ELPS 406: Foundations of Using Data for Continuous Improvement

Spring 2018

Professor: Jorge Peña, Ed.D.
Email: jpena3@luc.edu
Office hours: by appointment
Course days: Thursdays, 4:15 pm to 6:45 pm
Location: Corboy Law Center, room L08, Water Tower Campus

Course Description
This is the foundational course for data-based decision making within the principal preparation series. This graduate course provides skill sets to help school leaders and administrators access, interpret, and encourage the use of data to improve student educational outcomes. Candidates will be taught skills to prepare data to lead teams to support evidence-based decision-making. In order to be more effective in selecting evidence-based practices, candidates also will be provided with an introduction to descriptive and inferential statistical methods used in education and the social sciences with an emphasis on the interpretation and communication of results from quantitative data. The topics of the course include knowledge of quantitative inquiry, basic quantitative research designs, criterion for evidence-based interventions and programs, and understanding basic statistics relating to the interpretation of student outcomes and school environment.

As a result of this course, students will:
1. Develop the required skills to lead teams in the use of data for continuous improvement.
2. Create processes to plan for and coordinate data collection efforts in school settings.
3. Interpret data when evaluating student and environmental outcomes.
4. Use data to initiate school improvement processes.
5. Complete the evaluation of an approach/intervention based on criterion from a multi-level evidence-base system of support (e.g., promising practices, evidences-based).
6. Define and evaluate for validity and reliability common formative and summative assessments.
7. Organize numerical data for analysis.
8. Identify the policy implications of data driven instruction.

School of Education’s Conceptual Framework
This course is designed for students whose goal is to become a leader of learning as a school principal. “Professionalism in Service of Social Justice” represents the foundation upon which this course has been developed. In support of this fundamental tenet of leadership development, this course will equip students with the knowledge, skills of inquiry, and ethics necessary to be professional and socially just evidence-based practitioners. The readings, learning tasks, and applications tasks used in this course illustrate how data analysis can illuminate issues of social justice such as inequality in resources and achievement across segments of our society. In addition, the research and statistical techniques used in this course also add to students’ ability to understand the diversity of perspectives to address social problems.
Conceptual Framework Standards Assessed in this Course

PSEL Standards (2015)

PSEL 7: Effective educational leaders foster a professional community of teachers and other professional staff to promote each student’s academic success and well-being.

PSEL 8: Effective educational leaders engage families and the community in meaningful, reciprocal, and mutually beneficial ways to promote each student’s academic success and well-being.

Diversity

In concert with the conceptual framework for the School of Education, faculty and students will be expected to show respect and sensitivity to individual, cultural, social, and economic diversity. In this spirit, as we look at questions of organizational theory, instructional leadership and student achievement, it will be our challenge to create will and capacity within our schools so that all educational stakeholders can fulfill the promise of education.

Dispositions

All students are assessed on the dispositional areas of growth across our programs:

Professionalism, Inquiry, and Social Justice. The dispositions assessed in this course and related rubrics can be found in can find the rubrics related to these dispositions in LiveText and in this syllabus. For those students in non-degree programs, the rubric for dispositions may be available through Sakai. Disposition data is reviewed by program faculty on a regular basis. This allows faculty to work with students to develop throughout their program and address any issues as they arise.

Technology

LiveText

All students, except those who are non-degree, must have access to LiveText to complete the benchmark assessments aligned to the Conceptual Framework Standards and all other accreditation, school-wide and/or program-wide related assessments. You can access more information on LiveText here: LiveText.

You will need a laptop for each class. We will be using a rolling agenda during each class. The rolling agenda can be accessed here and in Sakai. Link to rolling agenda.

IDEA Course Objectives

IDEA is an evaluation system that Loyola University Chicago uses to assess whether a class reaches the major goals in the end of the semester. There are four essential objectives for this course and they are listed in bold.

1. Gaining a basic understanding of the subject (e.g., factual knowledge, methods, principles, generalizations, theories).
2. Developing knowledge and understanding of diverse perspectives, global awareness, or other cultures.
3. Learning to apply course material (to improve thinking, problem solving, and decisions).
4. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course.
5. Acquiring skills in working with others as a member of a team.
6. Developing creative capacities (inventing; designing; writing; performing in art, music, drama, etc.).
7. Gaining a broader understanding and appreciation of intellectual/cultural activity (music, science, literature, etc.).
8. Developing skill in expressing oneself orally or in writing.
9. Learning how to find, evaluate and use resources to explore a topic in depth.
10. Developing ethical reasoning and/or ethical decision making.
11. Learning to analyze and critically evaluate ideas, arguments, and points of view.
12. Learning to apply knowledge and skills to benefit others or serve the public good.
13. Learning appropriate methods for collecting, analyzing, and interpreting numerical information.

IDEA Course Evaluation Link for Students
Each course you take in the School of Education is evaluated through the IDEA Campus abs system. We ask that when you receive an email alerting you that the evaluation is available that you promptly complete it. To learn more about IDEA or to access the website directly to complete your course evaluation go to: http://luc.edu/idea/ and click on STUDENT IDEA LOGIN on the left hand side of the page.

Syllabus Addendum Link
• www.luc.edu/education/syllabus-addendum/

This link directs students to statements on essential policies regarding academic honesty, accessibility, ethics line reporting and electronic communication policies and guidelines. We ask that you read each policy carefully. This link will also bring you to the full text of our conceptual framework that guides the work of the School of Education – Social Action through Education.

Required texts

Additional Required Readings and Online Videos. The readings below will be made available online in Sakia.
• How great leaders inspire action: video
• Ladder of Inference video #1 and video #2

Online Resources
• Loyola University Chicago Library: http://libraries.luc.edu/
• Marzano Research: http://www.marzanoresearch.com/
• What Works Clearinghouse: https://ies.ed.gov/ncee/wwc/
• Scientifically Based Research: http://www.gosbr.net/
• Best Evidence Encyclopedia: http://www.bestevidence.org/

Things you need and bring to class
• A laptop/ or Windows tablet (not an iPad or Chromebook)
• Access to Sakai
• Access to software: Microsoft Excel, Microsoft PowerPoint, Adobe Reader
• Readings assigned for that day

Course Assignments

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
<th>Total Points</th>
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<tbody>
<tr>
<td>Learning Tasks (n=4)</td>
<td>18 points each</td>
<td>72 points</td>
</tr>
<tr>
<td>Application Tasks (n=5)</td>
<td>18 points each</td>
<td>90 points</td>
</tr>
<tr>
<td>Final Presentation</td>
<td>28 points</td>
<td>28 points</td>
</tr>
<tr>
<td>Dispositions</td>
<td>10 points</td>
<td>10 points</td>
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<tr>
<td></td>
<td></td>
<td>200 points</td>
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Grade Scale

<table>
<thead>
<tr>
<th>Percent Range</th>
<th>Letter Grade</th>
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<tr>
<td>93% - 100%</td>
<td>A</td>
<td>77% - 79%</td>
<td>C+</td>
</tr>
<tr>
<td>90% - 92%</td>
<td>A-</td>
<td>73% - 76%</td>
<td>C</td>
</tr>
<tr>
<td>87% - 89%</td>
<td>B+</td>
<td>70% - 72%</td>
<td>C-</td>
</tr>
<tr>
<td>83% - 86%</td>
<td>B</td>
<td>67% - 69%</td>
<td>D+</td>
</tr>
<tr>
<td>80% - 82%</td>
<td>B-</td>
<td>63% - 66%</td>
<td>D</td>
</tr>
<tr>
<td>62% and Below</td>
<td></td>
<td></td>
<td>F</td>
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Assignment Formatting
All assignments are to be typed, single-spaced, and submitted digitally in Sakai. It is the expectation that assignments are written at a professional level using correct English grammar, syntax, organizations, and use of higher level thinking skills. A rubric for the dispositions is on this syllabus. The American Psychological Association (APA) style for references, citations, and formatting is the standard for each assignment.

Coursework: Learning Tasks

1. a. **ACE Habit Focus Area.** Identify one ACE Habit as a focus area you will cultivate and be mindful of for the duration of this class. Answer the following: Question 1: Why did you choose this ACE Habit as a focus area? Question 2: How will you develop this ACE Habit? Question 3: How will you apply this ACE Habit in this course and in your professional work? This is a one-page task. *Submission instructions: create a document (such as Microsoft Word), identify the ACE Habit Focus Area, and answer the three questions.*
   
b. **Great Meetings.** Download the following activities from Sakai: “Estimate the cost of meetings,” “Rate the quality of meetings,” “Describe great and terrible meetings.” Complete each activity by following the directions. After completing the learning activities, answer the following: Question 1: What did you learn from these activities? Question 2: How productive are most of the meetings you attend? Question 3: How are great meetings like great classrooms? This is a one-page task. *Submission instructions: use the ACE Habit Focus Area document and add to it by answering these three questions; submit in Sakai. File name: Last name-ACE and Great Meetings.* Do not submit the work from the activities, only submit the answers to the questions.

2. **Evaluate the reliability and validity of a psychometric summative assessment.** Read the technical manual for the summative assessment your school administers (ACT Aspire, ACT, or SAT). Evaluate the assessment on its reliability, which is the degree to which the assessment produces stable and consistent results. Evaluate the assessment for its validity, which is the quality of inferences can be made from the test results. This is a two-page task, write one page on the assessment’s reliability and one page on its validity. *Submission instructions: create a document (such as Microsoft Word), write your response, and submit in Sakai. File name: Last name-Summative Assessment*

3. **Evaluate the reliability, validity, and results of a research study.** Choose one of four articles to analyze (articles are posted in Sakai). Evaluate the research study’s reliability, validity, and the results; and the study’s applicability to your school setting, such a research design and the results. This is a two-page assignment. *Submission instructions: create a document (such as Microsoft Word), write your response, and submit in Sakai. File name: Last name-Research Study*

4. **Given an action plan, identify an assessment plan.** Create an assessment plan for Berkshire Arts and Technology Charter Public School (BART). Get to know the school by reading the following:
   
a. BART website: [Who We Are](#) and [Academics](#)
   b. BART [Annual Report](#)
   c. BART School Report Card: [Accountability](#) and [Students](#)
d. **BART Data Wise Journey and Through Line for Steps 1-6**

Based on what you read and learned about the school, create an assessment plan for BART’s action plan. Use the assessment plan spreadsheet template to write the assessment plan. After you create the assessment plan, answer the following: Question 1. Why did you choose these particular assessments to measure progress? Question 2. Why did you choose these particular learning goals? Question 3. What challenges do you anticipate in either the administration of these assessments, the collection of data from these assessments, the analysis of these assessment results, or making adjustments to the action plan based on these results? Question 4. How can you leverage your ACE Habit focus area in the creation and implementation of the assessment plan? This is a two-page task. **Submission instructions:** create a document (such as Microsoft Word), copy the assessment plan to this document, and use this document to answer the three questions; submit in Sakai. File name: Last name-Assessment Plan

**Coursework:** Application Tasks

1. **Create a data overview.** Create a data overview visual display designed to engage educators in collaborative analysis. In Step 3 of the Data Wise Improvement Process (create data overview), educators collaborate to analyze visual displays in order to identify a priority question. Use two or three years of summative assessment results to create a visual display of what the data shows. The visual display can show grade level results on multiple subject tests (such as results in reading and writing in grades 3-8) or strands within subject tests (such as reading strands: key ideas and details, craft and structure, and integration of knowledge and ideas). Use Microsoft Excel to create the visual display; and use the Data Display Checklist when creating the visual display. **Submission instructions:** add another page to the completed Data Display Checklist document, and paste the visual display in this page. Submit in Sakai. File name: Last name-Data Overview

2. **Create a Meeting Wise agenda.** Create a Meeting Wise agenda designed to engage educators in analyzing visual displays of assessment results in order to identify a priority question. The agenda is to engage educators using the visual display(s) submitted on July 25. Use the Meeting Wise Checklist when creating the agenda. Optional: you may use the Meeting Wise Agenda template to create the agenda. **Submission instructions:** create a document (such as Microsoft Word) for the agenda; submit the agenda and completed Meeting Wise Checklist in Sakai. File names: Last name-Agenda-July 27; Last name-Agenda Checklist

3. **Draft Theory of Action.** Generate a draft Theory of Action for school improvement that is specific to your school. Use the Theory of Action template that is posted in Sakai. **Submission instructions:** submit the Theory of Action in Sakai. File name: Last name-Draft ToA

4. **Adaptive Challenge, Proposed Change Initiative, and Reflection.** Identify an adaptive challenge on using data for continuous improvement at your school. The adaptive challenge may focus on one or multiple steps of the Data Wise Improvement Process. Identify a change initiative to address the adaptive challenge. Complete the Adaptive Challenge and Proposed Change Initiative Template by stating the adaptive challenge, the proposed change initiative, filling in the table with the names of stakeholders and answering the column headings, and
answer the reflection questions. Submission instructions: submit the Adaptive Challenge and Proposed Change Initiative Template in Sakai. File name: Last name-Adaptive Challenge

5. **Final Theory of Action and reflection.** In the second portion of this task, share your draft Theory of Action with two students in our class; Dr. Peña will assign the students to provide feedback. You will meet with your classmates during class. Carefully note their feedback and any proposed revisions. Answer the following questions- Question 1. Now that you have received feedback on your draft Theory of Action, what have you learned from these interactions? Question 2. What changes do you plan to make to your Theory of Action? Question 3. Do you think you have the correct number and scope of ‘if’ statements to lead to the desired ‘then’ outcome? Question 4. To what extent did the review of the Theory of Action with classmates change your assumptions about the work to be done? The reflection is a one-page task. Submission instructions: Create a document (such as Microsoft Word) and respond to the reflection and revisions questions. Submit this reflection and the final Theory of Action template in Sakai. File names: Last name- ToA Reflection-August 10; Last name-Final ToA

**Coursework:** Final Project and Presentation- Data Wise Dilemma
The Final Project and Presentation consists of
- **Description of your school’s background:** location, brief history of the school, current size-enrollment and personnel, demographics, faculty profile.
- **Data available at the school:** describe the formative and summative assessments the school uses as data sources.
- **Data Overview:** visual display of summative assessment results.
- **Identify your final Theory of Action.**
- **Identify the adaptive challenge.** The adaptive challenge is to focus on using the Data Wise Improvement Process. Collaborate with a colleague at your school to help you identify an adaptive challenge on using the Data Wise Improvement Process.
- **Identify the proposed change initiative to remedy the adaptive challenge.** Collaborate with a colleague at your school to help you identify a change initiative that may remedy the adaptive challenge.
- **Identify a dilemma facing the proposed change initiative.**
- **Identify how you will leverage the ACE Habit focus area in the proposed change initiative.**

**Assignment Due Dates and Times**
Due dates for assignments are listed on the Course Calendar on this syllabus. Assignments are to be submitted in Sakai on or before the start of class, 4:15 pm Central Time.

**Late Work Policy**
Late work will not be accepted unless prior arrangements have been made with the professor. If the need arises to turn in work late, it is imperative the student contacts the professor immediately.

**Tardy Policy**
One of the norms for this class is “start on time and end on time.” It is imperative that students adhere to this norm, specifically starting on time. Please arrive to class at least five minutes before the start time of 4:15 pm.
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Readings completed before class</th>
<th>Coursework Due</th>
</tr>
</thead>
</table>
| Thursday, January 18  | Introduction to course  
Creating a culture of using data and improving practice | • Syllabus  
• Data Wise: Introduction and Chapter 1  
• Meeting Wise: Chapters 1 and 2  
• Video: Inspiring leadership |                                          |
| Thursday, January 25  | Building assessment literacy part 1                                    | • Data Wise: Chapter 2  
• Article: Intuitive Test Theory  
• Videos: Ladder of Inference | Online Learning Task from January 18 |
| Thursday, February 1  | Building assessment literacy part 2                                    | • Article: statistics primer  
• Meeting Wise: Chapters 3, 4, and 5 | ACE Habit Focus Area, Great Meetings |
| Thursday, February 8  | Data overview and priority question                                     | • Data Wise: Chapter 3  
• Meeting Wise: Chapters 6 and 7 | Evaluate the reliability, validity, and results of a psychometric summative assessment |
| Thursday, February 15 | Digging into student data and the learner-centered problem             | • Data Wise: Chapter 4  
• Article: protocols | Evaluate the reliability and validity of a research study |
| Thursday, February 22 | Examining practice and the problem of practice, part 1                | • Data Wise: Chapter 5 | Create a data overview display |
| Thursday, March 1     | Examining practice and the problem of practice, part 2                | • Instructional Rounds:  
Chapter 4 |                                          |
| Thursday, March 8     | No class: Spring Break                                                 |                                                                                               |                                          |
| Thursday, March 15    | Adaptive challenges and Theory of Change                               | • Article: Theory of Action  
• Article: The Work of Leadership  
• Article: Diagnose the political landscape | Create a meeting wise agenda for Data Wise Step 3 |
| Thursday, March 22    | Creating action plans                                                  | • Data Wise: Chapter 6 | Draft Theory of Action |
| Thursday, March 29    | No class: Easter Break                                                 |                                                                                               |                                          |
| Thursday, April 5     | Creating assessment plans                                              | • Data Wise: Chapter 7 | Adaptive Challenge and Proposed Change Initiative |
| Thursday, April 12    | Acting and adjusting the action plan                                   | • Data Wise: Chapter 8  
• Article: Oberman and Boudett | Given an action plan, identify an assessment plan |
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Article online</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday, April 19</td>
<td>Reflections on the Data Wise Improvement Process</td>
<td>· Article online: Meeting Wise</td>
</tr>
<tr>
<td>Thursday, April 26</td>
<td>Data Wise Dilemma presentation: first wave</td>
<td>Final Theory of Action and Final Presentation</td>
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<tr>
<td>Thursday, May 3</td>
<td>Data Wise Dilemma presentation: second wave</td>
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</tr>
</tbody>
</table>
## Dispositions Rubric

<table>
<thead>
<tr>
<th>PROFESSIONALISM</th>
<th>Target (2)</th>
<th>Acceptable (1)</th>
<th>Poor (0.5)</th>
<th>Unacceptable (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Candidate meets all deadlines</strong></td>
<td>Candidate meets all deadlines consistently.</td>
<td>Candidate meets deadlines with a few exceptions.</td>
<td>Candidate frequently does not meet deadlines.</td>
<td>Candidate does not meet deadlines</td>
</tr>
<tr>
<td><strong>Candidate is able to work with peers on assignments</strong></td>
<td>Candidate consistently works with peers in a positive manner.</td>
<td>Candidate works with peers in a positive manner most of the time.</td>
<td>Candidate is works with peers on assignments, but causes disruption to the group process.</td>
<td>Candidate is does not work with peers on assignments and causes disruption to the group process.</td>
</tr>
<tr>
<td><strong>Candidate attends class and is punctual to class</strong></td>
<td>Candidate consistently attends class and is always punctual.</td>
<td>Candidate attends class and is punctual with a few exceptions.</td>
<td>Candidate frequently misses class and/or is often tardy.</td>
<td>Candidate frequently tardy to class</td>
</tr>
<tr>
<td><strong>Candidate honestly and accurately cites other’s work</strong></td>
<td>Candidate honestly and accurately cites other’s work in a consistent manner.</td>
<td>Candidate honestly cites other’s work but at times is not accurate with the exact citation.</td>
<td>Candidate work is not original nor cites appropriately</td>
<td>Candidate misrepresents other’s work as his/her own.</td>
</tr>
<tr>
<td><strong>Candidate communicates promptly with faculty</strong></td>
<td>Candidate consistently communicates in a prompt manner (either by email or phone) with faculty.</td>
<td>Candidate usually communicates with faculty in a prompt manner (either by email or phone).</td>
<td>Candidate does not communicate with faculty in a prompt manner.</td>
<td>Candidate does not communicate with faculty in a prompt manner causing much disruption to the implementation of the candidate’s program</td>
</tr>
<tr>
<td>Candidate uses technology in the classroom only for academic purposes</td>
<td>Candidate consistently uses technology in the classroom only for academic purposes.</td>
<td>Candidate uses technology in the classroom for academic purposes with a few exceptions.</td>
<td>Candidate uses technology inappropriately sometimes checking personal email, texting, and/or surfing the web in the classroom.</td>
<td>Candidate uses technology inappropriately often checking personal email, texting, and/or surfing the web in the classroom.</td>
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<tr>
<td>Candidate demonstrates ethical behavior in all graduate work as prescribed by AASA and ISLLC standards.</td>
<td>Candidate consistently demonstrates ethical behavior in all graduate work as prescribed by AASA and ISLLC standards with few exceptions.</td>
<td>Candidate demonstrates ethical behavior sometimes in their graduate work.</td>
<td>Candidate demonstrates unethical behavior (such as dishonesty, cheating, or spreading gossip) in graduate work.</td>
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</table>

**FAIRNESS**

<table>
<thead>
<tr>
<th></th>
<th>Target (2)</th>
<th>Acceptable (1)</th>
<th>Poor (0.5)</th>
<th>Unacceptable (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate is able to reflect and respect other points of view within the university setting</td>
<td>Candidate consistently reflects and respects other points of view within the university setting.</td>
<td>Candidate respects other points of view with few exceptions. In the case of these exceptions, the candidate reflects to remedy the situation within the university setting.</td>
<td>Candidate rarely respects others points of view.</td>
<td>Candidate does not respect other points of view. The candidate does not reflect upon his/her unfair behavior and does not attempt to remedy the situation within the university setting.</td>
</tr>
</tbody>
</table>

**ALL STUDENTS CAN LEARN**

<table>
<thead>
<tr>
<th></th>
<th>Target (2)</th>
<th>Acceptable (1)</th>
<th>Poor (0.5)</th>
<th>Unacceptable (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate demonstrates a belief</td>
<td>Candidate consistently demonstrates a belief</td>
<td>Candidates demonstrate a belief</td>
<td>Candidate does not demonstrate a belief</td>
<td></td>
</tr>
<tr>
<td>Belief that all students can learn within the university setting</td>
<td>Demonstrates a belief that all students can learn within the university setting.</td>
<td>Belief that all students can learn within the university setting with a few exceptions.</td>
<td>Belief that only some students can learn within the university setting.</td>
<td>A belief that all students can learn within the university setting.</td>
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<tr>
<td>Candidate demonstrates respect for cultural differences within the university setting</td>
<td>Candidate demonstrates respect for cultural differences within the university setting and continually seeks to gain greater inter-cultural competence.</td>
<td>Candidate has minimal respect for cultural differences within the university setting and does not seek to gain inter-cultural competence.</td>
<td>Candidate does not demonstrate respect for cultural differences within the university setting and does not seek to gain inter-cultural competence.</td>
<td></td>
</tr>
<tr>
<td>Candidate demonstrates social justice within the university setting</td>
<td>The candidate advocates strongly for social justice within the university setting in both word and deed.</td>
<td>The candidate supports social justice within the university setting in both word and deed.</td>
<td>The candidate’s words and deeds within the university setting support a few of the principles of social justice.</td>
<td>The candidate’s words and deeds within the university setting do not support the principles of social justice.</td>
</tr>
</tbody>
</table>