Data-Driven Instruction
Online Graduate Course

Course Description:

Data Driven Instruction is designed for K-12 educators seeking to strengthen instructional decision-making through the effective use of student data. Participants will examine the data-driven decision-making cycle and learn how to analyze multiple sources of data to identify trends, target learning gaps, and adjust instruction to meet student needs. Educators will explore data-informed instructional strategies, including purposeful grouping, progress monitoring, and the use of technology to support analysis and implementation. Emphasis is placed on translating data into actionable instructional plans that support student engagement and achievement. By the end of the course, participants will be prepared to use data confidently and responsibly to guide instructional practices and improve learning outcomes.

Data-driven instruction is essential to effective teaching and continuous improvement in student learning. Educators are increasingly expected to analyze student performance data to inform instructional planning, differentiate instruction, and monitor student progress toward learning goals. This course provides teachers with the knowledge and skills necessary to interpret multiple forms of student data and use that information to make instructional decisions.

Objectives:

- Articulate the core principles of data-driven instruction and its impact on student achievement.
- Analyze multiple forms of student data (formative, interim, and summative assessments) to identify trends, strengths, and gaps in learning.
- Develop and implement effective assessment strategies aligned to learning standards.
- Use data to set specific, measurable, and attainable student learning goals.
- Create targeted action plans to address identified student needs and improve instructional outcomes.
- Apply strategies for reteaching and differentiation based on data analysis.
- Collaborate with colleagues in data-driven discussions to improve instructional practices.
- Monitor and evaluate the effectiveness of instructional adjustments using ongoing data collection.
- Utilize data tools and technology to organize, visualize, and interpret student performance data.
- Reflect on instructional practices and make continuous improvements based on evidence of student learning.

Curriculum Design:

Data-Driven Instruction is a sixty-hour, three credit graduate level course completed over a thirteen-week period. During the first week of the course, the participants will complete an introduction.

Modules 1 through 9 will be completed one per week. Module ten will be completed over a two-week period, so students will have time to revise and complete the final integration project.

Hardware & Computer Skills Requirements:

Students may either use Apple or Windows PC. Students should possess basic word processing skills and have internet access with an active email account. Students are also expected to have basic knowledge of how to use a Web browser, such as Safari, Firefox, Google Chrome, etc.

Course Materials:

The required textbook for this course is Driven by Data 2.0 - A Practical Guide to Improve Instruction, by Paul Bambrick - Santoyo. Using this text, educators will develop a deeper understanding of how to effectively use data to inform instructional decisions and improve student outcomes.

Module Outline

Module 1 - Introduction to Data-Driven Instruction

Objectives:

- Define data-driven instruction
- Understand its impact on student achievement
- Identify types of educational data

Module 2 - Types of Data and Their Uses

Objectives:

- Differentiate between formative, interim, and summative assessments
- Evaluate strengths and limitations

Module 3 - Creating Effective Assessments

Objectives:

- Design standards-aligned assessments
- Ensure validity of assessments

Module 4 - Analyzing Student Data

Objectives:

- Identify trends and patterns
- Interpret student performance data

Module 5 - Root Cause Analysis

Objectives:

- Identify causes of student errors
- Distinguish types of learning gaps

Module 6 - Action Planning and Instructional Adjustment

Objectives:

- Develop targeted instructional plans
- Use data to guide decisions

Module 7 - Reteaching and Differentiation

Objectives:

- Implement reteaching strategies
- Differentiate instruction

Module 8 - Using "Small Data" and Student Voice

Objectives:

- Understand qualitative data
- Incorporate student voice

Module 9 - Building a Data-Driven Classroom Culture

Objectives:

- Promote student ownership
- Build a positive data culture

Module 10 - Collaboration and Data Meetings

Objectives:

- Engage in collaborative data discussions
- Use structured protocols

Student Requirements:

1. Active Participation - Students are expected to actively participate in all module discussions by responding to the weekly talking point and engaging with peers in a thoughtful and professional manner.
2. Timely Submission of Assignments - All module reflections and assignments must be submitted by the designated due date. Late submissions may result in reduced credit unless prior arrangements are made.
3. Completion of Readings and Resources - Students are required to complete assigned chapters from *Driven by Data 2.0* and all supplemental articles/videos in order to meaningfully engage in discussions and assignments.
4. Application to Practice - Students should consistently connect course concepts to their own classroom or professional context, using real or realistic examples whenever possible.
5. Reflection and Growth Mindset - Written reflections should demonstrate thoughtful analysis, openness to new strategies, and a willingness to refine instructional practices.
6. Academic Integrity - All submitted work must be original. Any outside sources must be properly cited.
7. Final Project Completion - Successful completion of the course requires submission of the final project.

Course Evaluation:

- Modules 1-10 = 20 points each (200 total)
  - Talking point = 5 points
  - Assignment/Reflection = 15 points
- Final Project = 100 points
- Total = 300 Points

280 - 300 points = A
255 - 279 points = B
231 - 254 points = C

Student Academic Integrity:

Participants guarantee that all academic classwork is original. Any academic dishonesty or plagiarism (to take ideas, writings, etc. from another and offer them as one's own), is a violation of student academic behavior standards as outlined by our partnering colleges and universities and is subject to academic disciplinary action.