

Education 607-001
Contemporary Approaches to Educational Assessment
Winter 2020

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Class Meetings	Tuesdays 9am-12pm
Office Hours	By appointment. Please contact Ms. Lynn Chamberlain, lynnch@umich.edu
Room	2310 SEB
Website	https://umich.instructure.com/courses/338046

FINAL EXAMINATION: April 22, 1-4pm, Room: 2310 SEB

Course Description

This survey course seeks to provide students with an overview of major issues in educational assessment and measurement regarding quality (e.g., reliability, validity, error, bias), types and uses (e.g., diagnostic, achievement, performance, formative), and policy (federal and state). The course will provide students with skills to select and use high quality measures and will have a practical design and critique component of assessments and measurements that are relevant to the students in the course.

Upon completion of the course, students will be able to:

- Appreciate the complexity of developing or selecting, and using assessments and interpreting their information;
- Recognize various types of assessments and make judgements about their quality and the appropriateness of their use; and
- Recognize the structural and ethical implications of our current use of educational assessments.

The focus of the course will be to have informed positions about the roles and purposes of educational assessment. While we will review some common indices used to establish the quality of a measurement instrument, the course is not intended for individuals interested in a statistics-based methods course.

Course Expectations

This 3-credit course is organized as a seminar with an emphasis on in-class and reflective dialogue of weekly reading assignments by all attendees. The course will be a forum for supportive, productive, and critical inquiry. Students are expected to attend all class sessions, to complete the readings and short writing assignments prior to the class discussion, and to participate actively in all the course activities. **Students are expected to inform the instructor in advance of absences.**

Course Readings

Selected chapters from the following textbooks will be used for the course:

- [B&N] Brookhart, S. M., & Nitko, A. J. (2019). *Educational assessment of students* (8th ed.). New York, NY: Pearson.
- [C&S] Cohen, R. J. & Swerdlik, M. E. (2009). *Psychological testing and assessment* (7th ed). Primis Onlie: McGraw Hill. A PDF version of the textbook is available in the Files section in Canvas
- [K] Koretz, D. (2008). *Measuring up: What educational testing really tells us*. Cambridge, MA: Harvard University Press. Chapters will be made available in canvas.

Paper bound copies of the textbooks are available in the university libraries and other on-line providers.

Special Forms of Participation

Class Participation

As in any graduate level course, the reading load is substantial. It is expected that students will come to class willing to share their understandings, and to challenge and be challenged by the ideas and topics of each session, in order to contribute to the learning of all class members. For the reading assignments in the course textbooks, it is expected that students highlight, mark, or indicate passages that are interesting, unclear, provocative, or perhaps misleading, and bring those to the class discussion. **By 9am every Monday**, students are expected to answer a question related to the readings in no more than 200 words using the Discussion section of Canvas (as a reference, the course description in this syllabus is 177 words). You will be able to see other responses once you submit your answer. These will be used to guide the discussion the following day. During class, students are expected to listen to the other students' points of view and to offer support or contrasting arguments as needed.

Class Leadership

In the second half of the course, students working in a small group of two to three people, will be asked to lead the class in learning one of the following topics:

1. Adverse impact and bias; testing students with special needs, March 17
2. Utility of assessments, March 24
3. Formative feedback, March 31
4. Essay tasks, April 7
5. Performance assessments, April 14

In consultation with the instructor, they will design a 60-min lesson and deliver it according to the schedule at the end of this document. The students will organize activities that will engage students in discussing the material of the day. More details are given at the end of the syllabus.

Assignments

There are four assignments in this course that are designed to help you learn more about assessment and how to apply this knowledge. The assignments are:

- 1) Find an assessment or other measure of your choice pertinent to your field of study.
- 2) Write a small number of items, together with the directions for administering them and the scoring rubrics as needed.
- 3) Critique an assessment or other measure of your choice pertinent to your field of study.
- 4) Propose improvements to an assessment or other measure of your choice pertinent to your field of study.

Unless otherwise indicated, all assignment submissions should:

1. Be double-spaced, use a 12-point size font (Times family recommended), and have one-inch margins.
2. Have a title, header (assignment, author, and page number), and footer (name of the file, date, 607-Win-2020).
3. Have a file name with the author's last name and the date of the assignment. Please use the following convention for labeling your file: LastName_mm.dd (e.g., Mesa_09.10)
4. Be uploaded in the Canvas Assignment folder within the time stipulated as a word (.doc or .docx). This format makes it easier for me to provide formative feedback for your assignment. I will return to you files uploaded as PDFs. Canvas will mark late submissions. Five percent of points will be deducted for each day that an assignment is late.
5. Follow the stylistic standards from the American Psychological Association [APA] manual (<http://www.apastyle.org/previoustips.html>). A handy reference for the most important features of the style can be found in the University library online at: <http://guides.lib.umich.edu/content.php?pid=80367&sid=596113>

Students are strongly encouraged to download and learn to use the file EDUC607_WritingTemplate.dotx, which contains pre-set features that you can modify for your personal use.

Grading Policy

A letter grade (A, B, etc.) will be determined based on assessment of your performance in each of the special forms of participation, according to the following weights:

Special Form of Participation	Due Date	Weight
• Class Participation	On going	15%
• Class Leadership	TBD	15%
• Assignment 1: find a test	January 17 th , by midnight	10%
• Assignment 2: critique a test	February 8 th , by midnight	15%
• Assignment 3: develop items	February 28 th , by midnight	20%
• Assignment 4: revise an instrument		10%
Presentation	April 21, by 9am	15%
Paper	April 22, by midnight	
		/100%

Final grades will be assigned according to the following scale:

A	96% or more	C+	70-74%
A-	90-95%	C	65-69%
B+	85-89%	C-	60%-64%

B 80-84%
B- 75-79%

D 55%-59%
E Less than 55%

Schedule

Prior to our first class, please **read this syllabus and the New York Time pieces on assessment.**

Class #	Date	Topic & Assignment
1	January 14	<p>What is assessment? Origins of assessment and testing in the United States. Where are assessments kept?</p> <p>Read the three opinion pieces by Engel, the New York Times Editorial board, and Aldeman.</p> <p>Write: In 200 words, what position best represents what you think is appropriate in student testing?</p> <p>Special guest: Assessment librarian.</p>
	January 17, by midnight	Assignment 1 due: Assessment selection. See syllabus for details.
2	January 21	<p>Assumptions about assessment, what do you need to ask to know whether a test is good, norms</p> <p>Read Chapter 4 in C&S. This chapter is heavy in terminology. Most of it will be reviewed and expanded over and over throughout the term.</p> <p>Write: In 200 words, why is sampling an important consideration in this chapter?</p>
3	January 28	<p>What is reliability? What is measured when we talk about reliability?</p> <p>Read Chapter 5 in C&S. This chapter has a lot of formulas; focus your attention on what they seek to measure (more than on the formulas themselves).</p> <p>Write: In 200 words, explain the purpose of the reliability coefficient.</p>
4	February 4	<p>What is validity? Why are there so many types of validity?</p> <p>Read C&S Chapter 6.</p> <p>Write: In 200 words describe the connection between validity and bias.</p>
	February 8th, by midnight	Assignment 2 due: Critique a test. See syllabus for details.

5	February 11	How are tests developed? Key steps to follow. Read C&S Chapter 8. Write: In 200 words explain why the steps are needed to develop a good test.
6	February 18	Different types of tests and items for student assessment Read B&N-Chapters 7 & 9. Write: In 200 words describe the difference between diagnostic and formative assessments.
7	February 25	Types of items Read B&N-Chapters 10 & 11. Write: In 200 words describe the importance of including different types of items in a test.
	February 28th, by midnight	<i>Assignment 3 due: Item development. See syllabus for details</i>
8	March 10	Professional, ethical, legal issues in assessment CRLT Midterm Student Feedback Read B&N-Chapter 5. Write: In 200 words explain why legal considerations are important when talking about assessment.
9	March 17	Student presentations: Adverse impact and bias; testing students with special needs. Read K-Chapters 11 and 12. Write: In 200 words describe what is the difference between adverse impact and bias.
10	March 24	Student presentations: Utility of assessments. Read C&S-Chapter 7. Write: In 200 words explain the relationship between utility, reliability, and validity

11	March 31	Student presentations: Formative feedback. Read B&N-Chapter 8. Write: In 200 words indicate which strategy for formative feedback do you find most useful for your future work.
12	April 7	Student presentations: Essay tasks. Read B&N-Chapter 12. Write: In 200 words explain the utility and drawbacks of essay tasks.
13	April 14	Student presentations: Performance assessments. Read B&N-Chapter 13. Write: In 200 words explain the utility and drawbacks of performance assessments.
14	April 21, 9am	Assignment 4, oral portion due: Revise a test. See syllabus for details. Half of the presentations will occur on April 21 during class; the other half will occur on April 22 between 1 and 4pm.
	April 22, midnight	Assignment 4, written portion due: Revise a test. See syllabus for details

Course Assignments

Assignment 1: Find a test

For this assignment, select an available assessment, test, or instrument that purports to assesses the proficiency or trait (or sets of traits) of some population with respect to an educational or psychological domain. Choose an assessment of interest to you. For example, you might analyze a test that is being used or was used in an educational setting in which you have worked. Or, you might select an assessment or instrument that you are considering using in an upcoming research project or employment after graduation. You will use this instrument as a reference for two additional assignments in the course.

Appendices H and I in B&N provide useful information. Appendix H provides a list of some published tests, along with information about who the publisher is, and where reviews of the tests that can be found in the *Mental Measurements Yearbook* volume and entry number (see Buros Institute, <https://buros.org/test-reviews-information>). Appendix I provides URLs for various test publishers. You may find these useful in order to obtain descriptive information about the assessment you have selected

Make sure to include the following as part of your submission:

Title of the instrument:

Test publisher:

Edition and date:

Domain:

Source:

URL (if available):

Validation and testing:

Indicate how you found the test and why you are interested in this particular one. Which other tests did you consider, and why this was the one you decided to use. If you were to use this instrument, what question do you think you would be answering?

Due date: January 17th by midnight.

Assignment 2: Critique a test

In this assignment, you will analyze the test from your first assignment. In no more than 8 pages, your analysis will

- contrast the content of the instrument with the standards that it purports to measure (or with standards of your instructional program or research objectives, if pertinent);
- critique the technical documentation available regarding the quality of the chosen instrument;
- include your judgment of the technical adequacy of the instrument;
- include your impressions regarding the nature and utility of the scores and score reports;
- describe the availability of evidence to support the intended uses of the instrument; and
- why you think the instrument might (or might not) be useful to you.

Make sure to include the following as part of your submission:

Title of the instrument:

Test publisher:

Edition and date:

Domain:

Source:

URL (if available):

Validation and testing:

The evaluation of this assignment will consider evidence of analytic depth, accuracy, originality, insight, and clarity. Stylistic elements (e.g., grammar, sentence structure, spelling) may also be considered.

Due Date: February 8th, by midnight

Assignment 3: Develop Items

Each student will create 15 original items to assess student learning and knowledge in specific content areas, and that include various types of item formats as discussed in the course or described in the readings. These items must include a combination of fill-in-the blank, true-false, multiple-choice, matching, and problem solving, that are aligned to content standards of the State of Michigan. To begin, review the document *Taxonomies of Educational Objectives*, specifically the section corresponding to Webb's Depth-of-Knowledge levels, in B&N, pages 457-463 and other chapters in this textbook that describe the various types of formats that can be used.

Choose five standards from Michigan's Mathematics, five from English Language Arts (Reading and Writing), and five from Science for a grade level of choice. Various links are provided here for your convenience.

Michigan Standards

- https://www.michigan.gov/mde/0,4615,7-140-28753_64839_65510---,00.html

Mathematics Standards

- https://www.michigan.gov/documents/mde/K-12_MI_Math_Standards_REV_470033_7_550413_7.pdf
- https://www.michigan.gov/mde/0,4615,7-140-22709_70117-364403--,00.html

English Language Arts Standards

- https://www.michigan.gov/documents/mde/MDE_ELA_Standards_599599_7.pdf
- https://www.michigan.gov/mde/0,4615,7-140-22709_70117-364986--,00.html

Science Standards

- https://www.michigan.gov/documents/mde/K-12_Science_Performance_Expectations_v5_496901_7.pdf

For this assignment, write items that match each objective (total = 15 items). If feasible, you may use the same stimulus for two or more of the items. Items should be formatted *with as much attention to directions, formatting, space for student responses, etc., as if it were a real assessment for students*. Along with the test, indicate for each of the 15 items the expected student response (key), an explanation for why an incorrect option is discriminating (in the case of multiple-choice items) or what do incorrect matches may mean (for a matching item), and a rubric for assessing problem solving. See more details in the *Analysis of Responses* section.

Include the following table with your write-up:

Test Map

Item Number	Content Area M, ELA, S	Grade	Standard	DoK (Circle one)	Level
1				1 2 3 4	
2				1 2 3 4	
3				1 2 3 4	
4				1 2 3 4	
5				1 2 3 4	
6				1 2 3 4	
7				1 2 3 4	
8				1 2 3 4	
9				1 2 3 4	
10				1 2 3 4	
11				1 2 3 4	
12				1 2 3 4	
13				1 2 3 4	
14				1 2 3 4	
15				1 2 3 4	

Analysis of Responses

On a separate document, list the possible options or responses that your items may call students to use as follows:

- For a fill-in-the blank or true-false item, list the correct response, and at least three incorrect, but plausible, responses that you think your students might make and indicate what those reveal about students' knowledge regarding the standard being assessed.
- For a multiple-choice item (or for a matching item), list the options (matches) and mark the one(s) that is (are) correct, and for each *incorrect* option (match), you will describe in one to two sentences why the option (match) is discriminating. That is, indicate what about the option (match) would be attractive to a student who lacks sufficient knowledge to answer correctly. Why would a student who lacked mastery select that option? What makes the option plausible to a test-taker who does not quite have an accurate or complete grasp of the content tested? The point is not to tell why an option is incorrect, but to explain why a selection of an incorrect option (match) allows you to differentiate what students know. You should have three discrimination statements for each of your multiple-choice items and at least five discriminating statements for a matching item test.
- For a problem-solving item, provide scoring guides or rubrics that match the Michigan content standards for the content assessed by the item, defining clearly the dimensions of competence on which you propose to score the responses of students to your assessments (e.g., accuracy, use of representations, use of correct terminology, etc.) and the levels of competence using a 4-point scale.

The assignment will be graded using the following criteria:

Criteria	Maximum Points	Points Awarded
Quality of Items: Proper use of format, originality, clarity, and match with objectives	20	
General Test Construction: Directions, layout, and accuracy of the key	10	
Analysis of responses: Reasonableness, completeness, and clarity	20	
Total	50	

Due Date: February 28th by midnight.

Assignment 4: Revise an instrument

Using what we have learned in the course, propose revisions to the instrument you chose, by proposing at least 10 items some of which will be branching questions to show skill in devising a tool that might serve to probe respondents' thinking or possessing a particular trait. Ideally, you would be designing the instrument as something you might choose to use in the future, either in the context of your graduate studies or in a future job. In case your area of interest has no suitable instrument, describe the instrument you would like to have, and propose items as described above.

Prepare a 10-minute presentation of the instrument you chose, the qualities of that particular instrument (both positive and negative, taken from your revised critique), and one or two or the newly designed items that illustrate the best improvement of the instrument for your own use. There will be a 5-minute period of questions from the rest of the class. This presentation should be done in PowerPoint and uploaded into Canvas prior to the class on April 21. The Power point slide should have maximum 3 slides.

Turn in a paper-based copy (in Word) of the instrument; you may use an online survey tool to produce an electronic version of your instrument, it that is easier. Include the link in the Word version of the instrument, and make sure that the branching is clearly marked in the Word document. Include the following descriptive information about your instrument:

Audience for Survey/interview: _____

Purpose(s) for gathering Information: _____

Description of Respondents: _____

Anticipated Number of Respondents: _____

Other Pertinent Information: _____

Include an analysis of the responses similar to the one you included in Assignment 3. You are welcome to include items from your Assignment 3, provided you have revised them using the feedback received in that assignment.

The assignment will be graded using the following criteria:

Criteria	Maximum Points	Points Awarded
Written portion		
Quality of Prompts and Directions: Clarity, layout, and accuracy of the prompts.	15	
Quality of Items: Match with purpose, proper use of format, originality, and clarity.	15	
Quality and Completeness of the analysis of the responses and the system for categorizing respondents' responses to open-end questions.	15	
Ease of use of instrument; if applicable, use of prior feedback.	10	

Quality of Writing: clear organization, free from grammar and spelling mistakes	10	
Oral portion		
Quality of content presented: accuracy, relevancy, originality	15	
Quality of presentation: Clear and audible delivery, good pacing	10	
Conforming to guidelines: three slides only, 10-minute duration.	10	
Total	100	

Due Date: upload the PPT for the oral portion by 9am on April 22; Written portion: April 22 by midnight: