

## 1 Endnotes – Works Cited:

- <sup>1</sup> American Mathematical Association of Two-Year Colleges, Cohen, D. (Ed). (1995). *Crossroads in Mathematics: Standards for Introductory College Mathematics Before Calculus*. Memphis, TN: AMATYC.
- <sup>2</sup> Joliet Junior College (IL) celebrated its 100<sup>th</sup> anniversary in 2001.
- <sup>3</sup> American Association of Community Colleges (AACC): [www.aacc.nche.edu](http://www.aacc.nche.edu)
- <sup>4</sup> Lutzer, D.J., Maxwell, J.W., & Rodi, S.B. (Eds). (2002). *Statistical Abstract of Undergraduate Programs in the Mathematical Sciences in the United States, Fall 2000 CBMS Survey*. Providence, RI: The American Mathematical Society. Every five years, the Conference Board of Mathematical Sciences (CBMS) sponsors a national survey of undergraduate mathematical sciences in the United States. The eighth CBMS survey was conducted in the fall term of 2000.
- <sup>5</sup> Lutzer, D.J., Maxwell, J.W., & Rodi, S.B. (Eds). (2002). op. cit.
- <sup>6</sup> AACC, op. cit.
- <sup>7</sup> AACC, op. cit.
- <sup>8</sup> Organization for Economic Cooperation and Development (2000). *Literacy Skills for the World of Tomorrow – Further Results from PISA 2000*. Paris, France: OECD.
- <sup>9</sup> Lewis, L., Farris, E., & Greene, B. (1996). *Remedial Education at Higher Education Institutions in Fall 1995*. Washington D.C.: National Center for Education Statistics. (Statistical analysis report NCES 97-584).
- <sup>10</sup> Grubb, W.N., Worthen, H., Byrd, B., Webb, E., Badway, N., Case, C., Goto, S., & Villeneuve, J.C. (1999). *Honored But Invisible*. New York: Routledge, p. 5.
- <sup>11</sup> Apter, J. R. (1975). *The Development of a Community College Mathematics Placement Examination*. Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign.
- Armstrong, W. B. (1999). *Explaining Community College Outcomes by Analyzing Student Data and Instructor Effects*. Unpublished doctoral dissertation, University of California Los Angeles, Los Angeles.
- Robinson, S. H. (1998). *An Analysis of Placement Systems For New And Returning Community College Students, Specifically in the College Preparatory and Entry-Level College-Level Mathematics Courses* (Doctoral dissertation, University of Central Florida, 1990). *Dissertation Abstracts International*, pp. 59-63, A0707.
- <sup>12</sup> Marwick, J. (2002). Charting a Path to Success: How Alternative Methods of Mathematics Placement Impact the Academic Success of Community College Students. *Community College Enterprise*, 8(2), pp. 41-50.
- <sup>13</sup> Thomson, B.S. & Mascazine, J.R. (1997). *Attending to Learning Styles in Mathematics and Science Classrooms*. EIRC Digests. Columbus, OH: ERIC Clearinghouse for Science, Mathematics and Environmental Education.
- <sup>14</sup> Myers-Briggs Type Indicator (Briggs Myers & McCaulley, 1985), The Kiersey Temperment Sorter (Kiersey & Bates, 1984), Dunn Model (Dunn, 1996), The Kolb Learning Style Inventory (Kolb, 1976), Felder-Silverman Index of Learning Styles (Felder, 1993).
- <sup>15</sup> Grasha (1996) in Montgomery and Groat: Montgomery, S. M. and Groat, L. N. (2002). Student Learning Styles and their Implications for Teaching [Online <http://www.serprofessoruniversitario.pro.br>]. (Grasha, A.F. (1996). *Teaching with Style: A Practical Guide to Enhancing Learning by Understanding Teaching and Learning Styles*. Pittsburgh: Alliance Publishers.)
- <sup>16</sup> Felder, R.M. (1993) Reaching the Second Tier: Learning and Teaching Styles in College Science Education. *J College Science Teaching*. 23(5), pp. 286-290.
- <sup>17</sup> Thomson & Mascazine (1997). op. cit.
- <sup>18</sup> Tobias, S. (1993). *Overcoming Math Anxiety: Revised and Expanded*. New York: W.W. Norton & Co.
- <sup>19</sup> Fiore, G. (1999). Math-Abused Students: Are We Prepared to Teach Them? *Mathematics Teacher*, v. 92, pp. 403-406.
- Arem, C. (2003). *Conquering Math Anxiety: A Self-Help Workbook*. Pacific Grove: Brooks-Cole.
- <sup>20</sup> Zaslavsky, C. (1994). *Fear of Math*. New Brunswick, NJ: Rutgers University Press.
- <sup>21</sup> Peskoff, F. (2001). Mathematics Anxiety and the Adult Student: An Analysis of Successful Coping Strategies. In Schmitt, M.J. & Safford-Ramus, K. (Comps). *Adults Learning Mathematics-7: A Conversation Between Researchers and Practitioners*. Proceedings of ALM-7, July 6-8, 2000, at Tufts University, Massachusetts, USA. Cambridge, MA: National Center for the Study of Adult Learning and Literacy, Harvard Graduate School of Education, in association with ALM.
- <sup>22</sup> Ibid.
- <sup>23</sup> Tinto, V. (1998). Classrooms as Communities: Exploring the Educational Character of Student Persistence. *The Journal of Higher Education*, v. 103, p. 619.
- <sup>24</sup> Conti, G.J. (1998). Identifying Your Teaching Style. In M. Galbraith (Ed.), *Adult Learning Methods: A Guide for Effective Instruction*, (2<sup>nd</sup> Ed.). Malabar, FL: Krieger, pp. 73-84. Galbraith, M.W. (1998). Becoming An Effective Teacher of Adults. In M. Galbraith (Ed.), *Adult Learning Methods: A Guide for Effective Instruction*, (2<sup>nd</sup> Ed.). Malabar, FL: Krieger, pp. 3-19.

- <sup>25</sup> Springer, L., Stanne, M.E. & Donovan, S.S. (1999). Effects of Small-Group Learning on Undergraduates in Science, Mathematics, Engineering, And Technology: A Meta-Analysis. *Review of Educational Research*. 69 (1), pp. 21-51.
- <sup>26</sup> Adapted from Barr and Tagg (1995); Bonstingl (1992); Boyatzis, Cowen, Kolb and Associates (1995); Duffy and Jones (1995); and Kleinsasser (1995). <http://www.fdi.vt.edu/summer/2002/Content/TrackH/UnitB/B-21.html>.
- <sup>27</sup> Conti (1998); Galbraith (1998), op.cit.
- <sup>28</sup> Apps, J.W. (1991). *Mastering the Teaching of Adults*. Malabar, FL: Krieger.
- <sup>29</sup> Galbraith (1998), op cit.
- <sup>30</sup> Midkiff, R. B & Thomasson, R. D. (1993). *A Practical Approach to Using Learning Styles in Math Instruction*. Springfield, IL: Charles C. Thomas.
- <sup>31</sup> Ibid., p. 49.
- <sup>32</sup> Springer, Stanne, & Donovan (1999), op. cit.
- <sup>33</sup> Johnson, D.W. & Johnson R.T. (1989). *Cooperation and Competition: Theory and Research*. Edina, MN: Interaction Book Co.
- <sup>34</sup> Webb, N.M. (1992). Student Interaction and Learning in Small Groups. *Review of Educational Research*. v. 52, pp. 421-445.
- <sup>35</sup> Schwartz, D.L., Black, J.B. & Strange, J. (1991). Dyads Have a Fourfold Advantage Over Individuals Inducing Abstract Rules. *Proceedings of the American Educational Research Association*, Chicago.
- <sup>36</sup> Ibid., p. 25.
- <sup>37</sup> McKeachie (1986). In Diane F. Halpern and Associates (1994). *Changing College Classrooms: New Teaching and Learning Strategies for an Increasingly Complex World*. San Francisco: Jossey-Bass. (pp. 152-153).
- <sup>38</sup> Hart-Landesberg, S., Braunger, J., & Reder, S. (1992). *Learning the Ropes: The Social Construction of Work-Based Learning*. Verkeley, CA: National Center for Research in Vocational Education, p. 12. (ED 363 726)
- <sup>39</sup> Czarnocha, B. & Prabhu, V. (2000) The Flow of Thought Across the Zone of Proximal Development between Elementary Algebra and English as a Second language. *Proceedings of the 24<sup>th</sup> Conference of the International Group for the Psychology of Mathematics Education*, Hiroshima, Japan; MacGregor, M and Peirce, E. (1999) An Exploration of Aspects of Language Proficiency and Algebra Learning, *JRME*, 30(4), pp. 449-467.
- <sup>40</sup> Meyers, C. & Jones, T.B. (1993). *Promoting Active Learning: Strategies for the College Classroom*. San Francisco: CA: Jossey-Bass, p. 24.
- <sup>41</sup> Simutis, L. (2001). The Future Isn't What it Used to Be. *ENC Focus*, 8(4), 17.
- <sup>42</sup> Burrill, Gail, et al. (2002), *Handheld Graphing Technology in Secondary Mathematics: Research Findings and Implications for Classroom Practice*. Report prepared through a grant to Michigan State University. Dallas, TX: Texas Instruments.
- <sup>43</sup> Mazur, E. (1997). *Peer Instruction: A User's Manual*. Upper Saddle River, NJ: Prentice Hall.
- <sup>44</sup> CBMS (2000), p. 61.
- <sup>45</sup> National Center for Educational Statistics (1999, 2002, July 2003)
- <sup>46</sup> Boettcher, J. V. (2003). Course Management Systems and Learning Principles Getting to Know Each Other. *Syllabus*, 16(12), pp. 33-36; Johnstone, S. (2003). Emergency distance learning. *Syllabus*, 16(11), p. 14; Meisner, G., & Hoffman, H. (2003). Leading the way to virtual learning: The LAA physics laboratory. *Syllabus*, 16(11), pp. 26-28; Novak, R. J. (2002). Benchmarking distance education. In B. E. Bender & J. H. Schuh (Eds.), *New Directions for Higher Education: No. 118. Using Benchmarking to Inform Practice in Higher Education. Benchmarking Distance Education*). San Francisco: Jossey-Bass, pp. 79-92; Reiser, R. A., & Dempsey, J. V. (2002). *Trends and Issues in Instructional Design and Technology*. Upper Saddle River, NJ: Pearson Education.
- <sup>47</sup> NEA, AFT, Council of Regional Accrediting Commissions
- <sup>48</sup> Institute for Higher Education Policy (April, 2000) [www.ihep.com](http://www.ihep.com)
- <sup>49</sup> Organization for Economic Cooperation and Development (OECD) (2000). *Programme for International Student Assessment*. Organization for Economic Cooperation and Development.
- <sup>50</sup> Steen, L.A. (1997). *Why Numbers Count: Quantitative Literacy for Tomorrow's America*. New York: The College Board.
- <sup>51</sup> National Council on Education and the Disciplines (NCED) (2001). *Mathematics and Democracy: The Case for Quantitative Literacy*. National Council on Education and the Disciplines.
- <sup>52</sup> Secretary's Commission on Achieving Necessary Skills (SCANS) (1991). *What Work Requires of Education*.
- <sup>53</sup> MAA Subcommittee on Curriculum Reform Across the First Two Years (CRAFTY) (2003). *The Curriculum Foundations Project*. Washington, DC: Mathematical Association of America.
- <sup>54</sup> Department of Labor, *Monthly Labor Review* (November 2001), p. 79.

American Mathematical Association of Two-Year Colleges (AMATYC)  
**Crossroads Revisited (CR-R) – Standards 2006**  
**Draft V 6.0 – not for citation**

---

- <sup>55</sup> Report of the National Science Foundation Workshop (December 1999). *Investing in Tomorrow's Teachers: The Integral Role of the Two-Year College in the Science and Mathematics Preparation of Teachers*.
- <sup>56</sup> Example: Praxis Test Series
- <sup>57</sup> Conference Board of Mathematical Sciences (CBMS) (2001). *The Mathematical Education of Teachers*. Washington, D.C.: Mathematical Association of America, p. 7.
- <sup>58</sup> National Council of Teachers of Mathematics (NCTM) (2000). *Principles and Standards for School Mathematics*. Reston, VA: National Council of Teachers of Mathematics.
- <sup>59</sup> The NCTM *Illuminations* website is designed to illuminate the new vision for school mathematics in NCTM's *Principles and Standards for School Mathematics* (2000). <http://illuminations.nctm.org>.
- <sup>60</sup> The National Commission on Mathematics and Science Teaching in the 21<sup>st</sup> Century (2000).
- <sup>61</sup> NCTM *Illuminations*, op. cit.
- <sup>62</sup> CBMS (2001), op. cit.
- <sup>63</sup> Stiehl, R. & Lewchuk, L. (2002). *Outcomes Primer (2<sup>nd</sup> ed)*. Corvallis, OR: The Learning Organization.
- <sup>64</sup> Steen, L.A. (1999). Assessing Assessment. *Assessment Practices in Undergraduate Mathematics*: n. 49, pp. 1-6. Washington D.C.: The Mathematical Association of America.
- <sup>65</sup> National Council of Teachers of Mathematics (NCTM) (1995). *Assessment Standards for School Mathematics*. Reston, VA: National Council of Teachers of Mathematics.
- <sup>66</sup> Fabry V. J., Eisenbach, R., Curry, R.R., & Golich, V.L. (1997). Thank You for Asking: Classroom Assessment Techniques and Students' Perceptions of Learning. *Journal on Excellence in College Teaching*, 8(1), pp. 3-21.
- <sup>67</sup> American Association of Higher Education (AAHE) (2004). *9 Principles of Good Practice for Assessing Student Learning*. URL: <http://www.aahe.org/principles.htm>.
- <sup>68</sup> U.S. Department of Education, National Center for Education Statistics. *Defining and Assessing Learning: Exploring Competency-Based Initiatives*. NCES 2002-159, prepared by Elizabeth A. Jones and Richard A. Voorhees, with Karen Paulson, for the Council of the National Postsecondary Education Cooperative Working Group on competency-Based Initiatives. Washington, DC: 2002.
- <sup>69</sup> AMATYC. *Guidelines for Academic Preparation of Mathematics Faculty Two-Year Colleges* (1992)
- <sup>70</sup> Examples of current programs: AMATYC's Project ACCCESS, a mentoring and professional development initiative for two-year college faculty. The PMET (Preparing Mathematicians for Educating Teachers) initiative was designed to help mathematicians enhance the teaching of mathematics courses for future teachers. PREP is a comprehensive, professional career enhancement project of the MAA funded by NSF that offers a large number of workshops and short courses across the country. Humboldt State University offers a graduate certificate in college teaching in the area of mathematics. The College Faculty Preparation Program (CFPP) is a discipline-specific program to better prepare graduate students interested in teaching careers at the community college or university level.
- <sup>71</sup> Luna, G. & Cullen, D.L. (1995). Empowering the Faculty: Mentoring Redirected and Renewed. *ERIC Digest*, ERIC ED399888.
- <sup>72</sup> Keefe, R. (2003). Practical Tips for Effective Faculty Mentoring. *Women in Higher Education*. December 2003.
- <sup>73</sup> AMATYC. *Position Statement on Equal Opportunity in Mathematics* (1989)
- <sup>74</sup> CBMS (2000), op. cit., p. 168.
- <sup>75</sup> AMATYC. *Guidelines for Internships for Two-Year College Mathematics Faculty* (1996)
- <sup>76</sup> AMATYC. *Position Statement on Support for Professional Development* (1998)
- <sup>77</sup> AMATYC (1995). NCTM (2000), op. cit.
- <sup>78</sup> Hutchings, P. & Shulman, L.S. (1999). The Scholarship of Teaching: New Elaborations, New Developments. *Change*: 31(5), p. 12.
- <sup>79</sup> In these classroom assessment techniques, students may be asked to summarize an important concept discussed in class or describe the concept that is still "muddy" or unclear at the end of class.
- <sup>80</sup> Angelo, T. & Cross K.P. (1993). *Classroom Assessment Techniques: A Handbook for College Teachers (2<sup>nd</sup> edition)*. San Francisco: Jossey-Bass.
- <sup>81</sup> Shulman, L.S. (1993). Teaching a Community Property: Putting an End to Pedagogical Solitude. *Change*: 25 (6), p. 6-7.
- <sup>82</sup> Hutchings, P. (Ed). (2000). *Opening Lines: Approaches to the Scholarship of Teaching and Learning*. Menlo Park: The Carnegie Foundation for the Advancement of Teaching.
- Hutchings, P. (Ed). (1998). *The Course Portfolio: How Faculty Can Examine Their Teaching to Advance Practice and Improve Student Learning*. Washington, D. C.: American Association for Higher Education.

- <sup>83</sup> Weimar (1993); Examples: *The Journal of Scholarship of Teaching and Learning* (JoSoTL), a web journal, serves as an electronic forum for sharing scholarly work: [www.iusb.edu/~josotl/](http://www.iusb.edu/~josotl/). In 1998, The Carnegie Foundation for the Advancement of Teaching initiated CASTL: the Carnegie Academy for the Scholarship of Teaching and Learning. CASTL aims to foster significant, long-lasting learning for all students and to enhance the practice and profession of teaching: [www.carnegiefoundation.org/CASTL](http://www.carnegiefoundation.org/CASTL).
- <sup>84</sup> Hutchings (2000), op. cit.; Example: The AAHE Campus Program WebCenter is an online community <http://aahe.ital.utexas.edu>
- <sup>85</sup> Angelo, T. Presentation at the AMATYC national conference, Salt Lake City, UT, November, 2003.
- <sup>86</sup> Sparks, D. (2002). *Dreaming All That We Might Realize*. ENC Focus, 9 (1).
- <sup>87</sup> Long, M.J. (1997). Things to Consider when Implementing Reforms in the Mathematics Classroom. *Reform in Math and Science Education: Issues for Teachers*. Columbus, OH: Eisenhower National Clearinghouse.
- <sup>88</sup> “Eighty-one percent of the U.S. states that require exit exams allow calculators to be used on at least some test items. Similarly, 79% of the states without exit exams allow calculators to be used on state-mandated mathematics tests for high school students.” NCTM *News Bulletin* (Sept. 2003), p. 8.
- <sup>89</sup> AMATYC. *Position Statement on the Use of Internet Resources to Enhance Mathematics Instruction* (1998)
- <sup>90</sup> Discussions with Dr. Sadie Bragg, Borough of Manhattan Community College (NY) and Dr. Judy Ackerman, Montgomery College (MD) (August 2003).
- <sup>91</sup> Moses, R. (2001). *Radical Equations: Math Literacy and Civil Rights*. Boston, MA: Beacon Press, p. 5.
- <sup>92</sup> AMATYC. (1995), p. 69.

A list of Works Consulted will be available with the final draft.