

**Best and Emerging Practices
in Developmental Education and Learning Assistance:
An Annotated Bibliography**
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Introduction

This annotated bibliography identifies publications and resources that may be of use to those in the field of developmental education and learning assistance. “*Best practices*” are policies, principles, standards, guidelines, and procedures that contribute to the highest, most resource-effective improved student outcomes. Best practices were originally created in business. The business community seeks to learn what leading companies do well and to seek continuous quality improvement which contributes to higher productivity and profitability. Best practices in developmental education and learning assistance are consistent with current student retention theories, professional standards, contemporary learning theories, and successful replicated implementations with student outcomes that survive rigorous evaluation. “*Emerging practices*” refers to practices that show great promise for improved student outcomes, but have not been implemented widely as best practices have been in the past.

Alstete, J. W. (1998). *Benchmarking in higher education: Adapting best practices to improve quality*. San Francisco: Jossey-Bass.

Benchmarking is a systematic process for evaluating work processes and recognizing the most efficient practices. This report explores the literature on benchmarking in higher education and discusses its components as a tool for quality improvement.

American Association for Higher Education, American College Personnel Association, & National Association of Student Personnel Administrators. (1998). *Powerful partnerships: A shared responsibility for learning*. Washington, D.C.: Authors. Retrieved April 9, 2005, from <http://www.aahe.org/assessment/joint.htm>

This report identifies key factors and exemplary programs associated with higher student outcomes from collaborations between academic and student affairs. Several developmental education programs are featured.

American College Personnel Association, & National Association of Student Personnel Administrators. (n.d.). *Principles of good practice for student affairs*. Washington, D.C.: Authors. Retrieved April 9, 2005, from <http://www.acpa.nche.edu/pgp/principle.htm> and <http://www.naspa.org/resources/principles.cfm>

Inspired by Chickering and Gamson’s *Seven Principles of Good Practice for Undergraduate Education*, this document examines the role of student affairs with enhanced learning by undergraduates. In addition to the seven principles, seven inventories allow users to evaluate the degree to which the principles are being effectively implemented at their campus.

Arendale, D. (Ed.). (2005). *Postsecondary peer cooperative learning programs annotated bibliography*. [On-line]. Retrieved June 24, 2004, from <http://www.tc.umn.edu/~arend011/bibdir.htm>

This database identifies more than 700 articles, book chapters, dissertations, and reports related to the six major postsecondary peer cooperative learning programs: Accelerated Learning Groups, Emerging Scholars Program, Peer-Led Team Learning, Supplemental Instruction, Structured Learning Assistance, and Video-based Supplemental Instruction. The documents provide program descriptions, evaluation studies, and identification of critical program features that should be implemented to achieve optimal program and student outcomes. The data is available both through a downloadable report as well as a searchable database.

Arendale, D. R. (2001). *Effect of administrative placement and fidelity of implementation of the model on effectiveness of Supplemental Instruction programs*. (Doctoral dissertation, University of Missouri-Kansas City, 2000). *Dissertation Abstracts International*, 62, 93. (ERIC Document Reproduction Service No. ED480590). Retrieved June 24, 2004, from <http://www.tc.umn.edu/~arend011/disdir.htm>

This study examined implementation and impact of Supplemental Instruction (SI), the most widely implemented postsecondary peer cooperative learning program in the U.S. The study identified best practices of SI and key program activities associated with higher student outcomes and satisfaction levels of program with campus administrators.

Astin, A. (1993). *What matters in college: Four critical year revisited*. San Francisco: Jossey-Bass.

This is the landmark book based on the national research findings from the UCLA center directed by Astin that identified student preentry attributes, critical activities, and campus culture factors that influenced a wide range of student outcomes. Astin's Input-Environment-Output (IEO) model of program evaluation is the dominant evaluation design for most studies on student outcomes in U.S. postsecondary education.

Boylan, H. R. (1999). Exploring alternatives to remediation. *Journal of Developmental Education*, 22(3), 2-4, 6, 8, 10. Retrieved July 4, 2004, from: <http://www.ced.appstate.edu/centers/ncdereserve%20reading/V22-3alternatives%20to%20remediation.htm>

The article addresses issues related to the cost and time investment of providing remedial courses to college students and offers an overview of possible alternatives. Some criticisms of developmental education are examined and countered with evidence from research. Frequently employed current practices are outlined. More recent alternative approaches to course delivery and student support services are then reviewed, and their application to at-risk student needs is discussed. Recommendations for the actual implementation of alternatives are included. In addition to traditional approaches, developmental educators and developmental programs currently provide a variety of more innovative alternatives. Examples of these alternatives include freshmen seminar/orientation courses (Upcraft, Gardner, & Associates, 1989), Supplemental Instruction (Martin & Arendale, 1994), paired or adjunct courses (Commander, Stratton, Callahan, & Smith, 1996), collaborative learning communities (Tinto, 1997), and critical thinking courses and programs (Chaffee, 1992).

Boylan, H. R. (2002). *What works: Research-based best practices in developmental education*. Boone, NC: Continuous Quality Improvement Network with the National Center for Developmental Education. A summary of this document retrieved July 4, 2004, from: <http://www.ced.appstate.edu/centers/ncde/reserve%20reading/what%30works.htm>

This document reviews successful, research-based practices in developmental education. The book is based upon the Exxon National Study of Developmental Education which was the most comprehensive study conducted. Best practices were identified through analysis of student outcomes of nearly 150 institutions across the U.S. For example, the following instructional practices were identified as best practices: learning communities; accommodation of diversity through varied instructional methods; use of Supplemental Instruction; provide frequent testing opportunities; use of technology in moderation; provide frequent and timely feedback; use of mastery learning; link developmental course content to college level requirements; share instructional strategies; teach critical thinking; teach learning strategies; use active learning techniques; and use classroom assessment techniques.

Boylan, H., Bliss, L. B., & Bonham, B. S. (1997). Program components and their relationship to student performance. *Journal of Developmental Education*, 20 (3). Retrieved April 9, 2005, from http://www.ced.appstate.edu/prog_components.html
This provides a summary of the findings of the Exxon National Survey of Developmental Education as described in the citation above.

Casazza, M. E., & Silverman, S. L. (1996). *Learning assistance and developmental education: A guide for effective practice*. San Francisco: Jossey-Bass.
These authors identify best practices in developmental education and provide examples from exemplary programs across the U.S.

Center for Research on Developmental Education and Urban Literacy. (2005). Homepage. [Online]. Minneapolis, MN: Center for Research on Developmental Education and Urban Literacy, General College, University of Minnesota. Retrieved April 9, 2005, from <http://www.gen.umn.edu/research/crdeul/>
CRDEUL is a national center for research on practices related to more effective developmental education practices. It publishes an annual monograph on a specific topic related to best practices related to DE, a periodic eNewsletter, and conducts periodic training workshops and conferences. Monographs and books which can be downloaded include: theoretical perspectives for DE; histories of DE; exploring urban literacy and DE; multiculturalism in DE; best practices in access and retention in higher education; Multicultural Awareness Project for Institutional Transformation (MAP-IT); and Curriculum Transformation and Disability (CTAD), implementing universal design in higher education. CRDEUL recently published *The General College vision: Integrating intellectual growth and student development*. This 600 page book that identifies best practices in developmental education that were implemented throughout the curriculum and student services at General College at the University of Minnesota.

Chickering, A., & Ehrmann, S. C. (1996). Implementing the seven principles: Technology as lever. *AAHE Bulletin*, pp. 3-6. Retrieved April 9, 2005, from <http://www.tltgroup.org/programs/seven.html>

This article describes how to use of computers, video, and telecommunications technologies to advance Chickering and Gameson's *Seven Principles for Good Practice in Undergraduate Education*.

Chickering, A., & Gamson, Z. (1987). *Seven principles for good practice in undergraduate education*. Washington, D.C.: American Association of Higher Education. Retrieved April 9, 2005, from <http://learningcommons.evergreen.edu/pdf/fall1987.pdf> Descriptive booklet and inventories available from the Seven Principles Resource Center, Winona State University, P.O. Box 5838, Winona, MN 55987-5838, phone (507)457-5020.

The principles and three associated inventories (*faculty, institutional, student*) are identified for increasing the quality of undergraduate education. These documents allow an institution to conduct a self-evaluation of the learning climate on campus and serve to foster discussion on how to improve.

Christ, F. L. (Ed.). (2005). *Learning Support Centers in Higher Education*. [Online]. Retrieved August 23, 2005, from <http://www.pvc.maricopa.edu/~lsche/>

The LSCHE web site is the only one that is devoted exclusively to learning support centers in higher education. The site provides best practices in such centers. A variety of bibliographies, articles, reviews, and other materials provide a practical model for implementing an exemplary center.

Christ, F. L., Sheets, R. A., & Smith, K. G. (Eds.). (2000). *Starting a learning assistance center*. Clearwater, FL: H & H Publishing.

This practical book identifies best practices for implementation of a learning assistance center. The chapters are authored by national leaders in this movement.

Clark-Thayer, S. (Ed.). (1995). *NADE self-evaluation guides: Models for assessing learning assistance/ developmental education programs*. Clearwater, FL: H&H Publishing.

These guides were field tested with programs across the U.S. and identify best practices for tutoring, adjunct instructional programs, developmental education courses, and the teaching/learning process. A new edition with updated and expanded best practices in each of these areas will be available in Spring 2005 from H&H Publishing.

College Reading and Learning Association. (2005). *Homepage*. [Online]. Retrieved April 10, 2005, from <http://www.crla.net/certification.htm>

CRLA provides a certification program for the training of tutors and mentors. This website provides recommended topics to include in training programs.

Council for the Advancement of Standards. (2005). *The CAS Book of Professional Standards for Higher Education*. [Online]. Washington, D.C.: Author. Retrieved April 9, 2005, from <http://www.cas.edu>

CAS, along with the appropriate professional associations, have developed specific standards for a wide range of programs within student affairs. Several standards and accompanying evaluation worksheets that are directly relevant to developmental education include: academic advising, counseling services, disability support services, educational services for distance learners, learning assistance programs, outcomes assessment and program evaluation, student orientation programs, TRIO and other educational opportunity programs.

Cox, R. J., & Cunial, C. M. (2005). *Best practices within Australian food service, a case study: Customer satisfaction of red meat products*. Orange, NSW, Australia: Australasian Agribusiness Perspectives Papers. Retrieved April 9, 2005, from http://www.agrifood.info/Publications_perspectives/Pub_pers_2005/CoxandCunial.htm
This report uses Best Practices research to conduct a study of the Australian beef industry. While it appears to be unusual to include this reference, the report illustrates the principles of how to develop and implement best practices.

Farmer, V. L., & Barham, W. A. (Eds.). (2001). *Selected models of developmental education programs in higher education*. New York: University Press of America.
This book identifies best practices in developmental education in the following areas: affective and cognitive support services, curriculum and instruction, assessment and evaluation, and integrating developmental programs within the institution.

Finneran, T. (n.d.). A Best Practices assessment. Greenwood Village, CO: CIBER, Inc. Retrieved April 9, 2005, from <http://www.ciber.com/downloads/whitepapers/bestpractices/start.cfm>
This short paper provides a quick overview of the use of Best Practices within a business enterprise.

Geller, L. K. (2003). *A description, comparison, and contrast of postsecondary developmental education programs in North Dakota*. Unpublished dissertation, Montana State University, Bozeman, MT.
This study of public postsecondary institutions in North Dakota had among its purposes a comparison of each institutions' policies, organizational and institutional characteristics to "best practices" in developmental education.

Keimig, R. T. (1983). *Raising academic standards: A guide to learning improvement*. ASHE-ERIC Higher Education Research Report No. 4. Washington, D.C.: Association for the Study of Higher Education. A summary of the document was retrieved April 9, 2005, from <http://www.eric.org/digests/ED284512.html>
Keimig identified a hierarchy of programs that support higher academic achievement for students who are academically underprepared. The book has been often cited for inspiring restructuring of developmental education programs for increased effectiveness.

Koski, W. S., & Levin, H. M. (1998). *Replacing remediation with acceleration in higher education: Preliminary report on literature review and initial interviews*. Stanford, CA :

National Center for Postsecondary Improvement. Retrieved July 4, 2004, from: http://www.stanford.edu/group/ncpi/documents/pdfs/4-01_remediation.pdf

The authors offer recommendations for alternative delivery systems for remedial and developmental education. Part of the recommendations are based on the successful model of the Accelerated Schools Movement that makes systematic changes within a school district resulting in improved the academic achievement of at-risk elementary and secondary students. Some of the recommended models are: linked/paired courses; Supplemental Instruction; learning communities; critical thinking programs; and student-centered instruction/individualized learning. A number of institutional success stories are cited included General College of UM. Another summary of the report can be retrieved from http://www.finarticles.com/cf_0/m1254/1_31/54051232/print.jhtml.

MacDonald, R. B. (2000). *The master tutor: A guidebook for more effective tutoring*. 2nd ed. Williamsville, NY: Cambridge Stratford.

Based on the most rigorous research conducted on tutoring, the book identifies best practices in tutoring and provides practical suggestions for its implementation.

Maxwell, M. (Ed.). (1994). *From access to success: A book of readings on college developmental education and learning assistance programs*. Clearwater, FL: H & H Publishing.

One of the pioneers in developmental education, Maxwell has collected together some of the most influential articles previously published that identified best practices in the field.

Maxwell, M. (1997). *Improving student learning skills: A new edition*. Clearwater, FL: H & H Publishing.

This book is an update of her classic book that defined the field. Maxwell identifies critical practices needed with developmental education programs.

Muraskin, L. (1997). *"Best practices" in Student Support Services: A study of five exemplary sites*. Washington, D.C.: U.S. Department of Education. (ERIC Document Reproduction Service No. ED416784). Report summary retrieved April 9, 2005, from <http://www.ed.gov/offices/OUS/PES/higher/sss4.html>

This report examines "best practices" in the delivery of Student Support Services (SSS), one of the Special Programs for Disadvantaged Students collectively known as the TRIO programs. The study is based on case studies that were conducted in five local SSS projects during early 1996. The five projects were drawn from 30 projects in the National Study of Student Support Services, a longitudinal survey of students begun in 1991.

National Association for Developmental Education. (2005). *Homepage*. [Online]. Retrieved April 10, 2005, from <http://www.nade.net/G.%20certificaiton.htm>

NADE provides a certification program for developmental education courses, tutoring, and course-based learning assistance (i.e., Supplemental Instruction, Peer-led Team Learning, Emerging Scholars Program, and others).

Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research*. Jossey-Bass Higher and Adult Education Series. San Francisco: Jossey-Bass.

These researches provide a critical review of nearly 3,000 research studies concerning the influence of college upon students. The book identifies critical practices that make a difference in student outcomes. While not aimed specifically towards developmental education, the research findings are very informative and can be applied to any program in postsecondary education.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students : A third decade of research*. San Francisco: Jossey-Bass.

This book is a follow to the authors' 1991 landmark book by including an analysis of nearly 2,600 research studies on the topic of how college impacts students.

Simpson, M. L., Stahl, N. A., & Francis, M. A. (2004). Reading and learning strategies: Recommendations for the 21st century. *Journal of Developmental Education*, 28(2), 2-4, 6, 8, 10-12, 14-15, 32.

This is a follow-up to the widely cited publication from Stahl, Simpson, and Hayes (2000) that identifies more critical practices that improve outcomes for students participating in developmental education activities and programs.

Stahl, N. A., & Boylan, H. (Eds.). (2003). *Teaching developmental reading: Historical, theoretical, and practical background readings*. Boston: Bedford/St. Martin's Press.

The editors have collected the most important previously published articles and book chapters on best practices in developmental reading and study strategies.

Stahl, N. A., Simpson, M. L., Hayes, C. G. (1992). Ten recommendations from research for teaching high-risk college students. *Journal of Developmental Education*, 16(1), 2-4, 6, 8, 10.

One of the most cited articles in developmental education, the authors drew on recent research to identify critical practices related to higher student outcomes for students who are academically underprepared.

Tinto, V. (1998). Learning communities and the reconstruction of remedial education in higher education. *Journal of Higher Education*, 68(6), 599-623. A version of the document retrieved July 4, 2004, from: [http://soeweb.syr.edu/faculty/vtinto/files/%20Learning %20Better%20Together.pdf](http://soeweb.syr.edu/faculty/vtinto/files/%20Learning%20Better%20Together.pdf)

The author suggests that variations of learning communities are more effective than stand-alone remedial courses for underprepared students. A number of institutions have successful concurrently enrolled developmental students in reading courses that are linked to an academic content course which result in higher student outcomes than students enrolled in classes where the curriculum is not coordinated.

Wilcox, K. S., delMas, R. C., Steward, B., Johnson, A. B., & Ghore, D. (1997). The "package course" experience and developmental education. *Journal of Developmental Education*, 20(3), 18-20, 22, 24, 26.

The effect of package courses-based on the learning community model-on several educational outcomes was investigated for linked courses: a content course; an academic success/study skills course; and, in some cases, a noncredit math course. Package course students earned higher student outcomes and additional qualitative benefits were observed at the General College of the University of Minnesota.

Upcraft, M. L., Gardner, J. N., Barefoot, B. O. (2005). *Challenging & supporting the first-year student: A handbook for improving the first year of college*. San Francisco: Jossey-Bass.

This long-awaited second edition identifies many key program features for serving the needs of first-year students, including developmental education students.