

**MISSISSIPPI STATE UNIVERSITY
COLLEGE OF EDUCATION**

**DEPARTMENT of LEADERSHIP & FOUNDATIONS
COURSE SYLLABUS**

Course Prefix and Number: EDL 8433

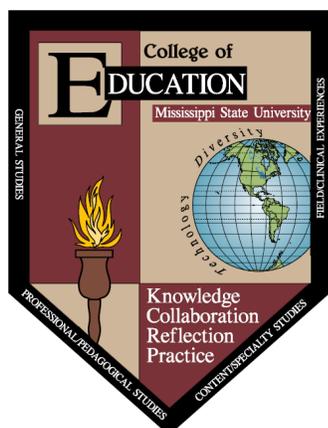
Course Title: Using Data for School Improvement

Credit hours: Three (3) semester hours

Type of course: Lecture

Catalog description: The course focuses on using data as a tool to enhance decision-making processes for comprehensive school reform and improvement.

College of Education Conceptual Framework:



The faculty in the College of Education at Mississippi State University are committed to assuring the success of students and graduates by providing superior learning opportunities that are continually improved as society, schools, and technology change. The organizing theme for the conceptual framework for the College of Education at Mississippi State University is educational professionals - dedicated to continual improvement of all students' educational experiences. The beliefs that guide program development are as follows:

1. **KNOWLEDGE** - Educational professionals must have a deep understanding of the organizing concepts, processes, and attitudes that comprise their chosen disciplinary knowledge base, the pedagogical knowledge base, and the pedagogical content knowledge base. They must also know how to complement these knowledge bases with the

appropriate use of technology.

2. **COLLABORATION** - Educational professionals must continually seek opportunities to work together, learn from one another, forge partnerships, and assume positions of responsibility.

3. **REFLECTION** - Educational professionals must be willing to assess their own strengths and weaknesses through reflection. They must also possess the skills, behaviors, and attitudes necessary to learn, change, and grow as life-long learners.

4. **PRACTICE** - Educational professionals must have a rich repertoire of research-based strategies for instruction, assessment, and the use of technologies. They must be able to focus that array of skills on promoting authentic learning by all students or clients, while exhibiting an appreciation and commitment to the value and role of diversity.

Course Outcomes and Standards Alignment:

To successfully complete the course, students are expected to achieve the following outcomes that are linked to the Educational Leadership Constituent Council (ELCC) Standards developed

by the National Policy Board of Educational Administration. Further, outcomes link to indicators in the College Framework of Program Outcomes (CFPO) document at Mississippi State University. All course assessments are linked by a crosswalk to the learner outcomes, ELCC standards, and CFPO. Although numerous ELCC elements are addressed in the course objectives, three specific ELCC elements (ELCC 1.1, 1.2, and 4.2) are assessed for the purpose of providing student performance data for NCATE review.

Course Goal/ Learner Outcomes Candidates will:	Relationship to ELCC	Relationship to CFPO
Demonstrate knowledge of varied historical, ethical, social, and economic data impacting decisions concerning students and their learning.	ELCC 6.1 Understand the larger context	CFPO 1 Professionalism CFPO 3 Knowledge CFPO 14 Issues Trends
Demonstrate understanding of the importance of data management as a function of leadership for school improvement and school accountability.	ELCC 3.1 Manage the organization ELCC 5.1 Acts with integrity ELCC 5.3 Acts ethically	CFPO 1 Professionalism CFPO 3 Knowledge CFPO 14 Issues Trends
Apply a collaborative inquiry approach to using data to improve learning for all students.	ELCC 2.3 Apply best practices to student learning	CFPO 1 Professionalism CFPO 3 Knowledge CFPO 14 Issues Trends
Apply various protocols for data analysis that include improvement of teaching and learning and curriculum review.	ELCC 2.3 Apply best practices to student learning	CFPO 1 Professionalism CFPO 3 Knowledge CFPO 14 Issues Trends
Evaluate programs and interventions, examine outcomes, and assess policies and practices.	ELCC 2.3 Apply best practices to student learning	CFPO 1 Professionalism CFPO 3 Knowledge CFPO 14 Issues Trends
Demonstrate comprehensive knowledge of assessment approaches and application.	ELCC 3.1 Manage the organization	CFPO 1 Professionalism CFPO 3 Knowledge CFPO 14 Issues Trends
Use tools to identify, collect, and analyze data measures and intersections.	ELCC 3.1 Manage the organization ELCC 3.2 Manage operations ELCC 3.3 Manage resources	CFPO 1 Professionalism CFPO 3 Knowledge CFPO 14 Issues Trends
Review and synthesize the existing research- based literature on data-driven practices for school improvement.	ELCC 1.2 Articulate vision	CFPO 1 Professionalism CFPO 3 Knowledge CFPO 14 Issues Trends
Apply protocols for monitoring, communicating, and reporting data results.	ELCC 3.1 Manage the organization ELCC 5.1 Acts with integrity ELCC 5.3 Acts ethically	CFPO 1 Professionalism CFPO 3 Knowledge CFPO 14 Issues Trends
Plan, organize, and facilitate professional development on data driven instruction.	ELCC 3.1 Manage the organization ELCC 5.1 Acts with integrity ELCC 5.3 Acts ethically	CFPO 1 Professionalism CFPO 3 Knowledge CFPO 14 Issues Trends

Topics Covered in the Course:

Content Areas and Subtopics	Duration	Assignments
Introduction to Using Data for School Improvement <ul style="list-style-type: none"> • Overview of course expectations and requirements • Overview of using data for student learning and school improvement • The importance of data--extant literature • Barriers to using data (Bernhardt) • Getting Started with data analysis (Bernhardt) 	3 Hours	Read all assigned class materials Assignment #1: Submit a one-page summary of an article focused on the importance of using data for school improvement and/or accountability
What Data Are Important-Levels of Data Analysis <ul style="list-style-type: none"> • Snapshots of measures • Measures, over time • Two or more variables within measures • Two or more variables within one type of measure, over time • intersection of two types of measures • intersection of two measures, over time • intersection of three measures • intersection of three measures, over time • intersection of four measures • intersection of all four measures, over time 	4 Hours	Read all assigned materials. Discuss and study measures and intersections of measures to explore using data. Assignment #2: interviews about what data are used and what data are perceived as important.
Using Demographics Data <ul style="list-style-type: none"> • How to analyze demographic information • Disaggregation 	3 Hours	Read all assigned materials. Explore demographics at a school using data. Assignment #3 Part A: Provide analysis of demographic data for a school.
Perceptions Data <ul style="list-style-type: none"> • Changing perceptions • Assessing perceptions • Designing questionnaires/opinionnaires • Data collection consideration 	3 Hours	Read all assigned materials. Explore a perception problem at a school using data. Assignment #3 Part B: Provide an analysis of perception data from a school
Student Learning	4 Hours	Read all assigned materials.

<ul style="list-style-type: none"> • Ways to measure student learning • Grades • Analyzing the results, descriptively • Analyzing the results, inferentially • Measurement error • Looking student learning measures • Common testing terms 		Explore the student learning problem at a school using data. Assignment #3 Part C: Provide an analysis of student learning data for a school.
<p>School Processes</p> <ul style="list-style-type: none"> • School level processes • School and classroom level processes working together • Chatting school processes • Assessing school processes 	3 Hours	Read all assigned materials. Explore school processes at a school using data. Assignment #3 Part D: Provide an analysis of school processes data for a school.
<p>Interactions and Analyses of Data</p> <ul style="list-style-type: none"> • Problem-solving cycle • Traditional analysis 	3 Hours	Read all assigned materials. In-class Assignment: Complete problem solving analysis using classroom data (use template).
<p>Building Assessment Literacy</p> <ul style="list-style-type: none"> • Principles for interpreting assessment results • Key assessment issues • Different ways of reporting performance • Measuring Improvement • Strategies of Interpreting Data 	3 Hours	Read all assigned materials. Assignment #4: Develop a list of 5 research-based data-driven classroom assessment best practices.
<p>Building a High Performing Data Culture</p> <ul style="list-style-type: none"> • Building the bridge between data and results • Leadership and capacity • Building collaborative teams • Using data frequently • Focusing on instructional improvement • Nurturing a collaborative culture based on commitment and trust 	2 Hours	Read all assigned materials. Assignment #5: Submit a one-page summary of an article focused on ways using data for planning and decision-making contribute to building a high performing culture of learning.
<p>Organizing for Collaborative Work</p> <ul style="list-style-type: none"> • A model for collaborative inquiry • Activating and engaging 	3 Hours	Read all assigned materials. In-Class Assignment: Participate in collaborative inquiry approaches to using data.

<ul style="list-style-type: none"> • Exploring and discovering • Organizing and integrating • Data-driven learning 		
<p>Tools for Data Teams</p> <ul style="list-style-type: none"> • Managing decisions • Patterns for participation • Grouping strategies • Use of space 	3 Hours	Read all assigned materials. Assignment #6: Select a model/strategy/tool to lead collaborative inquiry for using data and prepare a professional development activity agenda.
<p>Connecting Data to School Improvement</p> <ul style="list-style-type: none"> • Developing an action plan • Communicate the action plan clearly • Integrate the action plan into ongoing school work • Adapt professional development plans to meet action plan 	5 Hours	Read all assigned materials. Assignment #9: Action Plan and Vision Project- Develop an action plan based on school wide data for school improvement. The plan should address the vision for what you and others at your school want your school to look like (see template). Used for ELCC Assessment #3A.
<p>Communicating the Results</p> <ul style="list-style-type: none"> • Communication strategies • Different types of graphs • Data walls • Explaining questionable results • Interpreting test results explaining demographic results • Reporting the big picture 	3 Hours	Read all assigned materials. Assignment #7: Develop an for a data wall (Poster format with visual display).
<p>The Need for a Data Warehouse</p> <ul style="list-style-type: none"> • Databases and data warehouses • Selecting a data warehouse • Planning for a data warehouse • Determine what data exists • Determine desired data • Determine who is going to do the work • Issues and recommendations for setting up the data warehouse 	3 Hours	Read all assigned materials. Assignment #8; Develop a plan for a data warehouse for a school (See template).
Total	45 Hours	

Required Texts:

Bernhardt, V. L. (2004). *Data analysis for continuous school improvement*. Larchmont, NY: Eye on Education, Inc.

Boudett, K. P. City, E. A., Murnane, R. J. (2010). *Data wise*. Cambridge, MA: Harvard Education Press.

Wellman, B., & Lipton, L. (2008). *Data-driven dialogue: A facilitator's guide to collaborative inquiry*. Shennan, CT: Mira Via.

Love, N. (2009). *Using data to improve learning for all: A collaborative inquiry approach*. Cambridge, MA: Corwin Press.

Secondary Text:

Bernhardt, V. L. (2005). *Using data to improve student learning in elementary schools*. Larchmont, NY: Eye on Education, Inc.

Bernhardt, V. L. (2005). *Using data to improve student learning in high schools*. Larchmont, NY: Eye on Education, Inc.

Bambrick-Santoyo, P. (2010). *Driven by data: A practical guide to improve instruction*. San Francisco, CA: John Wiley and Sons.

Methods of Instruction:

A variety of instructional methods will be used to provide students with meaningful learning experiences. Some of these include team problem solving activities, case-studies, simulations, self-analysis, independent literature reviews, and lectures. Reading assignments will be made in an effort to help students prepare for class discussions.

Suggested Student Activities:

- Participate regularly in class/online discussions as a member of a student learning team to complete team assignments on various topics being addressed in the course.
- Read, reflect, and summarize research-based strategies addressing course topics.
- Analyze and prepare summary sheets with visualizations of data for a classroom, school, and district.
- Engage in a meeting activity that promotes the use of data to inform instruction.
- Develop a monitoring plan for student, classroom, and school improvement.
- Analyze district, school, and classroom achievement data needs to construct improvement plans.
- Review demographic data to make informed decisions on diversity education and cross cultural academic achievement.
- Create a collection of presentation formats for sharing a broad range of student data, including data walls and reports.
- Apply strategies in which student achievement data can be discussed with colleagues.
- Compare and contrast test results to state standards and develop classroom instructional materials/assessments based on those comparisons.
- Create a resource of data sets that can inform and support school leadership decisions.
- Develop an agenda for professional development utilizing collaborative inquiry.

- Participate in team assignments using collaborative inquiry approaches.
- Use curriculum-based assessments to monitor student progress.
- Using recent AYP subgroup student performance data, develop a plan of action designed to improve student achievement for each AYP subgroup in reading, math, or science at a grade level to ensure adequate student progress. Specify conditions and leadership actions which will facilitate plan implementation and acceptance.
- Develop a plan for assessing and indicating needs for a data warehouse.

Mississippi State University Honor Code:

"As a Mississippi State University student I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do." Please see <http://students.msstate.edu/honorcode/> for more information.

Technology:

Students are expected to make regular use of technology for accessing class materials, activities, and assessments. Word processing, use of PowerPoint, spreadsheets, graphs, charts, posters, and e-mails are essential skills students will utilize. Students are required to use Blackboard and Task Stream.

Diversity:

Diversity will be addressed in readings and course activities. As students complete activities, they are oriented to the cognitive level and learning styles of all students.

Disability:

Reasonable accommodations will be provided to any student who demonstrates, through appropriate documentation, a qualified disability. Please contact the professor for more information.

Assignments (Assessments and Field Components):

1. **Assignment #1 (10 Points):** Conduct a literature search for articles focused on the importance of using data for school improvement and/or accountability. Review, reflect, synthesize, and write a one-page summary/analysis of a selected article. The one-page summary should include the citation (APA format and style), background, purpose, key points, conclusions, recommendations, and implications for practicing school administrators. (ELCC 3.2, 3.3; CFPO 3, 6, 7, 8, 10, 13, 14)
2. **Assignment #2 (Field Component) (10 Points):** Interview a building-level administrator (principal or assistant principal), member of the school improvement team, and two randomly selected classroom teachers about what data are important and how data are used in the decision-making process for school improvement. Summarize your findings in a table format. Please use the interview protocol and template provided by the instructor for completing the summary of your findings. (ELCC 3.1, 5.1, 5.3)
3. **Assignment #3 (Field Component) (10 points):** Prepare a visual presentation that highlights key demographic data, perceptual data, at least two types of student learning data, and school process data (i.e., attendance data, teacher turnover data, drop-out, suspension/discipline data). Write a narrative that gives explanatory text for each. (ELCC

1.5, 2.3, 3.1, 3.3, 4.1, 4.2,5.1, 5.2, 5.3)

4. **Assignment #4 (10 Points):** Conduct a literature search for articles/materials focused on the research-based data-driven classroom/school learning/assessment best practices. Review, reflect, synthesize, and develop a list of 5 research-based data driven classroom/school learning/assessment best practices. (ELCC 3.1)
5. **Assessment #5 (10 Points):** Conduct a literature search for research-based articles/materials focused on how data-driven planning and decision-making contribute to building a high performing culture of learning. Review, reflect, synthesize, and write a one-page summary/analysis of a selected article. The one-page summary should include the citation (APA format and style), background, purpose, key points, conclusions, recommendations, and implications for practicing school administrators. (ELCC 1.2)
6. **Assignment #6 (Field Component) (10 Points):** Select a model/strategy/tool to lead collaborative inquiry for using data for school improvement. Prepare a professional development activity agenda that can be accomplished in one-hour. Please use the template provided by the instructor. (ELCC 2.3, 2.4)
7. **Assignment #7 (Field Component) (10 Points):** One of the most powerful techniques educators and school leaders can use to improve decision making in the classroom, school, and district is the "data wall." Develop a poster size entry (at least 36" x 36") for a data wall utilizing data for a classroom or school. The data wall entry should allow for monitoring student learning/school improvement. Please use the poster template provided by the instructor. (ELCC 3.1, 3.2, 3.3, 4.1, 4.2, 4.3)
8. **Assignment #8 (Field Component) (10 Points):** Based on what you have learned in the course and availability of data at your school, develop a plan for a data warehouse. Assess where your school is on access to data and determine what data are needed in order to contribute to student learning/school improvement as well as communicate with parents and community. Please use the template provided by your instructor. (ELCC 2.3, 3.1, 5.1, 5.3)
9. **Assignment #9: Action Plan and Vision Project/ ELCC ASSESSMENT #3A (Field Component) (10 Points):** Develop a school improvement action plan based on school wide data that addresses school vision and community interests. Using recent AYP subgroup student performance data, develop a plan of action designed to improve student achievement for AYP subgroups in either literacy/reading or mathematics. Specify conditions and leadership actions which will facilitate plan implementation and acceptance. The plan should address at least two goals for the vision for what you and others at your school want your school to look like to address: ELCC 1.1 Develop Vision, 1.2 Articulate Vision, 4.2 Respond to Community Interests. (ELCC 1.1, 1.2, 4.2)
10. **Class participation and quizzes (10 Points)**

Suggested Evaluation of Student Progress:

Rubrics will be used for grading. The final grade for the course is on a 100-point scale as follows:

A = 90-100

B = 80-89

C = 70-79

D = 60-69

F = Below 60

Bibliography:

- Bambrick-Santoyo, P. (2010). *Driven by data: A practical guide to improve instruction*. San Francisco, CA: John Wiley and Sons.
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- Boudett, K. P., & Steele, J. L. (2007). *Data wise in action: Stories of schools using data to improve teaching and learning*. Cambridge, MA: Harvard Education Press.
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- Danielson, C. (2002). *Enhancing student achievement: A framework for school improvement*. Alexandria, VA: Association of Supervision and Curriculum Development.
- Fullan, M. (2001). *Leading in a culture of change*. San Francisco, CA: Jossey-Bass.
- Holcomb, E. L. (1999). *Getting excited about data how to combine people passion and proof*. Thousand Oaks, CA: Corwin Press.
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- Noyce, P., Perda, D., & Traver, R. (2000). Creating data-driven schools. *Educational Leadership*, 57, 52-56. Ed Leadership. Alexandria, VA: Association of Supervision and Curriculum Development.
- Schmoker, M. (1999). *Results: The key to continuous improvement*, 2nd Edition. Alexandria, VA: Association of Supervision and Curriculum Development.

- Schmoker, M. (2003). *First things first: Demystifying data analysis. Education Leadership.* Alexandria, VA: Association of Supervision and Curriculum Development.
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- Wellman, B., & Lipton, L. (2008). *Data-driven dialogue: A facilitator's guide to collaborative inquiry.* Sherman, CT: Mira Via.
- White, S. (2005). *Show me the proof Tools and strategies to make data work for you.* Englewood, CO: Advanced Learning Press.