

EPPL 751: Colloquium Assessment & Evaluation to Promote Student Learning

COLLEGE OF WILLIAM AND MARY
SCHOOL OF EDUCATION

COURSE SYLLABUS Fall 2010

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Office Hours: Monday and Tuesday, 1:00 – 4:00 PM

Class Meeting: Monday, 4:30 – 7:00 PM
Room: 2021 School of Education

DESCRIPTION:

How do we know students are learning? How can we document what students are learning? What might improve the student learning experience? Questions such as these will guide our conversations in this seminar. Over the course of the semester, we will explore the purposes and practices of assessment and evaluation in American higher education. There is much more to assessment and evaluation than just testing!

We will learn about several assessment lenses utilized by higher education scholars (e.g., interviews, observations, surveys). Our focus will be on using assessment and evaluation techniques to promote undergraduate student learning, in contexts both in and out of the classroom. Major topics in the seminar will include the historical background of assessment and evaluation, creating effective assessments of learning, program evaluation, and how to use assessment results in your work.

This course is designed to explore the foundations of the current interest in assessing and evaluating outcomes of undergraduate education. It develops a historical and theoretical foundation for conceptualizing “outcomes” of undergraduate education with a specific interest in how assessment and evaluation can be employed to promote student learning.

LEARNING OUTCOMES:

- To examine the evolution of assessment and evaluation in American higher education with a particular focus on the promotion of student learning
- To identify assessment and evaluation in a broader theoretical framework within educational literature
- To review the similarities and differences between assessment and evaluation
- To explore from multiple perspectives how “learning outcomes” of undergraduate education are defined

- To review broadly systems of accreditation at the institution, state, regional, national, and international levels
- To relate outcomes to institutional goals and objectives and to aspects of the student experience
- To explore models of interaction among student characteristics, processes of undergraduate education, and learning outcomes
- To gain practical skills and methods for implementing assessment and evaluation to promote student learning

REQUIRED TEXTS:

American Psychological Association. (2009). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: American Psychological Association.

Banta, T. W. & Associates. (2002). *Building a scholarship of assessment*. San Francisco, CA: Jossey-Bass.

Suskie, L. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco, CA: Jossey-Bass.

Our course Blackboard site includes a rich set of sources as well, which we will add to throughout the semester. Additional required articles and chapters listed in this syllabus will be made available via Blackboard (Bb).

ASSIGNMENTS:

More details about each of the major assignments will be discussed in class as the semester progresses. Each student will complete the following tasks:

1. Write a concept paper that addresses the question: *What is your definition of a college graduate?* This paper will describe the ideal knowledge, skills, attitudes, and behaviors of a person holding a bachelor's degree, and what evidence will you need to determine that an individual possesses these attributes. (DUE September 14 via Blackboard.)
2. Conduct a case study of one institution's assessment strategies and methods. Institutions will be assigned by the professor. What does the institution assess (what are the student learning outcomes)? How does it assess these outcomes? What has it learned from assessing? How might it assess outcomes differently or better? Does it assess only course outcomes or does it design for "orthogonality"? How does the assessment or evaluation promote student learning?. Any of the following sources may be considered: interviews, documents, internet files, or archival sources. This assignment may (with advance approval) be a team project. Findings will be presented as an academic paper, as well as presented for class discussion. (DUE October 26 via Blackboard.)
3. Develop an assessment strategy for implementation. Students will propose ways to assess one or more "outcomes." The proposed strategy should identify the outcome to be assessed (and may range from the outcome of a single class session to something as general as "moral development.") The strategy should also propose what kind of data would serve as "indicators" of the outcome, how, where, and when the data could be gathered, and how the data would be used to reach conclusions.

This may be an excellent opportunity for you to apply your learning from this course to your current or future professional role. (Draft for In-Class Workshop November 15; Final DUE December 14 via Blackboard.)

4. Complete weekly in-class written reflections. Reflection is one tool for connecting, applying, and synthesizing what you are learning. This assignment is intended to provide an opportunity for written reflection on the course topics, discussion, and readings. We will reserve ten minutes near the end of each class period for reflective writing. In this ten minute writing period, you will be prompted to think about and your own opinions about and reactions to the topics of the day. Reflective writings can be typed or hand-written, as long as they are submitted before you leave class. (DUE each week in-class.)

5. Overall Course Engagement. Students should come to each class session prepared to actively participate in class discussions. Informed participation requires that you have read the assigned materials. Likewise, students should complete all course assignments. Students should be on time for class sessions, and submit all work on time. This is a graduate-level course in a professional preparation program, and I expect that you will behave professionally in your interactions and work this semester. (Ongoing.)

GRADES:

Course grades will be calculated by weighting the assignments as follows:

College Graduate paper	25%
Institutional Case Study paper	25%
Assessment Strategy project	30%
In Class Written Reflections	10%
Class Engagement	10%

The following criteria will be used in assigning letter grades:

A = Excellent work: well-conceived, logically developed, thoroughly documented, clearly written. Fully meets the Goal of the assignment.

B = Competent work: Needs further development on one or more of the above dimensions. Generally meets the Goal of the assignment.

C = Flawed work: One or more serious problems are noted; work is generally not acceptable at the graduate level.

+/- grades will be determined by class attendance and/or the quality and quantity of class participation.

Expectations: Students will be expected to prepare written assignments with care. Written work should reflect both a professional level of understanding and attention to clear and logical presentation. Questions posed in the assignment must be answered clearly and concisely. All written assignments should be typed, double-spaced, with APA-style citations and references.

Within a reasonable time frame (at least ten days), I am available to review work prior to submission.

ACADEMIC HONESTY:

William and Mary is a community of trust in which the conduct of its members is assumed to be honorable. Students are reminded to review terms of the Honor Code at:

<http://www.wm.edu/offices/deanofstudents/services/studentconduct/honorcode/index.php>.

You are expected to support the atmosphere of academic integrity by avoiding acts of academic dishonesty. Participation in any of the following activities will qualify the student for failure in the class and possible disciplinary action:

- *Cheating:* Using or attempting to use materials, information, or study aids to gain an unfair grade advantage over other students in any academic exercise.
- *Plagiarism:* Representing another's words or ideas as one's own in any academic exercise.
- *Multiple Submissions:* Submitting the same assignment in two or more courses without obtaining the prior permission of the respective instructors.
- *Misrepresentation:* Presenting false excuses or using deception to receive a higher grade or to avoid fulfilling the requirements of any assignment or course.

I expect students to acknowledge in writing the intellectual work of others. In all work (written or presented) you will be required to use the **APA citation** format (*Publication Manual of the American Psychological Association*, 6th edition, APAstyle.org).

Academic dishonesty, including all forms of cheating and/or plagiarism, will not be tolerated in this class. If you are not sure about whether something you are doing would be considered academic dishonesty, consult with the instructor.

RELIGIOUS OBSERVANCES:

I respect the rights of all students to observe their religious holidays in accordance with their own traditions. By the second class of the term, please tell me in writing if you will not be attending class for religious reasons for any day in the term (and which specific day(s) you will miss).

ADA ACCOMMODATIONS:

Reasonable accommodation for students with documented disabilities may be arranged by contacting the instructor on an individual basis early in the semester. I will work with you on making this course, class activities, and exercises accessible for your full involvement. Disability Services is located in the Campus Center, Room 109. Appointments may be scheduled in person or by calling 757-221-2510. Additional information is available at:

<http://www.wm.edu/offices/deanofstudents/services/disabilityservices/index.php>.

ATTENDANCE STATEMENT:

Attendance is a course requirement due to the interactive nature of the course. However, emergencies do occur, so please contact the instructor if necessary. If you should miss class, it is your responsibility to obtain class notes/materials from a classmate. If attending a

professional/higher education conference, students are excused but work must be provided prior to class session.

COURSE OUTLINE

Week	Topic	Readings	Assignment
1. August 30	Course Overview; Introductions; Accountability	Wergin 2005 (Bb)	Student Profile, due 8/31, 11:59 PM via Bboard
2. September 6	What are Assessment and Evaluation? What is Student Learning?	Banta, Ch. 1, 3, 5 Suskie, Ch. 1, 2 <i>Skim: Stufflebaum – Evaluation Models (Bb)</i>	
3. September 13	Blueprinting the Process	Banta, Ch. 2 Suskie, Ch. 3, 4, 5	College Graduate paper, due 9/14, 11:59 PM
4. September 20	Student Learning Outcomes	Banta, Ch. 6 Suskie, Ch. 8 King et al. 2007 – Liberal Arts (Bb) Kuh & Ikenberry 2009 – NILOA Report (Bb)	
5. September 27	Orthogonality	AAC&U 2007 – College Learning for a New Global Century (Bb) Mullin & Wilson 2000 – Quality of undergraduate education (Bb) NPEC 2005 – Sourcebook on Assessment (Bb)	
6. October 4	Policy & Accreditation (Program, Institutional, State)	Banta, Ch. 12, 13 Miller & Leskes 2005 (Bb) NCPI 2003 – State Policy Models website (Bb) Peterson & Einarson 2001 – What are Colleges Doing? (Bb) SCHEV 2010 – New Policy (Bb)	
7. October 11	FALL BREAK – No Class		
8. October 18	Policy & Accreditation (Regional, National, International)	SACS 2010 – Accreditation (Bb) Spellings Commission 2006 (Bb) Zemsky 2007 – Rise and Fall (Bb) About the Bologna Process 2010 – Website (Bb) Adelman 2009 – Quality Assurance (pp. 103-118) (Bb)	Mid-Term Student Feedback Survey
9. October 25	Institutional Case Studies; Astin's I-E-O Model	Astin 1993 – I-E-O (Bb); Review assigned websites for basic information about all institutions Alverno, Evergreen, Truman State, Michigan, Kings College, Fairhaven College, etc. (Complete list TBD)	Case Study Class Presentations, due 10/25; Final paper due 10/26, 11:59 PM
10. November 1	Quantitative	Banta, Ch. 7, 9	

	Approaches to Assessment; Testing and Culture	Bastedo & Bowman 2010 – Rankings (Bb) Suskie, Ch. 14	
11. November 8	Qualitative and Mixed Methods Approaches to Assessment	Baxter Magolda & King 2007 – Constructing conversations (Bb) King et al. 2009 – Developmentally effective experiences (Bb) Pizzolato 2007 – Assessing self-authorship (Bb) <i>Skim: Tsui 2002 (Bb)</i>	
12. November 15	Reliability, Validity, and Trustworthiness; Practical Applications	Brualdi 1999 – Validity website (Bb) Kuh 2003 – NSSE (Bb) Suskie, Ch. 9, 10, 11, 12 <i>Skim: Banta, Ch. 8</i>	Assessment Implementation Project DRAFT: In-Class Workshopping
<i>Nov. 18-20</i>	<i>ASHE Conference</i>	<i>Indianapolis, IN</i>	<i>http://ashe.ws</i>
13. November 22	Organizing the Process	Banta, Ch. 10, 11 Suskie, Ch. 6, 7, 15	
<i>Nov. 24-28</i>	<i>Thanksgiving Holiday</i>		
14. November 29	Communicating Your Findings	Banta, Ch. 4 Suskie, Ch. 13, 16, 17	
15. December 6	Data-Driven Practice	Banta, Ch. 14, 15 Reynolds & Chris 2008 (Bb) Suskie, Ch. 18, 19	
16. December 13	Final Class: Poster Fair		Assessment Implementation: Poster Presentations due in class; Final project due 12/14, 11:59 PM

COURSE READING LIST:

8/30 – Topics: Introductions, Review of the Syllabus, Assignment Overviews, Accountability

Wergin, J. F. (2005). Taking responsibility for student learning. *Change*, 37(1), 30-33.

9/6 – Topics: What are Assessment and Evaluation? What is Student Learning?

Banta, T. W. & Associates. (2002). *Building a scholarship of assessment*. San Francisco, CA: Jossey-Bass.
Chapter 1: An Emerging Scholarship: A Brief History of Assessment (Ewell)
Chapter 3: The Roots of Assessment: Tensions, Solutions, and Research Directions (Gray)
Chapter 5: Enacting a Collaborative Scholarship of Assessment (Mentkowski & Loacker)

Suskie, L. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco, CA: Jossey-Bass.

Chapter 1: What Is Assessment?

Chapter 2: How Can Student Learning Be Assessed?

Skim:

Stufflebeam, D. L. (2001). Evaluation models. In D. L. Stufflebeam (Ed.), *New Directions in Evaluation*, 89, 7-98.

9/13 – Topic: Blueprinting the Process

Banta, T. W. & Associates. (2002). *Building a scholarship of assessment*. San Francisco, CA: Jossey-Bass.
Chapter 2: Promoting Academic Improvement: Organizational and Administrative Dynamics That Support Student Assessment (Peterson & Vaughan)

Suskie, L. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco, CA: Jossey-Bass.

Chapter 3: What Is Good Assessment?

Chapter 4: Why Are You Assessing Student Learning?

Chapter 5: The Keys to a Culture of Assessment: Tangible Value and Respect

9/20 – Topic: Learning Outcomes

Banta, T. W. & Associates. (2002). *Building a scholarship of assessment*. San Francisco, CA: Jossey-Bass.
Chapter 6: The Scholarly Assessment of Student Development (Kuh, Gonyea, & Rodriguez)

Suskie, L. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco, CA: Jossey-Bass.

Chapter 8: Developing Learning Goals

King, P. M., Kendall Brown, M., Lindsay, N. K., & VanHecke, J. R. (2007). Liberal arts student learning outcomes: An integrated perspective. *About Campus*, 12(4), 2-9.

Kuh, G. & Ikenberry, S. (2009). *More than you think, Less than we need: Learning outcomes assessment in American higher education*. Abridged version. Retrieved from <http://www.learningoutcomeassessment.org/documents/niloabridgedreport.pdf>

9/27 – Topics: Orthogonality

Association of American Colleges & Universities (2007). *College learning for a new global century*. Retrieved from http://www.aacu.org/leap/documents/GlobalCentury_final.pdf

Mullin, R. & Wilson, G. (2000). Quality of undergraduate education: Examining the current paradigm and system. *Journal of Quality Management*, 5(2), 225-246.

National Postsecondary Education Cooperative. (2005). *NPEC sourcebook on assessment: Definitions and assessment methods for communication, leadership, information literacy, quantitative reasoning, and quantitative skills* by Elizabeth A. Jones and Stephen RiCharde, NPEC 2005-0832. Washington, DC: Author. Retrieved from <http://nces.ed.gov/pubs2005/2005832.pdf>

10/4 – Topics: Policy & Accreditation (Program, Institutional, State)

Banta, T. W. & Associates. (2002). *Building a scholarship of assessment*. San Francisco, CA: Jossey-Bass.
Chapter 12: Program Review: A Spectrum of Perspectives and Practices (Black & Kline)
Chapter 13: Accreditation and the Scholarship of Assessment

Miller, R. & Leskes, A. (2005). *Levels of assessment: From the student to the institution*. Washington, DC: American Association of Colleges and Universities. Retrieved from <http://www.aacu.org/pdf/LevelsOfAssessment.pdf>

National Center for Postsecondary Improvement. (2003). *State policy assessment toolkit: Assessment policy models, types, and considerations*. Retrieved from http://www.stanford.edu/group/ncpi/unspeficied/assessment_states/assessment.html

Peterson, M. W. & Einarson, M. K. (2001). What are colleges doing about student assessment? Does it make a difference? *The Journal of Higher Education*, 72(6), 629-669.

State Council of Higher Education for Virginia. (2010). *Virginia Public Higher Education Assessment Policy*.

10/11 – Fall Break – No Class

10/18 – Topics: Policy & Accreditation (Regional, National, International)

Southern Association of Colleges and Schools. (2010). *The principles of accreditation: Foundations for quality enhancement* (4th ed.) Retrieved from

<http://www.sacscoc.org/pdf/2010principlesofaccreditation.pdf>

U.S. Department of Education. (2006). *A test of leadership: Charting the future of U.S. higher education [Spellings Commission report]*. Washington, DC: Author. Retrieved from

<http://www2.ed.gov/about/bdscomm/list/hiedfuture/reports/final-report.pdf>

Zemsky, R. M. (2007). The rise and fall of the Spellings Commission. *The Chronicle of Higher Education*, 53(21), B6. Retrieved from http://repository.upenn.edu/gse_pubs/47

Bologna Process website. (2010). *About the Bologna Process*. Retrieved from

<http://www.ond.vlaanderen.be/hogeronderwijs/bologna/about/>

Adelman, C. (2009). Quality assurance. In C. Adelman, *The Bologna Process for U.S. eyes: Re-learning higher education in the age of convergence* (pp. 103-118). Washington, DC: Institute for Higher Education Policy. Retrieved from <http://www.ihep.org/assets/files/EYESFINAL.pdf>

10/25 – Topics: Institutional Case Studies; Astin’s I-E-O Model

Astin, A. W. (1993). Studying college impact. In A. W. Astin, *What matters in college?: Four critical years revisited* (pp. 1-31). San Francisco, CA: Jossey-Bass.

Review assigned websites for basic information about all institutions: Alverno, Evergreen, Truman State, Michigan, Kings College, Fairhaven College, etc. (Complete list TBD)

11/1 – Topics: Quantitative Approaches to Assessment; Testing and Culture

Banta, T. W. & Associates. (2002). *Building a scholarship of assessment*. San Francisco, CA: Jossey-Bass. Chapter 7: Measurement Issues in Outcomes Assessment (Pike)

Chapter 9: Information Support for Assessment (Borden)

Bastedo, M. N. & Bowman, N. A. (2010). *U.S. News & World Report College Rankings: Modeling institutional effects on organizational reputation*. *American Journal of Education*, 116, 163-183.

Suskie, L. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco, CA: Jossey-Bass.

Chapter 14: Selecting a Published Test or Survey

11/8 – Topics: Qualitative and Mixed Methods Approaches to Assessment

Baxter Magolda, M. B., & King, P. M. (2007). Constructing conversations to assess meaning-making: Self Authorship interviews. *Journal of College Student Development*, 48(5), 491-508.

King, P. M., Baxter Magolda, M. B., Barber, J. P., Kendall Brown, M., & Lindsay, N. K. (2009). Developmentally effective experiences for promoting self-authorship. *Mind, Brain, and Education*, 3(2), 106-116.

Pizzolato, J. E. (2007). Assessing self-authorship. In P. S. Meszaros (Ed.), *Self-Authorship: Advancing students’ intellectual growth, New Directions for Teaching and Learning*, Vol. 109, (pp. 31-42). San Francisco, CA: Jossey-Bass.

Skim:

Tsui, L. (2002). Fostering critical thinking through effective pedagogy: Evidence from four institutional case studies. *The Journal of Higher Education*, 73(6), 740-763.

11/15 – Topics: Reliability, Validity, and Trustworthiness; Practical Applications

- Brualdi, A. (1999). *Traditional and modern concepts of validity*. Retrieved from <http://www.ericdigests.org/2000-3/validity.htm>
- Kuh, G. D. (2003). *The National Survey of Student Engagement: Conceptual framework and overview of psychometric properties*. Retrieved from http://nsse.iub.edu/pdf/conceptual_framework_2003.pdf
- Suskie, L. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Chapter 9: Using a Scoring Guide or Rubric to Plan and Evaluate an Assignment
- Chapter 10: Creating an Effective Assignment
- Chapter 11: Writing a Traditional Test
- Chapter 12: Assessing Attitudes, Values, Dispositions, and Habits of Mind

Skim:

Banta, Ch. 8: Web Applications in Assessment (Shermis & Daniels)

11/22 – Topics: Organizing the Process

- Banta, T. W. & Associates. (2002). *Building a scholarship of assessment*. San Francisco, CA: Jossey-Bass.
- Chapter 10: Engaging and Supporting Faculty in the Scholarship of Assessment: Guidelines from Research and Best Practice (Angelo)
- Chapter 11: Scholarly Assessment of Student Learning in the Major and General Education (Palomba)
- Suskie, L. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Chapter 6: Supporting Assessment Efforts with Time, Infrastructure, and Resources
- Chapter 7: Organizing an Assessment Process
- Chapter 15: Setting Benchmarks or Standards

11/29 – Topics: Communicating Your Findings

- Banta, T. W. & Associates. (2002). *Building a scholarship of assessment*. San Francisco, CA: Jossey-Bass.
- Chapter 4: A Scholar-Practitioner Model for Assessment (Erwin & Wise)
- Suskie, L. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Chapter 13: Assembling Assessment Information into Portfolios
- Chapter 16: Summarizing and Analyzing Assessment Results
- Chapter 17: Sharing Assessment Results with Internal and External Audiences

12/6 – Topics: Data-Driven Practice

- Banta, T. W. & Associates. (2002). *Building a scholarship of assessment*. San Francisco, CA: Jossey-Bass.
- Chapter 14: Characteristics of Effective Outcomes Assessment: Foundations and Examples
- Chapter 15: A Call for Transformation
- Reynolds, A. L. & Chris, S. (2008). Improving practice through outcomes based planning and assessment: A counseling center case study. *Journal of College Student Development*, 49(4), 374-387.
- Suskie, L. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Chapter 18: Using Assessment Results Effectively and Appropriately
- Chapter 19: Keeping the Momentum Going

12/13 – Topics: Final Class: Poster Fair**ADDITIONAL RESOURCES:**

You may find the following list of resources from previous iterations of this course helpful in your work this semester. Feel free to use the resources as appropriate, and please suggest additions to this bibliography for use in future courses.

- Association of American Colleges and Universities. (2002). *Greater expectations: A new vision of learning as a nation goes to college*. Washington, DC: Author. Retrieved from <http://www.greaterexpectations.org/>
- Astin, A. W. (1991). *Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education*. Phoenix, AZ: ACE/The Oryx Press.
- Astin, A. W. (1993). *What matters in college: Four critical years revisited*. San Francisco, CA: Jossey-Bass, 1993.
- Banta, T. W. & Associates. (1993). *Making a difference: Outcomes of a decade of assessment in higher education*. San Francisco, CA: Jossey-Bass, Inc., 1993.
- Banta, T. W., Lund, J. P., Black, K. E., & Oblander, F. W. (1995). *Assessment in practice: Putting principles to work on college campuses*. San Francisco, CA: Jossey-Bass.
- Bok, D. (2005). *Our underachieving colleges: A candid look at how much students learn and why they should be learning more*. Princeton, NJ: Princeton University Press.
- Bowen, H. (1977). *Investment in learning*. San Francisco, CA: Jossey-Bass.
- Callan, P. M., Ewell, P. T., Finney, J. E., & Jones D. P. (2007). *Good policy, good practice: Improving outcomes and productivity in higher education: A guide for policymakers*. A Joint Report from The National Center for Public Policy and Higher Education and The National Center for Higher Education Management Systems. Retrieved from http://www.highereducation.org/reports/Policy_Practice/GPGP.pdf
- Davis, B. G. (1989). Demystifying assessment: Learning from the field of evaluation. In P. J. Gray (Ed.), *New Directions for Higher Education*, 67(3), 5-20.
- Kuh, G. D. (1999). How are we doing? Tracking the quality of the undergraduate experience, 1960s to the present. *Review of Higher Education*, 22(2), 99-119.
- Kuh, G. D., Pace, C. R. & Vesper, N. (1997). The development of process indicators to estimate student gains associated with good practices in undergraduate education. *Research in Higher Education*, 38(4), 435-454.
- Pascarella, E., & Terenzini, P. (1991). *How college affects students*. San Francisco, CA: Jossey-Bass, 1991.
- Pascarella, E., & Terenzini, P. (2005). *How college affects students, Volume 2: A third decade of research*. San Francisco, CA: Jossey-Bass.

Shavelson, R. J. (2007) Assessing student learning responsibly: From history to an audacious proposal. *Change*, 39(1), 26-33.

Shulman, L. S. (2007). Counting and recounting: Assessment and the quest for accountability. *Change*, 39(1), 20-25.

U.S. Department of Education. National Center for Education Statistics. (1997). *Enhancing the Quality and Use of Student Outcomes Data*, NCES 97-992, prepared by Maryann J. Gray and Judy D. Grace for the Council of the National Postsecondary Education Cooperative Working Group on Student Outcomes from a Data Perspective. Washington, DC: Author. Retrieved from <http://nces.ed.gov/pubs97/97992.pdf>

U.S. Department of Education. National Center for Education Statistics. (1997). *Student Outcomes Information for Policy-Making*, NCES 97-991, prepared by Patrick Terenzini for the Council of the National Postsecondary Education Cooperative Working Group on Student Outcomes from a Policy Perspective. Washington, DC: Author. Retrieved from <http://nces.ed.gov/pubs97/97991.pdf>

U.S. Department of Education, National Center for Education Statistics. (2000). *The NPEC Sourcebook on Assessment, Volume 1: Definitions and Assessment Methods for Critical Thinking, Problem Solving, and Writing*, NCES 2000-172, prepared by T. Dary Erwin for the Council of the National Postsecondary Education Cooperative Student Outcomes Pilot Working Group: Cognitive and Intellectual Development. Washington, DC: Author. Retrieved from <http://nces.ed.gov/pubs2000/2000195.pdf>

U.S. Department of Education, National Center for Education Statistics. (2000). *The NPEC Sourcebook on Assessment, Volume 2: Selected Institutions Utilizing Assessment Results*, NCES 2000-172, Prepared by T. Dary Erwin for the Council of the National Postsecondary Education Cooperative Student Outcomes Pilot Working Group: Cognitive and Intellectual Development. Washington, DC: Author. Retrieved from <http://nces.ed.gov/pubs2000/2000196.pdf>

Additional Assessment Web Resources

<http://www2.acs.ncsu.edu/UPA/assmt/resource.htm#c>

<http://www.crlt.umich.edu/assessment/index.php>

<http://web.wm.edu/sacs/>