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ABSTRACT

Howard Gardner and others have continued to expand on Gardner's theory of multiple intelligences (MI), a broad range of abilities people use to learn, solve problems, and create. Whereas most past studies and practical applications of MI theory have focused on learners in grades K-12, recent projects are extending MI to adult education. For example, Shearer has published an adult version of his instrument for measuring MI. In the adult version, three assessments of intellectual style have been added to the scales for the eight intelligences. Much of the work on MI for adults addresses the following areas: (1) adult literacy learners and adults with learning disabilities who may have experienced early schooling failure by being labeled by earlier, more limited conceptions of intelligence; (2) use of MI in the workplace to increase creativity and productivity by enabling workers to use their strengths; and (3) the connection between MI and multimodal learning using technologies such as the World Wide Web. MI theory is not prescriptive, and adult educators must use their own experience to decide how to apply it. An annotated bibliography listing 24 print and Web resources constitutes approximately 75% of this document. (MN)

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Multiple Intelligences and Adult Education
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Multiple Intelligences and Adult Education

Howard Gardner and others have continued to expand on Gardner's theory of multiple intelligences (MI), a broad range of abilities people use to learn, solve problems, and create. However, as Ferro (1999) discovered, most of the research, writing, and practical applications focus on K-12. Recent projects are extending MI to adult education. Shearer (1998), who developed an instrument for measuring MI, has published a version for adults that adds to the scales for the eight intelligences three assessments of intellectual style. In 1996, the Adult Multiple Intelligences Project began the first systematic investigation of MI in adult literacy education. Action research projects by literacy teachers (chronicled in *Focus on Basics* 1999) formed the basis of a sourcebook of articles, lessons, and research reports to be published in 2001. Much of the work on MI for adults addresses three areas:

Adult literacy learners and adults with learning disabilities, who may have experienced early schooling failure by being labeled by earlier, more limited conceptions of intelligence (Christison and Kennedy 1999; Cohen 1997; Merson 1995; Shelton 2000). As Hogan (in Merson 1995) notes, the identification of "learning disabilities" typically emphasizes verbal and logical-mathematical intelligences.

The use of MI in the workplace to increase creativity and productivity by enabling workers to use their strengths (Gardner 1999; Gaston 2000; Weber 2000; Williams 1995). Goleman's (1998) "emotional intelligence" and Lessem and Baruch's (1999) "spectral management theory" focus particularly on interpersonal and intrapersonal intelligences needed in the contemporary workplace.

The connection between MI and multimodal learning using technologies such as the World Wide Web (Coil 1998; Nelson 1998; University of Rio Grande 2000; Weiss 2000).

MI theory is not prescriptive, and adult educators must use their own experience to decide how to apply it (Viens in *Focus on Basics* 1999). MI techniques are not intended to replace but enhance existing activities and strategies (Coutan and Rocka in *Focus on Basics* 1999). The following print and Web resources can help educators use multiple intelligences in working with adults.

Adult Multiple Intelligences Project. 2000. <http://gseweb.harvard.edu/~ncsall/research/ami.htm>; <http://pzweb.harvard.edu/Research/AMI.htm>; <http://easternlincs.worlded.org/nelrc.htm#intelligence>

A collaboration between Harvard Project Zero and World Education/National Center for the Study of Adult Literacy and Learning in which teachers are conducting action research projects to examine how MI theory can support and enhance learner-centered instruction and assessment in adult basic education, English for speakers of other languages, and adult secondary education programs.

Brougher, J. Z. "Creating a Nourishing Learning Environment for Adults using Multiple Intelligence Theory." *Adult Learning* 8, no. 4 (1997): 28-29.

Gives examples of the application of MI theory in the adult classroom by describing activities for each intelligence.

Christison, M. A., and Kennedy, D. *Multiple Intelligences: Theory and Practice in Adult ESL*. NCLE Digest. Washington, DC:

National Clearinghouse for Literacy Education, Center for Applied Linguistics, 1999. <http://www.cal.org/nclle/digests/MI.htm>

Outlines the basic tenets of MI theory and describes how it has been applied in teaching English as a second language (ESL) to adults. Concludes that teachers who use MI theory to inform their curriculum development gain a deeper understanding of students' learning preferences and strengths.

Cohen, L. R. "I Ain't So Smart and You Ain't So Dumb: Personal Reassessment in Transformative Learning." *New Directions for Adult and Continuing Education* no. 74 (Summer 1997): 61-68. (EJ 554 985)

Adults who have internalized negative messages about their intelligence and ability must reexamine their personal meaning perspectives before they can engage in critical reflection. A multiple intelligences framework provides a structure for this reassessment.

Coil, R. A. "Multiple Intelligences and Computer Assisted Learning with Adult Learners." Ph.D. diss., Union Institute, 1998. (*Dissertation Abstracts International* 58, no. 12, 4523A, UMI No. AAT 98-17952)

Combining adult learning theory (andragogy), MI, and computer-assisted learning theories, an alternative approach to teaching adults was developed. Achievement gains and positive attitudes resulted from the use of computer tutorials and hypermedia instructional materials as well as the MI-based activities.

Diaz-Lefebvre, R. *Coloring Outside the Lines: Applying Multiple Intelligences and Creativity in Learning*. New York: Wiley, 1999.

Applies the Multiple Intelligences and Learning for Understanding model to teach for retention and understanding in a community college setting.

Ferro, T. R. "Multiple Intelligences and Adult Learning: A Review of the Literature." In *Proceedings of the 18th Annual Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education*, edited by A. Austin, G. E. Hynes, and R. T. Miller, pp. 109-114. St. Louis: University of Missouri, 1999.

Explores the extent to which MI theory has been applied in the field of adult education, finding primarily action research but few analytical studies.

Florida Community College. *From Theory to Practice: Adult Instructional Methodologies [and] Train-the-Trainer for Adult Education. Quality Professional Development Project*. Jacksonville: FCC, 1998. (ED 430 100 and ED 430 104)

Part of a set of professional development manuals for adult educators, these two modules include information on using MI in adult education.

Focus on Basics 3, issue A. Cambridge, MA: National Center for the Study of Adult Literacy and Learning, March 1999. (ED 436 680) <http://gseweb.harvard.edu/~ncsall/fob/1999/fobv3ia.htm>

Special issue articles include "MI, the GED, and Me" (Martha Jean); "Understanding Multiple Intelligences: The Theory behind the Practice" (Julie Viens); "I Can't Learn This!": An MI Route around Resistance" (Wendy Quiñones, Betsy Cornwell); "Adding a Dimension to Career Counseling" (Jean Mantzaris); "Emerging Themes in Adult Multiple Intelligences" (Silja Kallenbach); "Putting Theory into Practice" (Terri Coustan, Lezlie Rocka); and "Multiple Assignments for Multiple Intelligences" (Meg Costanzo, Diane Paxton).

Gardner, H. *Intelligence Reframed: Multiple Intelligences for the 21st Century*. New York: Basic Books, 1999.

A section on "MI Theory and the Workplace" explains how the application of MI could change recruitment, hiring, promotion, and training practices and college admission criteria.

Gaston, N. A. "Different Kinds of Smart: Multiple Intelligences and the Training of Adults." *Journal of Volunteer Administration* 18, no. 2 (Winter 2000): 28-37.

Outlines a train-the-trainer workshop to prepare trainers of volunteers to incorporate understanding of multiple ways of knowing into their training activities.

Goleman, D. P. *Working with Emotional Intelligence*. New York: Bantam, 1998.

Extends Goleman's concept of emotional intelligence into the workplace. Suggests that business leaders and outstanding performers are not defined by their IQs or even their job skills, but by a set of competencies that distinguishes how people manage feelings, interact, and communicate.

Lessen, R., and Baruch, Y. "Colour Your Managerial Type, Colour Your Organization." *Career Development International* 4, no. 1 (1999): 11-18. (EJ 578 932)

Spectral Management Theory describes eight management styles in terms of cognitive, affective, and behavioral characteristics: innovator, developer, analyzer, enterprising, manager of change, people manager, action manager, and adoptive manager. It incorporates multiple intelligences theory and can be applied to managing across cultures.

Merson, M., ed. "The Learning Disabilities/Lack of Progress Issue." *Connections: A Journal of Adult Literacy* vol. 5. Boston, MA: Adult Literacy Resource Institute, Winter 1995. (ED 407 493)

Articles include "Reaching ESL Students: The Multiple Intelligences Instrument" (Katherine Dullea Hogan); and "Finding the Key: The Educational Autobiography and Theory of Multiple Intelligences" (Cara Streck).

The MIDAS (Multiple Intelligences Developmental Assessment Scales) <http://www.angelfire.com/oh/themidas/index.html>

Includes the MIDAS newsletter, reviews, research, and links.

Morris, C. "Howard Gardner's Multiple Intelligences (MI) May Enhance Career Development." Paper presented at the 25th National Consultation on Career Development, Ottawa, Ontario, Canada, January 25-27, 1999. http://www.igs.net/~cmorris/natcon_cbs.html

Describes versions of the MIDAS, including one for adults, and the application of the information to career exploration. Includes a completed example of a MIDAS for Adults profile.

Nelson, G. "Internet/Web-Based Instruction and Multiple Intelligences." *Educational Media International* 35, no. 2 (June 1998): 90-94. (EJ 572 108)

Examines Gardner's theory of individual differences and its application to the challenges of Internet-based instruction. Various tools and activities offered by the Internet and the Web are discussed.

Nuzzi, R. *Gifts of the Spirit: Multiple Intelligences in Religious Education*. Washington, DC: National Catholic Educational Association, 1996. (ED 411 198)

Explains the value of a multiple intelligences approach in religious education for diverse groups of learners. Provides sample lessons involving application of different types of intelligences at educational levels from early childhood through adulthood.

Shearer, C. B. *The MIDAS for Adults*. Columbus, OH: Greydon Press, 1998.

Provides a quantitative and descriptive account of an adult's multiple intelligences disposition. Includes the eight main scales of intelligences along with three scales describing intellectual style (leadership, innovation, and general logic).

Shelton, L. *Multiple Intelligences for Adult Literacy and Adult Education*. San Mateo, CA: Project Read, 2000. <http://www.literacynet.org/diversity/home.html>

Addresses the application of MI to basic skills, learning styles, and adult literacy education. Includes sections on MI theory, assessment, and teaching tips.

University of Rio Grande. *Teaching to the Multiple Intelligences. Master's of Education in Classroom Teaching*. 2000. <http://mi.rio.edu/>

This experiential degree program with a number of Internet-based courses is based on Gardner's MI theory and designed to prepare teachers to use an interdisciplinary, MI approach.

Weber, E. "Anatomy of Creative Leaders in Successful Business." MITA Center, Houghton College, 2000. <http://www.houghton.edu/personnel/eweber/center/Business.htm>

Describes the application of the Multiple Intelligence Teaching Approach model to the development of individual abilities at work.

Weiss, R. P. "Howard Gardner Talks about Technology." *Training and Development* 54, no. 9 (September 2000): 52-56.

Technologies readily address the multiple ways of knowing that humans demonstrate. However, the person-centered intelligences still require human interaction.

Williams, M. "Playing Is the Thing: Three Activities for School Leaders." Paper presented at the Annual Meeting of the National Council of Professors of Educational Administration, Williamsburg, VA, August 8-12, 1995. (ED 387 911)

Presents a leadership development game based on multiple intelligences.

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