PROBLEM SOLVING: AN ANNOTATED BIBLIOGRAPHY

2nd Edition
August 2005

By
PHYLLIS C. MARION

In 1997, California Western School of Law began a concerted effort to implement its mission "to graduate creative problem-solvers committed to the improvement of our legal system and society."[1] As part of that effort, I began to compile a bibliography of materials on problem solving to assist both the faculty in its research and the library in collection development.

The bibliography covers English-language monographs, books and journal articles (both academic in nature and from the popular press) on problem solving in general from a variety of disciplines such as psychology, education and the management sciences.   It also includes monographs, books and journal articles about problem solving in legal education and legal practice. It does not include materials on particular types of problem solving within law, such as negotiation, mediation, ADR, or problem-solving courts. This second edition cumulates titles from the earlier edition and its supplement and covers materials published through mid-2005.

I have briefly annotated each entry. When possible, I have included a quote from the work that I feel gives a sense of its emphasis and flavor. If a monograph is available in the California Western School of Law Library I have included its call number.

The bibliography is a work in progress. It will be updated regularly through the California Western School of Law Library's web page found at http://www.cwsl.edu/library.

---

[1] California Western School of Law Mission Statement.

I. PROBLEM SOLVING IN THE LEGAL PROFESSION: MONOGRAPHS

ABRAMSON, Harold I.
   Mediation representation : advocating in a problem-solving process. Notre Dame, Ind. :
   National Institute for Trial Advocacy, 2004.
   KF9084 .A895 2004
   The author focuses on mediation as a creative problem-solving approach that searches for
answers to benefit all the parties involved.

AMERICAN BAR ASSOCIATION TASK FORCE ON LAW SCHOOLS AND THE
   PROFESSION: NARROWING THE GAP. Legal Education and Professional Development
   — an Educational Continuum. Chicago, IL: American Bar Association, 1992.
   KF272.A49 (Problem Solving Collection)
   Known as the MacCrate Report, this report lists problem solving as one of the fundamental
lawyering skills. It goes on to identify five underlying skills in problem solving: "identifying and
diagnosing a problem, generating alternative solutions and strategies, developing a plan of action,
implementing the plan, and keeping the planning process open to new information and ideas". (p.
142)

AMERICAN LAW INSTITUTE-AMERICAN BAR ASSOCIATION COMMITTEE ON
   CONTINUING PROFESSIONAL EDUCATION. Teaching for Better Learning: Adult
   Education in CLE. 1st ed. Philadelphia, PA: American Law Institute-American Bar
   Association Committee on Continuing Professional Education, 1999.
   KF275.T43 1999 (Problem Solving Collection)
   Of particular interest is the section which discusses participant-generated problems, which
are seen as an opportunity for lawyers to address the complex problems they are facing and to learn
problem-solving strategies from experts and peers.

AMSEL, Eric, et al. "Do Lawyers Reason Differently from Psychologists?: A Comparative Design
   for Studying Expertise." Complex Problem Solving: Principles and Mechanisms. Eds.
   Robert J. Sternberg and Peter A. Frensch. Hillsdale, NJ: Erlbaum, 1991. 223-250.
   BF449.C66 1991 (Problem Solving Collection)
   The authors begin with the premise that lawyers are experts in solving complex problems
within their area of expertise, as are psychologists. They then examine the question of whether the
education and experience of lawyers leads them to solve the same problem differently than experts
in other professions. That is, is there a uniquely legal style of reasoning and problem solving?

ASSOCIATION OF AMERICAN LAW SCHOOLS COMMITTEE ON TEACHING METHODS.
   "Report of the Committee on Teaching Methods, 1966: The Problem Method, Survey and
   Appraisal. Proceedings, Association of American Law Schools 1966 Annual Meeting, pt.
   1. Washington, D.C.: American Association of Law Schools, 1966. 198-266.
   KF263.A87
   The Report is an analysis of the results of an inquiry into the rise of the problem method (as
opposed to the case-method) of instruction in American law schools in the mid-1960s. It defines

the focus of the problem method as analysis of the problem(s) posed, not as an analysis of solutions already rendered.

BASTRESS, Robert M. & Joseph D. HARBAUGH. Interviewing, Counseling and Negotiating: Skills for Effective Representation. Boston, MA: Little, Brown, 1990.
KF311.B38
The authors discuss several models, other than the adversarial model, that may be used to provide effective representation for a client.

BENNETT, Merit. Law and the Heart: A New Paradigm for Lawyer-Client Relationships. Sante Fe, NM: The Author, 1994.
K126.B45
Law and the Heart is a series of essays discussing the psychological framework underlying the interaction between lawyer and client. It reflects the author's philosophy that a lawyer must "expand...[his/her] awareness of the intrinsic laws of human relationship....by understanding the mind's habits and by re-introducing intuition through the feeling heart." (p. 3)

BINDER, David A., et al. Lawyers as Counselors: A Client-Centered Approach. St. Paul, MN: West Pub. Co., 1991. (American Casebook Series)
KF311.B48 (Storage)
This casebook is a practical guide to a client-centered approach to problem solving. "More than a set of techniques, the client-centered approach is an attitude of looking at problems from clients' perspectives, of seeing problems' diverse natures and of making clients true partners in the resolution of their problems." (p. xxi)

BROWN, Louis M. Lawyering through Life: the Origin of Preventive Law. Littleton, CO: Rothman, 1986.
KF373.B745A35 (Problem Solving Collection)
Lawyering through Life is the autobiography of the lawyer who first used the term "preventive law" to describe his belief that a major concern of the lawyer should be to prevent legal problems for his clients.

COSTANZO, Margot. Problem Solving. London, Eng.: Cavendish Pub. Ltd., 1995. (Essential Legal Skills)
K116.C67 (Problem Solving Collection)
Costanzo's work is intended for Australian law students, but the methodology advocated for teaching problem-solving skills is applicable to any course of legal studies. The author distinguishes between creative thinking ("search for new knowledge and new methodologies") and problem solving ("applying established professional knowledge and methodologies to solve a problem"). (p. 3)

FREUND, James C.   Lawyering: A Realistic Approach to Legal Practice. New York, NY: Law Journal Seminars Press, 1979.

KF300.F73 1979

Chapter 2 addresses the lawyer as problem solver: which problems come to the lawyer, the reflective process for addressing the problem, and the application of analytical reasoning to non-legal problems.

GALANTER, Marc & Thomas PALAY. Tournament of Lawyers: The Transformation of the Big
Law Firm. Chicago, IL: University of Chicago Press, 1991.
KF300.G35

This history of the emergence of the big law firm documents the changes of the last 20 years, many of which the author finds disturbing. Chapter 6 presents a brief inquiry into the future shapes of law practice, mentioning a new emphasis on problem solving.

GUINIER, Lani, et al. Becoming Gentlemen: Women , Law School, and Institutional Change.
Boston, MA: Beacon Press, 1997.
KF287.G85 (Problem Solving Collection)

The authors assume that lawyers are basically problem solvers. They then go on to address the question: "Are conventional teaching methods and assessment techniques predictive of the kinds of work, the kinds of relationships, the kinds of collaborative approaches to solving private and public problems that lawyers will need in the future?" (p. 5)

HALL, Lavinia, ed. Negotiation: Strategies for Mutual Gain. Newbury Park, CA: Sage
Publications, 1993.
BF637.N4N44 (Problem Solving Collection)

Based on the basic seminar of the Harvard Program on Negotiation at Harvard Law School, this work, while dealing mainly with conflict management, " is about breaking the paradigm of winning and losing and transforming negotiation into a search for improved solutions to problems." (p. viii) Of particular interest is chapter 3, Facilitated collaborative problem solving and process management, by David Strauss.

HARTJE, Jeffrey H. & Mark E. WILSON. Lawyers' Work: Counseling, Problem Solving,
Advocacy and Conduct of Litigation. Seattle, WA: Butterworth, 1984.
KF8915.H38

Lawyers' Work is often cited by other works which discuss problem solving as a major component of the lawyer's work. Chapters 1 and 2 are of particular interest.

HAYDOCK, Roger S., et al. Lawyering: Practice and Planning. St. Paul, MN: West Pub. Co.,
1995. (American Casebook Series)
KF300.L38

This casebook concentrates on the skills listed in the ABA's MacCrate Report, including problem solving. It considers the many roles of the lawyer, among which are wise counselor, problem solver and technician.

HEALD, Paul J., ed. Literature and Legal Problem Solving: Law and Literature as Ethical
Discourse. Durham, NC: Carolina Academic Press, 1998.

PN56.L33L57 1998 (Problem Solving Collection)

"The essential connection of law to the question of how we should live, even when legal discourse obscures the connection, makes the study of literature relevant to law. Why? Because fiction is an undeniably rich collection of studies in the appropriateness of human action." (p. 4) "In other words, relevant raw materials for solving some legal problems may be found in novels, drama and mythology." (p. 4) Each essay in this book attempts to address a single legal problem in light of a particular legal work.

JONES, Philip A., et al. Lawyers' Skills. London, Eng.: Blackstone Press Ltd., 1998.
KD474.Z9L39 1998 (Problem Solving Collection)
Section 1, Legal Research and Problem Solving, discusses the use of research to solve a specific client's problem and provides a framework for doing so.

KRIEGER, Stefan, et. al. Essential Lawyering Skills: Interviewing, Counseling, Negotiation, and Persuasive Fact Analysis. Gaithersburg, NY: Aspen Law and Business, 1999.
KF300.E84 1999
"Most of the thinking that lawyers do consists of (1) *diagnosing* what is happening now, (2) *predicting* what will happen in the future, or (3) creating and implementing *strategies* to control what happens in the future." (p. 31, author's italics) Of particular interest is chapter 4, Lawyering as problem-solving.

KRONMAN, Anthony. Lost Lawyer: Failing Ideals of the Legal Profession. Cambridge, MA: Belknap Press of Harvard University Press, 1993.
KF300.K76
An intriguing look at what this lawyer feels is the lost ideal of the lawyer: the lawyer-statesman who was a problem solver. The lawyer counseled clients, helped them avoid disputes, and facilitated resolution of disputes if necessary.

LAWRENCE, Jeanette A. "Expertise on the Bench: Modeling Magistrates' Judicial decision-Making". Nature of Insight. Eds. Michelene T.H. Chi, et al. Hillsdale, NJ: Lawrence Erlbaum Associates, 1988. 229-259.
The author presents a cognitive model for judicial problem solving based on her research in the Australian criminal courts. She concludes that "judging can be regarded as a specialized professional problem-solving domain amenable to cognitive modeling, but with special features related to the ill-defined nature of its problem space." (p. 229)

LEVINE, Stewart. Getting to Resolution: Turning Conflict into Collaboration. San Francisco, CA: Berrett-Koehler Publishing, 1998.
KF9084.L48 1998
The author contends that resolving clients' problems so that they can get back to their lives

should be the real focus of the lawyer, not winning or losing. He addresses how to change one's thoughts about conflict and provides a model for resolution of conflict.

LÓPEZ, Gerald P. Rebellious Lawyering: One Chicano's Vision of Progressive Law Practice.
Boulder, CO: Westview Press, 1992. (New Perspectives on Law, Culture, and Society)
KF390.5.P78L66 1992

López describes, primarily through story-telling, the type of activist lawyering which he believes will bring about fundamental changes for those who are disadvantaged in our society. Much of which he discusses involves creative problem solving.

MAUGHAN, Caroline & Julian WEBB. Lawyering Skills and the Legal Process. London, Eng.:
Butterworths, 1995.
K116.M38 (Problem Solving Collection)

This work is based on the authors' teaching of 2nd and 3rd year LLB students at the University of the West of England. Two particularly applicable chapters are: chapter 3, Problem-solving: (i) The practical dimension; and chapter 4, Problem-solving: (ii) The business and ethical dimensions.

MCCORMACK, Mark H. What I Should Have learned at Yale Law School: The Terrible Truth
about Lawyers. New York, NY: Avon Books, 1988.
KF311.Z9M39 1988

McCormack, who is also the author of What They Don't Teach You at Harvard Business School, looks at the practical side of lawyering. While not specifically labeled problem solving, the approach advocated is creative problem solving in the business-client relationship.

MNOOKIN, Robert H., et al. Beyond Winning: Negotiating to Create Value in Deals and
Disputes.   Cambridge, MA: Belknap Press of Harvard University Press, 2000.
K120.M66 2000 (Problem Solving Collection)

Believing that negotiation is central to lawyering, the authors make the case "that a problem-solving approach to negotiation offers the most promising means of creating value." (p. ix)

NATHANSON, Stephen. What Lawyers Do: A Problem-Solving Approach to Legal Practice.
London, Eng.: Sweet and Maxwell, 1997.
K116.N37 (Problem Solving Collection)

What Lawyers do is British in focus, but it is easy to generalize the approach to other legal education systems. There is some emphasis on two aspects of problem solving: playing-out conflict and conflict blocking. The author provides a problem-solving theory that can be applied to the learning of law, to the practice of law, and to the teaching of law.

ROMBAUER, Marjorie Dick. Legal Problem Solving: Analysis, Research and Writing. 5th ed. St.
Paul, MN: West Publishing Co., 1991.
KF240.R64 1991 (Reference)

This is a classic law school text, with the emphasis on analysis, research and writing as methods of problem solving.

TESLER, Pauline H. Collaborative Law: Achieving Effective Resolution in Divorce without

Litigation. Chicago, IL: American Bar Association, Section of Family Law, 2001.
KF535.T47 2001 (Problem Solving Collection)

The author, who is a founder of the Bay Area Collaborative Law Group and the International Academy of Collaborative Professionals, describes the use of collaborative lawyering in handling divorces. "Collaborative law combines the explicit commitment to settlement...with the enhanced creative power of a model that builds into the settlement process from the start individual legal advocacy and counsel, as well as conflict management and guidance in negotiations. " (p. 4)

TWINING, William. Law in Context: Enlarging a Discipline. Oxford, Eng.: Clarendon Press, 1997.
K100.Z9T94 1997 (Problem Solving Collection)

"The main object of this book is to explore in detail and in depth what is involved in broadening the discipline of law." (p. 23) The book is a collection of mainly previously published work by the author on the practice of law and legal education. A series of chapters discusses legal skills training. The author also discusses other works on the role and training of lawyers.

WEBB, Julian & Caroline MAUGHAN, eds. Teaching Lawyers' Skills. London, Eng.: Butterworths, 1996.
KD432.T43 (Problem Solving Collection)

Teaching Lawyers' Skills is British in orientation, but the principles are of general application. Chapter 7, Problem-based learning in legal education, by David A. Cruickshank, includes a discussion of problem solving.

WIGGINS, Charles B. & L. Randolph LOWRY, eds. Negotiation and Settlement Advocacy: A Book of Readings. St. Paul, MN: West, 1997.
KF9084.A7W54 1997 (Problem Solving Collection)

While focusing on negotiation and settlement, several articles includes in this work address problem solving from various angles.

WINSOR, Keith. "Applying Problem-Based Learning to Practical Legal Training." The Challenge of Problem Based-Learning. 2nd ed. Eds. David Boud & Grahame I. Feletti. New York: Kogan Page, 1997. 224-232.
LC1059.C44 1997 (Problem Solving Collection)

This short article details the use of problem-based learning in practical legal training at the College of Law, New South Wales.

II. PROBLEM SOLVING IN THE LEGAL PROFESSION: ARTICLES

AARONSON, Mark Neal. Thinking Like a Fox: Four Overlapping Domains of Good Lawyering, 9 Clinical L. Rev. 1 (2002).

In a paper presented at the UCLA/IALS Conference on "Problem Solving in Clinical

Education", Nov. 8-11, 2001, Prof. Aaronson identifies "four overlapping domains of good lawyering: Role conceptualization; problem solving; decision making; and practical judgment." (p. 1) He then goes on to discuss how the "mix of traditional doctrinal courses, liberal arts courses, and simulated and live-client practice and skills courses" (p. 1) offered at most law schools are each important to developing good lawyering skills.

AARONSON, Mark Neal & Stefan H. KRIEGER.   Teaching Problem-Solving Lawyering: An Exchange of Ideas, 11 Clinical L. Rev. 485 (2005).
    Aaronson comments on Krieger's *Domain Knowledge and the Teaching of Creative Legal Problem Solving* (11 Clinical L. Rev. 149 (2004)) and Krieger responds to the comments.

AARONSON, Mark Neal. We Ask You to Consider: Learning about Practical Judgment in Lawyering, 4 Clinical L. Rev. 247 (1998).
    This paper, presented at the UCLA/IALS Conference on "Conceptual Paradigms in Clinical Legal Education", describes the need for practical judgment in the complex decision making faced by lawyers who are attempting to find solutions to complex, ill-structured problems.

ABRAMSON, Harold I. Problem-solving Advocacy in Mediations, Disp. Resol. J., Aug.-Oct. 2004 at 56.
    In this article adapted from his book, Mediation Representation: Advocating in a Problem-Solving Process, Abramson focuses on mediation as a creative problem-solving approach which "searches for solutions that go beyond the traditional and can benefit both parties." (p. 57)

ALLEN, Michael P. Making Legal Education Relevant to Our Students One Step at a Time: Using the Group Project to Teach Personal Jurisdiction in Civil Procedure, 27 Hamline L. Rev. 133 (2004).
    Prof. Allen describes his use of a group project in civil procedure to teach personal jurisdiction and to prepare "students for the dynamics of group problem-solving." (p. 135)

AMSTERDAM, Anthony G. Clinical Legal Education - - A 21st Century Perspective, 34 J. Legal Educ. 612 (1984).
    Amsterdam reflects on a new type of law school curriculum centered on problem solving. He also explores the conceptual skills involved in problem solving in legal practice.

BAKER, Brook K. Beyond *MacCrate*: The Role of Context, Experience, Theory, and Reflection in Ecological Learning, 36 Ariz. L. Rev. 287 (1994).
    The author discusses the energy theory of ecological learning, which concerns the ability to

learn in a practice or "on-the-job" situation. He includes a discussion about the degree to which problem-solving skills can be transferred from one context to another.

BARRON, Paul. Can Anything Be Done to Make the Upper-Level Law School Courses More Interesting?, 70 Tul. L. Rev. 1881 (1996).
    In order to develop problem-solving skills, Barron uses the problem-solving method in an

advanced bankruptcy course.

BARTON, Thomas D. Conceiving the Lawyer as Creative Problem Solver: Introduction. 34 Cal.
W. L. Rev. 267 (1998).
Prof. Barton introduces the symposium issue: Conceiving the Lawyer as Creative Problem
Solver.

BARTON, Thomas D., Creative Problem Solving and Human Rights, Hum. Rts., Fall 1999 at 17.
The author discusses creative problem solving as a potentially useful tool for addressing
disputes over human rights violations.

BARTON, Thomas D. Creative Problem Solving: Purpose, Meaning, and Values, 34 Cal. W. L.
Rev. 273 (1998).
The author believes that "creative problem solving ... attempts to broaden the inquiry
concerning legal problems and to acknowledge a broader range of skills for their effective
resolution." (p. 296) In order to lay a strong conceptual foundation for legal problem solving he
asks the questions: "What does creative problem solving mean in a legal context? Why is it
needed? What goals should animate our efforts? Finally, importantly, what values are implicated
in its advancement?" (p. 273)

BELKNAP, Michal. Constitutional law as Creative Problem Solving: Could the Warren Court
Have Ended the Vietnam War?, 36 Cal. W. L. Rev. 99 (1999).
The author posits that the Supreme Court's discretionary powers enable "it to resolve cases
by articulating rules of constitutional law that will solve, or at least contribute to the solution of
social problems." (p. 103) He then speculates on how the Warren Court could have used its power
to select cases and render decisions "that could help to 'solve' the Vietnam 'problem'" (p. 104)

BELLOW, Gary & Earl JOHNSON. Reflections on the University of Southern California Clinical
Semester, 44 S. Calif. L. Rev. 664 (1971).
The authors discuss their upper division trial advocacy courses which are designed to teach
the problem-solving and decision-making skills related to lawyering. Their approach addresses
all the skills surrounding problem solving with the goal of developing independent thinkers who
will be able to determine approaches best-suited to a given situation.

BENNETT, Susan D.   Embracing the Ill-Structured Problem in a Community Economic
Development Clinic, 9 Clinical L. Rev. 45 (2001).
The literature of problem solving often centers on the "ill-structured" problems. Ill-
structured problems are those that are complex in nature, with unclear resolution at the outset, and
with a possibility of many possible solutions. This "article asks whether the solving of complex
problems can be taught as a learning strategy, or if learners can only expand this expertise through
time and experience." (p. 45) The author originally presented this paper at the UCLA/IALS
Conference on "Problem Solving in Clinical Education", Nov. 8-11, 2001.

BERGER, Marilyn J. & John B. MITCHELL   Rethinking Advocacy Training, 16 Am. J. Trial

Advoc. 821 (1993).

Berger and Mitchell have developed a teaching methodology which incorporates problem solving into a year-long course on trial advocacy.

BERGMAN, Paul. The Movie Lawyers' Guide to Redemptive Legal Practice. 48 UCLA L. Rev. 1393 (2001).

In his essay, Prof. Bergman describes several movies that portray various types of lawyering, including problem-centered lawyering. He then compares the images in the movies with the attitudes of practicing lawyers.

BERTRAN, Michele. Judiciary Ombudsman: Solving Problems in the Courts, 29 Fordham L. Rev. 2099 (2002).

The author describes the ombudsman program developed in New Jersey which seeks "to help court users effectively participate in the system and redress problems when they occur." p. 2100.

BINTLIFF, Barbara. From Creativity to Computerese: Thinking Like a Lawyer in the Computer Age, 88 L. Libr. J. 338 (1996).

The author discusses the profound influence computer-assisted legal research has had upon the legal approach to problem solving.

BLASI, Gary L. What Lawyers Know: Lawyering Expertise, Cognitive Science and the Functions of Theory, 45 J. Legal Educ. 313 (1995).

"What Lawyers Know" provides a very detailed look at various theories of problem solving and their application to lawyering. Blasi contends law schools have focused on gaining teaching expertise in solving doctrinal problems, but have neglected problem solving in other legal areas. He believes advances in cognitive science provide the tools to consider empirically the relationship between problem-solving theory and lawyering practice. He concludes that the "core activity of lawyers entails problem-solving and the making of decisions" (p. 318) and presents some implications for the law school curriculum.

BREST, Paul & Linda Hamilton KRIEGER. Lawyers as Problem Solvers, 72 Temp. L. Rev. 811 (1999).

The authors assert that while a client consults with a lawyer because his/her problem has a significant legal component, most problems are multi-dimensional. Good lawyers "bring creativity, common sense, practical wisdom, and that most precious of all qualities, good judgment" to the table, as well as legal skill. (p. 812) The authors discuss two models of problem solving and decision making. Symposium issue: Phyllis W. Beck Chair in Law Symposium: New Roles, No Rules? Redefining Lawyer's Work.

BREST, Paul & Linda KRIEGER. On Teaching Professional Judgment, 69 Wash. L. Rev.527 (1994).

Brest and Krieger emphasize teaching law students to solve problems. "At their best, lawyers serve as society's general problem solvers, skilled in avoiding as well as resolving disputes

and in facilitating public and private ordering." (p. 529)

BREST, Paul. The Responsibility of Law Schools: Educating Lawyers as Counselors and Problem
Solvers. Law & Contemp. Probs., Summer/Fall 1995 at 5.
In this essay, the author proposes complementing the traditional case-based law school curriculum with a series of advanced courses integrating the skills of counseling and problem solving with insights from other disciplines. "The complementary curriculum is designed to prepare students for practice in a world that their forebears could scarcely have imagined." (p. 16)

BREST, Paul. Skeptical Thoughts: Integrating Problem Solving into Legal Curriculum Faces
Uphill Climb, Disp. Resol. Mag., Summer 2000 at 20.
While acknowledging the lawyer's need for problem-solving skills, the author expresses his doubts, "given the current political economy of legal education" (p. 22) that law schools will support the skills training necessary to integrate problem solving into their curriculums.

BROIDA, Mark. Creative Problem Solving, Law Tchr, Spring 2001 at 9.
In this brief article, Prof. Broida describes his use of an employment discrimination hypothetical to introduce his legal skills students to creative problem-solving techniques.

BROWN, Jennifer Gerarda. Creativity and Problem Solving. 87 Marq. L. Rev. 697 (2004).
"The focus of this short essay will be on some methods for teaching and practicing creativity" (p. 698) as it applies to the field of negotiation.

BRYAN, Sophie. Personally Professional: A Law Student in Search of an Advocacy Model, 35
Harv. C.R.-C.L L. Rev. 277 (2000).
A student essay on different models for advocacy as central to the life of a problem-solving professional.

CAGE, Mary Crystal. Stanford Law School Experiments with a Course That Teaches Students to
Think Like Lawyers, Chron. of Higher Educ., September 13, 1996, at A16.
This short article describes the use of problem-solving theories from cognitive science in the law school classroom.

CARRINGTON, Paul D. A Tale of Two Lawyers, 91 Nw. U.L. Rev. 615 (1997).
Carrington contrasts Abraham Lincoln and Charles Sumner as lawyers, stressing Lincoln's success as a lawyer. "[Lincoln] was a problem solver...[H]e created peace where there had been no peace." In contrast, "Sumner did not solve problems, he made them." (p. 627)

CAVERS, David F. In Advocacy of the Problem Method, 43 Colum. L. Rev. 449 (1943).
Contrasting the casebook study of cases (studying previous solutions to problems) with the problem method (how to solve problems), the author concludes there is a need to include the problem method in law school education. He then discusses means of implementing this method.

COBEN, James R. Summer Musings on Curricular Innovations to Change the Lawyer's Standard

Philosophical Map, 50 Fla. L. Rev. 735 (1998).

Prof. Coben discusses his school's (Hamline) program to provide every graduating student with an opportunity for an ADR simulation experience. He relates the difficulties encountered in trying to shift the students from the "lawyer's standard philosophical map" of adversarial conduct to a paradigm that attempts to serve more broadly the client's interests.

COLON-NAVARRO, Fernando. Thinking Like a Lawyer: Expert-Novice Differences in Simulated Client Interviews, 21 J. Legal Prof. 107 (1996).

The author examines the thinking processes of expert and novice lawyers who are presented with a problem to solve to determine whether legal expertise is developed in a manner similar or dissimilar to the expertise in other fields.

COOPER, James M. Creative Problem Solving and the Castro Conundrum, 28 Cal. W. Int'l L. J. 391 (1998).

Cooper believes the U.S. hard-line policy toward Cuba has failed to bring about positive developments in Cuba. "Part III [of this article] proposes alternative approaches to the American-Cuban situation, using an evolving process of Creative Problem Solving." (p. 395)

COOPER, James M. Towards a New Architecture: Creative Problem Solving and the Evolution of Law, 34 Cal. W. L. Rev. 297 (1998).

Cooper envisions law as social architecture, structuring his analysis around the ideas of Corbusier, the early 20th century architect and urban planner. The article "will attempt to introduce the concept of Creative Problem Solving into the lexicon of jurisprudence." (p. 302)

CORN, *Major*. A Problem Solving Model for Developing Operational Law Proficiency: An Analytical Tool for Managing the Complex , Army Law., Sep. 1998 at 36.

This article, geared to the judge-advocate, introduces an analytical model that favors a systematic approach to anticipating issues as an aid in problem solving.

CROMBAG, H.F.M., et al., On Solving Legal Problems, 27 J. Legal Educ. 168 (1975).

Training students to solve legal problems is an essential part of legal education. "The purpose of this paper is to use the research on problem-solving which has been conducted by experimental psychologists to develop a working program for helping students learn to solve legal problems." (p. 168) Includes various flow charts on problem solving.

DAICOFF, Susan. The Comprehensive Law Movement, 19 Touro L. Rev. 825 (2004).

The author discusses movements she describes as vectors which "are all moving toward these common goals of optimizing human well-being and considering rights plus." (p. 836) The vectors are therapeutic jurisprudence, procedural justice, holistic justice, creative problem solving, preventive law, collaborative law, restorative justice, transformative mediation, and problem-solving courts. Presented originally as part of a symposium, Lawyering and its Discontents: Reclaiming Meaning in the Practice of Law, hosted by the Touro Law Center, April 6-7, 2003.

D'AMATO, Anthony, et al. The Decline and Fall of Law Teaching in the Age of Student

Consumerism, 37 J. Legal Educ. 461 (1987).

Critical of the state of law teaching, D'Amato applies theories from Marvin Mensky's The Society of the Mind (New York, 1986) to law school teaching. Mensky believes intelligence has a core meaning: the ability to solve problems. This ability needs to be taught. As a person uses his/her skill in problem solving, the ability is strengthened for further use. Previously solved problems are used to shift and compare possible solutions to the present problem. D'Amato believes law school teaching must support this skill development.

DAVIDOW, Robert P. Teaching Constitutional Law and Related Courses Through Problem-Solving and Role-Playing, 34 J. Legal Educ. 527 (1984).

Davidow describes the use of learning theory in problem solving and role playing. He includes some of the clinical vignettes he has used in his constitutional law course.

DISARE, Thomas. A Lawyer's Education, 7 Md. J. Contemp. Legal Issues 359 (1996).

Disare states that problem solving previously was taught to new attorneys in the firms after hire--a "finishing off" of their formal legal education. However, this is no longer true. He proposes changes in legal education which would "force students to begin with a focus on the client's true goal and then to suggest creative solutions to client problems." (p. 373)

DOMINGUEZ, David. Negotiating Demands for Justice: Public Interest Law as a Problem Solving Dialogue, 15 In Pub. Interest 1 (1996-97).

A dialogue between a professor and a 1L over a public interest course requirement leads to a discussion of public interest law as a vehicle for solving societal problems.

DOMINGUEZ, David. Redemptive Lawyering: The First (And Missing) Half of Legal Education and Law Practice, 37 Cal. W. L. Rev. 27 (2000).

The author discusses introducing law students to the concept of "redemptive lawyering". "[Redemptive lawyering] envisions lay people discovering their capability to sort out their interests–common, divergent, conflicting–and achieve outcomes of exponential gain." (p. 32)

DZIENKOWSKI, John S. Lawyering in a Hybrid Adversary System, 38 Wm. & Mary L. Rev. 45 (1996).

Dzienkowski comments on Carrie Menkel-Meadow's "*The Trouble with the Adversary System in a Post-Modern, Multicultural World*" (38 Wm. & Mary L. Rev. 5 (1996)). While applauding her attempt to present a new model of justice in the post-modern, multicultural world, he is "less optimistic than [she] that such changes can be made efficiently." (p. 61)

EINESMAN, Floralynn & Linda MORTON. Training a New Breed of Lawyer: California Western's Advanced Mediation Program in Juvenile Hall, 39 Cal. W. L. Rev. 53 (2002).

The authors' describe the development of the CWSL Juvenile Hall Mediation Program that aims to "transform [high school] students from polarized adversaries into effective facilitators and creative problem solvers...." (p. 54) while also teaching "law students to become effective mediators and creative problem solvers." (p. 54)

ENOS, V. Pualani & Lois H. KANTER. Who's Listening? Introducing Students to Client-
        Centered, Client-Empowering, and Multidisciplinary Problem-Solving in a Clinical Setting,
        9 Clinical L. Rev. 83 (2002).
        In a paper originally presented at the UCLA/IALS Conference on "Problem Solving in
Clinical Education", Nov. 8-11, 2001, the authors' describe the teaching objective and methods used
to develop the listening skills of first-year law students active in the Boston Medical Center
Domestic Violence Project, an interdisciplinary clinic. These skills are important in developing the
skills necessary to find multi-disciplinary solutions to very complex client problems.

FEINBLATT, John & Derek DENCKLA, eds. Prosecutors, Defenders and Problem-Solving
        Courts: An Edited Transcript of a Discussion Among a Judge, Attorneys, a Court
        Administrator, and Academics. Judicature, Jan./Feb. 2001 at 206.
        Many communities have established problem-solving courts which adjudicate matters that
often involve multi-dimensional problems such as drug addiction, domestic violence and mental
illness. The hope is these courts will be better able to produce solutions that will change the
behavior of the individuals involved and contribute to the well-being of the community.

FREUND, James C. Teaching Problem Solving: New Business Lawyers Need to Know How to
        Find the Deal: A Lawyer's Perspective, Bus. L. Today, July/August 1999 at 32.
        As part of his involvement in the ABA Business Law Section Task Force on Business
Lawyers as Problem Solvers, the author discusses the problem-solving role of the business lawyer
from a practitioner's perspective. (See LANGEVOORT for a similar discussion from an academic's
perspective.)

GARTH, Bryant G. & Joanne MARTIN. Law Schools and the Construction of Competence, 43 J.
        Legal Educ.469 (1993).
        Garth and Martin's study updates Frances Zemans and Victor G. Rosenblum's work in the
late 1970s surveying the Chicago Bar's opinions on what makes a competent legal practitioner. The
study finds Chicago hiring partners, when ranking factors in promotion to partnership, rank the
ability to diagnose and plan solutions for legal problems second only to the ability to obtain and
keep clients.

GRISWOLD, Erwin N. Law Schools and Human Relations, 1955 Wash. U.L.Q.217.
        The author discusses four problems in legal education. The third "concerns what might be
called the forgotten areas of law practice, the problems which do not appear in upper court
decisions--human problems, presented and solved in the lawyer's office." (p.221)

HAMMOND, Celia. Teaching Practical Legal Problem Solving Skills: Preparing Law Students for
        the Realities of Legal Life (Teaching Note), 10 Legal Educ. Rev. 191 (2000).
        Prof. Hammond discusses the Notre Dame College of Law course called Legal Problem
Solving (developed in 1995-96).

HANDLEY, Robin & Damien CONSIDINE. Introducing a Client-Centered Focus into the Law

School Curriculum, 7 Legal Educ. Rev. 193 (1996).

While focusing on Australian legal education, the authors' approach is of general interest. The problem method of learning (hypothetical fact situations leading to analysis of the issues involved) is not the same as problem-based learning, which does not expand the issues to other legal and non-legal components of the client's problem. The problem method anticipates the need to change focus to the context of the problem and the client's situation. The authors stress that the lawyer does not always own the answers or the techniques to solve the problem--other professionals might. They discuss the development of a client-centered curriculum.

HESS, Gerald F. The Legal Educator's Guide to Periodicals on Teaching and Learning, 67 UMKC L. Rev. 367 (1998).

Hess reviews 21 journals and newsletters in order to "make education periodical literature more accessible to law teachers." (p. 367)

HOUSEMAN, Alan W. Civil Legal Assistance for the Twenty-First Century: Achieving Equal Justice for All, 17 Yale L. & Pol'y Rev. 369 (1998).

Houseman believes that in order to provide effective assistance, the civil legal assistance program needs "new techniques for advocacy, new substantive strategies, new capacities, a broader range of services, and new forms of interprofessional cooperation." (p. 433)

JOHNSON, Andrea L. Teaching Creative Problem Solving and Applied Reasoning Skills: A Modular Approach, 34 Cal. W. L. Rev. 389 (1998).

Johnson asserts the new dynamics of business have rendered traditional law school teaching methods "outmoded or ineffective. These methods are often ineffective because they are passive and linear, and fail to teach students how to formulate practical solutions and alternatives to resolving disputes, or effecting a client's interests." (p. 389) She suggest a new paradigm which integrates creative problem solving into substantive courses, using a modular approach.

JORDAN, Michael. Law Teachers and the Educational Continuum, 5 S. Cal. Interdisc. L.J. 41 (1996).

Thinking like a lawyer is a relative term; the type of problem-solving skills needed may vary

from setting to setting. Intelligence is the ability "to solve problems and produce things that are valued in a particular cultural setting." (p. 52)

KAPLIN, William A. Problem Solving and Storytelling in Constitutional Law Courses, 21 Seattle U.L. Rev. 885 (1998) (reviewing Daniel A. Farber, et al. Constitutional Law: Themes for the Constitution's Third Century (1993)).

Kaplin discusses his use of problem solving and storytelling in teaching constitutional law, with particular emphasis on his use of Farber's casebook.

KAYE, Judith S. Lawyering for a New Age, 67 Fordham L. Rev. 1 (1998).

Judge Kaye discusses the New York State Drug Treatment Courts' move away from "a purely process-driven model of criminal adjudication to a problem-solving model." (p. 5) This

approach requires new-age lawyers to "think creatively about the best way to solve a client's problem." (p. 9)

KEEVA, Steven. Keeva on Life and Practice: Lose the Box. A.B.A. J., Sept. 2004 at 84.
    Short piece describing the use of creative problem solving by lawyers, stressing the work being done by the faculty at California Western School of Law.

KEEVA, Steven. Opening the Mind's Eye, A.B.A. J., June 1996 at 48.
    "Opening the Mind's Eye" is a short piece, with very practical ideas on the necessity of creative problem solving in the practice of law.

KELSO, Charles D. In Quest of A Theory for Lawyering: Some Hypotheses and a Tribute to Dean Soia Mentschikoff, 29 U. Miami L. Rev. 159 (1975).
    Kelso writes on the development of lawyer competencies--basic to which is problem solving. He includes a description of Prof. Mentschikoff's skill in teaching strategy skills for reaching lawyer decisions. The article was written in response to the Law School Admission Council's desire to study career performance criteria.

KERPER, Janeen. Creative Problem Solving vs. The Case Method: A Marvelous Adventure in Which Winnie-the-Pooh meets Mrs. Palsgraf, 34 Cal. W. L. Rev. 351 (1998).
    The author contends that "compared to more sophisticated models of problem solving, case analysis is a blunt instrument." (p. 352) She critiques the case method, contrasting it with the techniques of creative problem solving, using *Palsgraf* as a model.

KOHMAN, Paulette. An Interest-Based Approach to Practicing Law, Mont. Law., Jan. 23,1998 at 17.
    Kohman explores the growing use of an interest-based approach to solving a client's problems. "An 'interest-based approach' simply means the lawyer looks at all the clients' interests [some legal, some not] before taking action or recommending a legal approach." (p. 18) The best solution is one that best satisfies the interests of all the parties involved.

KRIEGER, Stefan H. Domain Knowledge and the Teaching of Creative Legal Problem Solving, 11 Clinical L. Rev. 149 (2004).
    Krieger argues emphasizing problem-solving approaches in law may undermine the knowledge of legal doctrine, the necessary domain knowledge for successful lawyering.

KRUSE, Katherine R. Biting Off What They Can Chew: Strategies for Involving Students in Problem-Solving Beyond Individual Client Representation, 8 Clinical L. Rev. 405 (2002).
    "This article explores the challenges of translating the problem-solving techniques employed in direct representation of individual clients into the larger context of problem solving for a client community by examining each step of the traditional problem-solving process." (p. 405)

KURTZ Suzanne, et al. Problem-Based Learning: An Alternative Approach to Legal Education, 13 Dalhousie L.J. 797 (1990).

The authors discuss problem-based and reiterative problem-based learning in the law school context as one method of encouraging the development of problem-solving skills.

LAFLIN, Maureen E.   Toward the Making of Good Lawyers: How an Appellate Clinic Satisfies the Professional Objectives of the MacCrate Report, 33 Gonz. L. Rev. 1 (1997/98).
This article contains a short section (p. 19-22) on how an appellate clinic can foster problem-solving skills.

LANDMAN, J. H. The Problem Method of Studying Law, 5 J. Legal Educ. 500 (1953).
The "problem method...approximates the thinking of the practising lawyer when confronted with a new problem." (p. 505) Landman would apply the scientific process of thinking to the study of law (problem method) instead of the case method (casebooks). The scientific process includes four steps: (1) realize a problem; (2) observe, experiment, analyze and classify data; (3) adopt a tentative hypothesis as a solution, using experience and imagination; and (4) by deduction and induction, reject or verify the hypothesis.

LANGEVOORT, Donald C. Teaching Problem Solving: New Business Lawyers Need to Know How to Find the Deal: An Academic's Perspective, Bus. L. Today, July/August 1999 at 33.
As part of his involvement in the ABA Business Law Section Task Force on Business Lawyers as Problem Solvers, the author discusses the problem-solving role of the business lawyer from an academic's perspective. (See FREUND for a similar discussion from a practitioner's perspective.)

LASER, Gary S.   Educating for Professional Competence in the Twenty-First Century: Educational Reform at Chicago-Kent College of Law, 68 Chi.-Kent L. Rev. 243 (1992).
More than just describing legal education at Chicago-Kent, the author reflects on the art of problem solving in a technical education setting. There is a lengthy discussion of Schön's Reflective Practitioner. "In law practice, most problems lie in the indeterminate environment, where use of the art of problem solving is essential." (p. 253)

LASH, Karen A., et al. Equal Access to Civil Justice: Pursuing Solutions Beyond the Legal Profession, 17 Yale L. & Pol'y Rev. 489 (1998).
Focusing on the access to civil justice in California (particularly the California Commission on Access to Justice), the authors expand on their belief that "we must broaden responsibility and accountability for equal access to civil justice beyond the legal profession to involve the entire community." (p. 494)

LAWRENCE, James K.L. Collaborative Lawyering: A New Development in Conflict Resolution, 17 Ohio St. J. Disp. Resol. 431 (2002).
Practitioner's Corner.
The author describes the model for collaborative lawyering used by the Collaborative Law Center in Cincinnati, Ohio. The process couples problem-solving principles with a commitment by both parties and their lawyers to come to settlement and forego litigation.

LERNER, Alan M. Law & Lawyering in the Work Place: Building Better Lawyers by Teaching Students to Exercise Critical Judgment as Creative Problem Solver, 32 Akron L. Rev. 107 (1999).
This article discusses the development by the author and a colleague of a course that leads students to think not only of their role as litigator/negotiator, but also as "the creative solver of complex problems." (p. 109) Their "mission was to teach students to exercise critical judgment in addressing problems framed or constrained by the law, and to act creatively as transformative problems solvers...." (p. 112)

LERNER, Alan M. Using Our Brains: What Cognitive Science and Social Psychology Teach Us about Teaching Law Students to Make Ethical, Professionally Responsible Choices, 23 Quinnipiac L. Rev. 643 (2004).
"This paper analyzes recent discoveries in cognitive science and social psychology that explain the brain's learning and problem solving mechanisms, and applies that scientific knowledge to demonstrate why traditional legal education may actually impair the ability to effectively solve complex problems, particularly those freighted with issues of personal values and professional responsibility. It then describes an alternative pedagogy, problem-based learning, that provides valuable insights to teaching law students to become ethical practitioners." (p. 644)

LÓPEZ, Gerald P. Lay lawyering. 32 UCLA L. Rev. 1 (1984).
López asserts that lawyering means problem solving, which involves using persuasion. The lawyer persuades by manipulating "stock stories" which help individuals interpret the world. He uses just such a "story" to show how the process works.

LÓPEZ, Gerald P. Training Future Lawyers to Work with the Politically and Socially Subordinated: Anti-Generic Legal Education, 91 W. Va. L. Rev. 305 (1989).
López sees legal education as a "stubborn underachiever" (p. 342) with a generic vision of the world. This mind-set needs to be challenged if law students are to be trained to solve the problems of particular people.

LUSTBADER, Paula. Construction Sites, Building Types, and Bridging Gaps: A Cognitive Theory of the Learning Progression of Law Students, 33 Willamette L. Rev. 315 (1997).
The author discusses the learning progression of law students using metacognition theory, schema theory, expert/novice theory and instructional theory.

MACFARLANE, Julie. Assessing the "Reflective Practitioner": Pedagogic Principles and Certification Needs, 5 Int'l J. Legal Prof. 63 (1998).
Reflective practitioners are responsive to change, flexible in their practices and emphasize professional self-growth. They are responsive to the context of the problems they face. The author examines whether the assessment choices and their implementation in legal education are responsive to the professional imperative of the reflective legal practitioner.

MACFARLANE, Julie. Experiences of Collaborative Law: Preliminary Results from the Collaborative Lawyering Research Project, 2004 J. Disp. Resol 179.

The authors discusses the results of a Canadian study addressing collaborative lawyering, including "the extent to which integrative, problem-solving approaches are being used in collaborative negotiations." (p. 195)

MACLEOD, Gordon A. Creative Problem-Solving--for Lawyers?!, 16 J. Legal Educ. 198 (1963).
"A lawyer might best be described as a professional problem-solver". (p. 198) The author describes an early course in creative problem solving offered by the Creative Education Foundation at the University of Buffalo Law School in 1962.

MACNAUGHTON, Ann L. Cross-cultural Conflict Resolution: Finding Common Ground in Disputes Involving Value Conflicts, 33 Willamette L. Rev. 747 (1997).
This essay on "the impact of *values conflicts* on problem-solving and collaborative dispute resolution paradyms" (p. 749) includes a brief discussion of conflict resolution theory, followed by an analysis of the challenges presented in value conflicts. It offers some suggestions on structuring a collaborative problem-solving process when values collide.

MARTIN, Fiona. Teaching Legal Problem Solving: A Problem-Based Learning Approach Combined with a Computerised Generic Problem, Legal Educ. Rev., 2003-04, no. 1 at 77.
The author describes how computerized problem-based learning (PBL) can be used to teach students how to solve the ill-defined problems that arise in the practice of law.

MATAYOSHI, Coralie C. Reinventing our Profession - Attorneys as Caring Problem Solvers, Haw. B. J., May 2,1998 at 4.
This short opinion piece by the Executive Director of the Hawaii State Bar Association urges lawyers to help clients solve their problems using a variety of mechanisms, including the courtroom and alternative dispute resolution.

MCDONNELL, Thomas Michael. Playing Beyond the Rules: A Realist and Rhetoric-Based Approach to Researching the Law and Solving Legal Problems, 67 UMKC L. Rev. 285 (1998).
McDonnell believes that legal research instruction "has focused almost entirely upon finding out the relevant published law" (p. 288) (realism) but ignored "rhetoric" which could provide information about the people who play the roles in a lawsuit "and the informal rules and practices that help determine the outcome". (p. 288) This inhibits problem solving at all levels of lawyering. In Part III, the author presents a comprehensive legal problem-solving model that integrates "rhetoric" research with traditional research.

MCKENZIE, Sandra Craig. Storytelling: A Different Voice for Legal Education, 41 U. Kan. L.Rev. 251 (1992).
"Lawyers are storytellers, using stories as a means of solving problems for clients." (p. 251) The author feels legal education has failed to recognize this role and offers suggestions for bringing this skill into the classroom.

MENKEL-MEADOW, Carrie. Aha? Is Creativity Possible in Legal Problem Solving and
        Teachable in Legal Education?, 6 Harv. Negot. L. Rev. 97 (2001).
        The author discusses the cognitive and behavioral dimensions of legal creativity and how
such creativity can be taught in law schools in order to enhance problem-solving skills.

MENKEL-MEADOW, Carrie. The Lawyer as Problem Solver and Third-Party Neutral: Creativity
        and Non-Partisanship in Lawyering, 72 Temp. L. Rev. 785 (1999).
        Prof. Menkel-Meadow discusses the changing role of the lawyer from advocate-
adversary to problem solver. Her aspiration is that lawyers "will help to solve human problems
and make the world better than they found it: for clients, but not for clients alone." (p. 786) She
discusses three aspects of turning lawyers into problem solvers: (1) how current rules,
frameworks, and metaphors constrict the role of lawyer as problem solver; (2) what new
metaphors and conceptions of lawyering might look like; and (3) the difficulty of incorporating
new views into current regulatory and professional responsibility regimes. Symposium issue:
Phyllis W. Beck Chair in Law Symposium: New Roles, No Rules? Redefining Lawyers' Work.

MENKEL-MEADOW, Carrie. The Legacy of Clinical Education: Theories about Lawyering, 29
        Clev. St. L. Rev. 555 (1980).
        While not specifically mentioning problem solving, Menkel-Meadows discusses the role of
the lawyer, including the micro-theory of the role of the lawyer: the lawyer as "interviewer, planner,
investigator, negotiator, examiner or interrogator, advocate, debater and counselor." (p. 559)

MENKEL-MEADOW, Carrie. Narrowing the Gap by Narrowing the Field: What's Missing from
        the MacCrate Report— of Skills, Legal Science and Being a Human Being, 69 Wash. L.
        Rev. 593 (1994).
        Menkel-Meadow criticizes the MacCrate Report as espousing " a kind of 'technocratic

problem-solver'" as opposed to a human problem solver who exercises practical wisdom and
judgment, using intuition, feeling and sympathy, as well as the reason and science of lawyering.

MENKEL-MEADOW, Carrie. Practicing "In the Interests of Justice" in the Twenty-First Century:
        Pursuing Peace as Justice, 70 Fordham L. Rev. 1761 (2002).
        Prof. Menkel-Meadows believes the "lawyer's role in 'pursuing justice' must expand to
pursuing other forms of actions–including peace-seeking, consensus-building and problem-
solving...." (p. 1767)

MENKEL-MEADOW, Carrie.   The Silences of the Restatement of the Law Governing Lawyers:
        Lawyering as Only Adversary Practice, 10 Geo. J. Legal Ethics 631 (1997).
        The author critiques the Restatement of the Law Governing Lawyers, focusing on lawyers
as litigators. Of particular interest is Part III, The Possible Architecture of Some Restatement of the
Law Governing Lawyers Engaged in ADR: The Lawyer as Third-Party Neutral or Problem Solver
(of Non- or Less Adversarial Lawyering).

MENKEL-MEADOW, Carrie. Taking Problem-Solving Pedagogy Seriously: A Response to the

Attorney General, 49 J. Legal Educ., 14 (1999).

In response to Attorney General Janet Reno's Jan. 9, 1999 address to the Association of American Law Schools, Menkel-Meadow encourages legal educators to take seriously Reno's challenge to educate legal problem solvers. She outlines a variety of ways in which problem-solving skills might be integrated into current law school curriculums.

MENKEL-MEADOW, Carrie. To Solve Problems, Not to Make Them: Integrating ADR in the Law School Curriculum, 46 SMU L. Rev. 1995 (1993).

One component of ADR is problem solving. "Well educated lawyers should be taught to solve problems, facilitate relationships and transactions and negotiate legislation and diplomatic arrangements, not just to litigate disputes." (p. 1995)

MENKEL-MEADOW, Carrie. Toward Another View of Legal Negotiation: The Structure of Problem Solving, 31 UCLA L. Rev. 754 (1984).

The author applies a problem-solving model to a negotiation rather than a win/lose model, with the lawyer's role to satisfy the needs of both parties rather than maximize individual gain.

MENKEL-MEADOW, Carrie. The Trouble with the Adversary System in a Postmodern, Multicultural World, 38 Wm. & Mary L. Rev. 5 (1996).

Menkel-Meadow is critical of the binary nature of the adversary system because it does not adequately address complex problems which require "complex and multifaceted solutions." (p. 7)

MENKEL-MEADOW, Carrie J. When Winning isn't Everything: The Lawyer as Problem Solver, 28 Hofstra L. Rev. 905 (2000).

The author talks about "problem solving as a legal goal that is different from 'winning'" (p. 906), but instead focuses on coming to a resolution that solves the problem needing to be addressed. She asserts that the "ideal legal problem solver needs these modern skills, in addition to more conventional advocacy and argument: question framing, investigative skills, quantitative skills..., listening and hearing, as well as talking, emotional awareness and empathy..., creativity, the ability to synthesize, as well as analyze, coordinate and implement..., manage conflict, superintend meeting and group facilitation, and offer expertise in decision making...." (p. 910-11)

MITCHELL, John B. Current Theories on Expert and Novice Thinking: A Full Faculty Considers the Implications for Legal Education, 39 J. Legal Educ. 275 (1989).

Mitchell makes suggestions on how to improve law school pedagogy through the use of schema and expert/novice theory.

MORGAN, Thomas D. Economic Reality Facing 21st Century Lawyers, 69 Wash. L. Rev. 625 (1994).

In this short article on the potential demand for lawyers, the author concludes "the most fundamental skill of a twenty-first century lawyer is likely to be understanding a client's business or family problem. Skills of lawyering will more and more become skills of problem-solving...." (p. 634).

MORIN, Laurie & Louise Howells. The Reflective Judgment Project, 9 Clinical L. Rev. 623
        (2003).
        Clinical law students sometimes get "stuck" when trying to solve clients' ill-structured
problems. In order to get "unstuck" the authors feel the student must exercise reflective judgment.
The article includes a problem-solving checklist (p. 679-81) to aid students in the reflective thinking
process.

MORTON, Linda. Creative Problem Solving: A Paradigmatic Approach, 34 Cal. W. L. Rev. 375
        (1998).
        Morton describes her "use of a visual paradigm, or model, to teach creative problem solving
in the law school curriculum." (p. 375) After defining the term "creative problem solving", she
justifies its use in law school education, describes her use of the model in clinical, and suggests how
it might be used in traditional courses.

MOSKOVITZ, Myron. Beyond the Case Method: It's Time to Teach with Problems, 42 J. Legal
        Educ. 241 (1992).
        The author believes the problem method is the best method to train professionals, although
not the only method. "If our job is to train students to 'think like lawyers' then we should train them
to solve [the problems presented by clients] because that is the kind of thinking that lawyers must
actually do." (p. 245) He concludes that "problem-solving is the single intellectual skill on which
all law practice is based." (p. 245)

MOUST, Jos G. & Herman J. NUY. Preparing Teachers for a Problem-Based, Student-Centered
        Law Course, 5 J. Prof. Legal Educ. 16 (1987).
        The entire curriculum at the University of Limburg Faculty of Law (Netherlands) is oriented
towards problems and their solutions. The curriculum stresses continuous training in problem
solving as student learns substantive law. The author discusses the role of teacher in this
environment.

NATHANSON, Stephen.   Bridging the Divide between Traditional and Professional Legal
        Education, 15 J. Prof. Legal Educ. 15 (1997).
        Nathanson believes there is a divide between the problems addressed by students in
traditional legal education which focus on substantive legal issues and those addressed by students
in professional legal education which focus on client problems. "Client problems relate not just to
legal issues but to the much more complex problem of how to help clients resolve or prevent legal
conflict." (p. 15) Educators can help bridge this divide by providing students "with a theoretical
framework for legal problem solving and demonstrating how their prior traditional education fits
into that framework." (p. 15)

NATHANSON, Stephen. Changing Culture to Teach Problem-Solving Skills, 14 J. Prof. L. Educ.
        143 (1996).
        Nathanson discusses how to educate students to think deeply and to solve complex problems,
with an emphasis on instructional design.

NATHANSON, Stephen. Creating Problems for Law Students: The Key to Teaching Legal Problem Solving? 10 J. Prof. Legal Educ. 1 (1992).

Recognizing that designing a law school curriculum to teach problem solving is daunting, Nathanson details a two-pronged strategy to accomplish the task. The first prong consists of following existing principles of curriculum design. The second is to invest significant resources in the design of <u>good</u> problems.

NATHANSON, Stephen. The Culture of Design, 3 Int'l J. Legal Prof. 301 (1996).

Nathanson describes the need to inculcate a "culture of design" in order to facilitate a change to problem-based learning, which requires new curricular design.

NATHANSON, Stephen. Developing Legal Problem-Solving Skills, 44 J. Legal Educ. 215 (1994).

This detailed work on curricular design recognizes that the instructional methodology in legal education will need to synthesize general problem-solving skills and context-specific knowledge.

NATHANSON, Stephen. Designing Problems to Teach Legal Problem Solving, 34 Cal. W. L. Rev. 325 (1998).

"Problems form the basis of learning activities and assessments found in a skills-based or problem-centered curriculum." (p. 326) Nathanson emphasizes the need to design *good* problems because such problems are essential to the success of the problem-centered curriculum. He then discusses the principles for making *good* problems.

NATHANSON, Stephen. Problem-Solving in Professional Legal Education, 7 J. Prof. Legal Educ. 121 (1989).

Focusing on the work being done by professional legal education institutes in Australia to integrate the "teaching of legal skills with legal transactions in a problem-solving framework," (p. 121) the author presents problem solving as a unifying theme for professional legal education. He sees problem solving as a five-step process: (1) problem and goal identification; (2) fact investigation; (3) legal issue identification and assessment; (4) option identification and decision making; and (5) planning and implementation.

NATHANSON, Stephen. The Role of Problem Solving in Legal Education, 39 J. Legal Educ. 167 (1989).

This is an excellent shorter article on problem solving as a generic skill that has been overlooked in legal education, even though it is "the essence of what lawyers are supposed to do in their practice." (p. 168) Nathanson addresses the question of whether a theory of legal problem solving can be developed and, if it can, what role problem solving should play in legal education.

NEUMANN, Richard K., Jr. Donald Schőn, the <u>Reflective Practitioner</u>, and the Comparative Failures of Legal Education, 6 Clinical L. Rev. 401 (2000).

Schőn, the author of several books on how professionals solve problems, is frequently cited by legal educators when discussing legal education and practice. Neumann discusses Schőn's work and suggests how others might build upon it.

NIVALA, John F. The Architecture of a Lawyer's Operation: Learning from Frank Lloyd Wright, 20 J. Legal Prof. 99 (1995/96).

       Lawyering is an art; legal educators guide students to work toward that art by letting them deal with real-life problems. The architect Frank Lloyd Wright saw each client's needs as a problem to be solved. Nivala applies Wright's philosophy to the role of the lawyer, particularly in relation to the art of legal writing.

NOLAN-HALEY, Jacqueline M. Lawyers, Non-Lawyers, and Mediation: Rethinking the Professional Monopoly from a Problem-Solving Perspective, 7 Harv. Negotiation. L. Rev. 235 (2002).

       Nolan-Haley investigates the contradiction between the ethic of problem solving in mediation and the legal profession's reluctance to collaborate with non-lawyers in solving legal problems.

NOLAN-HALEY, Jacqueline & Bronagh HINDS. Problem-Solving Negotiation: Northern Ireland's Experience with the Women's Coalition, 2003 J. Disp. Resol. 387.

       The authors look at the relevance of domestic conflict resolution theory, focusing "on a case study of the Norther Ireland Women's Coalition...whose members participated in the negotiations leading up to the 1998 Good Friday Agreement...." (p. 387)

OATES, Laurel Currie. I Know that I Taught Them How To Do That, 7 Legal Writing 1 (2001).

       The author explains the need to teach analogous problem solving to legal writing students. She presents a step-by-step plan on how to do so.

OGDEN, Gregory L. Problem method in Legal Education, 34 J. Legal Educ., 654 (1984).

       Ogden encourages greater use of problems by law teachers. He defines the problem method and examines the objectives of legal education, describing how the method meets those objectives. He also discusses the advantages and disadvantages of the method and its use in specific courses.

O'LEARY, Kimberly E. Using "Difference Analysis" to Teach Problem-Solving, 4 Clinical L. Rev. 65 (1997).

       Recognizing the need for the legal profession to take into account the importance of perspective in understanding the law, the author discusses the ways a clinical course can integrate "difference analysis" into the process of problem solving for a client. "Difference analysis" is defined as "the systematic exploration of diverse perspectives as a means of generating options to assist a client in the solving of a legal problem." (p. 66, ft. 5)

PAINTER, Suzanne R. Improving the Teaching of School Law: A Call for Dialogue, 2001 BYU Educ. & L. J. 213.

       Using the fundamentals of cognitive science, Painter encourages teaching law to pre-service school administrators by focusing on problem solving so that the law "is integrated into other problem-solving experiences of students." (p. 229)

PALMER, Michael. Problem-Solving Negotiation: What's In It For You ...And Your Clients?, Vt.

B. J., Sept./Oct. 2000 at 21.

The author discusses the advantages of Problem-Solving Negotiation as developed by the Harvard Program on Negotiation. He briefly describes its seven elements: relationship; communication; interests; options; legitimacy; walkaway alternatives; and, commitment.

PERLIN, Michael L. Stepping Outside the Box: Viewing Your Client in a Whole New Light, 37 Cal. W. L. Rev. 65 (2000).

The author critiques the useful of the case method in preparing students for the reality of the practice of law. He then discusses the application of creative problem solving to law school teaching.

PODGERS, James. Grassroot Lessons, A.B.A.J., Feb. 1997 at 68.

This essay describes former-President Gerald Ford's successes as a lawyer. "Solving peoples' problems was at the center of whatever he did." (p. 69)

PROCTOR, PollyBeth. Toward Mythos and Mythology: Applying a Feminist Critique to Legal Education to Effectuate a Socialization of Both Sexes in Law School Classrooms, 10 Cardozo Women's L.J. 577 (2004).

Proctor points out that "implementing the suggestions of a feminist critique of legal education would effectuate a socialization of both sexes that would help repair the profession's reputation and reorient lawyers with a clear vision of professional identity that will strengthen and stabilize the professional community." (p. 601) Among those skills to be reinforced are the problem-solving skills traditionally associated with feminine modes of reasoning.

RE, Edward D. The Causes of Popular Dissatisfaction with the Legal Profession, 68 St. John's L. Rev. 85 (1994).

One of the suggestions presented by the author to counter the current dissatisfaction is a focus on the lawyer as counselor who uses alternatives other than litigation to solve legal problems.

RE, Edward D. The Lawyer as Counselor and the Prevention of Litigation, 31 Cath. U. L. Rev. 685 (1982).

Re's lecture highlights the lawyer's role as a counselor who can help a client avoid controversy and resolve a problem without litigation. He stresses the counseling is not just as to legal consequences, but to "inform the client of the practical and social consequences of the act." (p. 693)

RE, Edward D. The Role of the Lawyer in Modern Society, 30 S.D. L. Rev. 501 (1985).

Re discusses the role of the lawyer as a counselor who must use problem-solving techniques other than litigation.

RENO, Janet. Law Day 1997 : A Legacy of Public Service, 26 Cap. U.L. Rev. 227 (1997).

Reno's essay contains the substance of her remarks at Capitol University on May 1, 1997 emphasizing the attorney's role as problem solver. "Become known for your ability to solve your clients' problems the right way, consistent with the law." (p. 227)

RENO, Janet. Lawyers as Problem-Solvers: Keynote Address to the AALS, 49 J. Legal Educ. 5

(1999).

In an address to the Association of American Law Schools on Jan. 9, 1999, the then-Attorney General of the United States encourages law schools to produce lawyers who, in addition to being skilled advocates, are also problem solvers and peacemakers. "Neither the institutions nor the practitioners of the law can function in ways that are isolated from the everyday experience of the people. The lawyer must serve the people and solve their problems...." (p.6).

RENO, Janet. Speech: The Honorable Janet Reno, Attorney General of the United States, 31 New Eng. L. Rev. 159 (1996).

Reno speaks of a speciality called "community advocacy" which would train lawyers and advocates in problem solving and conflict resolution.

ROSENBERRY, Katharine. Creative Problem Solving: Mixing the Traditional with the Non-Traditional. San Diego Law., March/April 2004 at 44.

A short piece advocating the use of a variety of techniques, legal and non-legal, to solve problems that arise in the practice of law.

ROSENBERRY, Katharine. Creative Techniques in Law School Reflect Changes in Society, San Diego Bus. J., April 28, 2003 at 3.

A short piece describing classes in problem-solving techniques offered to students at the California Western School of Law by the faculty in its McGill Center for Creative Problem Solving.

ROSENBERRY, Katharine. Organizational Barriers to Creativity in Law Schools and the Legal Profession, 41 Cal. W. L. Rev. 423 (2005).

Rosenberry believes law schools and the legal profession should be concerned about the barriers to creative problem solving in the practice of law. She identifies a series of barriers including lack of expertise, lack of tolerance for ambiguity, interest in maintaining status quo, resistance to failure and risk-taking, lack of lateral flow of communications, ineffective physical space, and lack of diversity in appearance and opinion.

SANDER, Frank E.A. & Robert H. MNOOKIN. A Worthy Challenge: The Teaching of Problem Solving in Law Schools, Disp. Resol. Mag., Summer 2000 at 21.

In response to the skepticism expressed in Paul Brest's *Skeptical Thoughts: Integrating Problem Solving into Legal Curriculum Faces Uphill Climb* (Disp. Resol. Mag., Summer 2000 at 20), the authors express their belief that with effective leadership the legal "profession and the academy will place greater emphasis on collaboration and problem-solving." (p. 21)

SAUNDERS, Kurt M. & Linda Levine. Learning to Think Like a Lawyer, 29 U.S.F.L. Rev.121 (1994).

Learning to think like a lawyer involves mastery of problem-solving methods.

SCHNEIDER, Andrea Kupfer. Shattering Negotiation Myths: Empirical Evidence on the Effectiveness of Negotiation Style. 7 Harv. Negot. L. Rev. 143 (2002).

The author reports on the results of an empirical study the results of which "shatter the myth that adversarial bargaining is more effective and less risky than problem-solving." (p. 147) Her "study found that problem-solving behavior is perceived as highly effective." (p. 148)

SCIESZINSKI, Annette J. Return of the Problem-Solvers: The Profession Needs to Focus on Helping People, Not Just Fighting Battles, A.B.A.J., June 1995 at 119.
This short perspective piece by a young Iowa lawyer states that "for the student, law school training may tend to glamorize litigation and de-emphasize problem-solving." (p. 119) Scieszinski goes on to state that "lawyers should offer their professionalism and problem-solving skills to clients rather than marketing their courtroom prowess." p. 119.

SEIELSTAD, Andrea M. Community Building As a Means of Teaching Creative, Cooperative, and Complex Problem Solving in Clinical Education, 8 Clinical L. Rev. 445 (2002).
"Modern problem solving theory stresses the need for lawyers to look beyond clients' legal rights and interest, and consider methods and solutions beyond those offered by the formal mechanisms of the law. This article considers how education in creative problem solving can be enhanced in the clinical context through work with poor communities engaged in community building." (p. 445)

SENGER, Charles J. Thinking Aloud Protocols: A Diagnostic Tool for Teaching Legal Problem Solving, 10 T.M. Cooley L. Rev.367 (1993).
Senger aims to provide law teachers with a diagnostic tool to evaluate their teaching of legal problem solving. His "basic method is to have the student 'think out loud' while they [sic] are problem solving." (p. 368)

SHEPPARD, Harrison. American Principles & the Evolving *Ethos* of American Legal Practice, 28 Loy. U. Chi. L.J. 237 (1996).
Sheppard presents three recommendations to remedy what he believes are the ethical misdirections the practice of law has taken in the last three decades. First, senior partners in law firms and senior executives in the public service must espouse an ethos of problem solving and non-adversarial conflict resolution within their firms and agencies. Second, the organized bar must require skills of negotiation and problem solving. Third, legal education must produce "*skilled peacemakers*" (p. 256) and train lawyers using a problem-solving model.

SILLS, David G. Challenges of the Legal Profession in the Next Century, 24 W. St. U. L. Rev. 217 (1997).
In a speech given at the Western State University College of Law Awards Banquet on April 18, 1997, Justice Sills reminds students that legal education provides a foundation for solving not only legal problems, but also social, economic and political problems. He stresses that the lawyers first duty is to solve the problem and that "commencement of litigation is a concession of defeat and acknowledgment of failure to solve the problem at hand." (p. 219)

SMITH, Rhona K. M. The International Impact of Creative Problem Solving: Resolving the Plight of Indigenous Peoples, 34 Cal. W. L. Rev. 411 (1998).

Because traditional legal approaches have proved unsatisfactory, Smith applies creative problem-solving techniques when addressing the problems encountered by indigenous peoples.

SMITH, Steven R. From Law and Bananas to Real Law: A Celebration of Scholarship in Mental Health Law, 34 Cal. W. L. Rev. 1 (1997).
In this essay published as the introductory essay in the *Symposium: Law and Psychology*, Smith states that mental health law has given insufficient attention to "a bundle of topics I refer to as 'creative problem solving' in mental health law...." (p. 2) This lack of attention presents a research opportunity and challenge for the 21st century.

SOANES, Marcus . Flexible Paradigms and Slim Course Design: Initiating a Professional Approach to Learning Advocacy Skills, 5 Clinical L. Rev. 179 (1998).
Soanes describes the Bar vocational course in England which emphasizes the "do how" skills, including the intellectual skills of problem solving.

SPAIN, Larry R. Collaborative Law: A Critical Reflection on Whether a Collaborative Orientation Can Be Ethically Incorporated into the Practice of Law, 56 Baylor L. Rev. 141 (2004).
The author discusses the ethical issues surrounding the use of collaborative law and, in particular, collaborative divorce, as a problem-solving technique.

SPIEGELMAN, Paul J. Integrating Doctrine, Theory, and Practice in the Law School Curriculum: The Logic of Jake's Ladder in the Context of Amy's Web, 38 J. Legal Educ. 243 (1988).
Spiegelman applies Carol Gilligan's work on moral development (In a Different Voice: Psychological Theory and Development (Cambridge, 1982)) to legal education with the aim of increasing student awareness of alternative methods of perceiving and solving problems.

STERNLIGHT, Jean R. Symbiotic Legal Theory and Legal Practice: Advocating a Common Sense Jurisprudence of Law and Practical Applications, 50 U. Miami L. Rev. 707 (1996).
Law schools need to foster an education after which "law students will go on to become legal practitioners who can use abstract theories to solve practical problems." (p. 767) The author recognizes the need to develop a "jurisprudence of applications", a complimentary relationship between abstract theory of the law and the practice of law. Legal theorists can make their work more powerful by focusing on real world problems and their solutions, while practitioners should "look to academia for new and creative solutions to real world legal problems." (p. 714)

STRONG, Graham B. The Lawyer's Left Hand: Nonanalytical Thought in the Practice of Law, 69 U. Colo. L. Rev. 759 (1998).
This article discusses the role of non-analytical processes of thought (left hand) as an important tool "in the creative generation of hypotheses in the legal problem-solving process." (p. 775). The author postulates that thinking like a lawyer means more than just thinking analytically, but also involves comprehension of the use of telling stories, which requires the use of non-analytical skills.

STUCKEY, Roy T. Education for the Practice of Law: The Times They are A-Changin', 75 Neb. L.

Rev. 648 (1996).

"My thesis is that the primary objective of law schools should be to teach students to be competent problem-solvers. A lawyer's core function is problem-solving." (p. 669)

STUCKEY, Roy T. Preparing Students to Practice Law: A Global Problem in Need of Global Solutions, 43 S. Tex. L. Rev. 649 (2002).

Prof. Stuckey describes the current state of legal education in various countries throughout the world. He then addresses why this education is inadequate and how it can be improved. He stresses that "if the central function of lawyers is to help people and institutions resolve problems, it is axiomatic that the central function of systems of legal education should be to help students develop their problem-solving skills." (p. 666).

STURM, Susan. Equality and the Forms of Justice, 58 U. Miami L. Rev. 51 (2003).

This paper authored as part of the symposium *Fiss's Way: The Scholarship of Owen Fiss* addresses the question of whether law can be "normative and aspirational when it is engaged in reflective practice and on-the-ground problem solving." (p. 81)

STURM, Susan P. From Gladiators to Problem-Solvers: Connecting Conversations about Women, the Academy, and the Legal Profession, 4 Duke J. Gender L. & Pol'y 119 (1997).

Women, the legal academy, and the legal profession all have expressed concern about the sole view of the lawyer as gladiator--fighting to win while someone else loses. "It [the article] explores the outlines of a problem-solving orientation to lawyering and legal education that has the potential to address and create a dynamic between the concerns of women and the need to reclaim the soul of the legal profession." (p. 122) Sturm suggests a shift from gladiator to problem solver may brighten the fate of the legal profession and the fate of women and other under-represented groups in the profession. She also describes a model for the lawyer as problem solver.

STURM, Susan. Lawyers and the Practice of Workplace Equity, 2002 Wis. L. Rev. 277.

While focusing on labor and employment law practices, the author discusses the law's role in problem solving, including such issues as how to evaluate the efficacy of problem solving, how problem solving relates to the perceived traditional role of the lawyer, and how to hold lawyers responsible for the their work in problem solving.

SYMPOSIUM, *Conceiving the Lawyer as Creative Problem Solver*, 34 Cal. W. L. Rev. 267 (1998).

In this issue which "celebrates the central mission of California Western School of Law to educate creative problem solvers", ...[the *Review*] begins what will be an ongoing effort to publish a rich diversity of scholarly discussion of creative problem solving." (p. 267)

SYMPOSIUM, *Creative Problem Solving Conference*, 37 Cal. W. L. Rev. 1 (2000).

This issue contains the papers and excerpts from the transcript of the Creative Problem Solving Conference, Feb. 2000, sponsored by the California Western School of Law.

TORRES, Arturo L. MacCrate Goes to Law School: An Annotated Bibliography of Methods for Teaching Lawyering Skills in the Classroom, 77 Neb. L. Rev. 132 (1998).

"This [annotated] bibliography compiles those law review articles that explore the teaching of lawyering skills in the traditional, non-skills oriented law courses." (p. 133) The articles are organized by the skills listed in the <u>MacCrate</u> *Report*.

TZANNES, Maria. Problem Based Learning in Legal Education: Intentionally Overlooked or Merely Misunderstood, 31 Law Tchr. 180 (1997).
Legal education, differing from medicine and architecture, has not overwhelmingly embraced problem-based learning. Problem-based learning is a sub-skill of problem solving, where the student is given a real-life problem (not necessarily a real-life client) and the responsibility to solve the problem. For legal education this means not just curricular change, but a change in the basic work of the teacher. Tzannes identifies obstacles to problem-based learning, some of which are centered in the changing role of the teacher. The article is Australian in focus, but of general application.

VAN DETTA, Jeffrey A. Collaborative Problem-Solving Responsive to Diverse Learning Styles: Labor Law as an Active Learning Experience, 24 N.C. Cent. L. J. 46 (2001).
The author views labor law as "an incredibly fertile platform for students to enhance their...practice skills through problem-solving in a collaborative learning environment." (p. 47)

WANGERIN, Paul T. Learning Strategies for Law Students, 52 Alb. L. Rev. 471 (1998).
The author feels legal educators not only disregard learning theory, "they positively disdain it" (p. 472) He discusses several studying and learning strategies (among which is problem solving) in the context of metacognition, which is the awareness by the learner of the learning process itself while learning.

WEINSTEIN, Ian. Lawyering in the State of Nature: Instinct and Automaticity in Legal Problem Solving, 23 Vt. L. Rev. 1 (1998).
The author reports the results of a study using the cognitive science human problem solving model to analyze legal thinking. Pt. 1 discusses problem solving at the beginning of a case and presents the human problem solving model. Pt. II discusses the application of the model as a framework for studying problem solving in the law. Pt. III presents the results of the study, including distinctions in problem-solving abilities between experts and novices. Pt. IV argues that while legal educators can set up conditions under which students can develop lawyerly thinking, they cannot teach students to think like lawyers.

WEINSTEIN, Janet. Coming of Age: Recognizing the Importance of Interdisciplinary Education in Law Practice, 74 Wash. L. Rev. 319 (1999).
"In an increasingly complex world, lawyers will need to expand their traditional approaches to problem solving if they are to be of real service to their client." (p. 319) In order to do so, they will need to work with professionals in other disciplines. Interdisciplinary education emphasizes training students to be creative problem solvers in the interdisciplinary world. "The ability to collaborate with professionals from other disciplines is an important aspect of creative problem solving." (p. 319)

WEINSTEIN, Janet & Linda MORTON.   Stuck in a Rut: The Role of Creative Thinking in Problem

Solving and Legal Education, 9 Clinical L. Rev. 835 (2003).

Creative thinking is essential to a lawyer's ability to solve the problems presented by his/her clients. The authors believe law schools are stuck in the rut of emphasizing analogical reasoning, thus failing to train creative thinkers. Their article focuses on creative thinking, drawing on problem solving materials from "the fields of creativity, creative thinking, psychology, and neuropsychology." (p. 836)

WHINERY, Leo H. The Problem Methods in Legal Education, 58 W. Va L. Rev. 144 (1955).

Whinery uses the concept of "problematicism": the lawyers duty to solve legal problems through counseling and advocacy. "The law school should provide the student with an educational program designed to enable him to evaluate *legal problems* in light of *applicable legal principles* and *relevant extra-legal doctrine.*" (p. 146) The student's focus should be on analysis of problems, with legal and
non-legal ramifications, and reaching solutions. The author reflects on a number of problem-oriented methods, including a detailed analysis of the strengths and drawbacks of using hypotheticals.

WINICK, Bruce. Therapeutic Jurisprudence and the Role of Counsel in Litigation, 37 Cal. W. L. Rev. 105 (2000).

"Therapeutic jurisprudence is the study of law's healing potential." (p. 108) Winick discusses the role therapeutic jurisprudence plays in the trial lawyer's practice.

ZWIER, Paul J. & Ann B. HAMRIC. The Ethics of Care and ReImagining the Lawyer/Client Relationship, 22 J. Contemp. L. 383 (1996).

Zwier and Hamric present an "ethic of care" model for the relationship between lawyer and client, which takes into account the human side of the client's problem. They believe such an approach "produces better, more creative, and more tailored solutions to the parties' problems." (p. 388)

III PROBLEM SOLVING IN GENERAL: MONOGRAPHS

ACKOFF, Russell L. The Art of Problem Solving: Accompanied by Ackoff's Fables. New York, NY: Wiley, 1978.
HD30.29.A25 1978 (Problem Solving Collection)

Aimed at the lay reader, Ackoff's real-life examples all lead to a moral about problem solving. "Problem solving is what I have been trying to do all my adult life.... And now, in my 'late period', I find myself preoccupied with the art of problem solving, keeping both philosophy and science ever at my side." (p. ix)

ADAMS, James L. The Care and Feeding of Ideas: A Guide to Encouraging Creativity. Reading, MA: Addison-Wesley Pub. Co., 1986.
BF408.A3 1986 (Problem Solving Collection)

Meant as a self-teaching tool, the main theme of this book is dealing with change, with an emphasis on problem solving. It includes mini-exercises to reinforce specific techniques the author feels are of great value in managing creativity and change.

ADAMS, James L.   Conceptual Blockbusting: A Guide to Better Ideas. 4th ed.. New York: Perseus
        Books, 2001.
        BF441.A28 2001 (Problem Solving Collection)
        "This book is concerned with the cultivation of idea-having and problem-solving
 abilities." (p. vii)   The focus is on creative conceptualization, not verbal and analytical skills.

ALLEN, Roger E. & Stephen D. ALLEN. Winnie-the-Pooh on Problem Solving: In Which Pooh,
        Piglet, and Friends Explore How to Solve Problems So You Can Too. New York, NY: Dutton,
        1995.
        HD30.29.A45 1995 (Problem Solving Collection)
        A light-hearted, but perceptive, look at how to solve problems, using narrative in the style of
the original Winnie-the-Pooh stories.

AMABILE, Teresa M. Creativity in Context. Boulder, CO: Westview Press, 1996.
        BF411.A43 1996 (Problem Solving Collection)
        The author's research centers on the social factors that serve to either maintain or destroy

creativity.   She also considers personality factors in motivational orientation which may affect
creativity. This edition updates the author's The Social Psychology of Creativity (1983).

AMABILE, Teresa M. The Social Psychology of Creativity (1983), *see* the author's Creativity in
        Context (1996)

AMSLER, Mark, ed. Creativity and the Imagination: Case Studies from the Classical Age to the
        Twentieth Century. Newark, NJ: University of Delaware Press, 1987. (Studies in Science and
        Culture, v. 3)
        Amsler presents three-real life case studies involving problem solving: one in physics, one in
philosophy and one in painting.

ANDERSON, Barry F. The Complete Thinker: A Handbook of Techniques for Creative and Critical
        Problem Solving. Englewood Cliffs, NJ: Prentice Hall, 1980.
        BF441.A52 1980 (Problem Solving Collection)
        The author presents a "program library" of procedures for dealing with problems. He discusses
how adopting the attitudes taken by good problem solvers toward problems can make one a better
problem solver.

BAGLEY, Michael T. Using Imagery in Creative Problem Solving. Monroe, NY: Trilliam Press,
        1987.
        BF408.B33 1987a (Problem Solving Collection)
        Bagley advocates the use of non-guided imagery to attack problems more creatively. Imagery
is a method which uses pictures, instead of words, to elicit creative responses to problems. The author
detail a creative problem-solving workshop which focuses on imagery exercises as a technique. This
work was reprinted by the Royal Fireworks Press in 1999.

BARKER, Alan. Creativity for Managers. London, Eng.: The Industrial Society, 1995.
    HD53.B37 (Problem Solving Collection)
    Aimed at managers, this work is a "quick read" which focuses on the need for creativity as an essential management skill. "Creativity is less about solving problems then about finding them." (p. 41)

BARRETT, Derm. The Paradox Process: Creative Business Solutions...Where You Least Expect to
    Find Them.   New York, NY: AMACOM, 1998.
    The author presents the Paradox Process as a methodology for creative problem solving and innovation by both individuals and groups in the business world. "In the Paradox Process you have three options: You can encourage yourself to do or think the opposite of what is conventional; you can think and do two opposite things simultaneously, juxtaposing them in a creative new arrangement; or you can combine those opposites to form a new synthesis." (p. 1-2)

BARROWS, Howard S. How to Design a Problem-Based Curriculum for the Preclinical Years. New
    York, NY: Springer, 1985. (Springer Series on Medical Education)
    R834.B36 (Problem Solving Collection)
    While the focus of this work is on medical education, the introduction includes a general discussion of the objectives of problem-based learning.

BEAN, John C. Engaging Ideas: The Professor's Guide to Integrating Writing, Critical Thinking, and
    Active Learning in the Classroom. San Francisco, CA: Jossey-Bass, 1996.
    PE1404.B35 (Problem Solving Collection)
    Part 2 of this work is devoted to designing problem-based writing assignments that promote critical thinking.

BEREITER, Carl & Marlene SCARDAMALIA. Surpassing Ourselves: An Inquiry into the Nature and
    Implications of Expertise. Chicago, IL: Open Court, 1993.
    BF378.E94B47 (Problem Solving Collection)
    Expertise is a process of progressive problem solving during which a person continually rethinks and redefines his/her work. The authors discuss how one grows from being a novice in an area to being an expert.

BERGER, Dale E., et al., eds. Applications of Cognitive Psychology: Problem Solving, Education,
    and Computing. Hillsdale, NJ: Lawrence Erlbaum Assoc., 1987.
    BF441.A63 1987 (Problem Solving Collection)
    Part 2 of this work concentrates on the teaching of thinking and problem solving. Of particular interest is chapter 8, Teaching productive problem solving and attitudes, by Kenneth Pfeiffer, et al., which emphasizes the importance of how problem solving is taught as compared to what is being taught.

BIGGS, John B., ed. Teaching for Learning: the View from Cognitive Psychology. Hawthorne, Aus.:
    Australian Council for Educational Research, 1991.
    LB1060.T43 (Problem Solving Collection)

Teaching for Learning provides a methodology for applying the results from various research studies on the learning process to the teaching of problem solving, with a particular emphasis on students' perspectives on the learning process.

BLACK, Robert Alan. Broken Crayons: Break Your Crayons and Draw Outside the Lines. Athens, GA: Cre8ng Places Press, 1995.
BF408.B52 1995 (Problem Solving Collection)
In this popular treatment, Black's primary goal is to help the reader learn how to break through barriers to creativity. He uses the act of breaking crayons as a symbol of a reminder that in order to be creative, one needs to do things differently and out of the ordinary, and removing real or imaginary barriers. Includes exercises.

BOLLING, G. Fredric. Leadership and Immensity. Aldershot, Eng.: Gower, 1996.
HM141.B79 1996 (Problem Solving Collection)
Leaders are defined by the immense problems they face and attempt to solve. They address issues of concern to groups of people. "This book is about the connection between leaders and immense problems.... *A leader is someone who expresses THE vision of what things will be like when the immense problem goes away or is solved.*" (p. 2, author's italics) This is a thought piece (no footnotes) of expanded essays.

BORCK, Leslie E. & Stephen B. FAWCETT. Learning, Counseling and Problem-Solving Skills. New York, NY: Haworth Press, 1982.
BF637.C6B58 (Problem Solving Collection)
This work contains a series of problem-solving exercises meant to teach this skill to counselors and their assistants. It includes an instruction manual.

BOUD, David & Grahame I. FELETTI, eds. The Challenge of Problem-Based Learning. 2nd ed. London, Eng.: Kogan Page, 1997.
LC1059.C44 1997 (Problem Solving Collection)
The authors of the included essays explore the strength and weaknesses of problem-based learning, with particular emphasis on how it might be applied to professional education. While most of the authors are sympathetic to problem-based learning, they do address the subject critically and examine many views on the techniques used. Chapter 23, Applying problem-based learning to practical legal training, by Keith Winsor, discusses the use of problem-based learning in practical legal training at the College of Law, New South Wales.

BRAMS, Steven J. & Alan D. TAYLOR. The Win-Win Solution: Guaranteeing Fair Shares to Everybody. New York, NY: W.W. Norton, 1999.
HM136.B73 1999 (Problem Solving Collection)
The author deals in a relatively non-technical way with helping parties to obtain a fair settlement to a well-structured problem in which it is possible for everyone to win. He discusses three procedures: strict and balanced alternation (based on taking turns); divide and choose (I cut the cake, you choose the first piece); and adjusted winner.

BRANSFORD, John D., et al, eds. How People Learn: Brain, Mind, Experience, and School.
        Washington, D.C.: National Academy Press, 1999.
        LB1060.H672 1999 (Problem Solving Collection)
        The editors present the results of a two-year study evaluating user developments in the science
of learning. "Recent research provides a deep understanding of complex reasoning and performance
on problem-solving tasks and how skill and understanding in key subjects are acquired. (p. xi) This
work includes a discussion of learned problem-solving skills in novices vs. experts.

BRANSFORD, John D. & Barry S. STEIN. The IDEAL Problem Solver: A Guide for Improving
        Thinking, Learning and Creativity. 2nd ed. New York, NY: W.H. Freeman & Co., 1993.
        BF449.B73 1993 (Problem Solving Collection)
        Bransford and Stein present a model for improving problem-solving skills. The work includes
problems and exercises (with answers) to help the readers improve their problem-solving skills.

BRANSFORD, John D., et al. "Teaching Thinking and Problem Solving." Teaching Thinking Skills:
        Theory and Practice. Eds. Joan Boycoff Baron and Robert J. Sternberg. New York, NY: W.H.
        Freeman & Co., 1987. 162-181.
        B105.T54T43 (Problem Solving Collection)
        The authors describe the ideal problem solver and then discuss the problem of teaching thinking
and problem solving. They also explain how to evaluate programs which teach such skills.

BRIDGES, Edwin M. & Philip HALLINGER. Problem-Based Learning for Administrators. Eugene,
        OR: ERIC Clearinghouse On Educational Management, University of Oregon, 1992.
        LB1027.42.B74 (Problem Solving Collection)
        "Problem-based learning" is an educational approach in which students working in small
groups, take responsibility for solving problems. The authors show how this approach was used in a
training program for prospective school principals.

BRIGHTMAN, Harvey J. Group Problem Solving: An Improved Managerial Approach. Atlanta, GA:
        Business Publishing Division, College of Business Administration, Georgia State University,
        1988.
        HD30.29.B735 1988 (Problem Solving Collection)
        The author presents an approach to group problem solving based on his Constructive Conflict
Model of team problem solving.

BRIGHTMAN, Harvey J. Problem Solving: A Logical and Creative Approach. Atlanta, GA: Business
        Publishing Division, College of Business Administration, Georgia State University, 1980.
        HD30.29.B74 (Problem Solving Collection)
        Problem Solving is intended as an aid for "training practicing managers to develop systematic
and creative approaches to solving the problems they face" (p. vii)

BRODY, Ralph. Problem Solving: Concepts and Methods for Community Organizations. New York,
        NY: Human Sciences Press, 1982.
        HV41.B69 1982 (Problem Solving Collection)

Brody provides guidance on the application of traditional problem-solving techniques to the problems faced by community organizations.

BROWN, Stephen I. & Marion I. WALTER. The Art of Problem Posing. 2nd ed. Hillsdale, NJ: Erlbaum, 1990.
QA63.B76 1990 (Problem Solving Collection)
Defining the correct problem to be solved is of paramount importance in any problem-solving model. This work focuses on problem posing in mathematics, but the strategies employed are applicable to diverse problem situations.   The authors assume reader has completed high-school mathematics.

CAIN, Jim & Barry JOLLIFF. Teamwork & Teamplay: A Guide to Cooperative, Challenge and Adventure Activities That Build Confidence, Cooperation, Teamwork, Creativity, Trust, Decision Making, Conflict Resolution, Resource Management, Communication, Effective Feedback, and Problem Solving Skills. Dubuque, IO: Kendall Hunt Publishing, 1998.
The authors present a variety of activities, most involving physical activity, which can be used to build and enhance teamwork skills, including problem solving. .

CARPENTER, Susan L. & W.J.D. KENNEDY. Managing Public Disputes: A Practical Guide for Government, Business, and Citizens' Groups. 2nd ed. San Francisco, CA: Jossey-Bass, 2001.
HD42.C37 2001 (Problem Solving Collection)
Managing Public Disputes is intended to enable decision-makers involved in public disputes to solve problems without mediation.

CHESLA, Elizabeth. Practical Solutions for Everyday Work Problems. New York, NY: Learning Express, 2000.
HD30.29.C43 2000 (Problem Solving Collection)
Chesla takes the reader through a series of steps leading to effective problem solving not only in the work place, but in almost any situation. She presents twenty short lessons, each of which can be completed in about twenty minutes.

CHI, Michelene T.H.et al. "Expertise in Problem Solving." Advances in the Psychology of Human Intelligence. Ed. Robert J. Sternberg. Hillsdale, NJ: Lawrence Erlbaum Associates, 1982.
 v. 1, 7-75.
The analysis of expertise in problem solving plays a significant role in understanding the nature of intelligence. The authors' first discuss expert problem solving in general and then turn to problem solving in physics.

CINNAMON, Kenneth M. & Richard Silverman, eds. Creative Problem Solving. Kansas City, MO: Applied Skills Press, 1979. (Applied Skills Training Series)
HD30.29.C56 1979 (Problem Solving Collection)
This is a manual to be used by trainers who are conducting classes or workshops on creative problem solving. It presents a series of structured activities and case studies which can be used in a variety of settings.

COSTA, Arthur L., ed. Developing Minds: A Resource Book for Teaching Thinking. 3rd ed.
        Alexandria, VA: Association for Supervision and Curriculum Development, 2001.
        LB1590.3.D48 2001 (Problem Solving Collection)
        Developing Minds is a compilation of articles on the teaching of thinking. The work is
international in scope and covers theory, research, and practical applications. "It is intended to help
educational leaders...infuse curriculum, instruction, and school organization with practices that more
fully develop the intellectual potentials of all the organizations' inhabitants." (p. xi)

COUGER, J. Daniel. Creative Problem Solving and Opportunity Finding. Hillsdale, IL: Boyd &
        Fraser, 1995. Decision Making and Operations Management Series)

        HD53.C69 (Problem Solving Collection)
        This textbook discusses creative problem-solving methodology in business and management.

COVEY, Stephen R. The Seven Habits of Highly Effective People: Restoring the Character Ethic.
        New York, NY: Simon & Schuster, 1989.
        BF637.S8C68 1989 (Problem Solving Collection)
        Covey's highly popular book concentrates on improving personal effectiveness, with an
emphasis on ethical , people-oriented conduct. Problem solving is seen as an opportunity to arrive at
mutually beneficial, mutually satisfying solutions (win/win principle).

COX, Geof, et al. 50 Activities on Creativity and Problem Solving. Aldershot, Eng.: Gower, 1991.
        The authors present fifty training activities centering on overcoming perceptions which can
interfere with problem solving. The activities are broken down into six categories: icebreakers,
creativity, problem analysis, solution finding, implementing solutions and thinking process.

CRAWFORD, Donna & Richard BODINE. Conflict Resolution Education: A Guide to Implementing
        Programs in Schools, Youth-Serving Organizations, and Community and Juvenile Justice
        Settings: Program Report. Washington, D.C.: U.S. Dept. of Justice, Office of Juvenile Justice
        and Delinquency Prevention and U.S. Dept. Of Education, Office of Elementary and Secondary
        Education, 1996.
        LB3013.3.C72 1996 (Problem Solving Collection)
        Aimed at heightening awareness of conflict resolution education and its potential to settle
disputes peacefully in the elementary and secondary school system, this work emphasizes problem-
solving skills.

CRAWFORD, Robert P. The Techniques of Creative Thinking: How To Use Your Ideas to Achieve
        Success. New York, NY: Hawthorn Books, 1954.
        BF408.C72 1954 (Problem Solving Collection)
        The author shows how an individual can come up with creative ideas quickly and readily. Of
particular interest is chapter 10, How to Solve Problems Creatively (p. 132-147)

CROPLEY, Arthur J. Creativity in Education and Learning; A Guide for Teachers and Educators.

London, Eng.: Kogan Page, 2001.

LB1062.C76 2001 (Problem Solving Collection)

The author discusses creativity in terms of "production of novelty". He "emphasizes *psychological states and processes* that lead to production of novelty, and *personal properties* that are related to those processes." (p. 2, author's italics)

DAVIDSON, Janet E. & Robert J. STERNBERG, eds. The Psychology of Problem Solving. Cambridge, Eng.: Cambridge University Press, 2003.

BF449.P78 2003 (Problem Solving Collection)

The editors' goal is to present "what psychologists know about problem solving and the factors

that contribute to its success or failure." (p. ix) In order to do this, each contributor was asked to discuss from his/her perspective what makes problem solving difficult.

DAVIS, Gary A. Psychology of Problem Solving: Theory and Practice. New York, NY: Basic Books, 1973.

This review of basic research done on problem solving through 1972 is slanted toward the psychologist.

DE BONO, Edward. De Bono's Thinking Course. Rev. Ed. New York, NY: Facts on File, 1994.

BF455.D363 1994 (Problem Solving Collection)

"Improving your thinking is actually much, much simpler than most people believe." (p. xi) The author believes that while thinking is a matter of intelligence, it can be improved by training and practice. He presents a practical strategy for learning how to think better.

DE BONO, Edward. Lateral thinking: A Textbook of Creativity. New York, NY: Penquin Books, 1977.

BF408.D4 1977 (Problem Solving Collection)

Lateral thinking "is the process of using information to bring about creativity and insight restructuring." (p. 7) The ability to use lateral thinking can be a very important tool in solving problems at all levels. This textbook presents a variety of exercises and methodologies for teaching and learning the processes involved in lateral thinking.

DE BONO, Edward. Lateral Thinking: Creativity Step by Step. New York, NY: Harper & Row, 1970.

BF408. D4 1970 (Problem Solving Collection)

Lateral thinking is a generative, rather than selective, process that seeks to generate ideas in a creative manner. It is not a substitute for vertical thinking which proceeds in a logical manner. Both are need to address problem and generate solutions.

DE BONO, Edward. Masterthinker's Handbook. New York, NY: International Center for Creative Thinking, Inc. 1985.

BF455.D365 1985 (Problem Solving Collection)

De Bono presents a "framework which allows a thinker to direct his or her attention to one aspect of a matter at a time." (Foreword)

DE BONO, Edward. The Mechanism of the Mind. New York, NY: Simon and Schuster, 1969.
    BF455.D37 1969 (Problem Solving Collection)
    "This book has to do with the way the brain becomes mind." (p. 7)   It discusses the
biological information processing system of the mind–focusing on the mechanical behavior of the brain.

DE BONO, Edward. New Think: The Use of Lateral Thinking in the Generation of New Ideas. New
    York, NY: Basic Books, Inc., 1968.
    BF455.D38 1968 (Problem Solving Collection)

    "New think" involves the use of lateral thinking to produce new solutions by increasing
the ability to think sideways and re-form patterns.

DE BONO, Edward. PO: Beyond Yes and No. Baltimore, MD: Penguin Books, 1973.
    BF408.D44 1973 (Problem Solving Collection)
    "PO", a word invented by the author, represents the initial step in the author's theory of
lateral thinking to address problems.

DE BONO, Edward.   Serious Creativity: Using the Power of Lateral Thinking to Create New ideas.
    New York, NY: HarperBusiness, 1993.
    BF408.D447 1993 (Problem Solving Collection)
    Dr. DeBono believes creativity is not a semi-mystical talent, but that creative thinking skills can
be improved through the use of conscious techniques such as lateral thinking. "Lateral thinking is a
systematic approach to creative thinking with formal techniques that can be used deliberately." (p. v.)

DE BONO, Edward.   Six Thinking Hats. 1ˢᵗ U.S. Ed. Boston, MA: Little, Brown and Co., 1985.
    BF441.D385 1985 (Problem Solving Collection)
    The author describes six different thinking hats, each of which defines a certain type of thinking.
By choosing between the hats, one makes thinking a very deliberative process. The six hats are: the
white hat–facts and figures; the red hat–emotions and feelings; the black hat–what is wrong with it; the
yellow hat–speculative-positive; the green hat–creative and lateral; and the blue hat–control of thinking.

DELBECQ, Andre L., et al. Group Techniques for Program Planning: A Guide to Nominal Group and
    Delphi Processes. Glenview, IL: Scott, Foresman and Co., 1975. (Management Applications
    Series)
    Aimed at a practitioners in the human services (widely-defined), the authors discuss Nominal
Group Techniques and the Delphi Technique as methods of assisting groups in defining problems and
reaching solutions. According to the authors these methods "increase the creative productivity of group
action, facilitate group decision, help stimulate the generation of critical ideas, give guidance in the
aggregation of individual judgments and, in all these endeavors, save human effort and energy and leave
participants with a sense of satisfaction." (p. viii)

DENTON, D. Keith. The Toolbox for the Mind: Finding and Implementing Creative Solutions in the
    Workplace. Milwaukee, WI: ASQ Quality Press, 1999.
    HD53.D46 1999 (Problem Solving Collection)

The author "aims to help you find innovative solutions to today's problems [in the workplace] using an interdisciplinary approach." (p. xvii) He does so by providing the reader with a variety of "tools" which aid in finding creative solutions. The book is divided into three sections: 1. Creativity and Innovation; 2. Using Creativity Techniques and Knowledge Tools; 3. Implementing Innovations.

DEPORTER, Bobbi & Mike HERNACKI. Quantum Thinking: Creative Thinking, Planning and
      Problem-Solving. Oceanside, CA: Learning Forum Publications, 2000.
      LB1062.D47 2000 (Problem Solving Collection)
      The authors give a brief introduction to methods that allow individuals to exercise creativity in
their everyday lives.

DEUTSCH, Morton & Peter T. COLEMAN, eds. The Handbook of Conflict Resolution: Theory and
      Practice. 1st ed. San Francisco, CA: Jossey-Bass, 2000.
      HM1126.H35 2000 (Problem Solving Collection)
      This is a general work on conflict resolution, with many sections mentioning problem solving
in passing. Of particular interest is chapter 9, Problem solving and decision making in conflict resolution, by Eben A. Weitzman and Patricia Flynn Weitzman.

DILTS, Robert & Gino BONISSOME. Skills for the Future: Managing Creativity and Innovation.
      Capitola, CA: Meta Publications, 1993.
      BF408.D54 1993 (Problem Solving Collection)
      "The focus of this book is on how the cognitive and behavioral technologies of Neuro Linguistic
Programming may be used to develop and apply personal and organizational learning strategies together with communication and leadership skills to manage the processes of creativity and innovation." (p. xi) A significant portion of the work deals with creative problem solving, both individually and in groups.

DOLAN, Daniel T. & James WILLIAMSON. Teaching Problem-Solving Strategies. Menlo Park, CA:
      Addison-Wesley Pub. Co., 1983.
      QA63.D64 (Problem Solving Collection)
      Although the problem-solving activities included in this book are aimed at junior-high math
students, they may be helpful in developing useful exercises for any age group.

DOMBROWSKI, Thomas W. Creative Problem-Solving: The Door to Progress and Change. San Jose,
      CA: toExcel Press, 1972, reprinted 2000..
      BF441.D66 1979a (Problem Solving Collection)
      The author presents a systematic guide to problem solving "which can be applied to human
relations, personal problems, scientific problems, social problems, and economic problems." (p. 9) The book is aimed at the lay person and includes illustrations and exercises.

DÖRNER, Dietrich. The Logic of Failure: Recognizing and Avoiding Error in Complex Situations.
      Reading, MA: Perseus Books, 1996.
      BF448.D6713 1996 (Problem Solving Collection)
      "The subject of this book is the nature of our thinking when we deal with complex problems."
(p. 7) This thinking involves our emotions, our values and motivations. The author uses "games" in

which participants simulate complex situations that require problem solving.

        Translation of <u>Die Logik des Misslingens</u> (1989).

DRYSDALE, Bryan & Julie BLAU. Problem Solving for Entrepreneurs: A Creative New Approach to Overcoming Your Business Problems. Aptos, CA: SMD Publishing, 1996.

        HD30.29.D79 1996 (Problem Solving Collection)

        This work presents both a general overview of problem solving and business specific guidance geared toward the entrepreneur who must learn to solve business problems swiftly and efficiently. It concentrates on three goals: to teach the business owner how to distinguish between easily-solved problems, those that cannot be solved, and those that bring the owner closer to his/her goals; to enable the entrepreneur to focus on what he/she wishes to accomplish; and to explain reframing problems to gain insight.

EDEN, Colin, et al. Messing About in Problems: An Informal Structured Approach to Their Identification and Management. New York, NY: Pergamon Press, 1983.

        HD30.29.E3 1983 (Problem Solving Collection)

        "This book is aimed at all those working in and around organizations who are interested in ways of thinking systematically and creatively about messy problems...." (p. ix) The authors target those persons in organizations who are providing services, giving ways of thinking about problems and suggesting techniques that might be used to solve them.

EDMUND, Norman W. The General Pattern of the Scientific Method (SM-14): A Flexible, Inclusive, and Creative General Problem-Origination and -Solving Method. 1st student ed. Fort Lauderdale, FL: Norman W. Edmund, 1992.

        Q175.3.E36 1992 (Problem Solving Collection)

        On title page: For Originating, Preventing, Solving, and Challenging of Unusual, Complex, Unique, or Ill-Structured Problems and Decisions.

        According to the author, this pamphlet "offers a complete picture" (p. 2) of the scientific method which he believes has never been clearly presented to most educators. It contains many charts, diagrams and pictures to illustrate the method.

EDMUND, Norman W. The Scientific Method Today: Your Guide to the Complete Method of Creative Problem Solving and Decision Making, SM-14. 2000 ed. Fort Lauderdale, FL: N.W. Edmund, 2000.

        Q175.3.E36 2000 (Problem Solving Collection)

        This work updates the author's 1992 pamphlet, <u>The General Pattern of the Scientific Method (SM-14)</u>. Edmund presents the scientific method as a series of eleven major stages and three supporting ingredients. The pamphlet contains charts, diagrams and pictures to illustrate SM-14.

EIFFERT, Stephen D. Cross-Train Your Brain: A Mental Fitness Program for Maximizing Creativity and Achieving Success. New York, NY: AMACOM, 1999.

        BF408.E395 1999 (Problem Solving Collection)

        This popular treatment looks at the methodology for developing creativity, a necessary ingredient in problem solving.

EITINGTON, Julius E. The Winning Trainer. 3rd ed. Houston, TX: Gulf Publishing Co., 1996.
> HF5549.5.T7E38 1996 (Problem Solving Collection)
> The focus of this work is on a training session which actively involves the learner. Of particular interest are chapter 10, Defining a problem and generating data about it; chapter 11, Generating solutions to a problem; and chapter 12, Selecting and implementing a solution.

ELSTEIN, Arthur S., et al. Medical Problem Solving: An Analysis of Clinical Reasoning. Cambridge, MA: Harvard University Press, 1978.
> R723.E47 1978 (Problem Solving Collection)
> The authors report the findings of the Medical Inquiry Project, "a five-year program of research on medical problem solving that began in early 1969 and continued through late spring 1973." (p. 1) While focused on medical problem solving, the work does discuss general theories of problem solving.

EPSTEIN, Robert. Cognition, Creativity, and Behavior: Selected Essays. Westport, CT: Praeger, 1996.
> BF199.E67 1996 (Problem Solving Collection)
> This is a collection of the author's essays dealing with cognition and creativity as determined through the experimental analysis of behavior.

EPSTEIN, Robert. Creativity Games for Trainers: A Handbook of Group Activities for Jumpstarting Workplace Creativity. New York, NY: Training McGraw-Hill, 1996.
> HF5549.5.T7E67 1996 (Problem Solving Collection)
> This work is meant to be used in group training situations. It consists of a series of exercises based on generativity theory and research to enhance creativity for "real" people. It includes an introduction to training principles and instructions on how to use the exercises.

EVENSEN, Dorothy H. & Cindy E. HMELO, eds. Problem-Based Learning: A Research Perspective on Learning Interactions. Mahwah, NJ: Lawrence Erlbaum Associates, 2000.
> LB1027.42.P78 2000 (Problem Solving Collection)
> Professional workers must not only have knowledge, they must also be able to effectively use that knowledge to solve problems, more often than not as a member of a team. Problem-based learning, which refers to many contextualized approaches to instruction, offers a pedagogical approach which may enhance a student's problem-solving skills.

FABIAN, John. Creative Thinking & Problem Solving. Chelsea, MI: Lewis Publishers, 1990.
> Q172.5.C74F33 1990 (Problem Solving Collection)
> This book is "intended for scientists, engineers, and project leaders who want to add depth, how to's and spice to their creative thinking." (p. vii) The author presents strategies for both individuals and groups.

FAUST, Gerald W., et al. Responsible Managers Get Results: How the Best Find Solutions–Not Excuses. New York, NY: AMACOM, 1998.
> HD66.F38 1998 (Problem Solving Collection)
> The authors emphasize responsibility while discussing various models for problem solving. "Very simply stated, successful managers are responsible managers. They focus on the results that need

to be produced and do whatever is necessary to achieve them. In order to maintain this focus on results, it's important that they do two things: First, they must elevate the role of problem solving in their organizations; they must make problem solving a strategic process. Second, they must solve the day-to-day problems that arise in their organizations decisively and permanently." (p. xiv)

FELDHUSEN, John F. & Donald J. TREFFINGER. Teaching Creative Thinking and Problem Solving.
        Dubuque, IO: Kendall/Hunt Publishing Co., 1977.
        LB1062.F43 1977 (Problem Solving Collection)
        The authors present a series of materials, methods, and techniques to assist primary and secondary teachers in presenting creative problem solving to their students.

FINKE, Ronald A., et al. Creative Cognition: Theory, Research, and Applications. Cambridge, MA:
        MIT Press, 1992. (A Bradford Book)
        BF408.F447 1992 (Problem Solving Collection)
        Of particular interest is chapter 8, Creative Strategies for Problem Solving, in which the authors present a brief overview of various types of creative strategies for problem solving, particularly those relevant to creative cognition.

FIRESTEIN, Roger L. Leading on the Creative Edge: Gaining Competitive Advantage through the
        Power of Creative Problem Solving. Colorado Springs, CO: Piñon Press, 1996.
        HD53.F56 1996 (Problem Solving Collection)
        Aimed at those in business who want to win in the market place, the author's aim is to deliver "practical methods you can immediately apply to help you become more creative and to nurture creativity in the people who work for you." (p. 9-10) He lays out a process to redefine a problem in order to solve the problem effectively.

FISHER, Marsh. The IdeaFisher: How to Land that Big Idea–and Other Secrets of Creativity in
        Business. Princeton, NJ: Peterson's/Pacesetter Books, 1996.
        HD53.F57 1996 (Problem Solving Collection)
        The author has patented IdeaFisher™, a software program that aids problem solving through the use of the concept of "associational thinking". The book describes associational thinking and how it can be used in problem solving with or without computer assistance. It uses a variety of scenarios as teaching tools. While geared toward business, the book could be helpful to the general reader.

FISHER, Roger & William URY. Getting to Yes: Negotiating Agreement Without Giving In. 2nd ed.
        New York, NY: Penguin Books, 1991.
        BF637.N4F57 1991
        Getting to Yes is an often-cited popular work for the lay reader on how to satisfactorily address problems through negotiation.

FLIN, Rhona, et al., eds. Decision Making under Stress: Emerging Themes and Applications.
        Aldershot, Eng.: Ashgate, 1997.
        BF448.D423 1997 (Problem Solving Collection)

These papers are from an international conference: Decision Making Under Stress: Emerging Themes and Applications, Aberdeen, Scotland, 1996. Stress has a negative import on problem solving and decision making, particularly among novices. Experts, however, often achieve a high level of competence in decision making under stress.

FLOOD, Robert L. & Michael C. JACKSON. Creative Problem Solving: Total Systems Intervention. New York, NY: Wiley, 1991.
T57.6.F59 (Problem Solving Collection)
Total systems intervention (TSI) is a technique which seeks to "choose an appropriate methodology for tackling the problem situation as it is perceived, but always to recognise that other possible perceptions of that problem situation are possible." (p. xi) It uses case studies geared toward management, but the technique has application to social and political problems.

FLOOD, Robert L. Solving Problem Solving: A Potent Force for Effective Management. New York, NY: Wiley, 1995.
HD30.29.F58 (Problem Solving Collection)
The authors use the TSI (Total systems intervention) technique in case studies from a variety of disciplines and jurisdictions. Solving Problem Solving is aimed at managers in organizations and their consultants.

FLOWER, Linda. Problem-Solving Strategies for Writing in College and Community. Fort Worth, TX: Harcourt Brace College Publishers, 1998.
PE1408.F5125 1998 (Problem Solving Collection)
This textbook, a revision of the author's Problem-Strategies for Writing (1981), is concerned with how to write about problems and their solutions. It looks at how rhetoric links academic and civil discourse, "where problem solving and writing come into the service of the goals that move and unite us." (p. v)

FOBES, Richard. The Creative Problem Solver's Toolbox: A Complete Course in the Art of Creating Solutions to Problems of Any Kind. Portland, OR: Solutions Through Innovation, 1993.
BF449.F69 1993 (Problem Solving Collection)
Using real-life example, the author presents a variety of tools to be used in creative problem solving in all settings. These tools are specific techniques that can be taught and learned. Includes numerous diagrams, pictures and exercises.

FOGLER, H. Scott & Steven E. LEBLANC. Strategies for Creative Problem Solving. Englewood Cliffs, NJ: Prentice Hall, 1995.
BF449.F7 1995 (Problem Solving Collection)
The authors provide a framework to polish creative problem-solving skills. They include a problem-solving heuristic to address ill-defined problems which consists of five steps: (1) define the real, as opposed to perceived, problem; (2) generate solutions; (3) decide a course of action; (4) implement the solution; and (5)evaluate the solution. Each step is described with exercises.

FOX, William M. Effective Group Problem Solving: How to Broaden Participation, Improve Decision

Making, and Increase Commitment to Action. San Francisco, CA: Jossey-Bass, 1987.

Fox emphasizes group problem solving as an effective management technique for a work group, committee or volunteer group. He presents a process known as Improved Nominal Group Technique (INGT) which employs rules and procedures to minimize the problems associated with group procedures.

FRENSCH, Peter A. & Joachim FUNKE, eds. Complex Problem Solving: The European Perspective.
Hillsdale, NJ: Lawrence Erlbaum Associates, 1995.
QP360.5.C66 1995 (Problem Solving Collection)

The editors believe simple problem solving and complex problem solving are qualitatively different. Complex problem solving involves problems that are: "(a) novel, (b) complex, (c) dynamically changing over time, and (d) intransparent ." (p. xi) They concentrate on presenting selections from European research on complex problem solving which they view as having a quite different flavor from North American research.

FRYER, Marilyn. Creative Teaching and Learning. London, Eng.: Paul Chapman Publishing, 1996.

This title is directed "especially for teachers who want their students to become efficient learners, skilled in creative thinking and problem solving." (Pref.) It is based on reports from over 1,000 British teachers of under eighteen-year-olds.

GAGNÉ, Robert M. The Conditions of Learning and Theory of Instruction. 4th ed. New York, NY:
Holt, Rinehart and Winston, 1985.
LB1051.G19 1985 (Problem Solving Collection)

Chapter 9, Problem solving, is of particular interest. Gagné describes problem solving as a process that yields new learning through the application of previously-learned rules.

GAGNÉ, Robert M. "Problem Solving." Categories of Human Learning. Ed. Arthur W. Melton. New
York, NY: Academic Press, 1964. 293-317.
LB1051.S97 1962 (Problem Solving Collection)

Problem Solving is a detailed examination of the author's theory of the problem-solving process. It is accompanied by comments by Tracy S. Kendler, "Learning and Problem Solving: Comments on Professor Gagné's Paper." (p. 318-323)

GAMACHE, R. Donald & Robert Lawrence KUHN, eds. The Creativity Infusion: How
Managers Can Start and Sustain Creativity and Innovation. New York, NY: Harper & Row, 1989.
HD53.G36 1989 (Problem Solving Collection)

The editors have gathered a series of works aimed at encouraging both creative managers (those who produce creative ideas personally) and managers of creativity (who may not personally be creative, but have the tools and skills to recognize, develop and promote creativity in others).

GARDNER, Martin. Aha! Insight. New York, NY: Scientific American/W.H. Freeman and Co., 1978.

This work is a compilation of puzzles which encourage the reader to develop the skill to find simple, elegant solutions to problems as opposed to more traditional involved, difficult

solutions. These solutions involve the "aha" factor: that point when the mind can suddenly "see" a simple answer.

GELFAND, Bernard. The Creative Practitioner: Creative Theory and Method for the Helping Services. New York, NY: Haworth Press, 1988.
HV31.G37 1988 (Problem Solving Collection)
In this work designed for undergraduate and graduate students in the helping services (such as social work, vocational guidance, etc.), the author attempts to join together "the theory and practice of problem solving with the theory and practice of creativity." (p. x) The text should also be helpful to educators and practitioners in these services. Includes exercises and worksheets.

GETZELS, J.W. "The Problem of the Problem". Question Framing and Response Consistency. Ed. Robin M. Hogarth. San Francisco, CA: Jossey-Bass, Inc., 1982. 37-49.
The first step in problem solving is to formulate the problem. Problems "must be specified and formulated in fruitful and often radical ways if they are to be moved toward productive termination." (p. 38)

GICK, Mary L. & Keith J. HOLYOAK. "Analogical Problem Solving." Issues in Cognitive Modeling: A Reader. Eds. A.M. Aitkenhead & J.M. Slack. London, Eng.: Erlbaum, 1985. 279-306.
BF311.I82 1985 (Problem Solving Collection)
This study describes the author's investigation of the use of analogy as a guide to solving ill-defined problems.

GILHOOLY, K.J., ed. Human and Machine Problem Solving. New York, NY: Plenum, 1989.
BF449.H86 1989 (Problem Solving Collection)
Starting with the premise that problem solving is a form of information processing, the editor compares and contrasts, in complimentary chapters, problem solving by humans and problem solving by machine (artificial intelligence).

GILHOOLY, K.J. Thinking: Directed, Undirected and Creative. 3rd ed. New York, NY: Academic Press, 1996.
BF441.G44 1996 (Problem Solving Collection)
Aimed at students with some background in psychology and those in courses on psychology of thinking, this work addresses such topics as thinking directed at problem solving and creative thinking. Thinking directed toward problem solving is exploring a symbolic model of the task to determine the course of action that should be best. Of particular interest are chapter 3, Expertise 1: Adversary problems and chapter 4, Expertise 2: Non-adversary problems.

GLASSMAN, Edward. The Creativity Factor: Unlocking the Potential of Your Team. San Diego, CA: Pfeiffer & Co., 1991.
This work is intended for team leaders and members who are committed to enhancing the problem-solving creativity of their teams. The author provides "step-by-step instructions to carry out activities essential to improving creativity." (p.1)

GRAY, Barbara. Collaborating: Finding Common Ground for Multiparty Problems. San Francisco, CA: Jossey-Bass, 1989.
    HD30.29.G73 (Problem Solving Collection)
    Gray presents collaboration as a problem-solving device in multiparty disputes.

GREENO, James G. "Nature of problem-solving abilities." Handbook of Learning and Cognitive Processes (Vol. 5): Human Information Processing. Ed. W.K. Estes. Hillsdale, N. J.: Lawrence Erlbaum Associates, 1978. 239-270.
    The author reviews the experimental psychology literature concerning problem solving and presents some suggestions as to the skills necessary to solve problems successfully.

GREENO, James G. & Herbert A. SIMON. "Problem Solving and Reasoning". Stevens' Handbook of Experimental Psychology. 2d. ed. Eds. Richard C. Atkinson, et al. New York, NY: John Wiley & Sons, 1988. v. 2, 589-672.
    "This chapter surveys the major theoretical concepts and principles that have been developed [concerning problem solving], presents some of the evidence that supports these principles, and discusses the empirical and theoretical methods that are used in this domain of scientific study." (p. 589)

GRØNHAUG, Kjell & Geir KAUFMANN, eds. Innovation: A Cross-Disciplinary Perspective. Oslo, Norway: Norwegian University Press, 1988.
    HD53.I56 1988 (Problem Solving Collection)
    This collection is aimed at researchers, graduate students, managers and politicians interested in the innovation issue. Of particular interest are: chapter 3, Adaptors and Innovators: Problem Solvers in Organizations, by Michael Kirton (p. 65-85); chapter 4, Problem Solving and Creativity, by Geir Kaufmann (p. 87-137); chapter 7, Trial by Fire in an Industrial Setting: A Practical Evaluation of Three Creative Problem-Solving Techniques, by Stanley S. Gryskiewicz (p. 205-232); and chapter 8, Applying Experimental Research on Group Problem Solving to Organizations, by L. Richard Hoffman (p. 233-250).

GROSSMAN, Stephen R., et al. Innovation, Inc.: Unlocking Creativity in the Workplace. Plano, TX: Wordware Publishing, 1988.
    HD53.G76 1988 (Problem Solving Collection)
    Focused on innovation in the business world, Innovation, Inc. presents exercises and methodologies to increase creativity in the workplace.

GRYSKIEWICZ, Stanley S. & David A. HILLS, eds. Readings In Innovation. Greensboro, NC: Center for Creative Leadership, 1992.
    HD53.R4 1992 (Problem Solving Collection)
    The editors have gathered a variety of readings on innovation. Of particular interest are: Adaptors and Innovators: Problem-Solvers in Organizations by M.J. Kirton (p. 45-67); Facilitating Creative Problem-Solving Groups, by Scott G. Isaksen (p. 99-135); and Creative Problem Solving, by David C. Morrison (p. 211-221).

HALE, Richard & Peter WHITLAM. Practical Problem Solving & Decision Making: An Integrated
Approach. London, Eng.: Kogan Page, 1997.
HD30.29.H35 1997
The authors have "devised a model which [they] believe mirrors in a more formal and structured
way the mental stages through which individuals pass [in problem solving]. (p. 9) The text is geared
to managers who face complex or strategic problems, but can also be used in collective problem-solving
situations.

HANSEL, Tim. Eating Problems for Breakfast: A Simple, Creative Approach to Solving Any Problem.
Dallas, TX: Word Publishing, 1988.
BJ1581.2.H27 1988 (Problem Solving Collection)
 The author believes that, rather than just coping, one must take an active attitude toward solving
problems. He offers ten principles as a step-by-step guide to problem solving. This work deals mainly
with handling personal problems.

HARE, A. Paul. Creativity in Small Groups. Beverly Hills, CA: Sage, 1982.
HM133.H35 (Problem Solving Collection)
Hare discusses how small groups can work together for maximum creativity. The author believes
"...the steps in the creative process are essentially the same as the steps in ordinary problem solving.
The difference lies in the degree of originality of the product." (p. 11)

HARRIS, Robert A. Creative Problem Solving: A Step-by-Step Approach. Los Angeles, CA: Pyrczak
Publishing, 2002.
BF449.H37 2002 (Problem Solving Collection)
This book, aimed at a popular audience, is intended to help the reader "solve unstructured
problems--problems that require a thoughtful and creative approach." (p. v.) Includes graphs and
exercises.

HARRISON, Allen F. & Robert M. BRAMSON. Styles of Thinking: Strategies for Asking Questions,
Making Decisions, and Solving Problems. Garden City, NJ: Anchor Press/Doubleday, 1982.
B105.T54H37 1982 (Problem Solving Collection)
The authors' intent is to expand the readers' repertoire of strategies for dealing with decision
making and solving problems. They hope to enable the reader to understand his or her style of thinking,
identify blind spots in this style, reinforce strengths and learn practical skills to expand his/her styles
of thinking.

HAYES, John R. The Complete Problem Solver. 2nd ed. Hillsdale, NJ: Lawrence Erlbaum Assoc.,
1989.
BF441.H33 1989 (Problem Solving Collection)
The Complete Problem Solver is intended as a text for a course in general problem-solving skills.
"Teaching problem solving skills is a bit like coaching: the instructor needs to watch the students in
action to be sure that they are performing the skills in the right way." (p. viii)

HIGGINS, James M. 101 Creative Problem Solving Techniques: The Handbook of New Ideas for

Business. Winter Park, FL: New Management Publishing Co., 1994.
HD30.29.H54 1994 (Problem Solving Collection)

Businesses, if they are to succeed, must create an atmosphere which will turn creativity into innovation. The author describes the creative problem-solving process and presents 101 techniques to foster the process. Includes diagrams, charts, illustrations and exercises.

HIROKAWA, Randy Y. & Marshall Scott POOLE, eds. Communication & Group Decision Making.
2d ed. Thousand Oaks, CA, Sage Publications, 1996.
HD30.23.C65 1996 (Problem Solving Collection)

Group communication processes are truly complex interactions. "This volume takes stock of recent developments in group communication research." (p. 5) Of particular interest is chapter 3, Functional Theory & Communication in Decision Making & Problem-Solving Groups: An Expanded View, by Dennis S. Gouran & Randy Y. Hirokawa. (p. 55-80)

HODNETT, Edward. The Art of Problem Solving: How to Improve Your Methods. New York, NY:
Harper, 1955.

Intended for the general reader, this self-help book provides suggestions on how to solve problems in all areas of one's life.

HOENIG, Christopher. The Problem Solving Journey: Your Guide to Making Decisions & Getting
Results. Cambridge, MA: Perseus Publishing, 2000.
BF488.H63 2000 (Problem Solving Collection)

Using a series a of case studies, the author illustrates what he believes to be the "new" definition of problem solving, one that "encompasses large scale, non-linear, opportunity-oriented, & strategic work." (p. xi) He presents problems-solving skills: "generating mindset, acquiring knowledge, building relationships, managing problems, creating solutions, & delivering results." (p. xi)

HOGARTH, Robin M. Judgement & Choice: The Psychology of Decision. 2nd ed. New York, NY:
John Wiley & Sons, 1987.
BF448.H64 (Problem Solving Collection)

Hogarth's goal is to teach the reader better decision-making by emphasizing the unstructured, natural way individuals make judgments & choices. Chapter 9, Problem structuring & decision aids, is of particular interest.

HOLYOAK, Keith J.   "Mental Models in Problem Solving." Tutorials in Learning and Memory:
Essays in Honor of Gordon Bower.   Eds. John. R. Anderson & Stephen M. Kosslyn. San
Francisco, CA: W. H. Freeman, 1984. 193-218

The author presents "both an intuitive and a more systematic account of what mental models are, emphasizing their role in the process of solving problems." (p. 193) His use of the term problem solving "involves recognizing that a problem exists, forming some initial mental representation [model] of it, transforming an initially vague model into one that is better specified, and eventually, if all goes well, using the model to plan and execute a concrete solution." (p. 194-195)

HOLYOAK, Keith J. "Problem solving." Thinking: an Invitation to Cognitive Science, 2nd ed. Eds.

Daniel N. Osherson & Edward E. Smith. Cambridge, MA: M.I.T. Press, 1990. v. 3, 267-296.
BF311.I68 (Problem Solving Collection)

Holyoak discusses the nature of problem solving and the theoretical issues the topic raises for cognitive science.

HUDGINS, Bryce B. Learning and Thinking: A Primer for Teachers. Itasca, IL: F.E. Peacock Publishers, 1977.
LB1051.H798 1977 (Problem Solving Collection)

This work is an introduction for teachers on how children think and learn in school. The author presents ideas about learning and thinking which may prove to be of value in the classroom. Of particular interest is chapter 7, The Pupil as Thinker: Problem Solving (p. 210-255).

HUGHES, Thomas P. Rescuing Prometheus. New York, Pantheon Books, 1998.
T176.H84 1998 (Problem Solving Collection)

Hughes recounts the technological transformation of the post-World War II period, during which complex problems were solved through the use of technology and science. He emphasizes the massive research and development projects which were collective creative endeavors.

HUNTER, Dale, et al. The Art of Facilitation: How to Create Group Synergy. Tucson, AR: Fisher Books, 1995.
HM133.H86 1995 (Problem Solving Collection)

Originally published in New Zealand, this popular treatment of facilitation in groups focuses on "developing group effectiveness by focusing on the role and skills of the facilitator." (p. x)

IJIRI, Yuji & Robert Lawrence KUHN, eds. New Directions in Creative and Innovative Management: Bridging Theory and Practice. Cambridge, MA: Ballinger Publishing Co., 1988. (Series on Econometrics and Management Sciences, v. 7)
HD53.N49 1988 (Problem Solving Collection)

Th editors present papers from the Third International Conference on Creative and Innovative Management, held in 1987. Of particular interest is chapter 11, Innovative Problem Solving in Groups: New Methods and Research Opportunities, by Scott G. Isaksen. (p. 145-168) Isaksen, believing creative problem solving can be learned, analyzes six steps to problem solving: mess finding, data finding, problem finding, idea finding, solution finding, and acceptance finding.

ISAKSEN, Scott, K., et al. Creative Approaches to Problem Solving: A Framework for Change. 2d. Ed. Dubuque, IO: Kendall/Hunt Publishing Co., 2000.
BF449.I73 2000 (Problem Solving Collection)

The authors use case studies to illustrate problem-solving theory, tools and applications. Much of the focus is on creative problem solving in business and education. The work is an update of the authors' framework for CPS. Includes illustrations, flow-charts and diagrams.

ISAKSEN, Scott G. & Donald J. TREFFINGER. Creative Problem Solving: The Basic Course. Buffalo, NY: Bearly Ltd, 1985.
BF408.I8 1985 (Problem Solving Collection)

The authors provide a basic overview of creative problem solving, describing different phases of the process involved and including exercises to build creative problem-solving skills.

ISAKSEN, Scott G., ed. Facilitative Leadership: Making a Difference with Creative Problem Solving.
Dubuque, IO: Kendall/Hunt Publishing Co., 2000.
BF449.F32 2000 (Problem Solving Collection)
"Facilitative leadership is the kind of leadership that focuses on service, providing help and assistance to others in ways that build strong consensus and shared commitment." (p. xxvii) The editor has gathered a collection of papers that synthesize what is known about facilitative leadership, using as a framework the creative problem-solving approach.

ISAKSEN, Scott G. et al, eds.   Nurturing and Developing Creativity: The Emergence of a Discipline.
Norwood, NJ: Ablex Publishing Corporation, 1993.
BF408.E46 1993 v. 2 (Problem Solving Collection)
Volume two of the proceedings from the 1990 International Working Creativity Research Conference held at the Center for Studies in Creativity. "The purpose of the conference was to clarify and develop the disciplinary potential of the field and to collegially present our best thinking about the past, present, and future state of the field." (p. 1) One of the key potential conference outcomes was the improved use of creative problem solving. This volume focuses on the issues related to the stimulation of creativity. Of particular interest is chapter 3, Implications of Problem Finding on Teaching and Learning), by Michael T. Moore. (p. 51-69) Moore believes problem finding is at the core of problem solving. Until a problem is found, there is no need for a solution. The solution may then lead to the discovery of other gaps which in turn need solutions. This article explore the differences between the ways novice and experienced teachers perceive problems.

ISAKSEN, Scott G. et al, eds.   Understanding and Recognizing Creativity: The Emergence of a Discipline. Norwood, NJ: Ablex Publishing Corporation, 1993.
BF408.E46 1993 v. 1 (Problem Solving Collection)
Volume one of the proceedings of the 1990 International Working Creativity Research Conference held at the Center for Studies in Creativity. "The purpose of the conference was to clarify and develop the disciplinary potential of the field and to collegially present our best thinking about the past, present, and future state of the field." (p. 1)   This volume focuses on the issues relating to the discipline, including approaches to structuring the field.

ISAKSEN, Scott G., et al. Toolbox for Creative Problem Solving: Basic Tools and Resources. Buffalo, NY: Creative Problem Solving Group, 1998.
HD53.I83 1998 (Problem Solving Collection)
This looseleaf volume contains a variety of tools to assist in problem solving, particularly in a group setting. Contains exercises, activities, and teaching aids.

JACKSON, K.F. The Art of Solving Problems. New York, NY: St. Martin's Press, 1975.
The Art of Problem Solving centers its discussion on five stages of problem solving: (1) formulating the problem; (2) interpreting the problem; (3) constructing courses of action; (4) decision-making; and (5) implementation.

JAY, Eileen S. & David N. PERKINS. "Problem Finding: The Search for Mechanism." The Creativity Research Handbook, Ed. Mark A. Runco. Cresskill, NJ: Hampton Press, 1997. v. 1, 257-293.
    The authors survey the problem-finding literature and discuss various approaches to the subject.

JOHNSON, Eric J. "Expertise and Decision under Uncertainty: Performance and Process." The Nature of Expertise. Eds. Michelene T.H. Chi, et al. Hillsdale, NJ: Lawrence Erlbaum Associates, 1988. 209-228.
    Cognitive science and artificial intelligence researchers believe that expert decision makers make better decisions than novice decision makers. Empirical research in behavioral decision theory has not supported this belief. Indeed, "in many studies, experts do not perform impressively at all." (p. 209) Johnson explores these divergent views, with particular attention given to behavioral decision literature.

JONES, Beau Fly, et al. Real-Life Problem Solving: A Collaborative Approach to Interdisciplinary Learning. Washington, D.C.: American Psychological Association, 1997.
    LB1570.J66 (Problem Solving Collection)
    While the focus is on primary and secondary education, the authors include a general introduction to problem-based learning.

JONES, John E. & J. William PFEIFFER, eds. The 1979 Annual Handbook for Group Facilitators. La Jolla, CA: University Associates, 1979.
    HM134.A55 1979 (Problem Solving Collection)
    The handbook assembles a variety of materials for group facilitators. Of particular interest are the articles: Puzzle cards: approaches to problem solving (p. 41); and Finishing Unfinished Business: Creative Problem Solving (p. 154).

JONES, Louis N. & Ronald C. MCBRIDE. An Introduction to Team-Approach Problem Solving. Milwaukee, WI: ASQC Quality Press, 1990.
    HD30.29.J66 1990 (Problem Solving Collection)
    The author presents a quality improvement strategy for companies using a team approach to problem solving. The system is "DISTIL"-- which "combines creative, judgmental, and logical approaches to move a team from problem identification to a long-lasting, positive solution." (p. ix)

JUNIPER, Dean Francis. Successful Problem Solving: The Organized Approach to Creative Solutions. London, Eng.: W. Foulsham, 1989.
    BF441.J86 1989 (Problem Solving Collection)
    The author presents a systematic approach to problem solving which involves a framework categorizing problem types as decisional, procedural, solutional, or generative. He then matches these categories with a corresponding solution method.

JUNTUNE, Joyce E. Creative Problem Solving for the Classroom Teacher. New Brighton, MN: 120 Creative Corner, 1983.
    This pamphlet, based on the problem solving process developed by Alex Osborn and Sidney

Parnes, is "designed to assist classroom teachers in the teaching of the Creative Problem Solving Process to students." (p. ii) It is done in workbook format.

KAHANE, Adam. Solving Tough Problems: An Open Way of Talking, Listening, and Creating
        New Realities. San Francisco, CA: Berrett-Koehler Publishers, 2004.
        HM1126.K34 2004 (Problem Solving Collection)
        Many times, tough, complex problems are solved by force because a peaceful solution seems too difficult or slow. Kahane believes peaceful solutions could be a reliable default option if parties learned to be better listeners and talkers.

KAO, John. Jamming: The Art and Discipline of Business Creativity. New York, NY:
         HarperBusiness, 1997.
        HD53.K36 1997 (Problem Solving Collection)
        Creativity is essential in today's business climate. Managers must be able to "mobilize the creativity advantage" (p. xvii) if they are to succeed.

KAPLAN, Stan. An introduction to TRIZ: The Russian Theory of Inventive Problem Solving.
        Southfield, MI: Ideation International Inc., 1996.
        The author presents a brief overview of TRIZ, a methodology for adapting to the domain of inventive problem solving a long-recognized scientific problem-solving methodology that involves "establishing a system of classification for problems in the field, and a system of operators that map the problem categories into corresponding categories of solutions." (Abstract)

KARMOS, Joseph S. & Ann H. KARMOS.   "Strategies for Active Involvement in Problem
        Solving". Thinking Skills Instruction: Concepts and Techniques. Eds. Marcia Heiman and Joshua Slomianko. Washington, DC: National Education Association, 1987. 99-110.
        Believing that good problem solvers are more active than poor problem solvers, the authors present several techniques "that encourage students to be active problem solvers". (p. 99)

KAUFMAN, Roger. Identifying and Solving Problems: A Systems Approach. La Jolla, CA:
        University Assoc., 1976.
        Intended for the general reader, this is a how-to approach to solving life's problems.

KEANE, Mark T. Analogical Problem Solving. Chichester, Eng.: Ellis Horwood, 1988.
        (Ellis Horwood Series in Cognitive Science)
        Analogical reasoning is an important tool not only in scientific research, but also in the social

sciences, the humanities, and every-day life. The author discusses several aspects of analogical problem solving including problem solving itself, retrieval, and mapping.

KEPNER, Charles H. & Hirotsugu IIKUBO. Managing beyond the Ordinary. New York, NY:
        AMACOM, 1996.
        HD31.K46 1996 (Problem Solving Collection)
        This practical guide for managers stresses that management efforts to solve problems involve

a collaborative effort between managers and their informal resource persons.

KIM, Steven H. Essence of Creativity: A Guide to Tackling Difficult Problems. New York, NY:
Oxford University Press, 1990.
HD53.K56 1990 (Problem Solving Collection)
Many of the problems faced in life are difficult and require creativity to solve. "This book represents an initial step toward developing a coherent framework for the nature of knotty problems and the dimensions of creative behavior demanded by such tasks." (p. vii)

KIRTON, Michael, ed. Adaptors and Innovators: Styles of Creativity and Problem Solving. Rev.
ed. London, Eng.: Routledge, 1994.
HD53.A33 1994 (Problem Solving Collection)
Kirton relates problem solving to individual capacity and the "coping behavior" of individuals in the work place to the "cognitive climate" of the organization.

KLEINMUNTZ, Benjamin, ed. Problem Solving: Research, Method and Theory. New York, NY:
John Wiley, 1966.
This work is "the First of an annual series of symposia in the area of cognition under the sponsorship of Carnegie Institute of Technology." (Title-page) Contains early papers by many researchers who have since become prolific authors in the area of complex problem solving.

KOBERG, Don & Jim BAGNALL. The Universal Traveler: A Soft-Systems Guide to: Creativity,
Problem-Solving and the Process of Reaching Goals. Los Altos, CA: William Kaufmann,
Inc. 1976.
BF441.K55 1976 (Problem Solving Collection)
The authors present a composite of their notes taken from a number of seminars and workshops they have given on creative problem solving. The focus is on problem solving in one's personal and social life.

KRANTZ, Steven G. Techniques of Problem Solving. Providence, RI: American Mathematical
Society, 1997.
QA63.K73 (Problem Solving Collection)
Using mostly mathematical examples, Krantz presents a methodology for analytical thinking, discussing the basic principles of problem solving, both mathematical and non-mathematical.

KRIPPNER, Stanley & Joseph DILLARD. Dreamworking: How to Use Your dreams for Creative
Problem-Solving. Buffalo, NY: Bearly Limited, 1988.
BF1099.P75K75 1988 (Problem Solving Collection)
An interesting and provocative work supporting the authors' belief that one may use one's dreams to come up with creative solutions to problems. Each chapter includes exercises which let the reader test the concepts in the chapter.

KRITEK, Phyllis Beck. Negotiating at an Uneven Table: A Practical Approach to Working with

Differences & Diversity. San Francisco, CA: Jossey-Bass, 1994
R724.K74 1994 (Problem Solving Collection)
This self-help book discusses how to negotiate conflict when some of the parties are at a disadvantage which other parties do not acknowledge. This is a practical, not scholarly work, often discussing life experiences.

KUHN, Robert Lawrence, ed. Handbook for Creative and Innovative Managers. New York, NY:
McGraw-Hill Book Co., 1988.
HD53.H356 1988 (Problem Solving Collection)
Creative and innovative management focuses on acts of management which integrate the creation of new ideas and modes of operation with their implementation. Two articles in this collection deal specifically with creativity in relation to problem solving. The first is chapter 10, Creativity in Problem Solving and Planning, by Russell Ackoff and Elsa Vergara . (p. 77- 89) "First, we consider what has been written about the nature of creativity. Second, we review a number of processes that have been proposed for enhancing creativity in problem solving and planning. Third, we present an operationally meaningful definition of the concept and relate the creativity-enhancing processes to it." (p. 77-78)   The second, chapter 15, , Human factors for innovative problem solving, by Scott G. Isaksen (p. 139-146) focuses on innovative problem-solving groups.

LAMB, David. Discovery, Creativity and Problem-Solving. Brookfield, VT: Avebury, 1991.
B105.C74L36 1991 (Problem Solving Collection)
This book is a philosophical inquiry into creativity and discovery with an emphasis on a rational account of the process. Chapter 4, Discovery as a mode of problem-solving, emphasizes discovery in science, with some information on computer simulation of the problem-solving process. The work contains an interesting section on solution generators vs. solution restrictors.

LEICHTMAN, Harry M. Helping Work Environments Work. Washington, D.C.: CWLA Press,
1996.
HD31.L44 (Problem Solving Collection)
While this book is geared to social service agency work, chapter 8, The notion of a problem and its management, contains an analysis of what "problems" are.

LEIGH, Andrew. Decisions, Decisions: a Practical Management Guide to Problem Solving and
Decision Making. Hampshire, Eng.: Gower, 1983.
HD30.23.L45 1983 (Problem Solving Collection)
Aimed at middle managers as a practical aid to enhancing the decision-making process, chapter 1 discusses a variety of different frameworks representing the problem-solving process. The book includes checklists and strategies suggestions.

LEMONS, John, ed. Scientific Uncertainty and Environmental Problem Solving. Cambridge, MA:
Blackwell Science, 1996.
GE105.S35 1996 (Problem Solving Collection)
Various authors discuss the nature of scientific uncertainty and how it impacts upon environmental problem solving.

LEONARD, Dorothy A. & Walter C. SWAP. When Sparks Fly: Igniting Creativity in Groups.
Boston, MA: Harvard Business School Press, 1999.
HD53.L46 1999 (Problem Solving Collection)
The authors merge perspectives from basic research in psychology and from practical
experience in management to address the issue of creativity in groups.

LESGOLD, Alan. "Problem Solving." <u>The Psychology of Human Thought</u>. Eds. Robert J.
Sternberg and Edward E. Smith. Cambridge, Eng.: Cambridge University Press, 1988. 188-
213.
The author discusses psychological theories of problem solving, with an emphasis on
"focused mental activity aimed at achieving specific goals." (p. 188).

LEVESQUE, Lynne C. Breakthrough Creativity: Achieving Top Performance Using the Eight
Creative Talents. Palo Alto, CA: Davies-Black Publishing, 2001.
BF408.L595 2001 (Problem Solving Collection)
Creativity is one of the most important ingredients in organizational and personal success. The
author creates a typology of creative personalities, dividing "the world into Adventurers, Navigators,
Explorers, Visionaries, Pilots, Inventors, Harmonizers, and Poets." (p. xii) Creativity can be
enhanced by building on the strengths within each of these types.

LEVY, Mark. Accidental Genius: Revolutionize Your Thinking through Private Writing. San
Francisco, CA: Berrett-Koehler, 2000.
PE1479.B87L48 2000 (Problem Solving Collection)
The author describes "private writing", a technique of writing which can be used to increase
the amount of original thought in written business communication. This technique would be of value
to any one wishing to improve the writing component of his/her problem-solving skills.

LIPPITT, Lawrence L. Preferred Futuring: Envision the Future You Want and Unleash the Energy
to Get There. San Francisco, CA: Berrett-Koehler Publishers, 1998.
HD58.8.L573 1998 (Problem Solving Collection)
Preferred futuring is an alternative methodology to problem solving which shifts the paradigm
"from focusing on the problem to focusing on an exciting future state." (p. 5)

LOEHLE, Craig. Thinking Strategically: Power Tools for Personal and Professional Advancement.
Cambridge, Eng.: Cambridge University Press, 1996.
BF408.L753 1996 (Problem Solving Collection)
Most professionals are not educated to solve complex problems, but rather to solve well-
defined problems. Professionals need to master strategic thinking "which is a process of reasoning
about complex problems or systems to achieve a goal." (p. 1) Strategic thinking allows us to define
a problem arising from "an initially ambiguous sea of unconnected data and then solving it." (p. 1)

LOGSDON, Tom. Breaking Through: Creative Problem Solving Using Six Successful Strategies.
Reading, MA: Addison Wesley Publishing Co., 1993.
HD30.29.L64 1993 (Problem Solving Collection)

The author describes strategies to enhance an individual's creative problem-solving skills. Each chapter begins with a description of a "breakthrough made by a single individual with one simple, creative idea." (p. viii)   He includes many lessons and work sheets of exercises.

LUMSDAINE, Edward & Monika LUMSDAINE. Creative Problem Solving: Thinking Skills for
a Changing World. New York, NY: McGraw-Hill, Inc., 1995.
BF408.L82 1994 (Problem Solving Collection)
The authors' approach stresses the need for creative thinkers who can use their skills to become more effective problem solvers. Part 1 concentrates on developing creative thinking skills; part 2 deals with the creative problem solving processes; and part 3 presents four areas of application for creative thinking and problem solving.

LUNDBERG, Gary & Joy LUNDBERG. I Don't Have to Make Everything All Better: Six Practical
Principles to Empower Others to Solve Their Own Problems While Enriching Your
Relationships. New York, NY: Viking, 1999.
HM132.L86 1999 (Problem Solving Collection)
This work deals with problem solving in personal relationships.

LURIA, Aleksandr R. & Lubov S. TSVETKOVA. The Neuropsychological Analysis of Problem
Solving. Orlando, FL: Paul M. Deutsch Press, 1990. (Classic Soviet Psychology Series)
Translated from a Russian work originally written in the 1960's, this is a very technical discussion of the neuropsychological underpinnings of problem solving.

MACCRIMMON, Kenneth R. & Ronald N. TAYLOR. "Decision Making and Problem Solving."
Handbook of Industrial and Organizational Psychology. Ed. Marvin D. Dunnette. Chicago:
Rand McNally College Publishing Co., 1976. 1397-1453.
In this college textbook, the authors discuss decision making and problem solving from the viewpoints of a variety of disciplines, with particular emphasis on the strategies available to the decision-maker/problem-solver.

MAIER, Norman R.F. Problem Solving and Creativity in Individuals and Groups. Belmont, CA:
Brooks/Cole Pub. Co., 1970.
Maier analyzes a variety of laboratory studies in problem solving.

MAIER, Norman R.F. Problem Solving--Discussions and Conferences: Leadership Methods and
Skills. New York, NY: McGraw Hill, 1963.
The author discusses the skills necessary to provide effective leadership in group problem solving.

MARSHALL, Sandra P. Schemas in Problem Solving. New York, NY: Cambridge University
Press, 1995.
BF395.S34M37 (Problem Solving Collection)

Schema, a means by which similar experience are assimilated and brought together to be remembered, play an important role in problem solving.

MATTAINI, Mark A. & Bruce A. THYER, eds. Finding Solutions to Social Problems: Behavioral Strategies for Change. Washington, D.C.: American Psychological Association, 1996. HN17.5.F56 (Problem Solving Collection)
The editors have included essays by behavioral analysts exploring solutions to some important social problems that have a critical impact on human life. Solutions involve practical application of the general principles of the science of behavior to areas such as sexual coercion, child maltreatment, education, crime and drug abuse.

MATTIMORE, Bryan W. 99% Inspiration: Tips, Tales & Techniques for Liberating Your Business Creativity. New York, NY: Amacom, 1994. HD53.M374 1994 (Problem Solving Collection)
In this popular treatment, the author discusses a wide variety of approaches to sparking creativity in the business setting, including Idea Hooks®, fuzzy thinking, and creative dreaming.

MAYER, Richard E. Thinking and Problem Solving: An Introduction to Human Cognition and Learning. Glenview, IL: Scott Foresman, 1977. BF455.M346 1977 (Problem Solving Collection)
This introductory textbook for a course on thinking and problem solving is intended as a basic systematic work on the psychology of thinking.

MAYER, Richard E. Thinking, Problem Solving, Cognition. 2d ed. New York, NY: W.H. Freeman, 1992. BF441.M35 1991 (Problem Solving Collection)
Mayer's goal is to introduce the reader to the cognition aspects of cognitive psychology. He includes a variety of problem-solving activities. Of particular interest is chapter 12, Creativity training: thinking as a learnable skill.

MAYESKE, George W. Life Cycle Program Management and Evaluation: An Organic and Heuristic Approach. 4th ed. Washington, D.C., Cooperative State Research, Education and Extension Services, U.S. Dept. of Agriculture, 1999. T57.84.M39 1999 (Problem Solving Collection)
"Life cycle" is a term usually associated with project management, but it is useful in the development of educational programs that emphasize learning by doing. Of particular interest is chapter 3, Problem finding.

MCCOY, Charles W., Jr. Why Didn't I Think of That: Think the Unthinkable and Achieve Creative Greatness. Paramus, NJ: Prentice Hall Press, 2002. BF441.M32 2002 (Problem Solving Collection)
The author discusses a variety of approaches that may be used to sharpen creative thinking skills in one's work and home life. The approaches are illustrated by real-life examples of creative

thinking.

MILLER, William C. The Creative Edge: Fostering Innovation Where You Work. Reading, MA:
Addison-Wesley Publishing Co., 1987.
HD53.M55 1987 (Problem Solving Collection)
This work is aimed at managers and staff who wish to increase their own creativity and that
of others in their organizations. It is a practical guide that serves as an introduction to the skills
necessary to foster creativity.

MILLIS, Barbara Jane & Philip G. COTTELL, Jr. Cooperative Learning for Higher Education
Faculty. Phoenix, AR: Oryx Press, 1998.
LB2331.M54 1998 (Problem Solving Collection)
Of particular interest is chapter 6, Structures for Problem Solving in Teams.

MITROFF, Ian. Smart Thinking for Crazy Times: The Art of Solving the Right Problems. San
Francisco, CA: Berrett-Koehler Publishers, 1998.
BF449.M6 1998 (Problem Solving Collection)
The author "introduces readers to the *art of formulating problems, not solving canned
exercises.*" (p. x, author's italics) Part one analyzes critical thinking; part two concentrates on five
errors in problem solving; and part three examines problem solving in teams.

MOURSUND, David. Increasing Your Expertise as a Problem Solver: Some Roles of Computers.
2nd ed. Eugene, OR: International Society for Technology in Education, 1996.
LB1028.3.M6 1996 (Problem Solving Collection)
"This book will help you to learn more about your mind and computers, and how they can
work together to solve problems." (p. 1) It emphasizes problems where computers are a useful aid,
but early chapters discuss problem solving generally.

NADLER, Gerald & Shozo HIBINO. Breakthrough Thinking. 2nd ed. Rocklin, CA: Prima
Publishing, 1994.
HD30.29.N34 1994 (Problem Solving Collection)
Intended as a self-help book, Breakthrough Thinking presents a method of problem solving
involving seven basic principles of successful solution finding.

NADLER, Gerald & Shozo HIBINO. Creative Solution Finding: The Triumph of Breakthrough
Thinking over Conventional Problem Solving. Roseville, CA: Prima Publishing, 1999.
BF449. N33 1999 (Problem Solving Collection)
The authors introduce a new paradigm, Full-Spectrum Thinking, as a methodology for
approaching problem solving. Full Spectrum Thinking has seven fundamental assumptions or
principles: Uniqueness; Purposes; Solution-after-next;. Systems; Limited Information Collection;
People Design; and, Betterment Timeline. The book presents an overview of problems and problem
solving and then discusses the new paradigm in detail.

NAGEL, Stuart, ed. Creativity: Being Usefully Innovative in Solving Diverse Problems.

Huntington, NY: Nova Science Publishers, Inc., 2000.
BF408.C7547 2000 (Problem Solving Collection)
The works presented in this volume were written in response to the editor's call for papers on
creativity. The editor defines the creative alternative as an alternative that is "better on whatever criteria considered relevant than the alternatives that were previously being considered." (p. ix)

NAGEL, Stuart, ed. The Handbook of Policy Creativity. Huntington, NY: Nova Science Publishers, 2001.
H97.H355 2001 (Problem Solving Collection)
In this three volume set, the editor has collected a series of shorter essays on various areas of creativity and problem solving. The set includes: vol. 1: Creativity at the Cutting Edge; vol. 2: Creativity Causes and Effects; and vol. 3: Creativity from Diverse Perspectives.

NALEBUFF, Barry & Ian AYRES. Why Not? How to Use Everyday Ingenuity to Solve Problems Big and Small. Boston: Harvard Business School Press, 2003.
HD30.29.N35 2003 (Problem Solving Collection)
In this work intended for the general audience, the authors endeavor to "teach you simple methods for generating your own ingenious solutions." (p. xiii) Includes problems and illustrations.

NEWELL, Allen & Herbert A. SIMON. Human Problem Solving. Englewood Cliffs, NJ: Prentice-Hall, 1972.
Human Problem Solving is an often-cited early work in the study of problem solving. The authors develop a theory of problem solving in knowledge-lean task domains (those that do not require previous knowledge to solve a problem).

NICKERSON, Raymond S., et al. The Teaching of Thinking. Hillsdale, NJ: Erlbaum, 1985.
BF455.N53 (Problem Solving Collection)
Chapter 4, Problem-solving, creativity and metacognition, is a review of the research on problem solving and the teaching of problem-solving skills.

NOLLER, Ruth B. Scratching the Surface of Creative Problem-Solving: A Bird's Eye-View of CPS. East Aurora, NY: D.O.K. Publishers, 1986.
BF441.N65 1977 (Problem Solving Collection)
"This little book is an attempt at" (p. 3) providing a ready answer to the question " what is creative problem solving". It consists of short answers in an outline format.

NOONE, Donald J. Creative Problem Solving. 2nd ed. Hauppauge, NY: Barron's Educational Series, Inc., 1998.
HD30.29.N66 1998 (Problem Solving Collection)
This short work written for the popular market emphasizes that creative problem solving is a high priority for all business people. It is a skill that can be learned and, once learned, its benefits are felt in all areas of one's life.

NUCHO, Aina O. Spontaneous Creative Imagery: Problem-Solving and Life-Enhancing Skills.
Springfield, IL: C.C. Thomas, 1995.
RZ401.N83 1995 (Problem Solving Collection)
Our ability at imagery allows us to look at the big picture–to see beyond the patterns of linear thinking. It allows us "to imagine alternative possible responses to the challenges of life". (p. vi) Of particular interest is chapter 8, Problem-solving imagery.

OCHSE, R. Before the Gates of Excellence: The Determinants of Creative Genius. Cambridge, Eng.: Cambridge University Press, 1990.
BF408.O29 1990 (Problem Solving Collection)
Ochse's focus is on creative achievement, that which contributes something of original value to culture. The final section of the book addresses the creative process itself. Of particular interest, chapter 9, Stages in Creative Problem-Solving (p. 185-201) and chapter 10, Specific Abilities and Processes Involved in Creative Problem-Solving (p. 202-218).

O'CONNOR, Joseph & Ian MCDERMOTT. The Art of Systems Thinking: Essential Skills for Creativity and Problem Solving. San Francisco, CA: Thorsons, 1997.
BF637.N46O26 1997 (Problem Solving Collection)
Solving problems in isolation may lead to greater problems in the long run. "Systems thinking is seeing beyond what appears to be isolated and independent incidents to deeper patterns. (p. xiii) This leads to better long-term solutions to complex problems. The authors provide a variety of models and methods that employ systems thinking in various situations.

O'KEEFFE, John. Business Beyond the Box: Applying Your Mind for Breakthrough Results.
London, Eng.: Nicholas Brealey Publishing, 1998.
HD58.8.O37 1998 (Problem Solving Collection)
The author says his book "will give you the secrets of operating beyond the box of conventional thinking habits and mindsets." (p. 1) He presents eight practical thinking strategies to improve the manager's ability to be innovative and play with boundaries.

OSBORN, Alex F. Applied Imagination: Principles and Procedures of Creative Problem-Solving.
3rd rev. ed. New York, NY: Charles Scribner's Sons, 1979.
"The author shows how to detect problems, how to define them properly and break them
 down into component parts.... He points out various techniques for processing problems and for evaluating proposed solutions." (p. xii)

OSIGWEH, Chimezie A.B. Improving Problem-Solving Participation: The Case of Local Transnational Voluntary Organizations. Lanham, MD: University Press of America, 1983.
If individuals are effective problem solvers, organizations and other entities can improve their ability to undertake effective organizational problem solving.

PARKER, Graham W. Structured Problem Solving. Aldershot, Eng.: Gower, 1995.
HD30.29.P37 1995 (Problem Solving Collection)
"A PARSEC Guide."

Aimed at the business community, Parker seeks "to demystify problem solving and describe how it can be carried out systematically, using a wide range of tools." (p. ix) Includes many charts and tables.

PARNES, Sidney J. The Magic of Your Mind. Buffalo, NY: The Creative Education Foundation, Inc. in cooperation with Bearly Limited, 1981.
BF408.P249 1981 (Problem Solving Collection)
This work is a popular treatment explaining how both groups and individuals can strengthen their creative skills. Includes exercises and many reprints of cartoons dealing with creativity.

PARNES, Sidney J. Optimize the Magic of Your Mind. Buffalo, NY: Bearly Limited, 1997.
Meant as a hands-on introduction to creative problem solving using the Osborn/Parnes CPS process, the author presents a revision and updating of two of his previous books, The Magic of Your Mind (1981) and A Facilitating Style of Leadership (1985). The book, authored in association with the Creative Education Foundation, Inc., includes a variety of exercises and cartoons dealing with creative problem solving.

PARNES, Sidney J., ed. Source Book for Creative Problem-Solving: A Fifty Year Digest of Proven Innovation Processes. Buffalo, NY: Creative Education Foundation Press, 1992.
HD30.29.S66 1992 (Problem Solving Collection)
This is a collection of works by various authors explaining what had been learned about the deliberative systematic development of creative potential in the 50 years between 1942 and 1992. It contains works of interest at all levels from the novice to the professional. Many of the chapters focus on creative problem solving.

PERKINS, David. Archimedes' Bathtub: The Art and Logic of Breakthrough Thinking. New York: W.W. Norton & Co., 2000.
BF441.P47 2000 (Problem Solving Collection)
Breakthrough thinking is not just creativity in general, but is "the sort of creativity that makes a decisive break with the past." (p. 6) The author discusses the structure of breakthrough thinking, presenting many examples of the phenomena and some "insight" puzzles which support the process.

PFENNINGER, Karl H. & Valerie R. SHUBIK, eds. The Origins of Creativity. Oxford, Eng.: Oxford University Press, 2001.
BF408.O75 2001 (Problem Solving Collection)
The editors have collected cross-disciplinary essays organized around four themes: the creative experience; the biology of creativity; the relationship of the environment; and the mind's perception of patterns.

PHILLIPS, Gerald M., ed. Teaching How to Work in Groups. Norwood, NJ: Ablex Publishing Corp., 1990.
HD30.23.T4 1990 (Problem Solving Collection)
"This book is designed for use as a text for teachers of group discussion. Each of the chapter [sic] contributes to the development of a pedagogy, which in turn can be integrated into a teaching

syllabus." (p. v) The author emphasizes teaching members of small groups the communication skills necessary for high quality consistent group output.

PLSEK, Paul E. Creativity, Innovation and Quality. Milwaukee, WI: ASQ Quality Press, 1997.
      HD53.P58 1997 (Problem Solving Collection)
      This book is aimed at quality management practitioners who want information on the topics of creativity and innovation. It shows "how creative thinking can be used to advance the practice of quality management in organizations today." (p. vii) The author focuses on "directed creativity" which is defined as "the deliberate mental action needed to produce novel ideas in targeted areas." (p. viii)

POLSON, Peter & Robin JEFFRIES. "Problem Solving as Search and Understanding." Advances in the Psychology of Human Intelligence. Ed. Robert J. Sternberg. Hillsdale, NJ: Lawrence Erlbaum Associates, 1982. Vol. 1, 367-411.
      The authors discuss the use of puzzles in the study of problem-solving processes.

POKRAS, Sandy. Systematic Problem-Solving and Decision-Making. Menlo Park, CA: Crisp Publications, 1989.
      HD30.29.P65 1989 (Problem Solving Collection)
      A practical guide to problem-solving techniques with many illustrations, worksheets and exercises. Adaptable to self-study or seminar/workshops.

POSAMENTIER, Alfred S. The Art of Problem Solving: A Resource for the Mathematics Teacher. Thousand Oaks, CA: Corwin Press, 1996.
      QA63.A78 1996 (Problem Solving Collection)
      Primarily mathematical in focus, but the introductions to the various essays have a more general approach.

POPPER, Karl. All Life is Problem Solving. Translated by Patrick Camiller. New York, NY: Routledge, 1999.
      CB357.P5613 1999 (Problem Solving Collection)
      This collection of essays on problem solving was originally published as Alles Leben ist Problemlösen. Of particular interest is chapter 9, All life is problem solving (1991).

PRINCE, George M. The Practice of Creativity: A Manual for Dynamic Group Problem Solving. New York, NY: Collier Books, 1970.
      HD38.P73 1972 (Problem Solving Collection)
      Aimed at industry and business, this book provide a model for problem-solving meetings that will encourage creativity. Emphasis is place on developing leadership techniques that will encourage and enhance creativity in each individual in the group.

PROCTOR, Tony. Creative Problem Solving for Managers. New York, NY: Routledge, 1999.
      HD30.29.P763 1999 (Problem Solving Collection)
      This textbook provides "an essential introduction to the ideas and skills of creative problem

solving." (Introductory page) The author critically examines the various themes of creative problem solving and presents a variety of methods for addressing managerial problems. Of particular interest is chapter 3, Theories of creativity and the creative problem solving process. The work includes case studies and problems and diagrams.

PRUITT, Dean G. & Peter J. CARNEVALE. Negotiation in a Social Conflict. Pacific Grove, CA: Brooks/Cole Pub. Co., 1993. (Mapping Social Psychology Series)
    BF637.N4P79 1993 (Problem Solving Collection)
    This work is an introduction to the social psychological literature on negotiation and mediation as a means of resolving social conflict. Problem solving is one of the key strategies in negotiation and mediation. Chapter 7, The dual concern model and the determinants of problem solving, discusses problem solving's applicability in negotiation when there are dual concerns: concern for one's own outcome and concern for the outcome of the other party.

"PUZZLE cards: approaches to problem solving." 1979 Annual Handbook for Group Facilitators. Eds. John E. Jones & J. William Pfeiffer. La Jolla, CA: University Associates, 1979. 41-45.
    HM134.A55 1979 (Problem Solving Collection)
    This chapter describes in detail exercises which generate an understanding of different approaches to problem solving and compares the advantages and disadvantages of each.

RAWLINSON, J. Geoffrey. Creative Thinking and Brainstorming. New York, NY: John Wiley & Sons, 1981. (A Halsted Press Book)
    HD53.R38 1981 (Problem Solving Collection)
    Aimed at the business manager, this work is an overview of creative thinking in relation to brainstorming as a tool for problem solving.

REITMAN, Walter R.   "Heuristic decision procedures, open constraints, and the structure of ill-defined problems." Human Judgments and Optimality. Eds. Maynard W. Shelly, II & Glenn L. Bryan. New York, NY: John Wiley & Sons, 1964. 282-315.
    Most problems are ill-defined, that is, there is no systematic way to decide whether a given solution as acceptable. The author describes a general framework for analyzing such problems.

RICKARDS, Tudor. Creativity and Problem Solving at Work. Aldershot, Eng.: Gower, 1990.
    HD53.R51 1990 (Problem Solving Collection)
    Creativity and analysis are often seen as opposites. The author believes individuals can examine their own "creative 'strategies', thus discovering ways of improving them through deliberate introduction of procedures and structures." (p. viii) First published in 1988 as Creativity at Work.

RICKARDS, Tudor. Creativity at Work, *see* RICKARDS, Tudor. Creativity and Problem Solving at Work

RICKARDS, Tudor. Problem Solving through Creative Analysis. Epping, Eng.: Gower Press, 1974.
    HD53.R524 1974 (Problem Solving Collection)

This book is intended to aid managers in tackling open-ended problems (those with no logically correct answer) through the use of creativity-spurring techniques. "The overall framework for assimilating effective [problem-solving] procedures is termed 'creative analysis'". (p. 2) The work includes figures, graphs and case studies. Reprinted under the title <u>Problem Solving</u> by Coles Business Books, Toronto Canada, 1980 (HD53.R52 1980)

RICKARDS, Tudor. Problem Solving *see* RICKARDS, Tudor, Problem Solving through Creative
       Analysis.

RIEMER, Neal. Creative Breakthroughs in Politics. Westport, CT: Praeger, 1996.
       JC585.R535 1996
       The author discusses a series of real or alleged or proposed creative breakthroughs involving persistent political problems in order to find ways to handle current and future problems of the same magnitude. "I define a creative breakthrough in politics as a fruitful resolution of a major problem, a problem the conventional wisdom deems impossible to solve." (p. ix-x)

ROOT-BERNSTEIN, Robert & Michèle ROOT-BERNSTEIN. Sparks of Genius: The Thirteen
       Thinking Tools of the World's Most Creative People. Boston, MA: Houghton Mifflin Co.,
       1999.
       BF408.R66 1999
       Creative thinking is often spontaneous resulting in ideas which then can be translated into formal types of communication, such as words or art. Everyone has a creative imagination. "Educating this universal creative imagination is the key to producing life-long learners capable of shaping the innovations of tomorrow." (p. vii)

ROTH, William, et al. Problem Solving for Results. Delray Beach, FL: St. Lucie Press, 1996.
       HD30.29.R86 (Problem Solving Collection)
       With a focus on problem solving in the workplace, the authors discuss how to reward problem solving and influence attitudes toward problem solving. They present tools and techniques for increasing the effectiveness of problem-solving efforts. One particular model, Quality Journey Problem-Solving Process, is covered in detail.

ROTHMAN, Jay. Resolving Identity-Based Conflict in Nations, Organizations, and Communities.
       San Francisco, CA: Jossey-Bass, 1997. (Jossey-Bass Conflict Resolution Series)
       HM136.R675 (Problem Solving Collection)
       Rothman integrates problem-solving techniques into the resolution of public problems.

ROWE, Helga A. H. Problem Solving and Intelligence. Hillsdale, NJ: Lawrence Erlbaum Associates,
       1985.
       BF431.R725 1985 (Problem Solving Collection)
       "The book contains two types of material. First, it presents an overview of major
 contributions to the conceptualization and investigation of problem solving and intelligence....
 Second, it reports a comprehensive, empirical study of the manifestation of intelligence in

problem solving." (p. ix)

RUBENSTEIN, Moshe F. & Iris R. FIRSTENBERG. Patterns of Problem Solving. 2nd ed. Englewood Cliffs, NJ: Prentice-Hall, 1995.
 Intended as a textbook for classes in problem solving, <u>Patterns of Problem Solving</u> presents various models for problem solving, with attention played to the interplay of cultural values and human values. It "attempts to provide the reader with tools and concepts that are most productive in problem solving...." (p. xiii) Problems for the user to solve are included.

RUNCO, Mark A. & Steven R. PRITZKER, eds. Encyclopedia of Creativity. San Diego, CA: Academic Press, 1999.
 BF408.E53 1999 (Problem Solving Collection)
 Among the entries related to problem solving are Problem Finding by Mark A. Runco and Gayle Dow (v. 2, p.433-435) and Problem Solving, by Richard E. Mayer (v. 2, p. 437-447).

RUNCO, Mark A., ed. Problem Finding, Problem Solving and Creativity. Norwood, NJ: Ablex Publishing Corp., 1994.
 BF449.P76 1994 (Problem Solving Collection)
 The editor has gathered papers which present an overview and integration of the research on problem finding. The articles also represent an attempt to provide a balance between those researchers who believe creativity is one aspect of problem solving and those who believe problem solving is one type of creativity

RUSSO, J. Edward & Paul J.H. SCHOEMAKER. Decision Traps: The Ten Barriers to Brilliant Decision-Making and How to Overcome Them. New York, NY: Simon & Schuster, 1989.
 HD30.23.R87 (Problem Solving Collection)
 The authors provide the lay reader with systematic coaching on how to make decisions, using good decision makers as models.

SAATY, Thomas L. Creative Thinking, Problem Solving and Decision Making. Pittsburgh, PA: RWS Publications, 2001.
 BF408.S215 2001 (Problem Solving Collection)
 Saaty believes creativity can be effectively taught and learned. He seeks to challenge readers to feel comfortable with their own creativity. The author includes exercises and a CD with Power Point slides that he uses for talks on creativity.

SANDERSON, Michael. Successful Problem Management. New York, NY: Wiley, 1979.
 HD30.29.S26 1979a (Problem Solving Collection)
 Using the building-block approach, Sanderson provides managers with a methodology/technique for promptly detecting and solving problems.

SAVRANSKY, Semyon D. Engineering of Creativity: Introduction to TRIZ Methodology of Inventive Problem Solving. Boca Raton, FL: CRC Press, 2000.
 TA153.S28 2000 (Problem Solving Collection)

TRIZ is "the Russian abbreviation of what can be translated as 'the theory of inventive problem solving.'" (Pref.) This theory focuses on finding technical solutions to engineering problems that are efficient, effective and creative. While there is some discussion of general problem techniques, the book mainly deals with inventions and engineering innovation.

SCANDURA, Joseph M. Problem Solving: A Structural/Process Approach with Instructional
        Implications. New York, NY: Academic Press, 1977.
        BF441.S22 1977 (Problem Solving Collection)
        This collection of papers by the author presents problem solving from a cross-disciplinary perspective in order to break down the barriers in the study of problem solving.

SCHOENNAUER, Alfred W.W. Problem Finding and Problem Solving. Chicago, IL: Nelson-Hall,
        1981.
        HD30.29.S54 (Problem Solving Collection)
        This manual on the techniques of problem solving, beginning with the step of problem finding, is presented from a management viewpoint.

SCHÖN, Donald A. Educating the Reflective Practitioner: Toward a New Design for Teaching and
        Learning in the Professions. San Francisco, CA: Jossey-Bass, 1987.
        LC1059.S45 (Problem Solving Collection)
        The author proposes that "professional education should be redesigned to combine the teaching of applied science with coaching in the artistry of reflection-in-action." (p. xii) Reflection-in-action is the skilled practice of thinking about what you are doing while you are doing it. It stresses learning by doing in such a manner that the doer can go beyond the stateable rule to new way of framing problems in order to reach a resolution. Much of the book describes the use of this technique in the performing and visuals arts, but the concluding section turns to the use of this technique in the professions.

SCHÖN, Donald A. The Reflective Practitioner: How Professionals Think in Action. New York,
        NY: BasicBooks, 1983.
        HD8038.A1S35 (Problem Solving Collection)
        Schön inquires into the epistemology of professional practice, addressing the question, "What is the kind of knowing in which competent practitioners engage?" (p. viii) He postulates that practitioners in most professions have a capacity for reflection in their intuitive knowledge that allows them to solve problems that arise in the practice of their profession. While he uses examples from professions other than law, his analysis could be applied to the legal profession.

SCHÖN, Donald A., ed. The Reflective Turn: Case Studies in and on Educational Practice. New
        York, NY: Teachers College Press, Teachers College, Columbia University, 1991.
        LB1025.3.R44 1991 (Problem Solving Collection)
        This is a collection of essays describing practice situations exemplifying Schön's theory of reflective practice in the professional setting. Chapter 7, Recipes and reflective learning: "What would prevent you from saying it that way?", by Robert W. Putnam analyzes the changing use of "recipes", i.e. prescribed phrases, during various stages of the learning process.

SCHWARTZ, Peter, et al., eds. Problem-Based Learning: Case Studies, Experience and Practice. London, Eng.: Kogan Page, 2001. (Case Studies of Teaching in Higher Education) LB1027.42.S39 2001 (Problem Solving Collection)

The editors have compiled a series of short case studies with commentary on the use of problem-based learning.

SCHWARZ, Roger M. The Skilled Facilitator: Practical Wisdom for Developing Effective Groups. San Francisco, CA: Jossey-Bass Pub., 1994. HD30.3.S373 1994 (Problem Solving Collection)

This work is intended for both the practitioner and the practical scholar, but is "about how facilitators and others help groups become more effective." (p. xi) Of particular interest is chapter 8, Helping the group solve problems.

SHAW, Marvin E. Group Dynamics: The Psychology of Small Group Behavior. 3rd ed. New York, NY: McGraw-Hill Book Co., 1981. HM 132.S5 1971 (Problem Solving Collection)

Of particular interest is chapter 11, Groups in Action, which discusses problem-solving groups and the factors that facilitate and inhibit group problem solving.

SICKAFUS, Ed. Unified Structural Inventive Thinking. Gross Ile, MI: NTELLECK, 1997.

Sickafus' work contains a great deal of material about problem solving particularly as it relates

to invention. "This book is about structured inventive thinking, a teachable, learnable, and executable process for generating conceptual solutions to conceptual problems." (p. vii, underlining by author)

SIEGEL, Gilbert B. Mass Interviewing and the Marshalling of Ideas to Improve Performance: The Crawford Slip Method. Lanham, MD: University Press of America, 1996.

The author describes an interesting method for gathering information from large groups that could be refined for a problem-solving activity.

SIMON, Herbert A. "Information-Processing Theory of Human Problem Solving." Issues in Cognitive Modeling: A Reader. Eds. A.M. Aitkenhead & J.M. Slack. London, Eng.: Erlbaum, 1985. 253-278. BF311.I82 1985 (Problem Solving Collection)

Simon presents an overview of the general theory of problem solving derived from research during the past twenty years. He examines research that has been done to formulate the theory and some of the methodological issues that have to be faced in that research.

SINNOTT, Jan D, ed. Everyday Problem Solving: Theory and Applications. New York, NY: Praeger, 1989.

The editor provides the reader with access to parts of the everyday problem-solving literature they would not normally encounter. Included are discussions of key everyday problem-solving areas, emphasizing the psychological and educational perspectives. Chapter 11, Interpreting discrepant narratives: hermeneutics and adult cognition, by Bonnie Leadbeater and Deanna Kuhn, is particularly

intriguing.

SIOUKAS, Tasos. The Solution Path: A Step-by-Step Guide to Turning Your Workplace Problems
into Opportunities. San Francisco, CA: Jossey-Bass, 2003.
HD30.29.S56 2003 (Problem Solving Collection)
The author "...provides step-by-step instructions and how-to exercises for addressing a
variety of problems in different fields." (p. 1) It deals with both individual and team problem solving.

SMITH, Gerald F. Quality Problem Solving. Milwaukee, WI: ASQ Quality Press, 1998.
TS156.S62 1998 (Problem Solving Collection)
The author's aim is to "provide readers with a comprehensive and reasonably deep
understanding of real-world problem solving, especially that performed for quality improvement
purposes." (p. xiii) While the book could be read cover to cover, it may also be used for advice on how
to solve specific problems that arise within organizations.

SMITH, Mike U., ed. Toward a Unified Theory of Problem Solving: Views from the Content
Domains. Hillsdale, NJ: Lawrence Erlbaum Associates, 1991.
BF449.T68 1991 (Problem Solving Collection)
A number of authors, writing mainly about domains in the sciences, present their views
about the commonality of problem-solving processes across various subject domains.

SPITZER, Quinn & Ron EVANS. Heads, You Win!: How the Best Companies Think. New York,
NY: Simon and Schuster, 1997.
HD30.23.S688 1997 (Problem Solving Collection)
The authors focus on critical thinking skills in the business setting, with problem solving being
the most seminal of the critical thinking skills. Of particular interest is chapter 3, Problem solving—the
eternal search for why.

STANISH, Bob & Bob EBERLE. Be a Problem-Solver: A Resource Book for Teaching Creative
Problem-Solving. Waco, TX: Prufrock Press, 1997.
LB1062.S72 1997 (Problem Solving Collection)
In a work aimed at teenagers, the authors present a variety of whimsical problems to be solved
using an "idea evaluation grid." The problems can be used as group activities in the classroom or as
individual work assignments.

STARKEY, Brigid, et al. Negotiating a Complex World: An Introduction to International Negotiation.
Lanham, MD: Rowman & Littlefield Pub., 1999.
JZ6045.S73 1999
The authors discuss negotiation as a problem-solving tool in the international arena. "This book
attempts to reach a broad audience of students who have a need for an in-depth understanding of how
nations and other international actors go about achieving their objectives through the give-and-take of
the negotiation process." (p. x)

STERNBERG, Robert J. & Peter A. FRENSCH, eds. Complex Problem Solving: Principles and
Mechanisms. Hillsdale, NJ: Erlbaum, 1991.
BF449.C66 1991 (Problem Solving Collection)
Sternberg and Frensch present a comprehensive overview of the then-current research on
problem solving, They include discussion of the practical application of such research. Of particular
interest is chapter 7, Do lawyers reason differently from psychologists?: a comparative design for
studying expertise, by Eric Amsel, Rosanna Langer and Lynn Loutzehniser.

STERNBERG, Robert J., ed. Handbook of Creativity. Cambridge, Eng.: Cambridge University Press,
1999.
BF408.H285 1999 (Problem Solving Collection)
While the essays focus on creativity , several deal with problem finding and problem solving.

STERNBERG, Robert J. & Janet E. DAVIDSON, eds. The Nature of Insight. Cambridge, MA: MIT
Press, 1995.
BF449.5.N38 (Problem Solving Collection)
The contributions selected by the editors represent diverse points of view on the
phenomenology of insight. Of particular interest are chapter 2, Insight and problem solving, by
Roger L. Dominowski and Pamela Dallob and chapter 5, Prolegomena to theories of insight in problem
solving: a taxonomy of problems, by Robert W. Weisberg.

STERNBERG, Robert J. "Reasoning, Problem Solving, and Intelligence." Handbook of Human
Intelligence. Ed. Robert J. Sternberg. Cambridge, Eng.: Cambridge University Press, 1982.
225-307.
The author discusses the framework and literature of studies concerning both reasoning and
problem solving. He also discusses the relationship of reasoning and problem solving to intelligence.

STERNBERG, Robert J. Thinking and Problem Solving. 2nd ed. San Diego, CA: Academic Press,
1994.
BF441.T465 (Problem Solving Collection)
Aimed at the cognitive scientist, this collection of articles covers a wide range of topics related
to thinking and problem solving. Of particular interest are chapter 7, Problem solving, by Earl Hunt
and chapter 13, The teaching of thinking and problem solving, by Raymond S. Nickerson.

STICE, James E., ed. Developing Critical Thinking and Problem-Solving Abilities. San Francisco,
CA: Jossey-Bass, 1987. (New Directions for Teaching and Learning; no. 30)
BF441.D48 (Problem Solving Collection)
The editor has included articles with various authors' perspectives on how to teach problem
solving and critical-thinking skills.

STONE, Douglas, et al. Difficult Conversations: How to Discuss What Matters Most. New York, NY:
Viking, 1999.
BF637.C45S78 1999 (Problem Solving Collection)

In order to effectively solve problems we must be able to communicate about difficult topics. This book explores "what it is that makes conversations difficult, why we avoid them, and why we often handle them badly." (p. vii). The authors then present skills that will enable the reader to deal with such conversations effectively.

STONEWATER, Jerry K. "Strategies for Problem Solving." <u>Fostering Critical Thinking</u>. Ed. R.E. Young. San Francisco, CA: Jossey-Bass, 1980. 33-58.
Stonewater describes four approaches to teaching problem solving. He then uses various elements of the approaches to devise his own model for successful teaching of problem solving.

SUSSKIND, Lawrence, et al., eds. The Consensus Building Handbook: A Comprehensive Guide to Reaching Agreement. Thousand Oaks, CA: Sage Publications, 1999.
HM746.C66 1999 (Problem Solving Collection)
Consensus building is an important part of group problem solving. The Consensus Building Institute asked a variety of experts in a broad range of disciplines to document "best practices" in the consensus building field. They also asked experts to report on noteworthy instances where they have either succeeded or failed to build consensus. Of particular interest are chapter 13, Legal issues in consensus building, by Dwight Golann and Eric E. Van Loon (p. 495-525) and chapter 16, Collaborative Problem Solving within organizations, by Christopher W. Moore and Peter J. Woodrow (p. 591-630).

TERNINKO, John, et al. Systematic Innovation: An introduction to TRIZ (Theory of Inventive Problem Solving). Boca Raton, FL: St. Lucie Press, 1998.
HD30.29.T47 1998 (Problem Solving Collection)
TRIZ aims at changing thinking patterns to allow for more creative problem solving.

THAYER-BACON, Barbara J. Transforming Critical Thinking: Thinking Constructively. New York, NY: Teachers College, Columbia University, 2000.
BC177.T45 2000 (Problem Solving Collection)
Thayer-Bacon's work brings the cultural factors of race, gender and class to the discussion of critical thinking. She presents her theory of constructive thinking, which she believes is "transformative to critical thinking theory". (p. xii) In doing so, she discusses the major critical thinking theories of the past and the current issues in the field.

TILLETT, Gregory. Resolving Conflict: A Practical Approach. 2nd ed. New York, NY: Oxford University Press, 1999.
HM1126.T55 1999 (Problem Solving Collection)
The author "aims to provide a practical guide to the application of theory and research on resolving real conflicts in the real world." (p. vii) Many chapters discuss the use of collaborative problem solving. The approach is practical, presenting skills and approaches that can be used to resolve conflict.

TORRANCE, E. Paul, et al. Creative Problem Solving through Role Playing. Pretoria, South Africa:

Benedic Books, 1996.

Intended as a guide for role playing directors, the authors present role playing "as a technology that combines what we know about learning, problem solving, states of consciousness and human relations." (pref.) The work includes a variety of problem-solving exercises using role playing.

TREFFINGER, Donald J. Assessing CPS Performance: Practical Resources for Assessing and
    Documenting Creative Problem Solving Outcomes. 3rd ed. Waco, TX: Prufrock Press,
    2000.
    BF723.C7T73 2000 (Problem Solving Collection)

A compilation of forms, quizzes, scales, etc. that assess problem-solving performance. For use by trainers, teacher and facilitators.

TREFFINGER, Donald J., et al. The CPS Evaluation Sourcebook: Practical Resources for Evaluating
    Creative Problem Solving Outcomes: A Collection of Practical Resources for Documenting and
    Improving the Outcomes and Impact of Your CPS Sessions or CPS Instructional Programs.
    Sarasota, FL: Center for Creative Learning, 1992.

This pamphlet contains a variety of forms which may be used to evaluate programs in creative problem solving. The forms may be duplicated and answer keys are provided.

TREFFINGER, Donald J. Creative Problem Solver's Guidebook: A Practical Set of Reproducible
    Templates to Guide Facilitators and Group Participants. 3rd ed. Waco, TX: Prufrock Press,
    2000.
    HD30.29.T74 2000 (Problem Solving Collection)

"This book contains 25 practical forms to use in a variety of ways to enhance applications of Creative Problem Solving (CPS) with adults, teenagers, or children." (p. 1)

TREFFINGER, Donald J., et al. Creative Problem Solving: An Introduction. 3rd ed. Waco, TX:
    Prufrock Press, 2000.
    BF441.T73 2000 (Problem Solving Collection)

The authors, who are associated with the Creative Problem Solving Group–Buffalo and the Center for Creative Learning, present a concise, easy to read description of the use of CPS by individuals and by groups. They include graphs and exercises which aid in the application of CPS techniques.

TREFFINGER, Donald J. Creativity, Creative Thinking, and Critical Thinking: In Search of
    Definitions. Sarasota, FL: Center for Creative Learning, 2000. (Idea Capsule Series)
    Treffinger discusses the different definitions of creativity he has collected over the years.

TREFFINGER, Donald & Patricia MCEWEN. Fostering Independent Creative Learning: Applying
    Creative Problem Solving to Independent Learning. East Aurora, NY: D.O.K. Publishers,
    1989.

This pamphlet is intended as a guide for teachers, particularly at the elementary and secondary levels, to use to foster creative learning in students who are undertaking independent learning projects. Written mainly in outline form, it contains a variety of charts, activities and diagrams.

TREFFINGER, Donald J. Practice Problems for Creative Problem Solving. 3rd ed. Waco, TX: Prufrock Press, 2000.
BF441.T74 2000 (Problem Solving Collection)
This work includes a variety of problems to be used with the author's Creative Problem Solving, but which could also be used independently.

TREFFINGER, Donald J. & SusanBeth S. PURIFICO. Successful Creative Problem Solving Teams: Growing, Guiding and Celebrating. Glassboro, NJ: Destination ImagiNation, Inc., 2004.
HD30.29.T75 2004 (Problem Solving Collection)
This pamphlet outlines some techniques in creative problem solving for use by teams in all settings.

TUMA, D.T. & R. REIF, eds. Problem Solving and Education: Issues in Teaching and Research. Hillsdale, NJ: Erlbaum, 1980.
Tuma and Rief present detailed description of then-current research projects into the nature and teaching of problem solving.

ULSCHAK, Francis L. "Finishing Unfinished Business: Creative Problems Solving". 1979 Annual Handbook for Group Facilitators. Eds. John E. Jones & J. William Pfeiffer. La Jolla, CA: University Associates, 1979. 154-173.
HM134.A55 1979 (Problem Solving Collection)
This article discusses problem solving from a person-centered perspective. It considers how problem solving is facilitated or blocked in both individuals and groups. Includes flow charts and diagrams.

ULSCHAK, Francis L., et al. Small Group Problem Solving: An Aid to Organizational Effectiveness. Reading, MA: Addison-Wesley Pub.Co., 1981.
HM133.U44 1981 (Problem Solving Collection)
The authors provide a generic plan for group problem solving, explaining techniques that are effective in groups and presenting a chronological framework for group situations which focus on problem solving.

VAN LEHN, Kurt. "Problem Solving and Cognitive Skills Acquisition." Foundations of Cognitive Science. Ed. Michael I. Posner. Cambridge, MA: MIT Press, 1990. 527.
Using an overview of research in the field, the author does not attempt to provide a coherent theory of problem solving, but to describe the ingredients necessary for developing such a theory.

VAN SLYKE, Erik J. Listening to Conflict: Finding Constructive Solutions to Workplace Disputes. New York, NY: AMACOM, 1999.
HD42.V36 1999 (Problem Solving Collection)
"This book provides a comprehensive overview of conflict resolution and demonstrates how listening can open pathways to understanding and constructive solutions." (p. x)

VANCE, Mike & Diane DEACON. Think Out of the Box. Franklin Lakes, NJ: Career Press, 1995.
    HD53.V354 1995 (Problem Solving Collection)
    The authors present techniques to assist the reader with thinking "out of the box" in order to avoid conventional responses and instead, to be creative and innovative. Each chapter includes a "profile in creativity".

VANGUNDY, Arthur B. 108 Ways to Get a Bright Idea and Increase Your Creative Potential. Englewood Cliffs, NJ: Prentice-Hall, 1983.
    BF408.V24 1983 (Problem Solving Collection)
    The author believes every individual has the capacity to generate bright ideas, but often needs the motivation and training to do so. He presents a series of stimulators and techniques to foster bright ideas.

VANGUNDY, Arthur B. Brain Boosters for Business Advantage: Ticklers, Grab Bags, Blue Skies, and Other Bionic Ideas. San Diego, CA: Pfeiffer & Co., 1995.
    HD53.V358 1995 (Problem Solving Collection)
    The author presents 101"brain boosters" for idea creation that will be useful in everyday business situations.

VANGUNDY, Arthur B. Creative Problem Solving: A Guide for Trainers and Management. New York, NY: Quorum Books, 1987.
    HD30.29.V34 1987 (Problem Solving Collection)
    The author describes and applies the Osborn-Parnes Creative Problem Solving (CPS) model as an especially useful model for addressing ambiguous, ill-structured types of problems. CPS is based on the use of both analytical and intuitive types of thinking. The book is aimed at those who are going to train using this model. Exercises are included.

VANGUNDY, Arthur B. Idea Power: Techniques and Resources to Unleash the Creativity in Your Organization. New York, NY: American Management Association, 1992.
    HD53.V36 1992 (Problem Solving Collection)
    VanGundy discusses creativity training which equips employees with the skills they need to identify problems and generate solutions. Of particular interest is chapter 2, Creative problem solving.

VANGUNDY, Arthur B. Managing Group Creativity: A Modular Approach to Problem Solving. New York, NY: AMACOM, 1984.
    HD30.29.V35 1984 (Problem Solving Collection)
    The author aims his book at managers and facilitators of groups who must deal with complex, ill-structured problems which usually require more creative solutions than routine problems. He contends that group creativity can be managed to produce creative solutions. The text is "built around a set of modules pertaining to different aspects of group creative problem solving." (p. v)

VANGUNDY, Arthur B. Stalking the Wild Solution: A Problem Finding Approach to Creative Problem Solving. Buffalo, NY: Bearly Ltd., 1988.

HD30.29.V343 1988 (Problem Solving Collection)

The author emphasizes that problem solving begins with clarifying and structuring the problem so as to achieve the best possible solution. Includes problems.

VANGUNDY, Arthur B. Techniques of Structured Problem Solving. 2nd ed. New York: Van Nostrand Reinhold Co., 1988.

HD30.29.V36 1988 (Problem Solving Collection)

This work is a guide to over 100 techniques that can be used to facilitate the creative problem-solving process. The techniques are not prescriptive but meant to be used as a flexible set of activities. The author includes a general problem-solving model and guidelines for selecting and using the techniques. He also describes the use of the techniques to resolve a variety of ill-structured problems.

VANGUNDY, Arthur B. Training Your Creative Mind. Englewood Cliffs, NJ: Prentice-Hall, 1982.

BF408.V25 1982 (Problem Solving Collection)

Aimed at those with little prior exposure to creative thinking and who are seriously interested in becoming more creative, this book provides a structures approach to increasing personal creativity. It includes many exercises.

VERDUIN, John R. Helping Students Develop Investigative, Problem Solving, and Thinking Skills in a Cooperative Setting: A Handbook for Teachers, Administrators and Curriculum Workers. Springfield, IL: Charles C. Thomas, 1996.

LC3993.9.V47 1996 (Problem Solving Collection)

The author presents strategies to introduce young students to investigative, problem solving and thinking skills, with an emphasis on working together in a democratic setting. The author tries to encourage social responsiveness and responsibility.

VOSS, James F. & Timothy A. POST. "On the solving of ill-structured problems." The Nature of Expertise. Eds. Michelene T.H. Chi, et al. Hillsdale, NJ: Lawrence Erlbaum Associates, 1988. 261-285.

The authors comment on earlier studies on solving ill-structured problems, present some of their own work on the topic, and describe some of the issues that need consideration in future work on ill-structured problems.

VOSS, James F., et al. "Problem-Solving Skill in the Social Sciences." The Psychology of Learning and Motivation. Ed. Gordon H. Bower. New York, NY: Academic Press, 1983. 165-213.

The authors concentrate on problem solving in political science, particularly on problems related to the Soviet Union. The article includes a flow chart on problem-solving techniques.

VUCHINICH, Samuel. Problem Solving in Families: Research and Practice. Thousand Oaks, CA: Sage Publications, 1999. (Understanding Families)

HQ728.V83 1999 (Problem Solving Collection)

As the title indicates, focus is on the processes that families use to solve problems.

VYE, Nancy J., et al. "Teaching Thinking and Problem Solving: Illustrations and Issues." The Psychology of Human Thought. Eds. Robert J. Sternberg & Edward E. Smith. Cambridge, Eng.: Cambridge University Press, 1988. 337-365.

  The authors discuss three programs that teach problem solving: Feuerstein and colleagues' Instrumental Enrichment; Lipman and colleagues' Philosophy for Children; and Sternberg's Intelligence Applied.

WAKEFIELD, John F. Educational Psychology: Learning To Be a Problem Solver. Boston, MA: Houghton Mifflin Co., 1996.
  LB1053.W35 1996 (Problem Solving Collection)

  Intended for use in a course for college teachers, the author presents a comprehensive discussion of problem solving, with an emphasis on teaching problem-solving skills in the classroom. The book both describes and demonstrates the problem-solving process.

WALLACE, Dave. Break Out!: Free Your Creative Power. Grand Rapids, MI: Ainsco, Inc., 1994.
  BF408.W25 1994 (Problem Solving Collection)

  In this popular treatment, the author examines the creative process and then suggest a method for generating creative ideas at will.

WANDBERG, Robert. Creative Problem Solving: What's a Better Way? Mankato, MN: LifeMatters, 2001.
  RJ101.7.W36 2000 (Problem Solving Collection)

  Aimed at teenagers, this work discusses problem solving in the context of health-related issues.

WARD, Thomas B., et al. Creativity and the Mind: Discovering the Genius Within. New York, NY: Plenum Press, 1995.
  BF408.W277 1995 (Problem Solving Collection)

  The authors discuss how the mind works in the process of creativity, which they view as a natural part of being human. Of particular interest, chapter 4, Problem solving and reasoning (p. 89-120)

WARNOCK, Peter. Two Heads Are Better Than One in Creative Problem Solving and Decision Making. Buffalo, NY: Bearly Limited, 1985.
  BF408.W37 1985 (Problem Solving Collection)

  This slim work aimed at cooperative extension workers presents the basic concepts of creative problem solving. It also includes a few exercises and inspirational quotes.

WEBNE-BEHRMAN, Harry. The Practice of Facilitation: Managing Group Process and Solving Problems. Westport, CT: Quorum Books, 1998.
  HD30.29.W43 1998 (Problem Solving Collection)

  This work addresses the facilitator's role in work group problem solving. Of particular interest is chapter 4, Problem solving in facilitated groups, which includes a discussion of the pre-conditions for effective problem solving and the alternative strategies that can be used.

WEISBERG, Robert W. "Problem Solving and Creativity." The Nature of Creativity:

Contemporary Psychological Perspectives. Ed. Robert J. Sternberg. Cambridge, Eng.: Cambridge University Press, 1988. 148-176.
Creativity has often been discussed mainly in the context of the genius view of creativity. Weisberg discusses laboratory research in problem solving in relation to creative acts of genius.   He then proceeds to detail what he sees "as the connection between laboratory work in problem solving and specific events in the careers of great artists and scientists." (p. 151)

WEITZMAN, Eben A. & Patricia Flynn WEITZMAN. "Problem Solving and Decision Making in Conflict Resolution." Handbook of Conflict Resolution. Eds. Morton Deutsch & Peter Coleman. San Francisco, CA: Jossey-Bass, 2000. 185-209.
HM1126.H35 2000 (Problem Solving Collection)
Resolving conflict can be thought of as solving a problem together. The authors present problem solving and divide conflict resolution into two areas: problem solving and decision making. They present a model blending the two.

WHIMBEY, Arthur & Jack LOCHHEAD. Beyond Problem Solving and Comprehension: An Exploration of Quantitative Reasoning. Philadelphia, PA: Franklin Institute Press, 1984.
The authors explore the use of quantitative reasoning (i.e. mathematical) skills in technical disciplines.

WHIMBEY, A. & J. LOCHHEAD. Problem Solving and Comprehension. 6th ed. Mahwah, NJ: Lawrence Erlbaum Associates, 1999.
This self-help textbook on how to increase problem-solving abilities contains a variety of exercises and tests.

WHITFIELD, P.R. Creativity in Industry. Harmondsworth, Eng.: Penguin Books, 1975.
HD45.W43 1975 (Problem Solving Collection)
This work focuses on technological innovation in relation to both individuals and small work groups. While the focus is on industry, the author discusses general concepts and includes some material on problem solving.

WILKERSON, LuAnn & Wim H. GIJSELAERS, eds. Bringing Problem-Based Learning to Higher Education: Theory and Practice. San Francisco, CA: Jossey-Bass, 1996. (New Direction for Teaching and Learning, no. 68)
LB1027.42.B74 (Problem Solving Collection)
"This volume describes the growth of PBL from early days in medical schools to current uses in a variety of fields."   (Introductory materials) The editors, believing problem-based learning to be a standard teaching method, have collected a number of short papers related to this methodology.

WYCOFF, Joyce. Mindmapping®: Your Personal Guide to Exploring Creativity and Problem-Solving. New York, NY: Berkley Books, 1991.
BF449.W93 1991 (Problem Solving Collection)
Mindmapping®, developed by Tony Buzan in the 1970s as a note-taking device, is a technique for idea organization that allows for recording the natural flow of information from the brain to notes

without the constraints of outlining. This technique allows the user "to explore new dimensions of flexibility and precision of thought." (p. xvii). Contains illustrations and exercises.

YANKELOVICH, Daniel. The Magic of Dialogue: Transforming Conflict into Cooperation. New
       York, NY: Simon & Schuster, 1999.
       HD30.3.Y36 1999 (Problem Solving Collection)
       Dialogue, according to the author, is seeking mutual understanding. There are usually two purposes for doing dialogue, "to strengthen personal relationships and to solve problems. Today, the second purpose is growing in importance: increasingly, we find ourselves facing problems that require more shared understanding with others than in the past." (p. 12)

YOUNG, Robert L. Understanding Misunderstandings: A Practical Guide to More Successful Human
       Interaction. 1st ed. Austin, TX: University of Texas Press, 1999.
       BF637.C45Y69 1999 (Problem Solving Collection)
       The author presents a practical approach for the non-scholar seeking to increase his/her understanding of how misunderstandings come about in order to "help us avoid them and more effectively handle them when they do occur". (p. ix)

ZAMBRUSKI, Michael S. The Business Analyser and Planner: The Unique Process for Solving
       Problems, Finding Opportunities, and Making Better Decisions Every Day. New York, NY:
       AMACOM, 1999.
       HF1008.Z36 1999 (Problem Solving Collection)
       This detailed handbook guides the business person through the decision-making process to be used to address problems in any business setting.

ZSAMBOK, Caroline E. & Gary KLEIN, eds. Naturalistic Decision Making. Mahwah, NJ: Lawrence
       Erlbaum Assoc., 1997.
       BF448.N38 1997 (Problem Solving Collection)
       These proceedings of the 2nd Naturalistic Decision Making Conference held in 1994 in Dayton, Ohio include presentations on expert-novice differences, examination of the role of recognition processes and situational assessment in problem solving, hypothesis formation and testing in real-world situations, and decision-making strategies in emergency situations. Various authors discuss how inexperienced decision-makers, individually or in groups, deal with ill-structured problems in times of stress and high stakes.

IV. PROBLEM SOLVING IN GENERAL: ARTICLES

ANDERSON, John R. Problem Solving and Learning, 48 Am. Psychologist, 35 (1993).
       The author elaborates on a basic framework for problem solving by presenting "a strength concept to account for variability in problem-solving behavior and improvement in problem-solving skill with practice." (p. 35)

ANSBURG, Pamela I. & Roger L. DOMINOWSKI. Promoting Insightful Problem Solving, 34 J.
       Creative Behav. 30 (2000).

The authors conducted training experiments which provided empirical evidence that problem solving is a trainable thinking skill.

ANTONIETTI, Alessandro, et al. Metacognitive Knowledge about Problem-Solving Methods, 70 Brit. J. Educ. Psychol. 1 (2000).
The authors analyze the beliefs of undergraduates about problem-solving methods and whether these beliefs differ depending on the method employed. The results indicate the most common problem-solving method is analogy.

BAGAYOKO, Diola, et al. Problem-Solving Paradigm, 48 C. Teaching 24 (2000).
The authors present a problem-solving paradigm in which all five categories in the paradigm (skill base, knowledge base, resources base, strategy-experience base and behavioral base) must be addressed for a successful increase in problem-solving skills.

BASADUR, Min, et al. Identifying Individual Differences in Creative Problem Solving Style, 24 J. Creative Behav.111 (1990).
The authors present the Basadur Creative Problem Solving Profile, an instrument they were developing to identify an individual's unique style of creative problem solving.

BASADUR, Min, et al. Understanding How Creative Thinking Skills, Attitudes and Behaviors Work Together: A Causal Process Model, 34 J. Creative Behav. 77 (2000).
Applying the Simplex process of creative thinking to solving management problems, the authors examine the interrelationships between attitude and skills variables.

BIAL, Boris. Eight Steps To Successful Problem Solving, Supervisory Mgmt., January 1986 at 7.
This short, practical article presents a strategy for managers to use in addressing complex problems in the workplace.

BRANSFORD, John, et al. Teaching Thinking and Problem Solving: Research Foundations, 41 Am. Psychol. 1078 (1986).
The authors discuss research in the processes underlying the ability to think and to solve problems. They focus on two approaches, one of which emphasizes the role of domain-specific knowledge, the other emphasizes general strategic and metacognitive knowledge.

CARSON, David K. & Mark A. RUNCO. Creative Problem Solving and Problem Finding in Young Adults: Interconnections with Stress, Hassles, and Coping Abilities. 33 J. Creative Behav. 167 (1999).
The authors explore the ability to handle stress and its relationship to creative problem solving in college undergraduates.

CHEN, Zhe & Marvin W. DAEHLER. External and Internal Instantiation of Abstract Information Facilitates Transfer in Insight Problem Solving, 25 Contemp. Educ. Psychol. 423 (2000).
The authors' research in four studies shows that both external and internal instantiation (adding

concrete examples to abstract source information) facilitates analogous problem solving.

CHI, Michelene, et al. Self-Explanations : How Students Study and Use Examples in Learning to Solve
Problems, 13 Cognitive Sci.145 (1989).
The authors found that a "good" student generates many self-generated explanations which expand upon examples used in learning to solve problems. The "poor" student does not generate sufficient self-explanations and relies too heavily on examples. They then "discuss the role of self-explanations in facilitating problem solving." (p. 145)

CHIU, Ming-Ming. Effects of Status on Solutions, Leadership, and Evaluations during Group Problem
Solving, 73 Soc. Educ. 175 (2000).
The author's work with high school students suggests that students' statuses, such as academic status, peer friendship, gender and ethnicity, affect the problems-solving activities of a group.

DUNCKER, Karl. On Problem-Solving, 58 Psychol. Monographs, no. 5 (Whole No. 270) (1945)
Translation by Lynne S. Lees of the author's Zur Psychologie des produktiven Denkens (1935). This much-cited article provides a theoretical discussion concerning the solution of practical problems.

DYER, William G., "When Is a Problem a Problem?", Personnel Administrator, June 1978, at 66.
Dyer distinguishes between a "problem", which is a "condition or state of affairs that is seen as being below some acceptable standard of rightness" (p. 68) and a "felt need", which "is a feeling state...about a condition or state of affairs that...demands some action...." (p. 68) Change may be required only when a "problem" rises to a "felt need".

EDWARDS, M. O. A Survey of Problem Solving Courses, 2 J. Creative Behav. 33 (1967).
The author reports the results of a survey by the Stanford Research Institute that sought to obtain "first-hand data on problem-solving courses conducted or sponsored by the organizations [surveyed]." (p. 33) The results are presented in tabular form.

GAGNÉ, Robert M. Learnable Aspects of Problem Solving, 15 Educ. Psychologist 84 (1980).
Gagné discusses cognitive strategies and their role in problem solving.

GETZELS, J. W. Problem Finding and the Inventiveness of Solutions, 9 J. of Creative Behav. 12 (1975)
In problem solving, a crucial step is the initial formulation of the problem. Problems "must be posed and formulated in fruitful and often radical ways if they are to be moved toward solution." (p. 12)

GICK, Mary L. & Keith L. Holyoak. Analogical Problem Solving, 12 Cognitive Psychol. 306 (1980)
In four experiments, the authors investigate the use of analogy from disparate domains to guide the problem-solving process.

GICK, Mary L. & Susan J. MCGARRY. Learning from Mistakes: Inducing Analogous Solution

Failures to a Source Problem Produces Later Successes in Analogical Transfer, 18 J. Experimental Psychol.: Learning, Memory, and Cognition, 623 (1992).

Based on the results of four experiments, the authors conclude that "pointing out and then correcting errors of representation in training problems may be more beneficial for students who will later be working on their own than is solving problems that readily lead to the correct representation of the transfer problem." (p. 637)

GICK, Mary L. Problem Solving Strategies, 21 Educ. Psychologist 99 (1986).

"This article reviews [then] recent research on problem-solving strategies and their relationships to learning and problem-solving processes. A distinction is made between schema-driven and search-based problem-solving strategies, and expert-novice differences in the use of these strategies are discussed." (p. 99)

GOOR, Amos & Roy E. SOMMERFELD. A Comparison of Problem-Solving Processes of Creative Students and Noncreative Students, 67 J. Educ. Psychol. 495 (1975).

The authors investigate the process aspect of creativity by observing and analyzing the problem-solving abilities of creative students and noncreative students.

GREENO, James G. Indefinite Goals in Well-Structured Problems, 83 Psychol. Rev. 479 (1976).

Indefinite goals are often viewed as a product of ill-structured problems. Prof. Greeno finds that these types of goals can also be included in the domain of well-structured problems.

HAMZA, M. Khalid & Vicky FARROW. Fostering Creativity and Problem Solving in the Classroom, 37 Kappa Delta Pi Rec. 33 (2000).

A study of eight teachers and 113 of their students in a community college indicates that teachers

who are successful in promoting creative problem solving have teaching styles that are spontaneous, intuitive, unique, and original.

ISAKSEN, Scott G. & Sidney J. PARNES. Curriculum Planning for Creative Thinking and Problem Solving, 19 J. Creative Behav. 1 (1985).

Based on a survey of curriculum planners, business, industry, public education, and curriculum specialists, the authors suggests a "creative problem-solving model to engage in curriculum planning for creative learning." (p. 1)

JONASSEN, David H. Toward a Design Theory of Problem Solving, 48 Educ.Tech. Res. & Dev. 63 (2000).

The author believes instructional design research and theory has paid too little attention to the processes surrounding problem solving. He discusses the differences among problems, describes individual differences that affect problems, and offers a typology of problems with the intent of spurring research in the area.

KEANE, Mark. On Drawing Analogies When Solving Problems: A Theory and Test of Solution

Generation in an Analogical Problem-Solving Task, 76 Brit. J. of Psychol. 449 (1985).
> The author addresses three criticisms of the theories of analogy and then presents a theory of solution generation.

MARIOTTI, John J. Checklists in Problem Solving, Mgmt. Rev., August 1971, at p. 52.
> A short article (condensed from <u>Management Adviser</u> (May-June 1971)) in which the author summarizes the use of checklists as a useful format for presenting the steps in problem solving.

MCBRIDE-CHANG, Catherine. An Alternative Approach to the Ill-Defined Problem of Teaching Problem-Solving, 28 Teaching Psychol. 50 (2001).
> The author incorporates both cognitive and social approaches into an integrated approach to teaching problem solving.

MCNAMARA, Carter. The 7 Steps of Problem-Solving, Administrator, May 2004 at 3.
> A single page containing a list of questions that should be addressed when taking the author's seven steps of problem solving.

MILLER, Merilee & Gerald D. NUNN. Using Group Discussions to Improve Social Problem-Solving and Learning, 121 Educ. 470 (2001).
> The authors review research on the use of group discussion to improve problem-solving skills.

MINOW, Martha & Elizabeth V. SPELMAN. In Context, 63 S. Cal. L. Rev. 1597 (1990).
> In analyzing a problem-solving model, it is important to be aware that cognitive processes may differ depending on the context of the problem being examined.

MUMFORD, Michael D., et al. Tradeoffs between Ideas and Structure: Individual Versus Group Information in Creative Problem Solving, 35 J. Creative Behav. 1 (2001).
> The authors studied variables that influence the performance of both groups and individuals who are involved in tasks requiring creative problem solving. Their results suggest that interventions in the problem-solving process may produce different results on individuals than they do on groups.

NEWELL, Alan, et al. Elements of a Theory of Human Problem Solving, 65 Psychol. Rev. 151 (1958).
> In setting forth a theory of problem solving, the authors describe "problem-solving behavior in terms of what we shall call *information processes*." (p. 151, authors' italics) This theory in then related to the study of information-processing systems.

PHYE, Gary D. Problem-Solving Instruction and Problem Solving Transfer: The Correspondence Issue, 93 J. Educ. Psychol. 571 (2001).
> The author's research suggests the instructional methodologies that prove efficient in teaching problem-solving strategies in one instance do not necessarily have the same impact on later problem-solving performance. He presents suggestions for further research on this lack of correspondence.

ROBERTSON, Ian. Imitative Problem Solving: Why Transfer of Learning Often Fails to Occur, 28 Instructional Sci. 263 (2000).

Focusing on the solving of math problems, the paper presents evidence that novice learners often solve problems through imitation and thus the analogical transfer of problem-solving skills even within a domain seldom takes place.

SCHEERER, Martin. Problem Solving, Scientific American, Apr. 1963 at 118.
   The author discusses how fixation often serves as an impediment to problem solving which often requires a shift in the way a problem is viewed.

SIMON, Herbert A. & Allen NEWELL. Human Problem Solving: The State of the Theory in 1970, 26 Am. Psychologist 145 (1971).
   In addressing the theory of problem solving, the authors conclude, "there is beauty in the intricacy of human thinking when an intelligent person is confronted with a difficult problem. But there is a deeper beauty in the basic information processes and their organization into simple schemes of heuristic search that make that intricate human thinking possible." (p. 159)

SIMON, Herbert A. The Structure of Ill Structured Problems, 4 Artificial Intelligence 181 (1973).
   Simon discusses the relationship between ill-structured problems and well-structured problems in order to determine whether ill-structured problems "are inaccessible to the problem solving systems of artificial intelligence in ways that those regarded as well structured are not." (p. 181-82)

WEDMAN, John F., et al. Thought Processes in Analogical Problem Solving: A Preliminary Inquiry, 32 (no. 3) J. Res. & Dev. Educ.160 (1999).
   Past research indicates problem solvers often have trouble transferring knowledge from one problem-solving scenario to an analogous one. The authors studied individuals' thought processes in order to determine what happens in such situations.

WOOD, Phillip Karl. Inquiring Systems and Problem Structure: Implications for Cognitive Development, 26 Hum. Dev. 249 (1983).
   Developmental theories assess complex problem solving rather than the types of problem solving addressed by intelligence theories such as information processing. "This article will provide one possible framework for distinguishing between types of problem-solving situations employed by developmental and more classical approaches to intellectual assessment." (p.250)