Spring 2015 (Campus)
LDT 690
Methods of Inquiry

Instructor: Minjuan Wang, Ph.D.
Class Meeting Time & Place: 4:00-18:45 (Wednesdays), Storm Hall 204
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Office Hours: Arranged
Course Prerequisites: None

Course Overview
LDT 690 orients you to the research 'side' of performance improvement---the issues, ideas, and constructs that underpin our discipline; the nature/types of studies we tend to conduct; and the ways in which we 'act' on the findings or results. You'll plan and conduct studies of your own (in teams of 2 or 3); interact with grads who routinely conduct research or manage/supervise others who do; and become adept at searching for information, assessing its quality, and synthesizing/summarizing it so that others can take full advantage of what they've learned.

LDT 690 is organized around four phases:

Phase 1: Planning the study. Here you'll concentrate on both traditional and eclectic research designs (and thus be able to distinguish empirical studies from those that are idea-focused), how studies are planned---and why good planning is so important, robust methods for locating "good" information that ensures key underlying constructs are thoroughly described (and thus understood), and the "rules" that guide researcher behavior (ethical conduct)--from beginning to end.

Phase 2: Collecting data. Here you'll focus on building (or adapting/adopting) tools/instruments for gathering the information you need. This is where you determine your information resources (and from whom you need approval to access them), whether or not sampling is appropriate (and the steps involved in selecting samples), technologies that can streamline data gathering without compromising reliability and validity, the most opportune time for data collection, and techniques to ensure people (or organizations) aren't put at risk.

Phase 3: Analyzing and interpreting the data. Here you'll focus on the quantitative and qualitative methods by which your data may be analyzed, how to triangulate information drawn from multiple sources or via varying methods, and what the results "mean." A research study is organized around questions to be answered or issues to be addressed; thus, your goal is to ensure that the data you've collected and the interpretations from your analyses "align" with your original investigative intent. You may also learn things that you hadn't anticipated---what some refer to as unintended results.

Phase 4: Reporting. Here you'll focus on ways to present your work to other researchers and the 'general public.' Your task is to develop a writing style that is simultaneously professional and conversational, aesthetically pleasing, and visually astute. Graphics, charts, tables, and figures are key to preparing a report that is both accurate and easy to digest.

LDT 690 is action-oriented. In the context of designing and executing your own study, you'll learn about and practice with an array of applications/online tools--for planning, data gathering, analyzing the data and interpreting it, and reporting results to key stakeholders and the larger community. You'll emerge from this course ready not only to design, develop, and implement performance interventions--but also to determine their worth or merit ... and ways to improve them.
**Course Goals and Competencies**

At the close of LDT 690 you will be able to:

- locate, examine, and critically interpret the literature associated with particular educational/instructional issues. [This implies familiarity/comfort with viable search engines, the "stacks" and databases @ SDSU’s Love Library, professional associations, and other resources.]
- describe common problems (validity, reliability, ethical concerns) associated with conducting, interpreting, and reporting educational research.
- distinguish between/among research designs--both traditional and eclectic--noting their strengths, weaknesses, and situational appropriateness.
- distinguish between/among common analytical tests--and the assumptions that underlie them.
- demonstrate competence with software appropriate for quantitative analyses (Excel, SPSS, etc.)--including set-up, graphical and table displays, and interpretation of results.
- demonstrate competence with software appropriate for qualitative analyses--including set-up, narrative and other displays, and interpretation of results.
- conduct a brief research/evaluation study, where you ...
  - identify a valid research issue or question to explore (to include, if appropriate, an investigational hypothesis).
  - conduct a review of the literature that contextualizes/operationalizes the constructs associated with the questions or issue of interest.
  - determine an appropriate research design--one that's theoretically robust yet practical to implement.
  - determine appropriate sampling techniques (whether data are acquired from people or existing resources).
  - develop data collection methods (surveys, interviews/focus groups, observations, tests, action plans, etc.).
  - determine how best to collect data (and over what time-frame or period) in ways that are ethically sound.
  - determine appropriate methods/procedures by which to analyze and triangulate the data (whether quantitative, qualitative, or both), and infer meaning from the results.
  - report the findings (to different audiences), as well as their implications.
- conduct yourself in a manner that demonstrates understanding of research "standards" promoted by AERA, AEA, and other professional associations or groups.
- identify common problems associated with conducting educational research and strategies for resolving them.

**Texts**

*Practical Research: Planning and Design (10th) Without the Access code for myEducation Lab*
Authors: Paul D. Leedy and Jeanne Ellis Ormrod

Authors: Neil Salkind
Publisher: Sage

*Handbook of Technical Writing (11th Edition)* -- spiral-bound is easiest to use, but it is more expensive
Authors: Gerald J. Alred, Charles T. Brusaw, & Walter E. Oliu
Publisher: Macmillan Education (2015)

**Course Assignments**
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<tr>
<th>Activity</th>
<th>Description</th>
<th>Points</th>
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<tbody>
<tr>
<td>Literature Review</td>
<td>Research cannot be undertaken without a thorough review of the literature. Specific parameters of the assignment will be provided in class -- along with example papers. In essence, you'll produce a structured white paper or technical report that generally conforms</td>
<td>100</td>
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<tr>
<td>Instruments</td>
<td>These are the tools that you will build (or &quot;adapt/adopt&quot;) to collect your data</td>
<td>80</td>
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<tr>
<td>Research Report</td>
<td>The report allows you to present a coherent explanation of the data you collected and your interpretation of it.</td>
<td>100</td>
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<tr>
<td>Topic Form and Proposal</td>
<td>These documents (5 and 10 pts respectively) are planning tools--ensuring the study is adequately conceptualized well before you begin collecting data!</td>
<td>100</td>
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<tr>
<td><strong>Other Requirements</strong></td>
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<td>Midterm</td>
<td>The midterm is scheduled at the halfway point of the semester.</td>
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<tr>
<td>Analysis and Writing Exercises</td>
<td>You'll work both in groups and independently on exercises that build skills (and confidence) with common analytical techniques--both quantitative and qualitative--including how to describe them to stakeholders and the larger community.</td>
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**Grading**

In order to acknowledge achievements and monitor student progress, LDT faculty use a realistic and meaningful system for grading performance. We recognize that the University and our professional community expect our program to maintain standards that reflect its reputation as one of the foremost of its type in the country.

According to our University’s Graduate Bulletin,

A: outstanding achievement; available for only the highest accomplishment.

B: praiseworthy performance; definitely above average.

C: average, awarded for satisfactory performance.

**Attendance and Participation**

Attendance, promptness and participation are both expected and appreciated. You'll be asked to read your texts/readings prior to class and come prepared to share your opinions of and reactions to them. Take full advantage of the opportunities this class affords--from meeting educational researchers and analysts in the field to examining how the "research" function unfolds in all sorts of organizations (K-12 schools, colleges and universities, the military, government, the corporate sector, etc.). The connections you'll
make and the competencies you’ll acquire in this course will positively affect your marketability--your readiness to take on interesting, challenging and well-compensated organizational (or consultative) roles.