Advanced Measurement & Assessment

EDLD 610 – 4 Credits – CRN 35861
University of Oregon, Educational Methodology, Policy, and Leadership (EMPL)

Spring 2017 Term Syllabus
Rev. Date 20 April 2017 – Subject to Change

Meeting Days/Time: Thursday, 9 am-12:50 pm
Location: 115 ED

INSTRUCTOR: Kathleen Scalise, Associate Professor
Educational Methodology, Policy, and Leadership (EMPL)

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FAX: ............... (541) 346-5174
E-MAIL: ........... kscalise@uoregon.edu
ADDRESS: ...... Educational Leadership
.................... 102B Lokey Education Bldg.
5267 University of Oregon
Eugene, OR 97403-5267

OFFICE HOUR: 8-8:50 am, Thursdays (except May 4), 102B Lokey Education (Kathleen’s office)

Also available at times in this course will be three participants through Supervised College Teaching:
Ross Anderson, Yue Adam Shen, HyeonJin Yoon. Times and roles will be discussed in class, and are
listed on the weekly schedule.

Course Overview

This course is designed to provide advanced exposure to the foundational knowledge base in educational
measurement and assessment, with an emphasis on applications of scale development and psychometric
evaluation techniques. Through a series of readings, lectures, applied analysis, and activities, students will learn
about measurement fundamentals, including definitions of key terms, and will be introduced to methodological
approaches to develop and evaluate the adequacy of scales designed both for educational settings and for applied
research settings. Students are expected to have had prior graduate-level exposure to basic elements of research
methods, measurement and assessment principles, and statistical analytic techniques. Scale construction,
technical adequacy, standard setting, test bias, and equating will be presented from a substantive perspective,
including problems participants bring to class. Mathematical models and equations, and statistical computations
are of course a necessary part of the study. Throughout, an emphasis is placed on the appraisal and use of
available ‘tools’, e.g., literature, websites, computer softwares, and colleagues. There are no prerequisites for this
course.

Student Learning Outcomes
In this course, participants will:

- Become knowledgeable about key terminology and concepts in educational measurement theory and practice.
- Learn how different methodical approaches to assessment impact psychometric properties of results.
- Discuss how concepts of reliability and validity are examined in the context of educational assessment.
- Develop skills in determining the adequacy of different measurement approaches in various settings.
- Discuss how cultural and linguistic differences, test fairness, and other factors can be involved in assessment impact and assessment fairness, and contribute to measurement variability.
- Learn basic tenants of item and measure development for educational settings.
- Advance skills in developing scales from item pools drawn from extant data and measures.
- Apply psychometric analytic techniques to evaluate the properties of scales.

Textbooks and Reading Materials


**Weekly Schedule of Topics and Assignments**

<table>
<thead>
<tr>
<th>Week</th>
<th>Theme</th>
<th>Readings</th>
<th>Assignments due</th>
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</table>
| 1 (Apr 6) | • Class outline and introductions, introduce syllabus and readings, discuss seminal papers, introduce Canvas & Library Research Help  
• Building Blocks of Measurement  
• When Needed: Examples and Logic of Sample Designs  
• Human Subjects Protocols at UO  
• Introduction to Reciprocal Teaching format; sign-up for 3 readings to present per student | Readings 1-3 above, due to be read by the start of class period in Week 2 | Sign-ups for Reciprocal Teaching, due in-class Week 1 |
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Activity</th>
<th>Readings</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>2</td>
<td>Apr 13</td>
<td>Generalizing In and Out: Considerations of Quantitative and Qualitative Data Sources, Methods of Data Collection, Observations, HyeonJin Yoon will teach about some parts of the UO MOCCA reading comprehension assessment work. She will briefly discuss the approach to the construct, instruments and scoring, as an orientation to the project, then will summarize the modeling decision process (2-dimensional choice theory IRT models) and some validity analyses so far engaged (e.g., construct, predictive validity, diagnostic accuracy). When Needed: Implementing a Sampling Design, PBL: Constructs and Course Data Sets, &amp; Introduction to Case Study PBL Building Block 1 writeup due next week</td>
<td>Readings 4-6 above, due to be read by the start of class period in Week 3</td>
<td>1. Readings 1-3 to be presented by students in class Week 2 using Reciprocal Teaching format provided 2. Sign-ups for Constructs and Data Sets due in class Week 2 on Case Study PBL</td>
</tr>
<tr>
<td>3</td>
<td>Apr 20</td>
<td>Qualitative Interviewing, HyeonJin Yoon will begin focused break-out group discussions on topics associated with a coherent evidentiary model in each student’s PBL assessment project, Self-Administered Questionnaires and Instruments, Ross Anderson will teach about two measurement techniques he and co-authors have been developing as alternatives to typical self-report, The Psychology of Survey Response: Attitudinal Questions, Preparing an Instrument Development Checklist, Translatability Issues &amp; Language Simplification, Accommodations and Modifications in Assessments, PBL: Observations, &amp; Introduction to Case Study PBL Building Block 2 writeup due next week</td>
<td>Readings 7-10 above, due to be read by the start of class period in Week 4</td>
<td>1. Readings 4-6 to be presented by students in class Week 3 using Reciprocal Teaching format provided 2. Case Study PBL Building Block 1 writeup due BEFORE class Week 3; students should expect to share and discuss their PBL Building Block 1 writeup in class. 3. Sign-ups for each student’s 3 self-selected PBL readings (you must identify your readings in advance of class, see readings for Week 5 for when reading must be done)</td>
</tr>
</tbody>
</table>
| 4 | Apr 27 | Outcome Space, Index and Scale Construction, Nonresponse and Missing Data, Review of Validity, Reliability, and Acceptability in the Context of Educational Assessment, PBL: Interpretation through Scoring, & Introduction to Case Study PBL Building Block 3 writeup due in two weeks, on Week 6 (PBL | Readings 11-13 above, due to be read by the start of class period in Week 5 | 1. Readings 7-10 to be presented by students in class Week 4 using Reciprocal Teaching format provided 2. Case Study PBL Building Block 2 writeup due BEFORE class Week 4; students should expect to share and
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Readings</th>
<th>Notes</th>
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</table>
| 5 (May 4)  | **NO whole group in-class meeting this week.**  
Information to be provided in class on the asynchronous/synchronous format for this week:  
1. Asynchronous: Field Studies Project  
2. Synchronous: Online Individual/Group Consultation on your progress for course PBL project, and discussion with instructor of your findings from your three personalized readings  
Three self-selected readings for your PBL project, due to be read by the start of class period in Week 6  
1. Readings 11-13 to be presented by students in class Week 6 using Reciprocal Teaching format provided  
2. Case Study PBL Building Block 3 writeup due **BEFORE** class Week 6; students should expect to share and discuss their PBL Building Block 3 writeup in class. | 1. Readings 14-17 above, due to be read by the start of class period in Week 7  
2. Case Study PBL Building Block 3 writeup due **BEFORE** class Week 6; students should expect to share and discuss their PBL Building Block 3 writeup in class. |                                                                                                                                                               |
| 6 (May 11) | • The Logic of Measurement and Association  
• Evaluating Survey and Instruments: Paneling, Sensitivity, Prefielding, DIF considered  
• Ross Anderson will teach about a framework he has been working on that can be potentially be applied to evaluate response bias of measures.  
• Descriptive Data Analysis: Elaboration of Tables, Displays, Frequencies, Patterns, Themes, and Descriptive Statistics.  
Readings 14-17 above, due to be read by the start of class period in Week 7 | 1. Readings 11-13 to be presented by students in class Week 6 using Reciprocal Teaching format provided  
2. Case Study PBL Building Block 3 writeup due **BEFORE** class Week 6; students should expect to share and discuss their PBL Building Block 3 writeup in class. | 1. Readings 14-17 to be presented by students in class Week 7 using Reciprocal Teaching format provided |                                                                                                                                                               |
| 7 (May 18) | • Analysis, con’t: Introduction to Application of Formal Measurement Models  
• Ethics of Survey Research  
• Cultural and Linguistic Differences in the Context of Measurement and Assessment; assessment impact and assessment fairness  
• Yue Adam Shen will teach about her IRT project last year focusing on the World Values Survey  
• Revisited: Validity and Reliability  
• PBL: Interpretation through Measurement Models, & Introduction to Case Study PBL Building Block 4 writeup due in two weeks, on Week 9 (PBL 4 NOT due next week)  
Readings 18-20 above, due to be read by the start of class period in Week 8 | 1. Readings 14-17 to be presented by students in class Week 7 using Reciprocal Teaching format provided | 1. Readings 14-17 to be presented by students in class Week 7 using Reciprocal Teaching format provided |                                                                                                                                                    |
| 8 (May 25) | • Yue Adam Shen will hold focused break-out group discussions today on topics associated with use and reporting of results from Item Response Models.  
• Interpretation and Measurement Models  
• The Reporting of Measurement and Assessment Results  
• Lab: Item Response Model Approaches  
Readings 21-24 above, due to be read by the start of class period in Week 9 | 1. Readings 18-20 to be presented by students in class Week 8 using Reciprocal Teaching format provided  
2. Case Study PBL Building Block 3 writeup due **BEFORE** class Week 8; students should expect to share and discuss their PBL Building Block 3 writeup in class. | 1. Readings 18-20 to be presented by students in class Week 8 using Reciprocal Teaching format provided  
2. Case Study PBL Building Block 3 writeup due **BEFORE** class Week 8; students should expect to share and discuss their PBL Building Block 3 writeup in class. |                                                                                                                                                    |
Grading Components and Criteria

Emphasis is placed on effort and skill-building, which includes attendance, participation in class discussions, and homework assignments. Your final grade is determined as a function of (1) reciprocal teaching of the assigned papers for each student, (2) performance on the four PBL building blocks for the course case study project, (3) two in-class analysis mini-labs for modeling activities, (4) attendance/participation, and (5) final report and presentation.

The final project will be presented to the class. Grading is determined as follows:

- Performance on three reciprocal teaching presentations, @ 5% each = 15%
- Performance on four PBL building blocks for the course case study project, @ 10% each = 40%
- Performance on two in-class Mini-labs, @ 5% each = 10%
- Attendance and Participation = 15%

While actual participation cannot be mandated, it is very important. Your participation, discussion, and questions are apt to benefit the entire class, including your instructor. Please notify the instructor if you plan to be absent from class.

Final Presentation and Written Report = 20% (Report @ 12% and Presentation @ 8%)

Your final grade will be based on the total number of points accrued during the term. Final letter grades for the course will be calculated as follows.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>93-100%</td>
</tr>
<tr>
<td>A-</td>
<td>90-92.9%</td>
</tr>
<tr>
<td>B+</td>
<td>87-89.9%</td>
</tr>
<tr>
<td>B</td>
<td>83-86.9%</td>
</tr>
<tr>
<td>B-</td>
<td>80-82.9%</td>
</tr>
<tr>
<td>C+</td>
<td>77-79.9%</td>
</tr>
<tr>
<td>C</td>
<td>73-76.9%</td>
</tr>
<tr>
<td>C-</td>
<td>70-72.9%</td>
</tr>
<tr>
<td>D+</td>
<td>67-69.9%</td>
</tr>
<tr>
<td>D</td>
<td>63-66.9%</td>
</tr>
<tr>
<td>D-</td>
<td>60-62.9%</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 59.9%</td>
</tr>
</tbody>
</table>

Please note that if this class is taken P/NP, 80% or higher is required to pass the class, and this MUST include completion and submission of write-ups for all four PBL building blocks for the course case study project.

Role of the students participating in Supervised College Teaching

Students participating in Supervised College Teaching for this course have previously gained expertise on the course concepts, and may share examples and/or provide course information and helpful feedback or facilitation of discussion for students on an individual and group basis. The course instructor will be responsible for grading.
and evaluation activities.

Student Engagement Inventory

<table>
<thead>
<tr>
<th>Educational activity</th>
<th>Hours student engaged</th>
<th>Explanatory comments (if any):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course attendance</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Assigned readings and multimedia</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Projects and writing assignments</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Lab or workshop</td>
<td>20</td>
<td>Some mini-labs will be held in class, see above, but additional hours will be required to complete analysis assignments</td>
</tr>
<tr>
<td>Online and field study</td>
<td>4</td>
<td>Individual consults and preparation for field activity and consult during Week 5</td>
</tr>
<tr>
<td><strong>Total hours:</strong></td>
<td><strong>160</strong></td>
<td></td>
</tr>
</tbody>
</table>

Attendance and Absence Guidelines

Attendance at all class and discussion groups is expected. Students must contact the instructor in case of illness or emergencies that preclude attending class sessions. Messages can be left via e-mail at any time of the day or night, prior to class, or alternatively if there is no access to email, a phone message can be left. If no prior arrangements have been made before class time, the absence will be unexcused. Excused absences will involve makeup assignments, with makeup assignment procedures to be discussed in class on the first day.

If you are unable to complete an assignment due to a personal and/or family emergency, you should contact your instructor or discussion leader as soon as possible. On a case-by-case basis, the instructor will determine whether the emergency qualifies as an excused absence.

Expected Classroom Behavior

Students are expected to participate in classroom activities. If use of digital devices or engagement in other non-class activities during class for purposes not regarding classroom activities is necessary, the student should engage in these activities while on break, or check with the instructor to arrange for a 10-minute break for unusual circumstances if necessary.

Diversity, Equity and Inclusion

It is the policy of the University of Oregon to support and value equity and diversity and to provide inclusive learning environments for all students. To do so requires that we:

- respect the dignity and essential worth of all individuals.
- promote a culture of respect throughout the University community.
- respect the privacy, property, and freedom of others.
- reject bigotry, discrimination, violence, or intimidation of any kind.
- practice personal and academic integrity and expect it from others.
- promote the diversity of opinions, ideas, and backgrounds, which is the lifeblood of the university.

In this course, class discussions, projects/activities and assignments will challenge students to think critically about and be sensitive to the influence, and intersections, of race, ethnicity, nationality, language, religion, gender, socioeconomic background, physical and cognitive ability, sexual orientation, and other cultural
identities and experiences. Students will be encouraged to develop or expand their respect and understanding of such differences.

Maintaining an inclusive classroom environment where all students feel able to talk about their cultural identities and experiences, ideas, beliefs, and values will not only be my responsibility, but the responsibility of each class member as well. Behavior that disregards or diminishes another student will not be permitted for any reason. This means that no racist, ableist, transphobic, xenophobic, chauvinistic or otherwise derogatory comments will be allowed. It also means that students must pay attention and listen respectfully to each other’s comments.

**Documented Disability**

Appropriate accommodations will be provided for students with documented disabilities. If you have a documented disability and require accommodation, arrange to meet with the course instructor within the first two weeks of the term. The documentation of your disability must come in writing from the Accessible Education Center in the Office of Academic Advising and Student Services. Disabilities may include (but are not limited to) neurological impairment, orthopedic impairment, traumatic brain injury, visual impairment, chronic medical conditions, emotional/psychological disabilities, hearing impairment, and learning disabilities. For more information on the Accessible Education Center, please see [http://aec.uoregon.edu](http://aec.uoregon.edu)

**Mandatory Reporting**

UO employees, including faculty, staff, and GEs, are mandatory reporters of child abuse and prohibited discrimination. This statement is to advise you that that your disclosure of information about child abuse or prohibited discrimination to a UO employee may trigger the UO employee’s duty to report that information to the designated authorities. Please refer to the following links for detailed information about mandatory reporting: [http://around.uoregon.edu/mandatoryreporting](http://around.uoregon.edu/mandatoryreporting)

**Academic Misconduct Policy**

All students are subject to the regulations stipulated in the UO Student Conduct Code ([http://conduct.uoregon.edu](http://conduct.uoregon.edu)). This code represents a compilation of important regulations, policies, and procedures pertaining to student life. It is intended to inform students of their rights and responsibilities during their association with this institution, and to provide general guidance for enforcing those regulations and policies essential to the educational and research missions of the University.

**Additional Policy on Academic Honesty**

Because you will be pulling together ideas and information from a range of different kinds of sources (including both popular press, the internet, and scholarly journals), it is going to be very important that you summarize the main ideas in your own words, and attribute correctly any direct quotes or significant ideas from anyone else. Here is what the UO policy on academic dishonesty has to say about plagiarism on the Teaching Effectiveness Program's website:

*Plagiarism is the inclusion of someone else's product, words, ideas, or data as one's own work. When a student submits work for credit that includes the product, words, ideas, or data of others, the source must be acknowledged by the use of complete, accurate, and specific references, such as footnotes. Expectations may vary slightly by discipline. By placing one's name on work submitted for credit, the student certifies the originality of all work not*
otherwise identified by appropriate acknowledgements. On written assignments, if verbatim statements are included, the statements must be enclosed by quotation marks or set off from regular text as indented extracts.

A student will avoid being charged with plagiarism if there is an acknowledgement of indebtedness. Indebtedness must be acknowledged whenever:
1. One quotes another person’s actual words or replicates all or part of another’s product;
2. One uses another person’s ideas, opinions, work, data, or theories, even if they are completely paraphrased in one’s own words;
3. One borrows facts, statistics, or other illustrative materials—unless the information is common knowledge.

Unauthorized collaboration with others on papers or projects can inadvertently lead to a charge of plagiarism. If in doubt, consult the instructor or seek assistance from the staff of the Teaching and Learning Center (68 PLC, 346-3226). In addition, it is plagiarism to submit as your own any academic exercise (for example, written work, printing, computer program, art or design work, musical composition, and choreography) prepared totally or in part by another. Plagiarism also includes submitting work in which portions were substantially produced by someone acting as a tutor or editor.

http://uodos.uoregon.edu/StudentConductandCommunityStandards/AcademicMisconduct.aspx

Conflict Resolution

Several options, both informal and formal, are available to resolve conflicts for students who believe they have been subjected to or have witnessed bias, unfairness, or other improper treatment.

It is important to exhaust the administrative remedies available to you including discussing the conflict with the specific individual, contacting the Department Head, or within the College of Education, you can contact the Associate Dean for Academic Affairs (Brigid Flannery, 346-2496, brigidf@uoregon.edu) or Assistant Dean for Equity and Inclusion (Krista Chronister, 346-2415, kmg@uoregon.edu). Outside the College, you can contact:

- UO Bias Response Team: 346-3216 http://bias.uoregon.edu/whatbrt.htm
- Conflict Resolution Services 346-3216 http://studentlife.uoregon.edu/support
- Affirmative Action and Equal Opportunity: 346-3123 http://aaeo.uoregon.edu/

Grievance Policy

A student or group of students of the College of Education may appeal decisions or actions pertaining to admissions, programs, evaluation of performance and program retention and completion. Students who decide to file a grievance should follow the student grievance procedure, or alternative ways to file a grievance outlined in the Student Grievance Policy (https://education.uoregon.edu/academics/student-grievance) or enter search: student grievance).

In Case of Inclement Weather

In the event the University operates on a curtailed schedule or closes, UO media relations will notify the Eugene-Springfield area radio and television stations as quickly as possible. In addition, a notice regarding the university’s schedule will be posted on the UO main home page (in the “News” section) at http://www.uoregon.edu.
Additional information is available at http://hr.uoregon.edu/policy/weather.html.

If an individual class must be canceled due to inclement weather, illness, or other reason, a notice will be posted on Canvas or via email. During periods of inclement weather, please check Canvas and your email rather than
contact department personnel. Due to unsafe travel conditions, departmental staff may be limited and unable to handle the volume of calls from you and others.

Course Incomplete Policy

Students are expected to be familiar with university policy regarding grades of “incomplete” and the time line for completion. For details on the policy and procedures regarding incompletes, please see: https://education.uoregon.edu/academics/incompletes-courses