

Data-Based Decision Making Loyola University Chicago



Summer Session A: MMXVI

CIEP 540 Syllabus

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Instructional Material

Creighton, T. (2007) *Schools and Data: The Educator's Guide for Using Data to Improve Decision Making*, Thousand Oaks California, Corwin Press
ISBN 1-4129-3733-7

LiveText (accessed at <http://luc.edu/education/admission/tuition/course-management-fee/>)

Suggested: 3 ring binder with separation tabs to organize handouts for future reference

A calculator

Reference Text

Norušis, J. (2005) *SPSS 13.0 Guide to Data Analysis*, New Jersey, Prentice Hall
ISBN 0-13-186535-8 (candidates do not need to acquire this reference text)

Course Description

This course provides school leaders with the knowledge and skills to explore and apply basic concepts supporting data-driven decision-making and performance accountability. Students apply data-driven decision-making and problem-solving techniques to the classroom, school, and school district. Descriptive, inferential, correlational and non-parametric techniques will be used to investigate questions that arise in an educational

setting. The use of data will be investigated in the context of RtI, formative assessment, summative assessment, high stakes testing and teacher performance.

Module Goals

Essential Questions:

1. How can summative and formative assessment be used to provide individual feedback regarding student achievement?
2. How are objectives, assessment, data collection, data analysis, and educational decisions related?
3. How do teachers effectively collaborate with other professionals across grade level and content area teams?
4. How can teachers use data to effectively design, adjust and modify instruction for the individual classroom and school?
5. How do education professionals use data to discern differences in populations?
6. How do education professionals use data to discern relationships between attribute?
7. How is data most effectively displayed for effective use?
8. Based on data, what are appropriate objectives and interventions for students and classes?

IPTS Objectives

Candidates will understand that effective educators use of data to direct instruction and assess teaching and learning effectiveness.

Candidate demonstrates a knowledge and understanding of:

Illinois Professional Teaching Standards: Knowledge Indicators:

- 8C: share collaboratively the use of data to design and implement effective school interventions that benefit all students
- 7D: know current terminology and procedures necessary for the appropriate analysis and interpretation of assessment data
- 7C: identify and explain measurement theory and assessment-related issues, such as validity, reliability, bias, and appropriate and accurate scoring
- 1L identify information about students' individual experiences, families, cultures, and communities can be used to create meaningful learning opportunities and enrich instruction for all students
- 3D: identify when and how to adjust plans based on outcome data, as well as student needs, goals, and responses
- 5G: evaluate and use student performance data to adjust instruction while teaching
- 5H: know when and how to adapt or modify instruction based on outcome data, as well as student needs, goals, and responses
- 3G: describe the relationship between research and the use of data to guide instructional planning, delivery, and adaptation
- 4H: acknowledge the use of student data (formative and summative) can be used to design and implement behavior management strategies

Illinois Professional Teaching Standards: Skills Indicators:

- 3N: access and use a wide range of information and instructional technologies to gather and use data to enhance a student's ongoing growth and achievement
- 4Q: analyze student behavior data to develop and support positive behavior
- 6K: use assessment data, student work samples, and observations from continuous monitoring of student progress to plan and evaluate effective content area reading, writing, and oral communication instruction
- 7G: make data-driven decisions using assessment results to adjust practices to meet the needs of each student
- 5P: use student data to adapt the curriculum and implement instructional strategies and materials to meet the needs of each student
- 1P: analyze and use student information to design instruction that meets the diverse needs of students and leads to ongoing growth and achievement
- 3j: Use data to plan for differentiated instruction to allow for variations in individual learning needs (IPTS)

Other Objectives

- Use pretest and post test data to calculate student and class growth
- Use pretest and posttest data to determine the mastery of objectives
- Represent data in a variety of graphical forms and tables

Dispositions Assessed in this Seminar

The teacher candidate commits to appropriate professional and interpersonal behaviors by...

- **D6** collecting and analyzing community, school, family, and student data to guide educational decision making. (a2E) (IB)
- **D8** demonstrating how one's beliefs about diverse learners impact teaching and learning and reflecting upon how one's actions affect others by demonstrating respect, fair-mindedness, empathy, and ethical behavior toward all learners, including respect for students' right to privacy. (a1F, i2A, i2B) (IB)

The rubrics for assessing these dispositions can be found on LiveText

IDEA Objectives: (Complete the course evaluation online at IDEA Campus Labs website:

<http://luc.edu/idea/>)

- Gaining a basic understanding of the subject (e.g., factual knowledge, methods, principles, generalizations, theories)

- Learning to apply course material (to improve thinking, problem solving, and decisions)
- Learning how to find, evaluate, and use resources to explore a topic in depth
- Learning appropriate methods for collecting, analyzing, and interpreting numerical information

Tentative Schedule of Discussion Topics CIEP 540

(Assignments will be announced daily in class and posted on Sakai)

	Class Date	Topics or Issues	Assignments (<i>Data set used</i>)
Use of Data in the Classroom	May 23	<ul style="list-style-type: none"> • Course Introduction • Ethical Issues of Data Use • Measures of Center • Data Types • Data uses in the classroom: formative assessment and RtI system • Basic Excel Functions 	Data Sorting Exercise (<i>Horizon HS Data Set</i>)
	May 25	<ul style="list-style-type: none"> • Use of MAP data in the classroom to differentiate instruction • Pretest/ Posttest Growth Analysis • Organizing Data with Excel 	Descartes Analysis (<i>Descartes set</i>) Pre/Post analysis (<i>Pre/Post Data Sets</i>)
	May 30	Memorial Day: No Class	
Use of Data in a Department or School	June 1	<ul style="list-style-type: none"> • Pretest/ Posttest Growth Analysis • Organizing Data with Excel 	Pre/Post analysis (<i>Pre/Post Data Sets</i>)
	June 6	<ul style="list-style-type: none"> • Introduction to SPSS • Descriptive Data Representations <ul style="list-style-type: none"> ○ Histograms ○ Stem and Leaf ○ Bar charts ○ Line graphs 	Descriptive Stats 1 (<i>GSSNET</i>)
	June 8	<ul style="list-style-type: none"> • Normal Distribution • Variation • Boxplots and outliers • Cross tabulations 	Descriptive Stats 2 (<i>Horizon HS Data Set</i>)
	June 13	<ul style="list-style-type: none"> • Introduction to constructing and testing hypotheses 	Comparing Groups #1 (<i>EPAS and Horizon HS Data Set</i>)

		<ul style="list-style-type: none"> • T-test for sample means and comparing 2 means • SPSS and t-testing 	
Use of Data at the District Level	June 15	<ul style="list-style-type: none"> • Validity and reliability • Analysis of Variance (ANOVA) 	Comparing Groups #2 (<i>Schools</i>)
	June 20	<ul style="list-style-type: none"> • Linear regression and correlation • Prediction and Goal Setting in Schools 	Correlation and Regression (<i>Horizon HS Data Set and EPAS n Courses</i>)
	June 22	<ul style="list-style-type: none"> • Analysis of Growth • Creating Student Profiles • EPAS System 	Growth Analysis (<i>EPAS</i>)
	June 27	<ul style="list-style-type: none"> • Analysis of survey data: nonparametric procedures • Mann-Whitney U Test • independent samples test • Spearman Rank-Order correlation 	Survey Analysis (<i>edTPA Survey Caution: Live Data!!</i>)
	June 29	<ul style="list-style-type: none"> • Chi-Square • Qualitative methods 	Chi-Square (<i>TBA</i>)

Course Requirements

1. Attendance: Your attendance is critical to your success in this class. Absences should be kept to a minimum. Inform the professor of such circumstance. Candidates will be expected to make up assignments missed due to absence

2. Assignments: (85% of grade)

Question sets will be assigned each class session. These question sets are due the following class in electronic or hard copy format, but are usually finished in the class. Late assignments are penalized 50%. An assignment is considered late if it is not submitted by the end of the class session on the due date. Exceptions to this policy are rare and are for extreme cases supported by documentation such as a doctor's note or prearranged absence. Assignments are subject to change

3. Module Participation: (15% of final grade)

Candidates are expected to attend all classes, demonstrate a professional attitude and demeanor, arrive promptly to learning sites, come prepared for class with assignments and required class materials, contribute constructively to the class, integrate readings into class assignments and activities, listen respectfully and incorporate and build from

others' ideas. Participation will make up 15% of your final grade for this course and be determined using the following common rubric.

Professional Attitude and Demeanor Part I

- 4-Always prompt and regularly attend classes.
- 3-Rarely late to class and regularly attend classes (No more than 1 absence).
- 2-Sometimes late to class and regularly attend classes. (No more than 2 absences).
- 0-Often late to class and/or poor attendance of classes (More than 2 absences).

Professional Attitude and Demeanor Part II

- 4-Always prepared for class with assignments and required class materials.
- 3-Rarely unprepared for class with assignments and required class materials.
- 2-Often unprepared for class with assignments and required class materials.
- 0-Rarely prepared for class with assignments and required class materials.

Level of Engagement in Class

- 4-Always a willing participant. Contributes by offering ideas and asking questions each class in small groups and the whole class.
- 3-Often a willing participant. Contributes by offering ideas and asking questions each class in small groups or the whole class.
- 2-Rarely a willing participant. Rarely contributes to class by offering ideas or asking questions.
- 0-Never a willing participant. Never contributes to class by offering ideas or asking questions.

Listening Skills

- 4-Listen when others talk, both in groups and in class. Incorporate or build off of the ideas of others.
- 3-Listen when others talk, both in groups and in class.
- 2-Rarely listen when others talk, both in groups and in class.
- 0-Does not listen or interrupt when others talk, both in groups and in class

Grade Assignment

- A 93-100%
- B 92-85%
- C 84-78%
- D 77-70%
- F 69-0%

Plusses and minuses are the percentage points at the top and bottom of the grade ranges

School of Education Policies and Information

Conceptual Framework Standards

The School of Education at Loyola University Chicago, a Jesuit and Catholic urban university, supports the Jesuit ideal of knowledge in the service of humanity. SOE's Conceptual Framework (CF)—*Social Action through Education*—is exemplified by our endeavor to advance professional education in the service of social justice, engaged with Chicago, the nation, and the world. To achieve this vision the School of Education

participates in the discovery, development, demonstration, and dissemination of professional knowledge and practice within a context of ethics, service to others, and social justice. We fulfill this mission by preparing professionals to serve as teachers, administrators, psychologists, and researchers; by conducting research on issues of professional practice and social justice; and by partnering with schools and community agencies to enhance life-long learning in the Chicago area.

Specifically grounded The Conceptual Framework: *Social Action through Education*, this module focuses on the individualized learning needs of diverse students in urban schools, emphasizing the role of the teacher in making educational decisions and advocating for students. Candidates must utilize current literature in bilingual, special, and literacy education to critically evaluate practices and apply knowledge and skills with diverse students.

Electronic Communication Policies and Guidelines

The School of Education faculty, students and staff respect each other's rights, privacy and access to electronic resources, services, and communications while in the pursuit of academic and professional growth, networking and research. All members of the university community are expected to demonstrate the highest standards of integrity, communication, and responsibility while accessing and utilizing technology, information resources, and computing facilities. A link to the Loyola University Chicago and School of Education official policies and guidelines can be found at:

http://www.luc.edu/media/lucedu/education/pdfs/SOE_Cyberbullying_Policy.pdf

LiveText and Sakai

Candidates will be responsible for regularly accessing their Sakai accounts at <http://sakai.luc.edu>. Sakai will be used to post the syllabus, course documents, and other relevant information. Candidates will also be responsible for activating their LiveText accounts. Candidates **MUST** use their Loyola University Chicago email address with LiveText. This course requires the use of LiveText in order for candidates to submit all course assessments.

In the case study planning, implementation, analyses, and presentation with individual students, teacher candidates will utilize technology. Teacher candidates will use technology in order to collect (e.g. AimsWeb), record (e.g., digital voice recorder), analyze (e.g., research coding software), and share assessment data (e.g., Google site).

Diversity

By focusing on individual, diverse students in urban classrooms, this seminar addresses multiple perspectives on diversity, including but not limited to the diversity in students' backgrounds (i.e., culture, language, ability) and classroom and school contexts (e.g., bilingual education, instructional contexts for students with special needs).

Dialogue is expected to be open and honest while remaining respectful and appropriate at all times in order to foster deeper understanding of issues pertaining to diversity. Diversity will be defined to include issues of race, gender, religion, orientation, income, and abilities. As part of Loyola's commitment to social justice, issues of diversity will be discussed in relation to equity, sensitivity, and prosocial practices. In our class discussions and your writing, please adhere to the recommendations made by TASH regarding the use of "People First" language. If interested, an article outlining those recommendations will be provided to you by your instructor.

Technology

Students will use Microsoft Excel and SPSS to manipulate, represent and analyze data.

University Policies and Information

Syllabus Addendum Link: <http://luc.edu/education/syllabus-addendum/>

This link directs students to the following statements

- **Academic Honesty**
- **Accessibility**
- **Conceptual Framework**
- **EthicsLine Reporting Hotline**
- **Electronic Communication Policies and Guidelines**