



# MAGNA ONLINE SEMINARS

## Supplemental Materials

### Measuring Learning: The Ultimate Teaching Evaluation

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Presented by:

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Dr. Linda B. Nilson is founding director of the Office of Teaching Effectiveness and Innovation (OTEI) at Clemson University and author of *Teaching at Its Best: A Research-Based Resource for College Instructors*, now in its third edition (Jossey-Bass, 2010) and *The Graphic Syllabus and the Outcomes Map: Communicating Your Course* (Jossey-Bass, 2007).

She also co-edited *Enhancing Learning with Laptops in the Classroom* (Jossey-Bass, 2005) and Volumes 25 and 26 of the major publication of the Professional and Organizational Development Network in Higher Education, *To Improve the Academy: Resources for Faculty, Instructional, and Organizational Development*, as associate editor (Anker, 2007, 2008) and Volumes 27 and 28 as head editor (Jossey-Bass, 2009, 2010).

Dr. Nilson has also published many articles and book chapters and has presented conference sessions and faculty workshops at colleges and universities both nationally and internationally on dozens of topics related to teaching effectiveness, assessment, scholarly productivity and academic career matters. She has been a regular presenter at the Lilly Conferences on College Teaching for years. She has held leadership positions in the Professional and Organizational Development (POD) Network in Higher Education, the Society for the Study of Social Problems, the Public Relations Society of America, Toastmasters International, Mensa and the Southern Regional Faculty and Instructional Development Consortium.



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# Measuring Learning: The Ultimate Teaching Evaluation

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## Activity: Skills analysis of a course

Pick one of your regular courses. On the list of 32 skills below, check those skills that your course is designed to develop or improve in your students. Add more if needed. (These skills should reflect your student learning outcomes.) The skills you check and add are your dimensions of “perceived learning gains.”

In an end-of-semester survey of your students’ perceived learning gains, you can phrase the stem like this: ***How much has this course improved your skills/abilities in each of the following?***

### Communication

Expressing myself in writing  
Expressing myself orally

### Content Mastery

Identifying the most important ideas in readings  
Mastering factual material  
Explaining key concepts/principles of the discipline  
Drawing connections between different disciplines

### Critical/Higher-Order Thinking

Giving fair consideration to new viewpoints  
Drawing relationships, such as comparisons and contrasts, between different ideas  
Applying knowledge to solve real-world or realistic problems  
Thinking through arguments or problems  
Evaluating ideas critically  
Evaluating high-quality and low-quality work in the discipline  
Critically examining my own opinions and values  
Developing positions that I can support and defend with logic and evidence

### Research Skills

Formulating hypotheses  
Identifying trends in data  
Explaining possible reasons for trends in data  
Evaluating the quality of sources of information  
Finding reliable sources of knowledge outside of the course material  
Following sound laboratory procedures  
Conducting original research

**Quantitative Reasoning**

Interpreting statistical data

Reasoning through a problem mathematically

**Creativity**

Exercising my creativity in the discipline

Developing an original product (a design, artistic creation, piece of equipment, multimedia presentation, etc.)

**Social and International Skills**

Working in cooperation with others

Understanding people who are very different from me

Assessing societal problems/needs

Drawing relationships between events in your own country and other countries

Functioning effectively in another culture

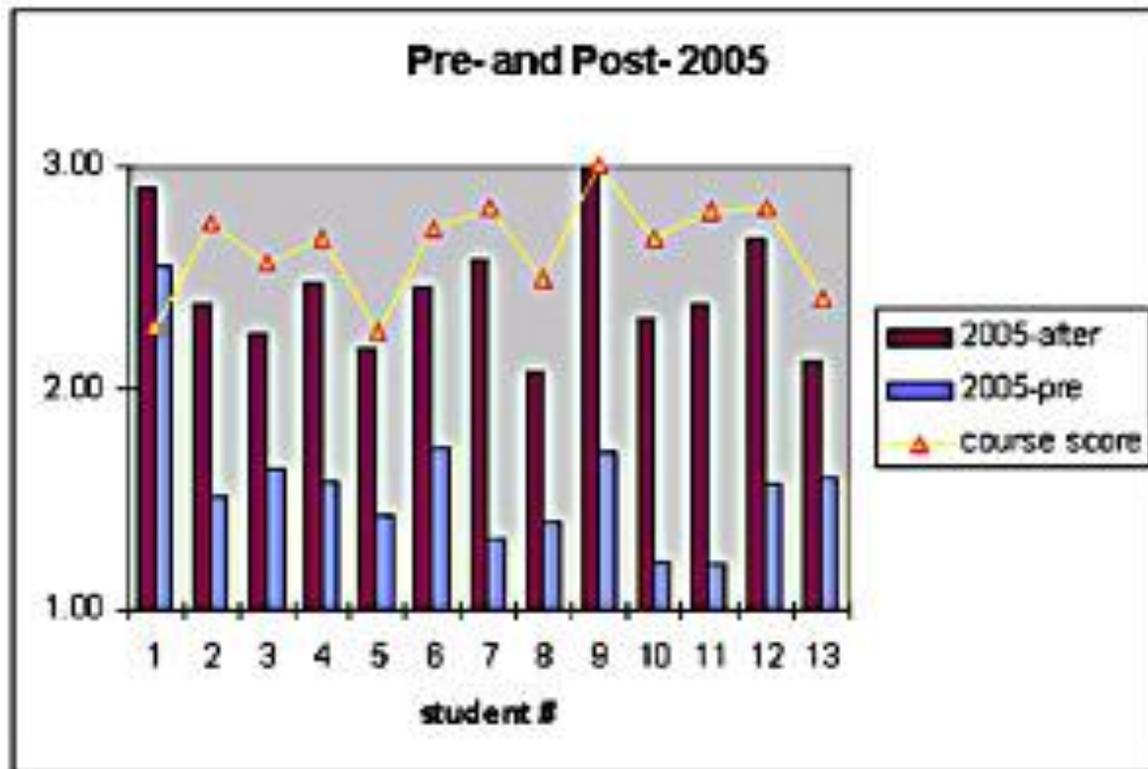
Acting in a leadership capacity

**Computing**

Using computer technology and resources

**Additional Skills** (specify below)

## Knowledge Surveys Evidence of Student *Underconfidence* after Learning

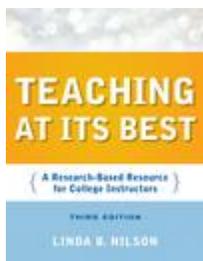


This plot shows knowledge survey results for 13 students enrolled in a Mineralogy class. The light blue bars show their "knowledge" prior to taking the course. The red bars show their knowledge after completing the course. To show that Knowledge Surveys actually do measure learning, the yellow line with triangles shows the overall course score (grade) of each student at the end of the course.

From Wirth, K., & Perkins, D. (2008). Knowledge surveys. Understanding what our geoscience students are learning: Observing and assessing. On the Cutting Edge - Professional Development for Geoscience Faculty. Available at <http://serc.carleton.edu/NAGTWorkshops/assess/knowledgesurvey/index.html>

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***Teaching at Its Best: A Research-Based Resource for College Instructors, 3rd Edition***

Linda B. Nilson, Ph.D.

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Order at <http://www.josseybass.com/WileyCDA/WileyTitle/productCd-0470401044.html> \* Also available as an E-Book

This third edition of the best-selling handbook offers faculty at all levels an essential toolbox of hundreds of practical teaching techniques, formats, classroom activities, and exercises, all of which can be implemented immediately. This thoroughly revised edition includes the newest portrait of the Millennial student; current research from cognitive psychology; a focus on outcomes maps; the latest legal options on copyright issues; and how to best use new technology including wikis, blogs, podcasts, vodcasts, and clickers. Entirely new chapters include subjects such as matching teaching methods with learning outcomes, inquiry-guided learning, and using visuals to teach, and new sections address Felder and Silverman's Index of Learning Styles, SCALE-UP classrooms, multiple true-false test items, and much more.

**Other Jossey-Bass Books by This Author**

**[The Graphic Syllabus and the Outcomes Map: Communicating Your Course \(Hardcover\)](#)** ISBN: 978-0-470-18085-3, 200 pages, October 2007

This book shows college instructors how to communicate their course organization to students in a graphic syllabus—a one-page diagram, flowchart, or concept map of the topical organization—and an outcomes map—a one-page flowchart of the sequence of student learning objectives and outcomes from the foundational through the mediating to the ultimate. It also documents the positive impact that graphics have on student learning and cautions readers about common errors in designing graphic syllabi. Order at <http://www.josseybass.com/WileyCDA/WileyTitle/productCd-0470180854.html>

**[Enhancing Learning with Laptops in the Classroom: New Directions for Teaching and Learning, No. 101 \(Paperback\)](#)** ISBN: 978-0-7879-8049-8, 112 pages, April 2005