Idaho State University | Albion Center for Professional Development

Supporting Multilingual Learners in Mathematics

Course Syllabus

Course Description

Welcome to "Supporting Multilingual Learners in Mathematics," a dynamic course designed for educators committed to providing equitable math instruction for all classroom learners. Mathematical proficiency requires students to be conceptually and procedurally fluent. The standards call for students to make sense of mathematical concepts through oral and written language. This course will address how to support multilingual learners by first learning how the brain acquires a second language and connecting that research to practices and instructional strategies that foster deep mathematical understanding and sense-making.

This course enhances classroom teaching effectiveness and supports improved student outcomes by introducing new knowledge in supporting multilingual learners through research-based language acquisition strategies and mathematical language routines.

Course Objectives

At the end of this course you should be able to:

1. Create a collective understanding of how the brain acquires a second language and what equity means for multilingual learners.
2. Review the CCSS Standards for Mathematical Practice (SMP) and the language required for proficiency.
3. Describe how the Standards for Mathematical Practice connect to the WIDA English Language Development (ELD) standards.
4. Review the design principles for promoting mathematical language development in order to examine the Math Language Routines (MLRs).
5. Examine MLR3: Critique, Correct, and Clarify, MLR4: Information Gap, and MLR5: Co-Craft Questions and Problems as strategies to deepen mathematical language and understanding.
6. Examine MLR6: Three Reads, MLR7: Compare and Connect, and MLR8: Discussion Supports as strategies to deepen mathematical language and understanding.
7. Synthesize and plan for the mathematical language routines within daily practice.
8. Identify ways to assess mathematical language learning.

Modules

- Module 1: Multilingual Learners, Quiz 1
- Module 2: 21st Century Mathematics, Quiz 2
- Module 3: Language Functions and Features of Mathematics, Quiz 3
- Module 4: Mathematical Language Development Principles and Introduction to the Math Language Routines, Quiz 4

- Module 5: Math Language Routines Deep Dive Part 1, Quiz 5
- Module 6: Math Language Routines Deep Dive Part 2, Quiz 6
- Module 7: Putting Learning into Practice, Quiz 7
- Module 8: Assessing for Learning, Quiz 8

Grading

Each quiz must be passed at an 80% or higher (three attempts allowed).

Format

This is a self-paced, asynchronous (no required live meetings) course. Throughout the PD course, you will find it helpful to take notes along the way to assist with the quizzes. Within each module, you will find reflection assessments that are not graded but will help in your journey through the course. There is an interactive forum in the course to help you connect with peers and instructors, share ideas, and collaborate on best practices throughout your learning journey.