

Annotated Bibliography on Active Learning

Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers* (Second Ed.). San Francisco: Jossey-Bass.

Classroom assessment encourages faculty to "become more systematic and sensitive observers of learning as it takes place every day in their classrooms." This valuable resource introduces readers to an especially exciting way to becoming a more reflective and effective classroom instructor. Further, it offers detailed descriptions of fifty classroom assessment techniques and illustrates nicely their use with brief case studies of how faculty from across the disciplines have employed these techniques. In addition to providing faculty with feedback of their instructional effectiveness, classroom assessment engages students actively in the reflective process of monitoring their comprehension and retention of subject matter. This essential book provides 50 classroom assessment techniques (CATs) organized according to the learning outcomes each CAT is most likely to assess, such as prior knowledge of course material, critical thinking, creative thinking, problem solving, and application. The CATs are also categorized by amount of time needed for faculty preparation, student response, and faculty analysis of the data. Examples of each CAT are provided from a wide variety of academic disciplines.

Bateman, W. L. (1990). *Open to question*. San Francisco: Jossey-Bass.

The author organizes this engaging and easily read text around three central questions: (1) Why teach by inquiry? (2) How can you teach by inquiry? and (3) How can you start? Based upon Bateman's experiences teaching at both the K-12 and college levels, this book stimulates readers to engage in both self-reflection and instructional skill building. Among the specific "how to" chapters are sections which explore "Coping with Rigid Beliefs," "Testing Hypotheses," "Discovering Assumptions," "Checking the Evidence," and "Discovering Insights." This text is an excellent follow-up to Sanders, N. (1966). *Classroom Questions: What Kinds?* NY: Harper & Row.

Bean, J. C. (1996). *Engaging ideas: The professor's guide to integrating writing, critical thinking, and active learning in the classroom*. San Francisco: Jossey-Bass.

The author, well known for his work in writing across the curriculum, has succeeded in creating "a pragmatic nuts-and bolts guide that will help teachers from any discipline design interest-provoking writing and critical thinking activities and incorporate them smoothly into their disciplinary courses." While the text clearly devotes greater explicit attention to the writing process than to either critical thinking or active learning, other works cited in this bibliography better address these two important topic areas. Three chapters in this volume examine "Understanding Connections Between Thinking and Writing," two chapters explore "Designing Problem-based Assignments," and three chapters discuss "Reading, Commenting On, and Grading Student Writing." The six remaining chapters describe various aspects of "Coaching Students as Learners, Thinkers, and Writers."

Bean, J. C. (2001). *Engaging ideas: The professor's guide to integrating writing, critical thinking, and active learning in the classroom*. San Francisco, CA: Jossey-Bass.

This book offers a wealth of practical advice for designing classes that incorporate active learning and critical thinking through the use of both formal and informal writing assignments. Part Three of the book focuses on strategies for designing assignments that engage students in critical thinking, helping students improve reading skills for difficult texts, using small group activities with the classroom, and incorporating active learning in lecture classes.

Bligh, D. (Ed.). (1986). *Teach thinking by discussion*. Guilford, Surrey: SRHE & NFER-Nelson.

The twenty-eight brief articles contained in this volume provide readers with a wealth of information and insights on using discussion methods to stimulate thinking and improve learning. Published in the U.K., this work offers faculty in the U.S.A. both perspectives and an extensive bibliography (many listings are annotated) which will be new. Topics include "Varieties of Learning Groups," "Participation in Groups," "Tutorless Task-Centered Groups," "Groups including Tutors," and "Evaluation of Teaching by Discussion."

Bonwell, C. C., & Eison, J. A. (1991). *Active learning: Creating excitement in the classroom*. ASHE-ERIC Higher Education Report No. 1. Washington, DC: The George Washington University, School of Education and Human Development.

This text critically synthesizes published writing and research on active learning. In particular, the following four major issues are examined: (1) What is active learning and why is it important? (2) How can active learning be incorporated in the classroom? (3) What are the barriers? and (4) What conclusions should be drawn and recommendations made? An extensive bibliography of current resources is provided. Dr. Bill Cashin (Kansas State University) has reviewed succinctly this work by noting "Bonwell and Eison provide coverage of the literature on active learning that is both clear and comprehensive, scholarly and practical, heuristic and helpful."

Brookfield, S. D., & Preskill, S. (1999). *Discussion as a way of teaching: Tools and techniques for democratic classrooms*. San Francisco: Jossey-Bass.

Stephen Brookfield is the author of three other award winning Jossey-Bass texts of interest to many faculty readers of this bibliography [i.e., *Developing critical thinkers: Challenging adults to explore alternative ways of thinking and acting* (1987); *The skillful teacher: On technique, trust, and responsiveness in the classroom* (1990); *On becoming a critically reflective teacher* (1995)]. This engaging text, his most recent work done in collaboration with a long-time friend and colleague, offers a compelling look at how discussion helps learning and enlivens classrooms (Chapter 2). As the title promises, subsequent chapters then offer similarly comprehensive practical suggestions for preparing for and starting discussions (Chapters 3 & 4), keeping discussions going (Chapters 5 & 6), understanding and acknowledging cultural and gender differences (Chapters 7 & 8), and keeping students' voices and teachers' voices in balance (Chapters 9 & 10). Novice and experienced active learning practitioners will both find fresh and helpful guidance in this recently published text.

Carr, C. (1996). *Team leader's problem solver*. Englewood Cliffs, NJ: Prentice Hall.

Based upon his extensive consulting experience with business and government, the author offers a comprehensive look at management problems commonly faced by team leaders (e.g., interpersonal problems within a team, problems with the behavior of or the performance of an individual team member, problems with the performance of the team as a whole, etc). An extensive collection of illustrative case vignettes is provided and each is followed by the identification of possible causes, cures, and team strengtheners. Some examples of the types of team problems explored in this helpful and easily-read text include: (1) The team doesn't trust one of its members, (2) The team wants to get rid of one of its members, (3) A member wants to leave the team, (4) Two team members are constantly fighting, (5) A team member has an excellent attitude but doesn't produce much work, and (6) A team member is an excellent individual performer but won't work with the team. These problems also arise frequently in the context of university courses that require group or team projects and faculty readers of this text will find helpful guidance in addressing such commonly encountered difficulties.

Christensen, C. R., & Hansen, A. J. (1981). *Teaching and the case method*. Boston: Harvard Business School.

This text is crucial reading for all interested in case method teaching in higher education. Based upon experiences at Harvard Business School and written by two acknowledged experts in the field, this book contains text, a collection of teaching cases with instructor notes, and readings. This work offers both neophytes and experienced case method teachers valuable insights to the excitement and the instructional challenges of case teaching.

Cooper, J., Prescott, S., Cook, L., Smith, L., & Mueck, R. (1990). *Cooperative learning and college instruction: Effective use of student learning teams*. Long Beach, CA: The California State University Foundation. (Available from the CSU Institute for Teaching and Learning, Chancellor's Office, 400 Golden Shore, Long Beach, CA 90802-4275). This easy-to-read monograph summarizes valuable lessons learned as a small group of faculty at California State University at Dominguez Hills met to discuss research and practice in cooperative learning at the college level. Topics include "The Case for Cooperative Learning in the College Classroom," "Critical Features of Cooperative Learning," "Organizing the Classroom for Cooperative Learning," "Fitting Cooperative Learning into Existing Teaching Styles," and "Concerns About Cooperative Learning." Readers should also consult two outstanding annotated bibliographies prepared by Cooper et al. published in *The Journal of Staff, Program, and Organization Development*: Fall 1989, 7(3), 143-148, and Winter 1991, 9(4), 239-252.

Eison, J. A., & Bonwell, C. C. (1993, January). Recent works on using active learning strategies across the disciplines. Unpublished manuscript. (ERIC Document Reproduction Service No. ED 364 135).

This bibliography lists 275 articles and monographs, mostly published in the 1980s, that address the use of active learning teaching methods at the postsecondary education level. Items are selected to produce a large illustrative sampling of published materials that can introduce the literature of active learning to faculty. Articles typically explore practical aspects of this methodology and classroom strategies. The bibliographic references are

divided by discipline reflecting the use of specific active learning approaches such as audio-visual aids, case studies, class discussion, computers, debates, field work, games/simulations, groups, library assignments, performance, surveys, visual imaging, or writing assignments. Specific sections are categorized by the following disciplines: business, humanities, sciences, and social sciences. This work was the precursor to the more extensive listing now posted bibliography on the Center's web page at http://www.cte.usf.edu/bibs/active_learn/intro.html/

Gardner, L. F. (1993, August). Involving college students in active learning: A rationale and potpourri of methods. Professional Resource No. 9. Newark, NJ: Author (c/o Rutgers University, Newark, NJ 07102-1811).

This is an outstanding twenty-page monograph containing a conceptual overview and a lengthy listing of active learning instructional methods and strategies.

Goodsell, A., Maher, M., & Tinto, V. with Smith, B. L., & MacGregor, J. (1992). Collaborative learning: A sourcebook for higher education. University Park, PA: National Center on Postsecondary Teaching, Learning, and Assessment, Pennsylvania State University.

This recent sourcebook contains nine valuable article reprints, several helpful bibliographies (i.e., annotated, discipline-specific, general), and an annotated listing of programs where collaborative learning is being used.

Hyman, R. T. (1979). Strategic questioning. Englewood Cliffs, NJ: Prentice-Hall. Hyman asserts that "Teaching is essentially a verbal activity," and that "Questioning is essential to teaching; both for the teacher and student." Designed to help teachers become more effective and strategic questioners, this remarkably concise text (1) contrasts several different types of questions instructors might employ, (2) describes five general strategies for asking questions, (3) identifies 15 specific questioning strategies (e.g., developing concepts inductively and deductively, comparing and contrasting, predicting, explaining, analyzing values, taking a stand), and (4) offers a manual illustrating 25 sample questioning dialogs.

Hyman, R. T. (1980). Improving discussion leadership. NY: Teachers College Columbia University.

Hyman, an experienced instructor and author, offers an engaging examination of discussion leadership. After considering "What is a discussion?" and "Discussion Planning," the following discussion leading skills are examined: (1) contributing, (2) crystallizing, (3) focusing, (4) introducing & closing, (5) questioning, and (6) supporting. Additional chapters examine "Preventing and Solving Discussion Problems" and "Discussion Feedback and Evaluation."

Johnson, D. W., Johnson, R. T., & Smith, K. A. (1991). Cooperative learning: Increasing college faculty instructional productivity. ASHE-ERIC Higher Education Report No. 4. Washington, DC: The George Washington University, School of Education and Human Development.

This important recent volume in the ASHE-ERIC Higher Education Reports series overviews a large and growing body of research on the instructional use of small student groups. Written by three widely recognized experts, the text offers both a literature review and a how-to-do-it perspective on issues such as (1) the basic elements of cooperative learning, (2) research on cooperative learning, (3) the instructor's role in cooperative learning, (4) the cooperative lecture, (5) the use of base groups, and (6) cooperation among faculty.

Johnson, D. W., Johnson, R. T., & Smith, K. A. (1996). *Academic controversy: Enriching college instruction through intellectual conflict*. ASHE-ERIC Higher Education Report Volume 25, No. 3. Washington, DC: The George Washington University, Graduate School of Education and Human Development.

"Academic controversy" exists when one student's ideas, information, conclusions, theories, and opinions are incompatible with those of another student, and the two seek to reach an agreement." This monograph describes a systematic, and sequential instructional method for stimulating critical and creative thinking, promoting student collaboration, and ensuring that students view an event or problem from multiple perspectives. This process first involves forming students into cooperative learning groups of four students and then dividing the group into two pairs. Then the instructor guides the students through the following steps: (1) Research and prepare a position-- Each pair develops the position assigned, learns relevant information about it, and plans how to present the best case possible to the other pair, (2) Present and advocate their position-- Each pair makes a presentation to the opposing pair, with each member of the pair participating, (3) Engage in an open discussion, refuting the opposing position and rebutting attacks on their own position-- Students argue forcefully and persuasively for their position, presenting as many facts as they can to support their point of view, (4) Reverse perspectives-- The pairs reverse perspectives and present each other's positions, and (5) Synthesize and integrate the best evidence and reasoning into a joint position-- The four members of the group drop all advocacy, synthesizing and integrating what they know into factual and judgmental conclusions summarized into a joint position on which all sides can agree.

Kadel, S., & Keehner, J. A. (1994). *Collaborative learning: A sourcebook for higher education*. Vol. II. University Park, PA: National Center on Postsecondary Teaching, Learning, and Assessment.

This helpful sourcebook consists of four sections. Section One contains a commissioned overview article about collaborative learning written by Zelda Gamson. Section Two reprints seven previously published articles on a range of different topics including group processes, fostering diversity and teaching by discussion, using collaborative learning groups in large classes, building learning teams, computer conferencing and collaborative learning, and learning communities. Section Three provides over 50 short faculty-authored contributions describing classroom-tested strategies for employing active learning instructional strategies; each contribution contains a short (a) description, (b) discussion of strengths, (c) discussion of limitations, and (d) a mailing address to contact the contributor. Section Four provides an annotated bibliography of nearly fifty citations identifying resources to support faculty "efforts at improving teaching and learning through collaborative approaches to higher education."

Lyons, P. (1992). *Thirty-five lesson formats: A sourcebook of instructional alternatives*. Englewood Cliffs, NJ: Educational Technology Publications.

Designed to help faculty employ alternative instructional strategies to lecturing, this sourcebook describes 35 simple active learning strategies which have been organized into formats to enhance (1) problem solving and negotiation skills, (2) planning, analysis, and communication skills, (3) cognitive and managerial skills, and (4) integration and cooperative learning skills. Each strategy is described in terms of (1) purpose, (2) size of group, (3) materials needed, (4) time required, (5) advance preparation, and (6) process.

McKeachie, W. J. (2002). *McKeachie's teaching tips: Strategies, research and theory for college and university teachers* (11th ed.). Boston, MA: Houghton Mifflin.

McKeachie provides practical advice for preparing courses, meeting the class for the first time, facilitating discussion, improving lectures, evaluating students, etc. Part 4 of the book focuses on strategies for facilitating active learning via writing assignments, reading assignment, collaborative learning, problem-based learning, and use of technology. Part 5 builds upon these strategies with recommendations for incorporating them in large classes, laboratories, experiential learning, independent projects, and distance education.

McNeal, A. P., & D'Avanzo, C. (Eds.). (1997). *Student-active science: Models of innovation in college science teaching*. Fort Worth, TX: Saunders College Publishing. This provocative collection of 26 chapters represent the Proceedings of the NSF sponsored conference on "Inquiry Approaches to Science Teaching" held at Hampshire College, June 1996. Articles explore such timely and significant issues as (1) the history of hands-on active education (two chapters), (2) comprehensive transformation of curriculum at diverse institutions (six chapters), (3) assessment and evaluation (three chapters), (4) interdisciplinary courses and curricula (three chapters), and (5) case studies of student-active courses from a variety of institutions (eleven chapters).

Millis, B. J., & Cottell, P. G. (1998). *Cooperative learning for higher education faculty*. Phoenix: AR: Oryx Press.

This outstanding new text explores the practical application of cooperative learning instructional approaches in higher education. The authors provide a comprehensive and scholarly look at the underlying rationale for cooperative learning and summarize the research-base that supports its ever-increasing use in college and university classrooms (as well as at the primary and secondary school levels). A detailed yet readable discussion follows exploring both philosophical and practical issues surrounding how to plan, manage, structure, and assess the cooperative classroom. In my opinion, as stated in the book-jacket, this currently is the "definitive 'how to' book on cooperative learning at the postsecondary level."

Moss, A., & Holder, C. (1988). *Improving student writing: A guidebook for faculty in all disciplines*. Dubuque, IA: Kendall Hunt.

This is both an outstanding and brief monograph written by two very experienced faculty at California State Polytechnic University offering practical advice on essential

instructional issues such as "Assigning Writing," "Assignments that Work," "Essay Examinations," "Strategies for Helping Students," and "Evaluating Students' Writing."

Myers, C., & Jones, T. B. (1993). *Promoting active learning*. San Francisco: Jossey-Bass. Meyers and Jones offer an engaging overview of the topic and describe a variety of practical strategies and techniques for using active learning approaches in college classes. Special attention is paid to the use of informal small groups (Chapter 4), cooperative student projects (Chapter 5), simulations (Chapter 6), and case studies (Chapter 7).

Neff, R. A., & Weimer, M. (Eds.). (1989). *Classroom communication: Collected readings for effective discussion and questioning*. Madison, WI: Magna Press. The editors have skillfully located, selected, and reprinted six excellent readings on using discussions and four readings on questioning; each article is followed by a series of questions designed to stimulate "Further Reflection and Action."

Paloff, R. M., & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom*. San Francisco: Jossey-Bass. An ever-increasing number of college and university instructors are currently seeking ways to enhance or deliver instruction through computer-mediated communication.

Silverman, R., Welty, W. M., & Lyon, S. (1992). *Case studies for teacher problem solving*. NY: McGraw-Hill. Though case method teaching is most commonly associated with graduate level instruction in business, the authors have skillfully prepared a collection of exciting "true cases" from the experiences of public school teachers for use in education methods and educational psychology courses. The 28 cases (with teaching notes) focus on (1) classroom management, (2) learning, (3) effective teaching, (4) diversity, (5) evaluation, and (6) contemporary teaching issues.

Stalheim-Smith, *Focusing On Active, Meaningful Learning. Helping Your Students Develop Critical Thinking Skills*, Lynch and Wolcott. The authors recommend theoretically grounded and empirically supported strategies teachers can use to improve the development and assessment of student's thinking skills. This is a very readable and practical paper. First, they present "Steps for better thinking, which can be conceptualized as the skills in a developmentally grounded problem solving or inquiry process. Next they present and provide examples of using a rubric to examine thinking skill patterns students typically exhibit. A brief overview of the theoretical and empirical background precedes the implications of this work for assisting students as they attempt to think critically. They share examples of tasks that can be adapted for learning purposes in any course or experimental setting. The tools provided here can help faculty be more deliberate in their efforts to understand and enhance students' thinking skills.

Stanley, C. A., & Porter, M. E. (Eds.). (2002). *Engaging large classes: Strategies and techniques for college faculty*. Bolton, MA: Anker. The publisher provides the following description of this book: Part I: Twelve chapters that identify and discuss major issues in the teaching of large classes such as course

design, planning and assessment, promoting civility, active and collaborative learning, classroom technology, working with TAs, and a review of research. Part II: Seventeen essays—written by teachers of large classes from various institutions—that describe strategies and techniques they have used to successfully promote learning in large classes. Disciplines include agriculture, business, clinical sciences, education, engineering, English, law, math, sciences, and social sciences.

Sternberg, R. J., & Grigorenko, E. L. (2000). *Teaching for successful intelligence to increase student learning and achievement*. Arlington Heights, IL: Skylight Professional Development.

This book focuses on the pedagogical implications of Sternberg's theory of successful intelligence, and it provides examples from many disciplines of classroom exercises that can assist students in developing skills in analytical thinking, creative thinking, and practical thinking.

Svinicki, M. D. (Ed.). (1990, Summer). *The changing face of college teaching*. *New Directions in Teaching and Learning*, No. 42. San Francisco: Jossey-Bass.

Many of the eight contributions to this scholarly yet readable volume focus on active learning strategies including: "Collaborative Learning: Shared Inquiry as a Process of Reform" (Chapter 2), "Writing to Learn: Back to Another Basic" (Chapter 3), "Teaching with Cases: Learning to Question" (Chapter 4), "Classroom Assessment: Improving Learning Quality Where it Matters Most" (Chapter 6), and "Assessing and Improving Students' Learning Strategies" (Chapter 7).

Tiberius, R. G. (1990). *Small group teaching: A trouble shooting guide*. Monograph Series, No. 22. Toronto: The Ontario Institute for Studies in Education Press.

All faculty who actively encourage student involvement and participation are, from time to time, certain to encounter a series of relatively predictable difficulties. This insightful and delightfully written text is designed to help faculty understand, prepare for, and skillfully deal with the most common of these difficulties. Chapters are organized into three parts: (1) "Group Goals", (2) "Group Interaction," and (3) "Group Motivation and Emotion." In each section, the author identifies several possible causes of the problem and offers several specific ways to address the problem. Don't be misled by the title, however, because the suggestions offered are also helpful to faculty seeking to stimulate student involvement in large classes.

Tobias, S., & Raphael, J. (1997). *The hidden curriculum: Faculty made tests in science*. Part 1: Lower-division courses. NY: Plenum Press.

The hidden curriculum: Faculty-made tests in science. Part 2: Upper-division courses. NY: Plenum Press.

While this book was designed to report ways science faculty (i.e., biology, chemistry, geology, and physics) have attempted to make examinations "more creative, more meaningful, and more useful as diagnostic and feedback mechanisms in the teaching of science," many of the contributions describe classroom-tested strategies for more actively involving students in the learning process. For example, chapters describe approaches such as (1) class reviews exam in open-book, group-debate format, (2) cooperative,

student-generated essay exam questions, (3) microtheme questions answered during lecture by students on 3" x 5" cards, (4) crossword puzzles testing knowledge of key terms, (5) group quiz every period on reading and homework, (6) discussion questions completed by student pairs, (7) collaborative learning and team exams, (8) computer-assisted paperless homework, (9) group oral exam, and (10) testing in pairs. These and other examples described in this text can readily be modified by faculty for use in a wide variety of disciplines.

Wassermann, S. (1994). *Introduction to case method teaching: A guide to the galaxy*. NY: Teachers College Press, Columbia University.

As indicated by the title, this engaging and easily-read text offers a fairly comprehensive introduction to case method teaching fundamentals for instructors at all grade levels. In addition to helping readers assess their own potential interest in teaching with cases, the author provides a practical and helpful look at such essential issues as (1) writing your own case (Chapter 4), (2) preparing students to learn with cases (Chapter 5), (3) teaching with cases (Chapters 6 & 7), and (4) evaluation in the case method classroom (Chapters 9 & 10). For instructors interested in learning how to employ this exciting instructional approach to their courses, this text provides an excellent first place to start.

White, G. P., & Coscarelli, W. C. (1986). *The guided design guidebook: Patterns in implementation*. Morgantown, WV: The National Center for Guided Design, West Virginia University.

Wales and Stager (1977) have developed the guided design approach to instruction to help students become "adaptive, creative, and independent people." This instructional approach relies upon (1) independent study, (2) small groups, (3) guided design projects, (4) competency-based testing, and (5) an instructor who serves as a model and mentor to students. This volume skillfully guides readers interested in using the guided design approach through (1) the organization of course materials, (2) the development of instructional units, and (3) the creation of group projects. Subsequent chapters also explore many important practical issues associated with teaching a guided design course.

Wilén, W. W. (Ed.). (1987). *Questions, questioning techniques, and effective teaching*. Washington, DC: National Education Association.

Questioning techniques are probably the most commonly employed active learning instructional strategy in higher education. Among its highlights, this edited collection of nine papers offers practitioners and researchers (1) a review of relevant research on questioning techniques (Chapter 2), (2) an examination of the characteristics, purposes, and values of different kinds of questions (Chapter 4), (3) a look at how silence or wait time after asking questions and receiving responses from students can be strategically used to produce significant educational outcomes (Chapter 5), (4) a description of how questioning techniques can be used to maximize student achievement (Chapter 6), (5) an exploration of the characteristics, principles, types and phases of class discussions (Chapter 7), and (6) a research-based look at ways to improve teachers' questions and questioning (Chapter 9).

Winston, R. B., Bonney, W. C., Miller, T. K., & Dagley, J. C. (1988). Promoting student development through intentionally structured groups. San Francisco: Jossey-Bass. This text offers a thoughtful and detailed guide to using intentionally structured groups (ISGs) to promote the educational and personal development of college students.

Whitmire, E. (2002). "Academic library performance measures and undergraduates' library use and educational outcomes. *Library & Information Science Research*, 24, 107-128.

The author used two datasets to investigate the relationship between an institution's library services/resources and self-reported gains in critical thinking and library use by undergraduate students. Data sources included the 1996 Integrated Postsecondary Education Data System (IPEDS)-Academic Library Survey (ALS) and the 1996 College Student Experience Questionnaire (CSEQ) administered to 7958 undergraduates at 36 colleges and universities. Variables associated with critical thinking gains included active classroom participation, frequent term paper writing, interactions with faculty, more time spent studying, and higher grades. Third and fourth year students reported higher gains in critical thinking compared to first and second year undergraduates. Studying the relationship between usage of library resources and student outcomes may be more useful than comparing operating expenditures, staffing and holdings to measure library quality.
