, are essential for law school students.

Surprisingly few students know how to read efficiently. To be sure, they may unconsciously know that reading to develop verbatim information is different from reading to develop constructed knowledge. And students may even unconsciously know that different kinds of texts must be read in different ways. For the most part, however, they do not consciously know these things and do not modify their reading based on their learning objectives. Furthermore, most students do not know that a number of relatively straightforward systems exist that dramatically increase reading "efficiency," although these systems do not necessarily increase reading speed.[83]

Reading theorists have developed several systems for helping students read efficiently. Francis Robinson's time-tested "SQ3R" reading system is probably the best known of these various systems, though, admittedly, many researchers have suggested modifications.[84] The SQ3R system divides the reading process into five distinct steps. The first two steps involve pre-reading activity and the last two involve post-reading activity.[85] The middle step consists of reading itself.

According to the SQ3R system, students should engage in two pre-reading activities.[86] First, they should quickly "survey" their entire reading or homework assignment in order to mentally prepare for what is coming.[87] Surveying in this context, means engaging in a very quick superficial reading. This survey includes a review of headings and summary paragraphs to find "clues" of the three to six main ideas that will serve as the basis of the discussion.[88] Surveying helps define the nature of questions that may arise during the actual reading phase and lets the reader mentally prepare for incoming data which

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[83] An important caveat must here be offered. None of what follows about efficient reading techniques is related, directly or indirectly, to popularized ideas about "speed reading." The reading techniques described below do not in any sense speed up the process of reading. Indeed, at least to a certain extent they slow it down. The techniques described below simply enhance the efficiency of reading.

[84] *See* F. ROBINSON, *supra* note 72, at 15-40. For a recent discussion of this system, see W. PAUK, *supra* note 77, at 150-52; Darch, Carnine & Kameenui, *The Role of Graphic Organizers and Social Structure in Content Area Instruction*, 18 J. READING BEHAV. 275, 284-86 (1986).

[85] F. ROBINSON, *supra* note 72, at 43.

[86] *See* J. DEESE & E. DEESE, *supra* note 72, at 42; F. ROBINSON, *supra* note 72, at 32-33. *But see* Darch, Carnine & Kameenui, *supra* note 84, at 285 (discussing three pre-reading steps).

[87] J. DEESE & E. DEESE, *supra* note 72, at 42-43; F. ROBINSON, *supra* note 72, at 32.

[88] F. ROBINSON, *supra* note 72, at 17-24, 32, 34.

will result in formation of new cognitive categories or expansion of existing ones. Surveying also helps put new materials into context. Second, according to Robinson and other reading theorists, students who have surveyed the assignment should then formulate specific "questions" about that material.[89] Robinson recommends turning headings into questions.[90] The formulation of questions, like surveying, prepares the student mentally for the actual reading process.[91]

The third step in the SQ3R system, "reading" itself, flows logically from the first two steps.[92] According to reading theorists, reading should primarily be the process of obtaining answers to questions that arise in connection with the first two steps of the reading process.[93] Interestingly, one of the best descriptions of this third step in the SQ3R process is in a book prepared for law students—a book virtually alone in the legal education literature acknowledging the existence of learning theory.[94]

> The reader must evaluate and select the information needed to fill in the gaps in her/his cognitive structures. Physical and psychological limitations of the human information processing system do not allow us to attend to *all* the incoming information. As we read, we rely on feedback from the environment and from our own cognitive structures to guide us in selecting what information to attend to. If we are not actively involved in reading, we will not receive maximum information from the print . . . .[95]

Few students engage in the post-reading fourth and fifth steps in the SQ3R system. The fourth step, "recitation," requires students to recite from memory a summary of the material just read.[96] Robinson recommends that recitation be done upon completion of each section, answering the question that was formulated from the section headings.[97] Recitation may be done by either mentally reciting the answer

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[89] *Id.* at 20-22 (citing studies in which students given questions before reading were more successful answering the questions), at 32-34 (describing this step of the SQ3R method); J. DEESE & E. DEESE, *supra* note 72, at 43-45 (suggesting a number of methods of formulating questions, and noting that often authors will provide questions); Darch, Carnine & Kameenui, *supra* note 84, at 285.

[90] F. ROBINSON, *supra* note 72, at 32-33.

[91] *Id.*

[92] *Id.* at 33; J. DEESE & E. DEESE, *supra* note 72, at 45; Darch, Carnine & Kameenui, *supra* note 84, at 285.

[93] F. ROBINSON, *supra* note 72, at 33-34. Robinson recommends that once the reader has formulated a question from a heading, the reader should read only so far as that section, reading actively in search of an answer to that question. *Id. See* W. PAUK, *supra* note 77, at 150.

[94] C. MAYFIELD, READING SKILLS FOR LAW STUDENTS (1980).

[95] *Id.* at 15-16 (emphasis in original).

[96] J. DEESE & E. DEESE, *supra* note 72, at 45-46; W. PAUK, *supra* note 77, at 151-52; F. ROBINSON, *supra* note 72, at 33.

[97] F. ROBINSON, *supra* note 72, at 34.

or by writing it down.[98] The better method is to put the thought down in a brief written note in the reader's own words.[99] The SQ3R theory suggests that readers who realize they will have to recite what they have read will read much more actively. Furthermore, readers who anticipate the recitation step will select and analyze larger amounts of material, and do so in a better manner. Recitation also helps transfer ideas from short-term to long-term memory.

The fifth and last step in the SQ3R system is "review."[100] When engaging in SQ3R review, readers look over all of their just-completed work. Review, like recitation, interferes with the process of forgetting. It also forces the student to rethink the questions originally asked and to ponder the answers to possible additional questions.

The SQ3R reading system, as well as other comparable reading systems, can be readily adapted to casebook reading by law students. For example, a law student might begin each reading assignment with a five or ten minute survey of the casebook headings of material to be covered and assigned cases to be read. Then beginning with the first heading or case, the student would formulate a question. Next, the student would actively read the case with the conscious purpose of answering the question, but remaining aware that other relevant questions may arise. Recitation would follow. Upon completing his or her reading of the case, the student would recite, mentally or in writing, the answer to the question and other main points about the case. Written recitation should be very brief—ideally not more than a few words or phrases. Finally, the law student would complete his or her reading assignment by spending ten or fifteen minutes reviewing the entire assignment including any notes written during the recitation step. The review should first be done without reference to notes or text. Then notes and underlining should be reviewed. This review almost certainly would reveal to students things that were missed on earlier readings of the material.

It should be noted forthrightly in this context that many law students will initially rebel at suggestions that they use something as time consuming as the SQ3R reading system. Use of such a system, they will insist, takes far too much of their precious time. This is not a valid objection. Research suggests that many students who master some sort of efficient reading system like SQ3R actually spend less time reading assigned material than students who do not use

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[98] *Id.* at 34-35.

[99] *Id.* Robinson states that written recitation is more effective because it forces the reader to verbalize what might remain only a vague thought if mental recitiation were used. *Id.*

[100] *Id.* at 33; J. DEESE & E. DEESE, *supra* note 72, at 47; W. PAUK, *supra* note 77, at 152.

such a system.[101] To be sure, SQ3R is not a speed reading system; however, it does not by any means produce significantly slower reading than non-systematic reading.

D. Note Taking

Not surprisingly, the series of five steps of the SQ3R system closely resembles the series of steps that educational psychologists have included in systems designed to help students efficiently take classroom and reading notes. An excellent starting point for analysis of such systems is Walter Pauk's work on student note taking, a system called the 5Rs.[102] The 5R system consists of recording, reducing, reciting, reflecting, and reviewing.[103] Pauk's work, like Robinson's, is not particularly recent. However, it too has stood up well to the test of time.[104]

The first two of the 5Rs involve straightforward tasks which are instinctively engaged in by most successful law students. Under the 5R system, students first "record" as many meaningful facts and ideas as possible in class or in reading assignments in the top two-thirds of the right hand two-thirds of note paper.[105] Empty space

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[101] For discussions of this idea, see J. DEESE & E. DEESE, *supra* note 72, at 42; K. MCWHORTER, *supra* note 69, at 183-90; F. ROBINSON, *supra* note 72, at 33-34; A. TRILLIN, TEACHING BASIC SKILLS IN COLLEGE 101-10 (1980).

[102] W. PAUK, *supra* note 77, at 128-39 (1974).

[103] *Id.*

[104] Unfortunately, much of the more recent work on note taking is highly technical. For example, the work of Kenneth Kiewra, the most important theorist now working in this area, is extremely dense and almost unreadable to anyone unfamiliar with the subject. *See, e.g.*, Kiewra & Benton, *The Relationship Between Information-Processing Ability and Notetaking*, 13 CONTEMP. EDUC. PSYCHOLOGY 33 (1988); Kiewra, *Cognitive Aspects of Autonomous Note Taking: Control Processes, Learning Strategies, and Prior Knowledge*, 23 EDUC. PSYCHOLOGIST 39 (1988) [hereinafter Kiewra, *Cognitive Aspects*]. Kiewra himself notes the continuing value of Pauk's ideas. Kiewra, *Notetaking and Review: The Research and its Implications*, 16 INSTRUCTIONAL SCI. 233, 242-43 (1987) [hereinafter Kiewra, *Notetaking*]. For recent general discussions of note taking, see Einstein, Morris & Smith, *Note-Taking, Individual Differences, and Memory for Lecture Information*, 77 J. EDUC. PSYCHOLOGY 522 (1985) (containing many references to work on note taking and discussing the link between that skill and organizational skills); Elshout-Mohr, Van Daalen-Kapteijns & Sprangers, *The Topic-Comment Technique to Study Expository Text*, 56 J. EXPERIMENTAL EDUC. 83 (1988) (discussing a note-taking technique for use with texts); Nye, Crooks, Powley & Tripp, *Student Note-Taking Related to University Examination Performance*, 13 HIGHER EDUC. 85, 94-95 (1984) (suggesting that students who take lots of notes tend to do better on exams); Smith & Tompkins, *Structured Notetaking: A New Strategy for Content Area Readers*, 32 J. READING 46 (1988) (suggesting a note-taking technique that uses text structures).

[105] *See* W. PAUK, *supra* note 77, at 128-29. Interestingly, some law school bookstores sell paper suited for this task called "briefing" paper.

It should be noted that Pauk discussed the 5R system solely in terms of note taking during lectures. Of course, the system is equally applicable to note taking during reading.

should be left at the bottom of the page of notes for "reflection," as discussed below. While recording notes, students should not be overly concerned about subdividing notes into paragraphs or gathering specific material under specific headings. Rather, emphasis at this point should be placed simply on recording as many of the ideas as possible.[106] Indeed, at this stage the more notes recorded the better.

The second step in Pauk's 5R process, "reduction," involves selection of important ideas from the mass of ideas recorded.[107] As soon after class or reading as possible, students should look carefully at the record they have produced and reduce that record to key words or concepts. This reduction should be placed in a smaller space on the top two-thirds of the left hand one-third of the note page. Again, space at the bottom of the page should be reserved for reflection. In addition, during this reduction stage students should add to their recorded notes on the right side of the page any matters discussed in class or in the readings that initially escaped recording, but were remembered during the reduction process.

The 5R system encourages students to move to the third of the 5Rs, "recitation," after recorded notes have been reduced to key words and concepts.[108] While reciting, students cover the right side of their notes, that is, the side containing the record of class discussions or readings. Students then look only at the reduced notes on the left side of the page, and recite what they remember recording.[109] Recitation helps transfer items from short-term to long-term memory.[110] Furthermore, anticipation of the dreaded recitation step encourages students to concentrate during earlier note taking stages.

The last two steps in the 5R note taking system build on the first three. In the reserved space at the bottom of their note pages, students should "reflect" on the ideas and facts contained in the upper part of the page.[111] Reflection involves an attempt to see all of the notes

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[106] *Id.* Recent research confirms the validity of Pauk's anecdotal sense that students who take voluminous class notes tend to do better on exams than students who take few notes. *See* Kiewra & Benton, *supra* note 104, at 40; Nye, Crooks, Powley & Tripp, *supra* note 104, at 94-95. Recent research has also shown that poor students are generally incomplete note takers and record only a small percentage of critical lectures. *See* Kiewra, *Notetaking, supra* note 104, at 244. *But see* Dunkel, *The Content of L1 and L2 Students' Lecture Notes and Its Relation to Test Performance*, 22 TESOL Q. 259, 269-70 (1988) (suggesting that voluminous note taking by students who are not native speakers of English may not be a good thing).

[107] W. PAUK, *supra* note 77, at 128. Professor Kiewra thinks that students who fail in academic tasks often do so because they "fail to highlight [key ideas] once they record them in notes." Kiewra, *Notetaking, supra* note 104, at 235 (citation omitted).

[108] W. PAUK, *supra* note 77, at 128.

[109] *Id.* at 128-29.

[110] *Id.* at 128.

[111] *Id.* at 128-29.

just taken as a unified whole. "Review," the last step, continues this same process of reflection but expands it somewhat.[112] During review, students integrate ideas from their new notes into ideas contained in notes taken during previous class sessions or in connection with previous readings.[113] In effect, when students review, they engage in an ongoing reflection about everything contained in all of the notes to date.[114]

One qualifying point must immediately be made about the 5R reading system and, concomitantly, about the closely related SQ3R reading system. The initial developers of both of these systems did their principal work before learning theorists had come to recognize the importance of metacognition as a component part of successful learning strategies. Furthermore, developers of both of these systems may have placed too much emphasis, at least for law school purposes, on the learning and retaining of verbatim knowledge. As noted earlier, learning in most law school classes requires the gathering of the informational product of constructed knowledge and the development of the performance capability of generalization. Nevertheless, both of these systems continue to be well accepted. Thus, both can readily serve as basic models for law school reading and note taking.

E. Review (Outlines and Graphic Organizers)

Review involves two completely different activities. First, review may involve attempts to bring to surface consciousness, either from memory, notes or text, isolated bits of information studied at earlier times in given courses. This kind of review helps students transfer information from short-term to long-term memory. Furthermore, this kind of review helps students practice a skill that will be needed on those exams which require displays of verbatim knowledge. Second, review may involve attempts to develop links between seemingly isolated bits of information. This kind of review, which primarily generates constructed knowledge, prepares students for examinations

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[112] *Id.* at 129.

[113] *Id.*

[114] *Id. See generally* Kiewra, *Notetaking, supra* note 104, at 242-43 (discussing the value of review as it impacts achievement).

Interestingly, modern technology has created the possibility of eliminating at least some of the drudgery that seems to be a part of Pauk's note-taking system. Many law students now have access to personal computers. Computer programs now exist that can help students re-write and re-work classroom notes. These programs, in effect, eliminate much of the drudgery of one of Pauk's five Rs, namely, reduction.

other than those requiring displays of verbatim knowledge.

Most law students, and many undergraduate students use "outlines" as their principal tool for review. Outlines help students learn and remember isolated bits of information. Since most professors expect students to assimilate a lot of information,[115] outlines can have considerable value. Unfortunately, however, traditional outlines do little more than help students develop verbatim knowledge. Since possession of verbatim knowledge alone rarely produces success in law school, students must also develop ways to gain both interpreted and constructed knowledge. Traditional outlines provide little help with that task.[116]

In recent years, learning and studying theorists have begun to discuss learning tools called "graphic organizers" or "spatial learning strategies."[117] These tools, like the previously discussed reading and note taking strategies,[118] encourage students to link seemingly unrelated bits of isolated information. This is done not through use of words and sentences, but by means of charts, maps, and schematics. The best recent explanation for the value of these learning devices comes from an article by Darch, Carnine & Kameenui:

These formats for organizing information rely on the use of lines,

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[115] For example, chemistry teachers expect students to remember that water contains two hydrogen and one oxygen atoms. Poetry teachers expect students to remember that sonnets have fourteen lines. Law school contracts teachers expect students to know that as a general rule contracts will not be legally enforceable unless supported by "consideration."

[116] Outlines prepared by publishing houses almost never contain discussions of the fundamental principles of the course or of how key concepts in the course relate to one another. For example, chemistry class outlines usually contain a lot of information about the chemical properties of individual substances. This is strictly verbatim information. These outlines, however, rarely note the existence of general ideas about the nature of chemical processes, general ideas that might link together numerous seemingly isolated phenomena. The same is true in liberal arts classes. Poetry class outlines frequently contain numbing detail about various literary forms. Rarely, however, do these outlines note the possible connection between complexity in poems' form and beauty in their substance. This is also true of law school outlines. Most student outlines for contracts courses, for example, provide endless details about the various rules governing the common law of contracts. Almost never, however, do these outlines note that similar underlying policies provide explanations for many of those seemingly isolated rules.

[117] For an excellent recent discussion of graphic organizers by leading theorists in this field, see Holley & Dansereau, *The Development of Spatial Learning Strategies*, in SPATIAL LEARNING STRATEGIES: TECHNIQUES, APPLICATIONS, AND RELATED ISSUES 3-19 (C. Holley & D. Dansereau eds. 1984). (Dansereau, it should be recalled, is the author of the MURDER studying system). For additional discussions of graphic organizers, see J. HEIMLICH & S. PITTELMAN, SEMANTIC MAPPING: CLASSROOM APPLICATIONS (1986); Alvermann, *Graphic Organizers: Cuing Devices for Comprehending and Remembering Main Ideas*, in TEACHING MAIN IDEA COMPREHENSION 210-26 (J. Baumann ed. 1986); Darch, Carnine & Kameenui, *supra* note 84; Van Patten, Chao & Reigeluth, *A Review of Strategies for Sequencing and Synthesizing Instruction*, 56 REV. EDUC. RES. 437 (1986).

[118] For a comparison of graphic organizers to the SQ3R system, see Darch, Carnine & Kameenui, *supra* note 84.

> arrows, geometric shapes, and spatial arrangements that describe the text content, structure, and key conceptual relationships typically found in content area text. The organizational structure of the graphic organizer is not unlike the systematic arrangement of ideas that specify the relationships connecting these ideas found in a text. In the case of graphic organizers, the arrangement of ideas, facts, concepts, and ideational relationships are presented visually and independent of a text. The explicit purpose of a graphic organizer for content area texts is to *inform* the reader about the interrelationships of ideas and the logical connections between higher order concepts and lower order concepts. The assumption is that a reader informed about the hierarchical arrangements of information in a text is more likely to understand the overall meaning of the text as well as the relationship of individual concepts and facts to each other. To perceive the hierarchy of information, the reader is required to study the visual, or graphic, arrangement of the information. The advantage of such a visual format to that of text-only format is that the top level organizational structure of information, identifying the most salient concepts and specifying their interrelationships, has been *visually* prescribed for the reader.[119]

Professors Gowin and Novak argue that graphic organizers provide much better tools for learning and review than traditional outlines. They do so for several reasons.

> First, good concept maps show key concepts and propositions in very explicit and concise language. Outlines usually intermix instructional examples, concepts, and propositions in a matrix that may be hierarchical, but fails to show the superordinate-subordinate relationship between key concepts and propositions. Second, good concept maps are concise, and show the key ideational relationship in a simple visual fashion that uses the remarkable human capability for visual imagery.[120]

The law school community for the most part has not seen much use of graphic organizers.[121] Contract law, however, provides an ex-

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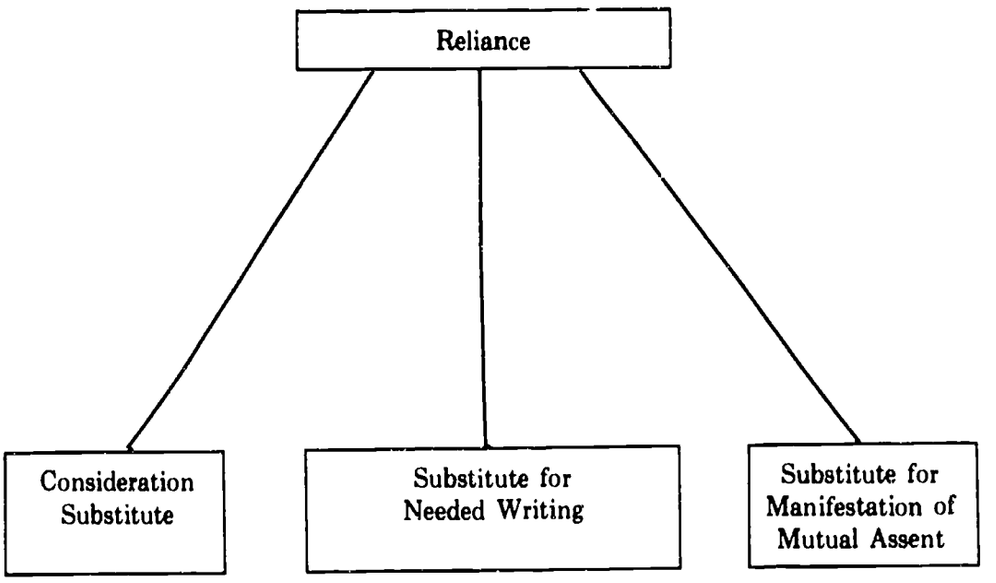
[119] *Id.* at 276 (citations omitted). Professors Novak and Gowin, two prominent theorists in this field, believe that these tools "work to make clear to both students and teachers the small number of key ideas they must focus on for any specific learning task. A map can also provide a kind of visual road map showing some of the pathways we may take . . . ." J. NOVAK & D. GOWIN, LEARNING HOW TO LEARN 15 (1984).

[120] J. NOVAK & D. GOWIN, *supra* note 119, at 78.

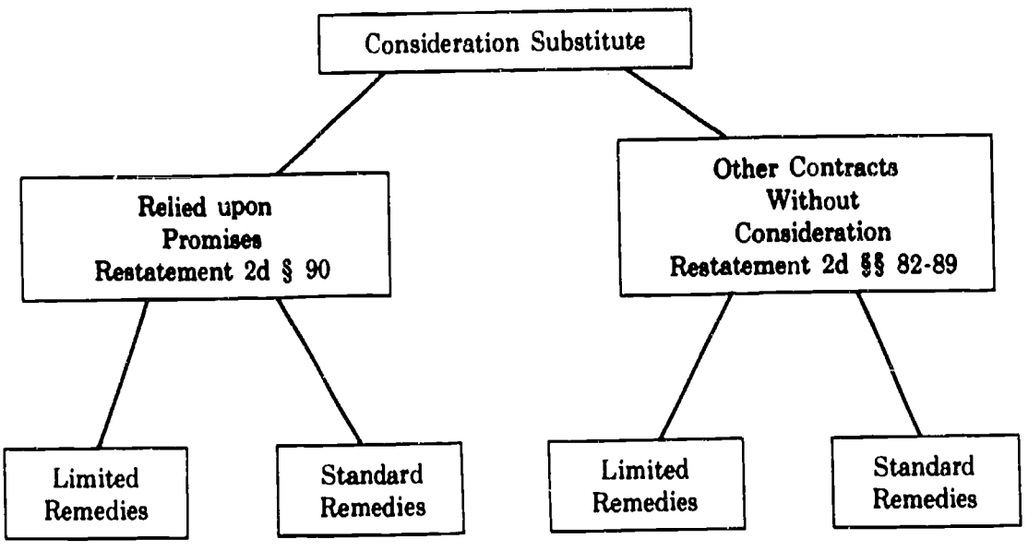
[121] Interestingly, however, some law school bookstores in recent years have begun to stock "flow charts" for key law school courses. Such charts are graphic organizers. As such, they are significant improvements over traditional law school study aids. Sadly, however, many of these

cellent source of material for examples of law concept maps. For example, since many teachers and commentators of contract law place the concept or policy of reliance at the center of a spiraling first semester course, reliance can become the starting point for one such map. A map of reliance might start with placement of the concept of reliance at the top of the map. Students, or teachers, might gradually then add branches off of that center point. Each of the separate branches, in turn, might be an area of contract law in which reliance serves as an exception or safety valve to standard rules. One of the branches might suggest, for example, that reliance can address situations in which generally unenforceable gift promises occur. Another branch might depict reliance as a means for dealing with the manifestation of mutual assent that normally is needed to make a contract legally enforceable. A third branch could show reliance as a safety valve for general requirements regarding contract formalities such as writings. Thus, the basic map might look like this:

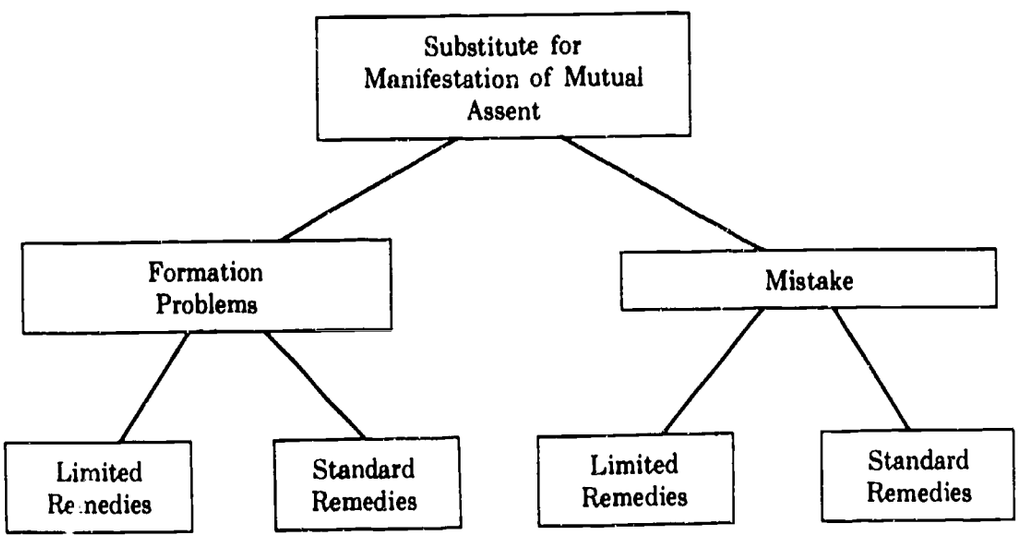


commercial charts are not particularly good ones, if only because they simply move through courses in a completely linear, first-to-last fashion. Rarely do these maps show important cross links or connections.

The consideration substitute branch, in turn, might be divided as follows:



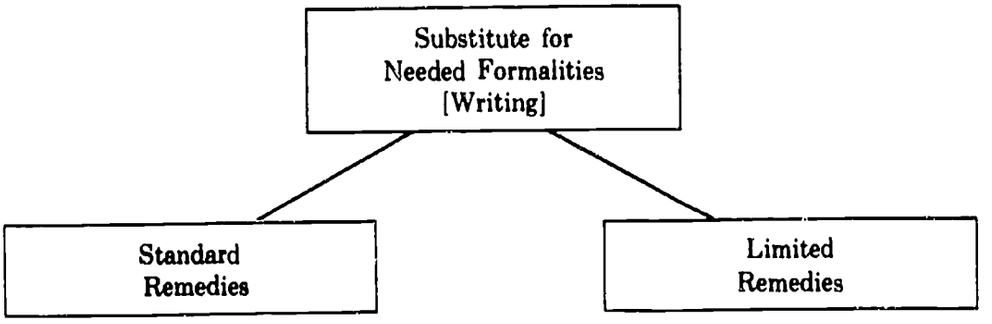
The manifestation of mutual assent branch might look like this:



Good maps do not flow in only one direction, however. Thus, numerous cross references would need to be made on the foregoing map. For example, the "limited remedies" boxes should be connected, perhaps with dotted lines. Likewise, the "standard remedies" boxes should be connected. This latter connection might note the fact that

Justice Traynor, who wrote the opinions in both *Monarco v. Lo Greco*[122] and *Drennan v. Star Paving Co.*,[123] did not join the idea of reliance with the conceptually related idea of limited remedies.

Finally, the formalities branch might look like this:



Graphic organizers can also be used to create visual pictures of entire law school courses. For example, a very simple map of an entire first semester course in contracts, a course using the popular case book written by Professors Farnsworth and Young,[124] might start by dividing the general category of "Promises" into two smaller categories, namely "Exchanges" and "Non-Exchanges." The Non-Exchanges category, in turn, would be subdivided into c[illegible]ies for "Relied On" and "Not Relied On." This would, in e[illegible]ummarize in a very cursory way the first chapter of that [illegible].[125] Students mapping the second chapter in the same book, a chapter on Assent,[126] might begin by dividing the Exchanges category on the map already described into two new categories, one involving situations in which manifestation of mutual assent had occurred (Assent Present) and the other involving situations in which such manifestation had not occurred (Assent Missing). The Assent Missing category, in turn, might break down into two additional categories, "Mistakes," and "Pre-Contracts," and each of those two categories would become two additional categories, "Not Relied On," and "Relied On."[127] The third chapter in the Farnsworth and Young book,[128] a chapter on the statute

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[122] 35 Cal. 2d 621, 220 P.2d 737 (1950).

[123] 51 Cal. 2d 409, 333 P.2d 757 (1958).

[124] E. FARNSWORTH & W. YOUNG, CASES AND MATERIALS ON CONTRACTS (4th ed. 1987).

[125] The map of part of that first chapter might then look like Table A *infra* at p. 507.

[126] *See* E. FARNSWORTH & W. YOUNG, *supra* note 124, at 127-252.

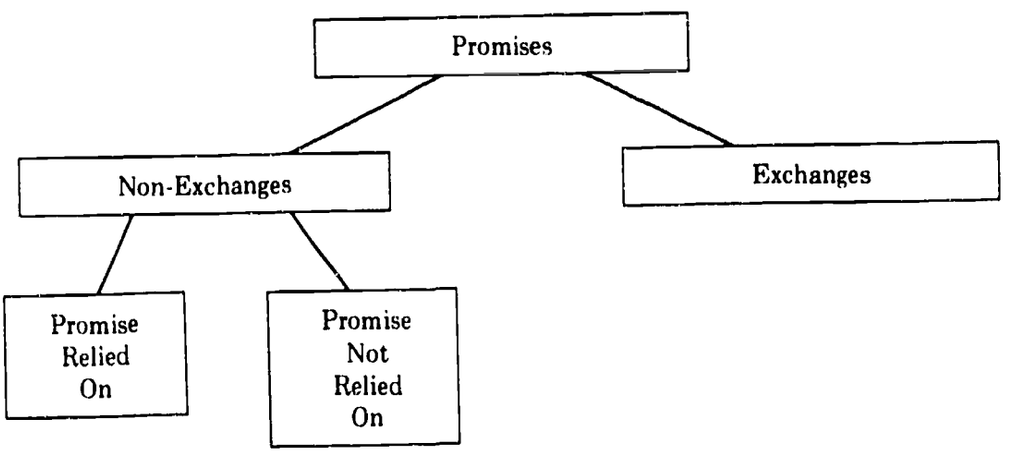
[127] The map of part of this second chapter might look like Table B *infra* at p. 508.

[128] *See* E. FARNSWORTH & W. YOUNG, *supra* note 124, at 253-88.

of frauds,[129] would be mapped by taking the Assent Present category and breaking it down into two categories, "Writing Missing" and "Writing Present." The Writing Missing category, of course, would then become two additional categories, "Relied On" and "Not Relied On."[130] To map the fourth chapter and last chapter in the first half of the Farnsworth and Young casebook,[131] a chapter essentially dealing with "defenses" to contract formation, students would divide the Writing Present category into two new categories, "Defenses Available" and "No Defenses Available." The Defenses Available category would then itself become categories called, "Relied On" and "Not Relied On."[132]

It should by now be clear that a map of these basic principles of a contracts course could easily fit on one page of legal-size paper.[133] Students should begin with a map of the basic principles of a course, then prepare more detailed maps to include secondary principles, cases, and professors' comments. The ability to draw such maps, it is suggested, is an extraordinarily valuable learning tool for law students, a tool much more valuable to them than the ability to create traditional outlines. Traditional outlines encourage students to look at their courses in a linear fashion and in the context of narrative text. Thus, when students prepare outlines, they see in their courses only verbal compendiums of isolated bits of knowledge; no generally

Table A



[129] *Id. See also* J. CALAMARI & J. PERILLO, THE LAW OF CONTRACTS 770-844 (3d ed. 1987) (discussing the statute of frauds).

[130] The map of part of this third chapter might look like Table C *infra* at p. 508.

[131] *See* E. FARNSWORTH & W. YOUNG, *supra* note 124, at 289-470.

[132] A map of part of the fourth chapter might look like Table D *infra* at p. 509.

[133] A skeletal map of the whole course might look like Table E *infra* at p. 510.

Table B

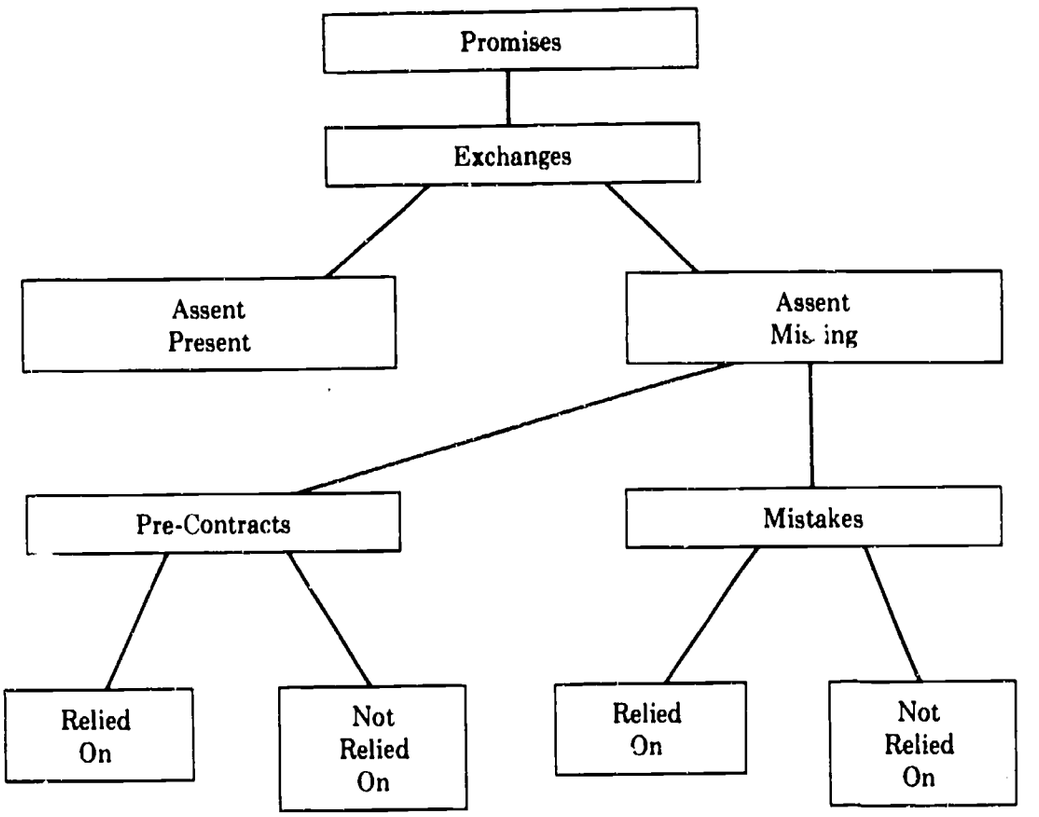


Table C

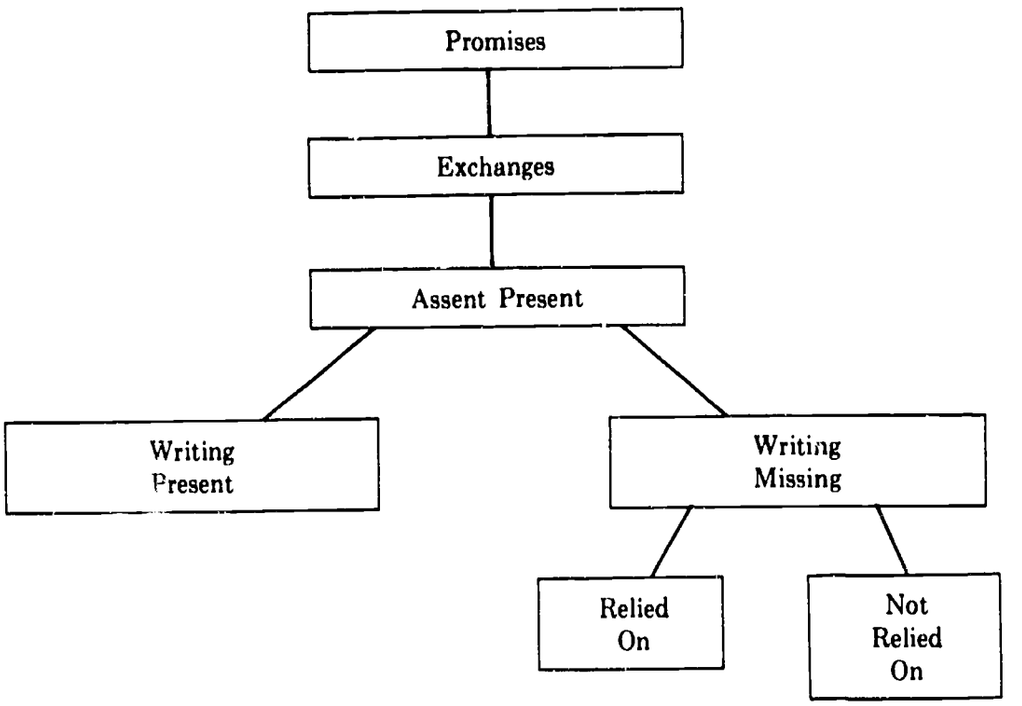
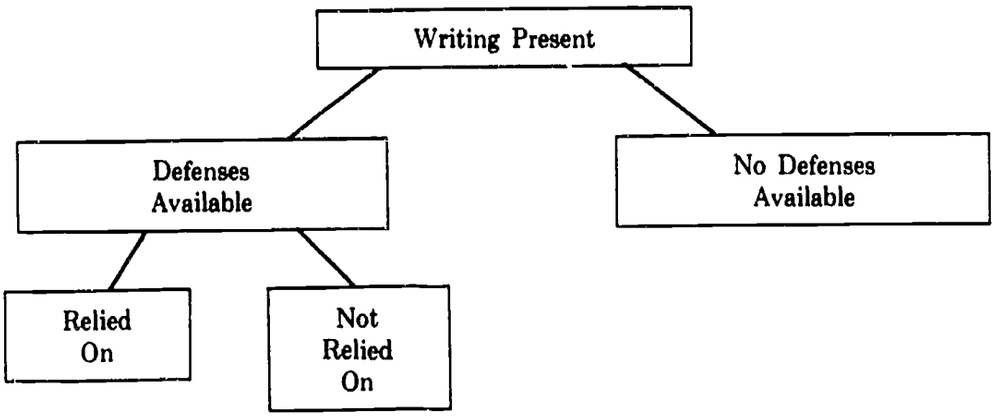


Table D



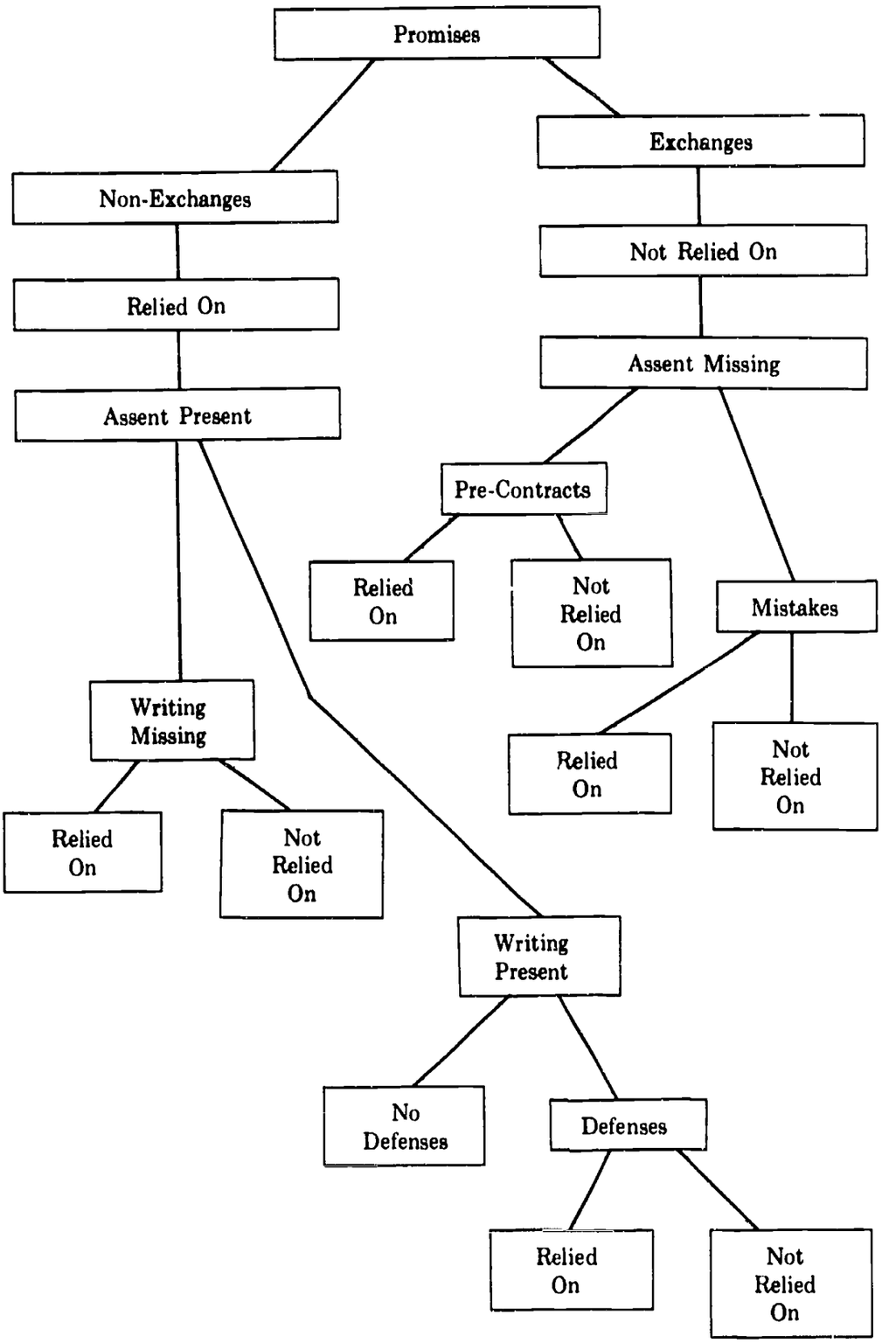
applicable rules or policies emerge. Conversely, graphic organizers provide students with a learning tool that allows the students to create visual images of the handful of core principles that link seemingly unrelated bits of knowledge. By forcing students to draw visual images of core ideas, therefore, graphic organizers help students develop constructed knowledge. Drawing them also helps students understand that learning itself is a process, which is infinitely flexible. Learning this second lesson, in turn, brings metacognition itself right to the forefront. Mapping, while perhaps more difficult to master than the SQ3R reading system and the 5R note taking system, is relatively simple to master when compared to the learning strategy of "problem solving."

F. Problem Solving

Law students are constantly confronting studying problems. They regularly ask themselves: "How do I find more time for Torts?" "How do I graciously get out of this awful study group?" "How do I get a better grade in contracts II than I got in contracts I when the same professor teaches both courses?" Although a great deal has been written on the subject,[134] the answers are rarely clear.

[134] The literature on problem solving is exhaustive. *See generally* G. DAVIS, PSYCHOLOGY OF PROBLEM SOLVING: THEORY AND PRACTICE (1973); E. GAGNÉ, THE COGNITIVE PSYCHOLOGY OF SCHOOL LEARNING 136-61 (1985); S. ISAKSEN & D. TREFFINGER, CREATIVE PROBLEM SOLVING: THE BASIC COURSE (1985); A. NEWELL & H. SIMON, HUMAN PROBLEM SOLVING (1972); D. PERKINS, THE MIND'S BEST WORK (1981); H. ROWE, PROBLEM SOLVING AND INTELLIGENCE (1985); J. SCANDURA, PROBLEM SOLVING: A STRUCTURAL/PROCESS APPROACH

Table E



WITH INSTRUCTIONAL IMPLICATIONS 235-315 (1977). The work of several well-known theorists in the area of creativity, notably Paul Torrance, has been collected and analyzed. CREATIVITY: ITS EDUCATIONAL IMPLICATIONS (J. Gowan, J. Khatena & E.P. Torrance eds., 2d ed. 1981) (discussing developmental character of the creative learner, and many other facets).

Regrettably, legal educators for the most part have not been able to do much to help students learn how to solve such studying problems. That is principally so, it is suggested, because legal educators typically do not possess knowledge about the problem solving process. Most legal educators probably learned how to solve problems by trial and error. Having learned this process by trial and error, however, most legal educators cannot be expected to consciously understand the underlying process of problem solving—a process that they may themselves unconsciously follow. Failing to understand that process themselves, they cannot teach it to students and they certainly cannot teach students about the metacognitive aspects of problem solving.

Twenty years ago, Robert Gagné, a social scientist, described the process of problem solving in terms that should be quite familiar to legal educators.[135] "The kind of human capability that is acquired in problem solving," he wrote, "seems to be a capability of *applying a rule* to any number of specific instances."[136] This is, of course, the kind of deductive reasoning that lawyers and law students use when they apply rules of law to newly encountered factual situations. Interestingly, Gagné believed that problem solving also involves induction.[137] "Problem solving," he notes, "is an inferred change in human capability that results in the acquisition of a generalizable

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Dr. Sidney Parnes, another well-known theorist, discusses much of his work in *Creative Problem Solving*. *See* Parnes, Creative Problem Solving (1979) (available from the Mankato State University Memorial Library in Mankato, Minnesota). This is a good summary of this major theorist's work.

A book of absolutely stunning originality and analysis is *The Mind's Best Work* by D.N. Perkins, *supra*, in which he discusses the operative characteristics of perception, understanding and memory. Professor Perkins finds considerable fault with much of the work that has been done in the context of both creativity and problem solving. Professor Perkins' book includes, incidentally, a brief discussion of the SQ3R reading system. *Id.* at 198-200.

For several of the best of a countless number of "how to" manuals on problem solving, see CREATIVITY AND LEARNING (J. Kagan ed. 1967); CREATIVITY: ITS EDUCATIONAL IMPLICATIONS, *supra*, at 99-108 (includes a creativity checklist); J. HAYES, THE COMPLETE PROBLEM SOLVER (1981); B. MITCHELL, A. STUECKLE & R. WILKENS, PLANNING FOR CREATIVE LEARNING (3d ed. 1983) (directed at elementary and high school teachers, but a teacher of higher education would also find the information useful); D. SHALLCROSS, TEACHING CREATIVE BEHAVIOR: HOW TO TEACH CREATIVITY TO CHILDREN OF ALL AGES (1981) (discussing creativity and its application to daily living). *See also* R. HOGARTH, JUDGMENT AND CHOICE 153-76 (2d ed. 1987) (a chapter entitled "Creativity, Imagination, and Choice" is most provocative). A number of writers on learning strategies have also discussed the process of problem solving. *See, e.g.*, 2 THINKING AND LEARNING SKILLS: RESEARCH AND OPEN QUESTIONS 127-213 (S. Chipman, J. Segal & R. Glaser eds. 1985).

[135] R. Gagné, *Human Problem Solving: Internal and External Events*, in PROBLEM SOLVING: RESEARCH, METHOD, AND THEORY 128-31 (B. Kleinmuntz ed. 1966).

[136] *Id.* at 131 (emphasis in original).

[137] *Id.* at 132.

rule which is novel to the individual, which cannot have been established by direct recall, and which can manifest itself in applicability to the solution of a class of problems."[138] In other words, Gagné's problem solvers, just like lawyers, initially create general rules (induction) and then apply those rules to specific factual situations (deduction).[139]

The overall process of problem solving begins with the process of "problem finding" or "problem definition."[140] Problem finding is the process through which problem solvers determine what problem or problems are presented by a set of facts. Successful problem finding usually occurs when people engage in a process of "divergent" rather than "convergent" thinking. Divergent thinking occurs when people think of many different ways to do the same thing.[141] In contrast, convergent thinking occurs when people limit their options. Good problem finders, it is thought, do not too quickly narrow or converge their thinking.[142] In short, they do not dive into problems.[143] Rather, they generally size up overall factual situations first, and while doing so generally consider various approaches to the definition of the problem in a qualitative way.[144]

These references to the process of divergent thinking reveal the cogency of Professor Ellen Gagné's observation[145] that problem solving consists of inductive as well as deductive reasoning. Facts themselves, problem solving theorists believe, do not simply contain pre-existing problems that problem solvers must discover. Rather, good problem solvers realize that a single set of facts can be read as creating all sorts of different kinds of problems. Because of this fact, problem finders who are temporarily blocked in their approach to defining or finding problems should simply "change the problem."[146]

Consider, for example, how convergent and divergent problem find-

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[138] *Id.*

[139] *See id.*

[140] G. DAVIS, *supra* note 134, at 97; S. ISAKSEN & D. TREFFINGER, *supra* note 134, at Five-1; D. PERKINS, *supra* note 134, at 183-87.

[141] See B. MITCHELL, A. STUECKLE & R. WILKENS, *supra* note 134, at 15; D. SHALLCROSS, *supra* note 134, at 70; Renzulli & Callahan, *Developing Creativity Training Activities*, in CREATIVITY: ITS EDUCATIONAL IMPLICATIONS, *supra* note 134, at 119-24.

[142] D. PERKINS, *supra* note 134, at 185.

[143] *Id.* at 186.

[144] *Id.* Interestingly, problem solving theorists are not the only people who study the idea of divergence. Learning strategy theorists also study divergence. *See, e.g.*, Moore, Weare & Leonard, *Training for Thinking Skills in Relation to Two Cognitive Measures*, 20 J. RES. & DEV. IN EDUC. 59 (1987). The authors discovered that college students taught divergent thinking skills scored higher on intelligence tests than control groups. *Id.*

[145] *See* E. GAGNÉ, *supra* note 134, at 128-32.

[146] D. PERKINS, *supra* note 134, at 217-18.

ing might work in connection with a factual situation regularly confronted by many law students.[147] Many students receive first semester grades in the first course of a two-course sequence that they do not find acceptable. And, many of these same students then immediately face the same professor for the second course in that sequence. Most students confronted by this set of facts will immediately define the problem they face as this: "How do I find more time to study for the second course?" When they so define their problem, however, these students demonstrate convergent thinking, a narrowing approach which amounts to poor problem solving activity.

Divergent thinking in the context of this studying problem can produce completely different results. For example, divergent problem finding in connection with the same set of facts might reveal that the actual problem presented might indeed be the one just posed: "How do I find more time to study for the course?" Divergent thinking would also reveal, however, that the problem itself might be something completely different: "Did I study *too much* for the first course?" "Did I study correctly for it?" "Did I panic on the exam?" "Do I lack the intellectual ability necessary to do better work in a class as competitive as this?" "Did the professor add up the points incorrectly on my first exam?" "Did I study with the wrong group of people?" The exercise of divergent thinking in connection with problem definition, theorists agree, is much more likely to lead students to productive solutions than is the exercise of convergent thinking.[148] More significantly, because it forces problem solvers to think about the mental process of problem solving, it encourages metacognitive activity.

Most problem solving theorists agree that once problems have been found or defined, ideas for solving those problems must be "generated."[149] How this generation of solutions should be done, however, is a matter of considerable debate. Some theorists believe that problem solvers should produce as many ideas as possible for solving each defined problem.[150] Such production, it is thought, brought about through techniques like "brainstorming," ultimately allows many possible solutions to be evaluated.[151] Limited searches result in limited

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[147] Students taught how to solve problems about studying accomplish two things simultaneously: they develop problem-solving skills and they solve important real life problems.

[148] *See* D. PERKINS, *supra* note 134, at 136-37, 185-86.

[149] *See* S. ISAKSEN & D. TREFFINGER, *supra* note 134, at Two-3 to Two-5; Parnes, *supra* note 134, at 2.

[150] Parnes, *supra* note 134, at 2.

[151] Brainstorming is divided into two phases: an idea generation phase and an idea evaluation phase. J. HAYES, *supra* note 134, at 205.

solution possibilities. Other theorists disagree with this approach. Techniques like brainstorming, these other theorists contend, usually produce quantity, but do so by sacrificing quality.[152] Professor Perkins, an important theorist in this second camp, has recently noted: "[T]he devising and quick acceptance of mediocre solutions is not a problem of short searches as such. This is only the superficial symptom. . . . It is a problem of not knowing or knowing and not maintaining standards. . . ."[153] Conscientious divergent thinking at the problem-finding stage quickly leads to a few workable solutions; therefore, a carefully formulated problem, Professor Perkins thinks, usually carries with it its own solution.[154]

The two-course sequence hypothetical discussed above reveals the cogency of Professor Perkins' point. Students who incorrectly define their problem as one involving "insufficient time" spent studying will only consider problem solutions involving time management. Then, regardless of the number of time management solution ideas that brainstorming may then produce, these students will not actually be able to solve their studying problem. Conversely, students who spend more time at the problem-definition stage, and who engage in divergent thinking at that stage, may soon realize that they spent plenty of time studying for the first course. Time-management solutions, therefore, need not be produced at all.

Theorists agree that problem solving ends with the evaluation of possible solutions.[155] During this evaluation step, problem solvers weigh the strengths and weaknesses of the various possible solutions.[156] Students who brainstorm will have to evaluate many ways in which the problem might be solved. Students who spend most of their time formulating the initial problem, however, will quickly proceed through this evaluation step.

Evaluation of problem solutions probably works most smoothly when problem solvers employ "checklists."[157] Checklists encourage

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[152] *See* D. PERKINS, *supra* note 134, at 142-43. For a contrary view, see E. GAGNÉ, *supra* note 134, at 144; J. HAYES, *supra* note 134, at 205.

[153] *See* D. PERKINS, *supra* note 134, at 143.

[154] *Id.* at 143-44; *see* S. ISAKSEN & D. TREFFINGER, *supra* note 134, at Five-1.

[155] D. SHALLCROSS, *supra* note 134, at 101.

[156] *Id.*

[157] Professor Davis, among others, alludes to the value of checklists in the context of creativity and problem solving by including checklists in his book. G. DAVIS, *supra* note 134, at 107-19; *see* D. SHALLCROSS, *supra* note 134, at 91-94. The following checklist, composed for problem solvers in the business world, can easily be used to evaluate possible solutions to law student studying problems.

Is the idea simple? Does it seem obvious?—or is it too clever?—too ingenious?—too

people temporarily caught up in the heat of intellectual discovery to slow down and systematically examine new ideas or facts in light of previously established criteria. Thus, checklists force students to concentrate on their own mental activities. Such concentration is an important aspect of metacogn ɔn, the key to all successful learning strategies.

G. Issue Spotting

Reference to studying techniques that might help law students learn the skill of "issue spot··g" is given only cursory treatment here. This is not in any sense meant to suggest that the skill of issue spotting is not a useful skill for law students. Rather, the discussion of issue spotting has been kept brief because students principally use issue-spotting skills while taking examinations and not while studying and learning.[158] Furthermore, issue-spotting skills principally rest on the ability to recognize and recall verbatim knowledge, an ability that is only one of many learning strategies. Finally, it is not focused

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complicated?

Is it compatible with human nature? Could your mother, or the man next door, or your cousin, or the service-station attendant, all accept it?

Is it direct and unsophisticated? Can you write out a simple, clear, and concise statement of it? Can you do this in two or three short sentences so that it makes sense?

Can it be understood and worked on by people of the average intelligence level found in the field?

Does your idea "explode" in people's minds? Does someone else react to it with "Now why didn't I think of that?" Can people accept it without lengthy explanation? If it does not explode, are you sure you have really simplified it?

G. DAVIS, *supra* note 134, at 115.

[158] The following question is typical of questions that appear on most law school exams:

While Mrs. Green was mowing her lawn, Mr. Walker, who was jogging by on a gravel path, shouted out to her: "Shut up you big fat slob. You're nothing but a big stupid [expletives deleted]." Mrs. Green then turned, glowered at Mr. Walker and started pushing the mower toward him. He moved off down the path and she followed him. The mower made a terrible racket as it reached the gravel path and then suddenly exploded. Debris from the explosion injured Mr. Walker, Mrs. Green, Sally, a six year old neighbor child who had been playing with her dolls in the middle of yet another neighbor's fenced in yard, and Susie, Mrs. Green's daughter who had been playing in her own yard.

Assume you are a judge called upon to decide this case. What results and why?

Law students answering an exam question like this one will, quite reasonably, try to apply the skills they have practiced all semester in briefing appellate court cases for class. They will immediately identify the one or two most important legal issues presented by the set of facts, focusing on the law pertinent to those issues. Thus, adhering to their classroom training, the students will give insufficient attention to the minor issues. Unfortunately, however, since many law school teachers—though surely not all such teachers—want students to spot as many issues as possible on exams, law students who follow classroom training when taking exams frequently will get only mediocre grades.

upon because a number of easily learned techniques for generating success in issue spotting exist, techniques that students can master without the benefit of the extended analysis provided in this article. Use of the "Rule of Twos," for example, is extremely helpful on issue-spotting examinations.[159] In addition, two different kinds of "checklist" procedures produce good results on these kinds of examinations.[160]

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[159] The Rule of Twos, which was called to my attention by Matthew Phillips, a former student of mine, suggests that law school examination questions that contain *two* parallel things of any kind—two parallel parties, two acts, two statements—should always generate answers with *two* separate lines of analysis. For example, on an examination question given by this writer recently in a contracts II class, possible third-party beneficiaries to contracts for a supply of water brought suit against two defendants, a municipality and a private water company, after water was not supplied to put out a fire. The Rule of Twos insists, quite correctly, that the liability of each defendant should be analyzed separately.

[160] The first checklist procedure, and by far the easier one to use, involves preparation and use of extremely concise course summary lists. These lists consist of no more than twenty or twenty-five items, each of which is described in no more than two or three words, and each can easily be prepared by reference to casebooks' tables of contents or topical indexes. After preparing these summary checklists, students can memorize them and then actually write them down on exam booklets or test sheets during the first two or three minutes of exams. This will insure that students will not forget items on the checklists during the exam. Then students can repeatedly look to these checklists for help. Reference to these short checklists will reveal the existence of subtle legal issues that the students would not have spotted if they had rushed through the exam relying on their memory of the checklist. For example, in a recent contracts I examination, this writer described at considerable length a writing prepared by one party to a transaction, a writing that contained little else but the quantity of Cadillacs involved in the transaction. Most of the students in the class correctly realized that this writing satisfied the requirements for a writing specified by Section 2-201 of the Uniform Commercial Code. Unfortunately, many of them overlooked the fact that buried away in the facts of the question was the comment that the Cadillacs were to be *rented*. A checklist approach would immediately have revealed this fact since checklists in contract classes would contain items like this, "UCC/Common Law?" In connection with the writing described in this particular examination question, the writing may be adequate under the Uniform Commercial Code but inadequate under the common law.

The second issue spotting checklist procedure is a procedure based on the usually overlooked ideas—indeed, often even ridiculed ideas—of Wentworth Miller. W. Miller, *supra* note 5. He distributes a privately printed book to law students who take his seminar on techniques for doing well on law school and bar exams. The procedure described below, which significantly modifies Miller's ideas, involves use of a checklist that creates, in effect, what I call a "Christmas tree" of analysis. This Christmas tree procedure, it must be noted most strenuously, is only useful when students have relatively long periods of time—perhaps forty-five minutes to an hour—in which to answer individual issue-spotting exam questions.

The Christmas tree approach requires students initially to analyze a law school question at five increasingly broad levels: (1) occurrences, (2) theories, (3) rules, (4) elements, and (5) application. This approach then requires them to narrow the analysis to (6) a policy discussion and (7) a conclusion. At the top of this issue-spotting Christmas tree students separately list—using some sort of shorthand—every significant factual "occurrence." For example, using the lawn mower hypothetical described *supra* note 158, this level would list among other things (1) Mrs. Green mowing; (2) Mr. Walker speaking; Mrs. Green (3) turning; (4) glowering; and (5) moving toward Mr. Walker; (6) Mr. Walker moving away; (7) Mrs. Green following, etc. At

III. Learning Strategies for Lawyering Skills

No one would much doubt that most lawyers are tremendously conservative when it comes to suggestions about change in the way they conduct their professional lives. Nor would anyone dispute that the same can be said of most teachers. Law school professors, therefore, can generally be expected to display resistance to change both as lawyers and as teachers. This fact, in turn, highlights two important observations. First, legal educators who wish to effect change in the way law school teachers generally teach students to learn must package their suggestions for change in highly traditional garb. Second, changes will come about in the law school community, if at all, only in tiny increments.

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the next level down on the Christmas tree, students would list—again employing some sort of shorthand—any possible legal "theory" that might arise from each of the occurrences listed at the higher level. Some occurrences, of course, will have several legal theories listed beneath them. Under Mr. Walker's speaking, for example, might be listed tort theories of (1) slander, (2) intentional infliction of mental distress, and (3) invasion of privacy. Under the occurrence of the mower's exploding, students might list theories of (1) negligence by Mrs. Green, (2) battery by Mrs. Green, (3) negligence by the mower distributor, (4) products liability by the manufacturer, and (5) warranty from the mower company. Naturally some occurrences might not have any theories listed below them at all (for example, the mowing itself).

This issue-spotting tree of analysis would continue to broaden as students descend to its third and fourth levels. Under each possible legal theory students would list as many legal "rules" as possible. For example, under the slander theory students might list the general common law rule, the rule of the *Restatement (Second) of Torts*, and the idiosyncratic minority rule of a particularly important jurisdiction. The same approach would be taken to all of the other theories. Each theory, in short, would be followed by several separate rules. At that point, an even broader level of analysis would be prepared at level four. Under each rule the various "elements" of the rules would be placed. At this point on the tree, surprising things might occur. For example, the elements of the *Restatement* rule might significantly differ on a particular point from the common law rule or the rule of a model statute.

It is only when they reach this point on the Christmas tree that students should begin "applying" the various rules to the facts. Here, many of the possible legal theories will be cast aside because pertinent rules simply do not support the theories. However, many subtle ideas that almost certainly would have escaped attention had a less thorough approach been used might be captured. For example, it may turn out that some idiosyncratic case from an important jurisdiction gives Mrs. Green some damages for slander in light of Mr. Walker's words, or a defense against his potential assault charges, despite generally accepted rules of law which might consider Mr. Walker's comments to be of no consequence whatsoever.

Christmas trees, of course, are narrow at the base. So too is this Christmas tree approach to issue spotting. It narrows as it discusses "policy" and then provides a "conclusion." It is in the context of policy, that this Christmas tree differs most from Wentworth Miller's checklist. Miller criticizes essay exams that stress policy analysis. *See* W. Miller, *supra* note 5, at 21-22. Quite frequently, similar underlying political or social policies explain several seemingly unrelated rules of law. For example, one general policy regarding risk avoidance might explain the rules of slander, the rules regarding negligence, and the rules of products liability. Students who spot these policy issues, as well as all legal and factual issues, tend to get the best grades. Finally, of course, the Christmas tree should state a conclusion. Law school teachers, like lawyers in general, are obsessed with the bottom line.

It is suggested that students who wish to succeed in law school and in practice must learn how to engage in two highly complex studying processes which augment the studying skills discussed in Part II of this article. These skills are discussed separately because they are particularly relevant to lawyering. The first lawyering skill is "legal analysis" which can perhaps best be taught by dividing it into its component parts. This process will be called "component" legal analysis. The second lawyering skill law students must learn is how to "brief" appellate court cases. As the following discussion illustrates, briefing cases is not nearly as straightforward a task as most law school teachers and professors and most law school study skill writers imagine.

A. Component Legal Analysis

Several years ago, this writer addressed a perennial problem faced by legal educators: "What exactly is legal analysis?"[161] In an essay filled with strange and even bizarre examples,[162] this writer argued that legal analysis—sometimes also known as "thinking like a lawyer"—could perhaps best be taught and understood if it were divided into several component skills.[163] Those component skills could be individually analyzed by law students and individually learned. Once individually learned, the component skills could be recombined into a total process.[164]

It will be helpful to this discussion to briefly review the principal ideas previously discussed in this article for two reasons. First, because the skill of legal analysis is such a crucial aspect of law school learning, techniques for learning that skill must of necessity be discussed in an article on law school learning strategies. That is particularly so when those techniques stimulate metacognition. Second, this writer's own thinking about component legal analysis has changed considerably since the earlier article was published. Most significantly, this writer's identification and definition of the individual component skills, and of the relationships between those skills, has

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[161] Wangerin II, *supra* note 10, at 423-64.

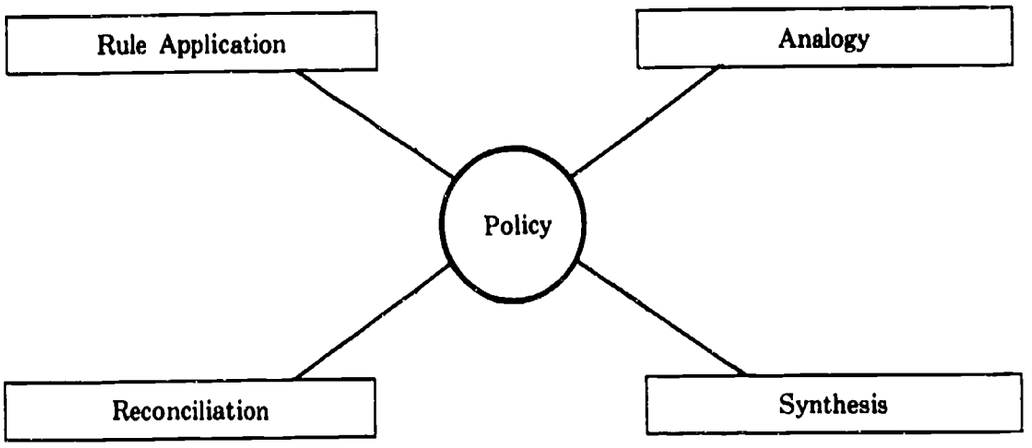
[162] The paper opened and closed, for example, with a description of a law school operated by the makers of the cult movie, "The Invasion of the Body Snatchers." *Id.* at 409-10, 484-85. Law school students were gradually lulled to sleep by their teachers. As soon as they fell asleep, however, they shriveled up and disappeared. Lawyers then emerged from "pods" hidden away in the musty backrooms of the library.

[163] *Id.* at 429-31.

[164] *Id.* at 431-64.

changed dramatically.[165]

The process of legal analysis can be divided into different component skills:[166] "rule application," "synthesis," "analogy," and "reconciliation."[167] Furthermore, each of those component skills rests implicitly or explicitly on yet another skill—the skill of evaluating relevant policy considerations. Structurally, legal analysis may be shown like this:



Rule application involves deductive application of authoritative rules to newly occurring sets of facts. Rules, in turn, tend to come in two forms. Legislative bodies promulgate statutory rules, and judges pronounce common law rules, or authoritative interpretations of statutory rules. Policy is the reason or purpose behind the statutory or common law rule. Rule application, it is suggested, is the easiest of the component skills to master.

Unlike the component skill of rule application, which involves only deduction, the component skill of synthesis consists of two kinds of thinking. First, synthesis involves the inductive merging of separate legal authorities—cases, statutes, scholarly materials, etc.—as support for general legal propositions or rules. It is the process by which legal writers initially create one rule out of several authorities. That general

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[165] Regrettably, when the earlier article was prepared, this writer did not know of, or at least did not realize the significance of, a stunning recent book by Professor Steven Burton. S. BURTON, AN INTRODUCTION TO LAW AND LEGAL REASONING (1985). Some of the changes that have occurred in my own thinking in this context since that earlier article was written have been stimulated by Professor Burton's work. My core ideas, however, remain the same as they were when the earlier paper was written, and more significantly, they remain quite different from Professor Burton's views.

[166] For somewhat different analysis built upon a similar underlying thesis, see Wangerin II, *supra* note 10, at 430-31.

[167] This terminology is original.

rule is then applied to the facts of specific legal problems. Thus, the second part of the component skill of synthesis, the deductive part, is simply rule application.

The component skill of analogy, though superficially similar to the component skills of synthesis and rule application, in fact significantly differs from both. Whereas both rule application and synthesis emphasize use of, or creation and use of legal rules, analogy uses only facts. Thus, at least conceptually, legal rules themselves play no role in connection with this skill. Users of the skill of analogy attempt to show that the facts of past cases are as similar as possible to the facts of present problems. If users of this component skill can set up a solid analogy, the principle of stare decisis requires that the result in the present case be the same as the result in the past cases.

Although most legal writers, such as judges, lawyers, and law students constantly refer to the idea of precedent, the component skill of analogy is rarely used. That is so because few legal writers actually and extensively compare the facts of past cases to the facts of present problems. Rather, when referring to past cases, legal writers almost always seek only to discover the rules of law explicitly or implicitly articulated in those past cases and then to apply those rules to present problems. Doing this, of course, is not necessarily a bad thing. This is rule application, however, and not analogy.

Policy plays a distinctly secondary role in connection with the skill of analogy. Policy explains the result in past cases, and justifies the rules articulated by the courts for these results. In connection with actual use of the skill of analogy, however, policy itself plays no express role. With this skill, only facts count.

The component skill of reconciliation is the mirror image of analogy. Reconciliation is the way in which an advocate conforms the reasoning of a contrary decision to reach the outcome desired. Often an advocate is faced with decisions in which the facts are similar to the facts of present problems, while the results are inconsistent with presently desired outcomes. Opposing lawyers use these cases as analogies. Reconciliation is a method for dealing with these bothersome cases.

Reconciliation involves three steps. First, users of this skill show that the facts of troubling past cases are subtly different from the facts of the present problem. This is called "distinguishing." Once the facts of past cases are distinguished from the facts of present problems, stare decisis does not require that the results be the same. Second, users of this component skill revert to the skill of synthesis, by *inductively* creating new legal rules that the previous cases can then be said to support. Although these new legal rules must naturally be consistent with the results in the past cases, they must also be

such that they produce the desired results in the present problem. Finally, users of the component skill of reconciliation *deductively* apply these newly formulated rules to the facts of the present problem.

It is suggested that law school students should learn as quickly as possible to develop law school learning strategies that in part examine appellate court opinions within the framework of the foregoing discussion of component legal analysis. For example, students should look at appellate court opinions for examples of the use of the different component skills of legal analysis just described—the skills of rule application, synthesis, analogy and reconciliation—and for the policy base upon which all the skills rest. In addition, students should criticize studied opinions for their failure to explicitly use these component skills. Likewise, students should learn to analyze law school casebooks for examples of these various component skills by comparing, for example, pairs of cases and analyzing those cases in light of the skill of analogy. Furthermore, when looking at groups of cases in casebooks—whole sections in particular chapters, for example—students should think of those cases in light of the skill of synthesis.

Use by law students of learning strategies involving examination of studied materials in the manner just described forces students to quickly come to grips with the "forms" of legal arguments as well as with the "content" of those arguments. Analysis of these forms, in turn, will bring to the surface of these students' consciousness the idea that thinking itself comes in many different forms. Sometimes, for example, thinking simply involves deductive application to new situations of already known information. Other times, however, thinking involves creation of new information and application of that new information to new situations. Furthermore, thinking may also involve manipulation of factual ambiguities, rules, or principles of law. At other times, however, it involves manipulation of concrete reality or facts. Awareness by students of these different kinds of thinking, of course, produces metacognition.

"Rewriting" is a particularly effective learning strategy which may employ some or all of the foregoing analysis. This strategy, which in a sense is a supplement to normal case briefing, takes advantage of most law students' desire to play the role of lawyer as quickly as possible. Students using the rewriting learning strategy begin by assuming that they represent the losing side in an appellate court opinion studied for a traditional law school class. They then can develop one or more legal arguments that could lead to an opposite decision in the case.

Students just beginning to use this learning strategy should simply rewrite the legal arguments actually used by the losing litigants. This

is helpful to students who have not yet figured out how to go beyond the ideas directly presented. Initially, this exercise is meant to show the student that whatever the book or the teacher says, and by extension whatever the litigants in studied cases say, is "the answer." Once students become adept at analogizing, synthesizing, reconciling and applying rules of law, however, they begin to realize that the thinking processes in which they can personally engage in the course of rewriting often surpasses in quality of the work done by lawyers and judges. In short, what began as a simple exercise of copying legal opinions becomes a creative attempt to write a better-reasoned opinion.

B. "Briefing" Cases

Numerous legal educators have provided "model" briefing formats.[168] Most of these models either explicitly or implicitly build on Karl Llewellyn's ideas about case briefing.[169] Perhaps the best known of these models are the ones described by Professors Mentschikoff and Stotzky and by Professors Statsky and Wernet. In their now somewhat dated book, *The Theory and Craft of American Law: Cases and Materials*,[170] Professors Mentschikoff and Stotzky suggest that case briefs should have nine separate parts: (1) case name and citation; (2) statement of the case (who is suing whom for what on what basis); (3) procedural aspects of the case; (4) statement of facts; (5) issue; (6) result on appeal; (7) holding; (8) reasons; and (9) additional points (which according to these writers should include among other

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[168] For an example of such models, see C. KELSO, A PROGRAMMED INTRODUCTION TO THE STUDY OF LAW, PART I: CASE SKILLS, Booklet, 26, 35-37 (1965).

For the description of a similar briefing system, see E. THODE, L. LEBOWITZ & L. MAZUR, CASES AND MATERIALS FOR USE IN INTRODUCTION TO THE STUDY OF LAW 49-59 (1970) (describing six steps to be used: identifying the case, designating the parties and facts, stating the issue, writing the holding, discussing the reasons, and evaluating the decision). This analysis adds an "evaluation" step to the end of the briefing model. *See also* K. HEGLAND, INTRODUCTION TO THE STUDY AND PRACTICE OF LAW 94-110 (1983) (nutshell series) (providing an interesting "checklist" of common problems with briefs). For simplified discussions of other, albeit similar, briefing systems, see S. KINYON, *supra* note 5, at 51-54; F. STONE, HANDBOOK OF LAW STUDY 71-73 (1952) (briefly alluding that different briefing formats should be used in different classes); Jacob, *Developing Lawyering Skills and the Nurturing of Inherent Traits and Abilities*, 12 STETSON L. REV. 541, 577-91, *reprinted in* MAXIMIZING THE LAW SCHOOL EXPERIENCE (M. Snygert & R. Batey eds. 1987) (including some comments on briefing).

[169] K. LLEWELLYN, *supra* note 4, at 41-55.

[170] S. MENTSCHIKOFF & I. STOTZKY, THE THEORY AND CRAFT OF AMERICAN LAW—ELEMENTS (1981).

things dissenting and concurring opinions).[171] In a more recent and comprehensive work on the topic of case briefing,[172] Statsky and Wernet spend over a hundred pages providing examples of how their briefing system works and detailing exercises that teachers can use to help students learn it. These authors suggest that briefs, whether "comprehensive" briefs or "thumbnail" sketches, should contain eleven points: (1) citation; (2) parties; (3) objectives (what each side is seeking); (4) theory of the litigation (the cause of action and the defense); (5) prior proceedings; (6) facts; (7) issue or issues; (8) holding or holdings; (9) reasoning; (10) disposition; and (11) commentary.[173]

Notwithstanding their apparent comprehensiveness, these models for case briefing do not reflect a number of important ideas presented in the world of legal education and learning theory. For example, these models for case briefing place little or no emphasis on something that Llewellyn himself calls the most important aspect of case briefing. Llewellyn noted that students cannot understand individual cases without understanding the integral relationship of each individual case in a casebook to cases that precede and follow it.[174] Llewellyn was describing what is referred to above as the component skill of synthesis.[175] The Mentschikoff-Stotzky and Wernet-Statsky briefing models pay at most lip service[176] to this crucially important idea.[177]

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[171] *Id.* at xxix-xxxv. A slightly different version of this same briefing format is contained in a book by Gertrude Block, a writing specialist. *See* G. BLOCK, EFFECTIVE LEGAL WRITING: A STYLE BOOK FOR LAW STUDENTS AND LAWYERS 83-86 (2d ed. 1983).

[172] W. STATSKY & R. WERNET, CASE ANALYSIS AND FUNDAMENTALS OF LEGAL WRITING 85-206 (2d ed. 1984). This very useful book was designed for use in a special class or seminar on case briefing for law students. A similar book has been written by Professor John Delaney. J. DELANEY, HOW TO BRIEF A CASE: AN INTRODUCTION TO JURISPRUDENCE (1987).

[173] W. STATSKY & R. WERNET, *supra* note 172, at 90-96. Although their briefing format is similar to that of Mentschikoff and Stotzky, Statsky and Wernet do not refer to them. *See id.*

[174] K. LLEWELLYN, *supra* note 4, at 49-52.

[175] *Id.*; *see supra* notes 147-54 and accompanying text (discussing synthesis).

[176] To be sure, both of these sets of authors acknowledge the importance of linking individual cases to groups of cases. Professors Statsky and Wernet, for example, suggest inclusion of reference to other cases in their 11th point, "commentary." W. STATSKY & R. WERNET, *supra* note 172, at 91. Furthermore, Statsky and Wernet note in their introduction that much work has been done emphasizing this point of "synthesizing" cases and that their book for the most part consciously ignores the issue. *Id.* at xiii. Nevertheless, synthesis is by no means stressed in this book, nor, for that matter is it stressed in the book by Mentschikoff and Stotzky.

[177] Professor Llewellyn's words regarding synthesis deserve quotation.

> Briefing, I say, is valuable. Briefing, I say, is well nigh essential. Briefing is also the saddest trap that ever awaited a law student, if he does not watch his step. For the practice under pressure of time, as eyes grow tired in the evening, or the movies lure, is to brief cases *one by one*, and therefore blindly. Now if I have made one point in this discussion it should be this: that a case read by itself is meaningless, is nil, is blank, is blah. Only after you have read the second case have you any idea what to do with the first. . . . Each brief should be in terms of *what this case adds to what I already know about* this subject. . . . As you

Furthermore, model briefs such as those just described do not encourage students to engage in metacognitive activity. Nor do such models implicitly or explicitly acknowledge that different law school professors have wildly different ideas about what is important in the law or what is important in learning about the law.

Even more serious than this shortcoming is the failure of these models to recognize that at least two completely different approaches to legal education exist at the present time among legal educators in the United States. Moreover, these models fail to acknowledge that two fundamentally different methods of case briefing exist.

Most law school professors lean towards one end or the other on a spectrum differentiating legal education as a process principally for teaching inductive reasoning from legal education as a process mainly

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pass to the third case and fourth case, you have accomplished nothing unless both in your reading and your briefing of them you work at them with reference to the cases that have gone before. What does the case *add, what difference does it make*, to what I already know? That is the keynote of the brief. For this same reason, when you ever do any research in law, you must distrust your briefs, and distrust most the earliest ones you made. The earlier in the research the brief was made, the less you knew when you made it; hence, the more worthless it is. Read through the first-found case again, and see! The chances are the first half of the briefs made in any one job of research belong on the ash-heap. The cases blossom under further study, under new reading. They yield more wisdom as your wisdom grows.

K. LLEWELLYN, *supra* note 4, at 54 (emphasis in original). *See* N. DOWLING, E. PATTERSON & R. POWELL, MATERIALS FOR LEGAL METHOD 163-64 (2d ed. 1952) (discussing more comprehensively the idea of synthesis). Dowling and his co-authors have had the following to say on the subject:

[T]he word "synthesis," denotes a "putting together," that is, a determination of the net consequences of two or more contributing factors. Thus the synthesis of decisions requires relational thinking, that is, the determination of what each case contributes to the whole picture in which each decision, is one element. This process of synthesis constitutes the most important single ingredient in legal thinking. Cases are matched, or compared for any one of many purposes. Sometimes the objective is to gain exactness in the formulation of a rule of law. Each added case reveals some new application or some new restriction of the rule under consideration. Sometimes the objective is the very simple one of revealing the existence of inconsistent rules, one accepted in some states, the opposite one in others. Sometimes, and most commonly in the work of a law student, the objective is to show how a rule has evolved, changing *in statement* as new and varying circumstances raise new facets of the problem for decision, or changing *in substance* as a response to changing social and economic factors.

In your law school case books, it is rare to find a single case which is unrelated to its predecessors and successors. Your task, as a seeker after legal skill and knowledge, is to discover the relations between these cases and to do it *before* the instructor has a chance to tell you the relation. What you do for yourself in such relational thinking, exercises, trains and develops *your* mind. What you soak up from the instructor's synthesis may distend and bloat you temporarily and may even help you to pass an examination (if it comes soon enough), but it adds little, if anything to your development as a legal thinker.

Id. at 163-64 (footnotes omitted) (emphasis in original); *see also* H. JONES, J. KERNOCHAN & A. MURPHY, LEGAL METHOD CASES AND TEXT MATERIALS 132-34 (1980) (discussing synthesis).

for teaching deductive reasoning.[178] An understanding of the differences between these two approaches, in turn, is crucial to an understanding of law school learning in general, and case briefing in particular.

Many present day law school professors—perhaps the majority—encourage students, particularly first year students, to focus primarily on developing inductive reasoning, a skill exemplified by what has been defined as the component skill of synthesis. This is accomplished by requiring students to use specific bits of information, principally appellate court opinions, as tools for formulating generally applicable rules of law.[179] This method of teaching flows directly from the classic case method of teaching used by Dean Langdell and his early twentieth century successors.[180] This method came into existence, and then flourished, when common law in fact was the principal source of law.[181] All of the models described above for law school case briefs reflect this approach to legal education. All of these models view appellate court opinions principally as tools that students can use inductively to discover general principles of law. Thus, all of these models place emphasis on "issue" definition, and on "rules" and "holdings" stated by courts. Additionally, these models emphasize the "reasoning" of the court itself. These briefing models suggest that analysis of specifics leads students inductively to formulation of general rules of law.

Despite the historical validity of the teaching method just described, not all law professors presently believe that law school is principally a place to teach inductive reasoning. In fact, many present day law school teachers encourage students, including many first-year students, to focus primarily on deductive reasoning, which is exemplified by the component skill of rule application previously described. Teachers

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[178] The following analysis was in part prompted by the "cases/rules" dichotomy described by Professor Steven Burton in his book on legal reasoning and by his discussions of "analogical" and "deductive" forms of legal reasoning. S. BURTON, *supra* note 165, at 11-24. This writer's colleague, Donald Beschle, has also spent many hours discussing the two different kinds of approaches to legal education described below. Professor Beschle principally uses the "induction" method of legal education whereas this writer primarily uses the "deduction" method.

[179] Admittedly, teachers using this method also force students to engage in deductive reasoning when they ask students to apply newly formulated general rules to new hypothetical factual situations. These teachers, however, for the most part use this kind of deductive exercise only as a prelude to additional attempts at induction.

[180] E. THODE, L. LEBOWITZ & L. MAZUR, *supra* note 168, at 5-17 (quoting Patterson, *The Case Method in American Legal Education: Its Origins and Objectives*, 4 J. LEGAL EDUC. 1 (1951)).

[181] The case method of teaching is discussed at length in two of this writer's earlier articles. *See, e.g.*, Wangerin III, *supra* note 81; Wangerin II, *supra* note 10, at 433-38, 442-48 (discussing the case method of instruction).

who take this approach to legal education do not encourage students to spend most of their studying time formulating new general rules. Rather, they encourage students to think about problems generated by the application of already known general rules of law to specific factual situations. This is because these teachers believe that judges, lawyers and law students in the late twentieth century function in a world in which statutes, cases, restatements, hornbooks, treatises and commercial outlines already provide explicit formulations of the specific rules of law applicable in factual situations. In short, these teachers think law students must concentrate on learning how to use already existing authorities rather than on how to generate new authorities.

None of the previously described case briefing models can be effectively used by students in classes taught by law school teachers who view legal education as principally stressing deductive reasoning. This is so because, as noted earlier, all of those models rest upon a view of law school as a place in which teachers tend to encourage the development of inductive reasoning.

Two radically different general models for law school case briefing should by now be seen taking shape, models that will be called the "induction" and "deduction" models. The induction model closely resembles the briefing models of Mentschikoff-Stotzky and Statsky-Wernet. Indeed, it differs from those models only in that it explicitly adds three elements: "synthesis," "course characteristics," and "metacognition."[182] The deduction model, however, differs significantly from the briefing models described earlier, at least after preliminary procedural matters are finished. This model suggests that the substantive portion of case briefs should *begin* with a statement of the authoritative rule or principle of law generally applicable to the kind of factual situation at issue and an explicit reference to the statutory, common law or treatise source from which that rule or principle had been drawn. The facts of the case studied, the issue, and the specific holding would follow the statement of the general rule or principle rather than precede it. Furthermore, unlike the induction model, in which the reasoning portion of the brief requires students to focus on how the studied case itself produced a particular rule of law, the reasoning portion of the deduction model requires students to focus on problems incident to application of a known general rule to the specific facts of the case studied.

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[182] The metacognition step might call for students to evaluate the brief that they have just completed according to a short checklist, a checklist that would force students to engage in metacognitive activity.

An apparent anomaly in these case briefing models deserves some explanation. In the descriptions of both of those models, no reference was made to requiring students to discuss policies that lie behind particular rules of statutory or common law. This omission, of course, does not reflect a belief in the unimportance of policy. Indeed, as the earlier discussion of component legal analysis suggested, policy is the linking core of the four individual component skills. Rather, the omission of policy from the model briefs reflects a belief that students can only learn how to do difficult things—to formulate and apply policy, for example—after they have learned to do simpler things—to formulate and apply statutory or common law rules, for example. Plenty of time exists during law school classes to move students beyond the cognitive points at which they start. Perhaps in law school, as in life, students should learn about the intrinsic value of rules and laws—a value principally generated, of course, by the ability of rules and laws to enable heterogenous people to live side by side in relative harmony—before they learn that policies or purposes lying behind rules and laws sometimes require disobedience of the rules and laws themselves.[183]

CONCLUSION

Legal educators and writers of study skills materials have become accustomed to teaching their courses and writing their "How to" books without reference to metacognition, the activity that theorists of studying accept to be the most important factor in effective learning and studying. In addition, many of these educators do not understand the processes of good studying and learning. Therefore, they cannot adequately warn students away from useless studying techniques nor can they adequately encourage students to use good studying methods.

This article attempts to fill the void in legal literature and law school teaching practices by discussing learning strategies adaptable to the particular problems that arise in law school teaching. Several study strategies have been suggested that will assist legal educators in understanding the metacognitive processes that students are likely to find most helpful for the courses they teach. By recommending these strategies to their students, legal educators can facilitate students' understanding of substantive areas of the law. Students, on

[183] The ideas alluded to in these last phrases are explored at considerable length in Wangerin I, *supra* note 8.

the other hand, will find the learning strategies discussed in this article helpful in designing their own autonomous learning plans. Law students can choose among the various reading, note taking, and studying methods to formulate an overall learning strategy best suited to their needs and interests. By taking advantage of the suggested methods, law school teachers and students can dramatically enhance the effectiveness of their teaching and learning.