

ERSH 4600/6600 Applied Educational Assessment  
Fall, 2005: Tues. & Thurs. 9:30-10:45 AM  
Aderhold 0418

**Instructor:** Dr. Deborah Bandalos

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**Office hours:** Tuesdays 10:45-11:45; Thursdays 1:00-2:00 and by appointment

**Text:** *Measurement and Evaluation in Psychology and Education*, 7<sup>th</sup> edition, Robert M. Thorndike.

**Supplementary texts:** *Measurement and Assessment in Teaching*, 8<sup>th</sup> edition, Robert L. Linn.

*Knowing what Students Know: The Science and Design of Educational Assessment*, National Research Council.

Date	Topic	Reading*
8/18	Course Introduction	
8/23	Introduction to the measurement process; Types of scores	T: chapters 1 & 3; Bond, 1996
8/25	Types of scores, con't	
8/30	Measuring learning outcomes	T: pp. 439-467; NRC, chapter 2
9/1	Measuring learning outcomes con't	Dietel, Herman, & Knuth, 1991
9/6	Criticisms of traditional cognitive testing	Wiggins, 1989; Fredericksen, 1984
9/8	Measuring complex achievement	L: chapter 9
9/13	Essay questions	T: pp. 473-479
9/15	Performance-based assessments & Portfolios	T: chapter 10; Arter & Spandel, 1992
9/20	Item analysis: cognitive	T: pp. 468-473
9/22	Item analysis con't	
9/27	Affective measurement	T: chapter 12
9/29	Affective measurement con't	
10/4	Exam 1	
10/6	Item analysis for affective measures	
10/11	Item analysis con't	
10/13	Reliability	T: chapter 4
10/18	Reliability con't	
10/20	Reliability con't	
10/25	Validity	T: chapter 5

Date	Topic	Reading*
10/27	FALL BREAK	
11/1	Validity con't	
11/3	Changing conceptualizations of validity	Hubley & Zumbo, 1996; Anastasi, 1986
11/8	Sources of information on tests	T: chapter 6
11/10	Legal and equity issues	T: chapter 14; Bersoff, 1981
11/15	Testing accommodations	Elliott, McKeivitt, & Kettler, 2002
11/17	Ethics and social considerations	T: chapter 14; Haney, 1981
11/22	Interest and personality assessment	T: chapter 11
11/24	Thanksgiving Break	
11/29	Aptitude tests	T: chapter 8
	Exam 2 due	
12/1	Standardized achievement tests	T: chapter 9
12/6	NO CLASS	
12/8	Last class: Project 3 due	

\* I reserve the right to assign other readings at my discretion.

T = Thorndike; NRC: National Research Council; L: Linn

## EVALUATION

The final grades for this course will be based on a weighted average of grades on exams and projects. Exam 1 will be composed of questions submitted by students. I will review all questions submitted and select questions on the basis of technical merit as discussed in class. The second exam will be a take-home exam. The three major projects are discussed below. However, additional smaller projects or homework assignments may be assigned at my discretion.

Weights for final grades will be as follows:

Exams	40% (20% each)
Projects	60% (20% each)

In order to pass the course, all projects must be completed.

## GENERAL COURSE GUIDELINES

**Attendance/participation.** It is imperative that students attend class and complete readings and assignments on time. Class participation will be taken into account in determining borderline grades. Class participation can be either in class or on the class website. Because of the nature of the course content only two unexcused absences will be allowed during the semester. Any other absences must be approved, in advance if possible. More than two unexcused absences during the course of the semester will cause your final grade to be lowered by one letter grade. Class lectures will cover a considerable amount of material that is not in the text. If you have missed a class, it is your responsibility to find out what you have missed and to obtain any information that you have missed.

**Cheating vs Working Together:** Activities such as working in groups, discussing one's work with other students, and sharing ideas are encouraged in this class and are not considered to constitute cheating. However, work on exams must be done on your own without any consultation with other students, former or present, faculty, or anyone else. Cheating is defined as copying work from another person or any misrepresentation of another's work as your own. This includes copying from class notes, readings, or texts on any assignment or exam. If you are asked for an evaluation or opinion on an assignment or exam, you should give it in your own words. Students

found to engage in cheating behavior will receive a grade of zero for the assignment on which the cheating occurred and possibly a failing grade in the course. In addition, the behavior will be reported to the student's advisor and other University authorities. If you are not sure whether something you are doing is considered to be cheating, ASK ME!

**Cell Phone Use:** Cell phone use during class is extremely disruptive. It shows a lack of respect for other class members because it makes it difficult for them to hear and concentrate on what is going on in class. Cell phone use should therefore be limited to emergency situations.

## PROJECTS

The projects in this class have been designed to give you hands-on experiences with writing and evaluating different types of measurements. I hope that this will provide a basis for class discussion as we observe and discuss issues arising from these measurement projects.

### PROJECT 1

Project 1 is an individual project in which you will evaluate and rewrite a class assessment. This can be a test or other assessment from a class you have taught or a class you have taken. For this assignment you should first identify the cognitive level of each item. Then you will critique each item and rewrite the items you feel are worst.

### PROJECT 2

Project 2 is a group project in which we will actually construct and evaluate a short attitude scale as a class. Each class member will write items for the scale. These items should reflect good item writing principles as discussed in class. In addition to these items, we will decide on four or five items designed to elicit demographic information, such as age or gender. Upon completion of the questionnaire, each class member will be required to administer it. We will then analyze the data collected by doing an item analysis as well as reliability and validity analyses.

Different sections of the project will be turned in throughout the semester, as the material is covered in class. Class members may redo any portion for which they do not receive all the points possible.

## PROJECT 3

Project 3 has been designed to allow you to apply what you have learned in class about test properties by evaluating a standardized test of your choice. At the beginning of the semester, each student will choose a type of test in which they are interested (e.g., intelligence tests, achievement tests, personality tests, etc). The available instruments in this area should then be researched and each student should choose one instrument to evaluate. Project 3 will consist of an assessment of the instrument in terms of reliability, validity, etc. You must therefore choose an instrument on which such information is available.

In order to assess the instrument you will need to obtain a copy of the test manual, and ideally of the test itself. You may be able to obtain these from professors in your department or schools or agencies with whom you are working. They are also available from testing companies, but this will require that you plan ahead as it will take time to order and receive them. Other sources of information include:

the Buros Mental Measurements Yearbooks (these are now available online)  
specialty area Tests and Reviews  
your textbook and other textbooks available from me.

A written report, no longer than ten typewritten, double-spaced pages will be due the last day of class. You will be given a detailed protocol describing what information should be included, but to give you an idea, you will be required to address the following:

- 1) Statement of what the test was designed to measure.
- 2) Information on how the test was constructed.
- 3) Instructions for administering the test.
- 4) Reliability evidence given including type of reliability and standard error of measurement.
- 5) Validity evidence given including type of validity.
- 6) A description of the norm groups and year in which each test was normed.
- 7) Type(s) of score(s) reported and ease of interpretation of the results.
- 8) Practical considerations such as cost, availability, special training or facilities needed, availability of alternate forms, time required, guides for using and interpreting the test.

## Readings

Anastasi, A. (1986). Evolving concepts of test validation. *Annual Review of Psychology*, 37, 1-15.

Arter, J.A. & Spandel, V. (1992). NCME Instructional Module: Using portfolios of student work in instruction and assessment. *Educational Measurement: Issues and Practice*, 11, 36-44.

Bersoff, D. (1981). Testing and the law. *American Psychologist*, 36(10), 1047-1056.

Deitel, R.J. Herman, J.L. & Knuth, R.A. (1991). What does research say about assessment? Oak Brook, IL: NCREL. Obtained from [http://www.ncrel.org/sdrs/areas/stw\\_esys/4assess.htm](http://www.ncrel.org/sdrs/areas/stw_esys/4assess.htm).

Elliot, S.N., McKeivitt, B.C., & Kettler, R.J. (2002). Testing accommodations research and decision making: The case of "good" scores being valued but difficult to achieve for all students. *Measurement and Evaluation in Counseling and Development*, 36, 153-166.

Fredericksen, N. (1984). The real test bias: Influences of testing on teaching and learning. *American Psychologist*, 39(3), 193-202.

Haney, W. (1981). Validity, vaudeville, and values: A short history of social concerns over standardized testing. *American Psychologist*, 36(10), 1021-1034.

Hubley, A.M. & Zumbo, B.D. (1996). A dialectic on validity: Where we have been and where we are going. *The Journal of General Psychology*, 123, 207-215.

National Research Council. (2001). The nature of assessment and reasoning from evidence. In *Knowing what Students Know: The Science and Design of Educational Assessment*, pp. 37-54. Washington, D.C.: National Academy Press.

Wiggins, G. (May, 1989). A true test: Toward more authentic and equitable assessment. *Phi Delta Kappan*, 703-713.