
DATA COLLECTION

Qualitative Measures: Factors that facilitate or impede the implementation, effectiveness, and sustainability of the interventions will be investigated through:

1. Interviews (principals, intervention teachers, parents)
2. Surveys (intervention teachers, university scientists)
3. Teacher portfolios
4. Field notes from classroom observations

Quantitative Measures:

1. Implementation fidelity measures taken six times throughout year using Transitional Bilingual Observation Protocol (TBOP) and Science Teacher Observation Record (STOR)
2. Student achievement measures focusing on science achievement, academic science vocabulary literacy, content area reading comprehension for ELLs using various instruments including, but not limited to:
 - WLPB-R
 - DIBELS
 - ITBS
 - TAKS



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Foundations of
Collaborative Research
Through A Longitudinal
Randomized Trial Study of
Middle School Science for
English Language Learners

Project MSSELL



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Project MSSELL

OBJECTIVE

To implement a rigorous, two-year randomized trial longitudinal evaluation of enhanced instructional science models for middle school students whose first language is Spanish with the hypothesis being a research-based model for improved science achievement and academic English proficiency.

RESEARCH QUESTIONS

1. How effective is the enhanced science program model in developing science achievement and academic English for non-English Language Learners, or for ELLs whose first language is Spanish?
2. Are there student, teacher, or home characteristics that predict academic success in the model in science achievement for non-ELLs or for ELLs whose first language is Spanish?
3. Do student characteristics interact with program type (experimental or typical), and/or teacher characteristics to predict academic success in the science model for non-ELLs or for ELLs whose first language is Spanish?

RESEARCH DESIGN

	Science Enhanced Program (SEP)	Science Typical Program (STP)
English Language Learners (ELLs)	2 teachers, 4 classes, 100 students	2 teachers, 4 classes, 100 students
Non-ELLs	2 teachers, 4 classes, 100 students	2 teachers, 4 classes, 100 students

Figure 1. Project MSSELL Research Design.

INTERVENTION MODEL

Project MSSELL will test an enhanced aligned state and national standards-based science curriculum model that includes English language acquisition strategies integrated into the science curriculum in a planned, decisive manner. The MSSELL model (see Figure 2) includes a strong university partnership and support to provide two levels and three tiers of intervention into the science classroom.

Level 1: Teacher Level Professional Development

Level 2: Student Level Instructional Intervention

- Tier I. District English curriculum in all content areas except science
- Tier II. Academic in-class science intervention components
- Tier III. Additional tutorials provided by trained paraprofessionals for lowest achieving students

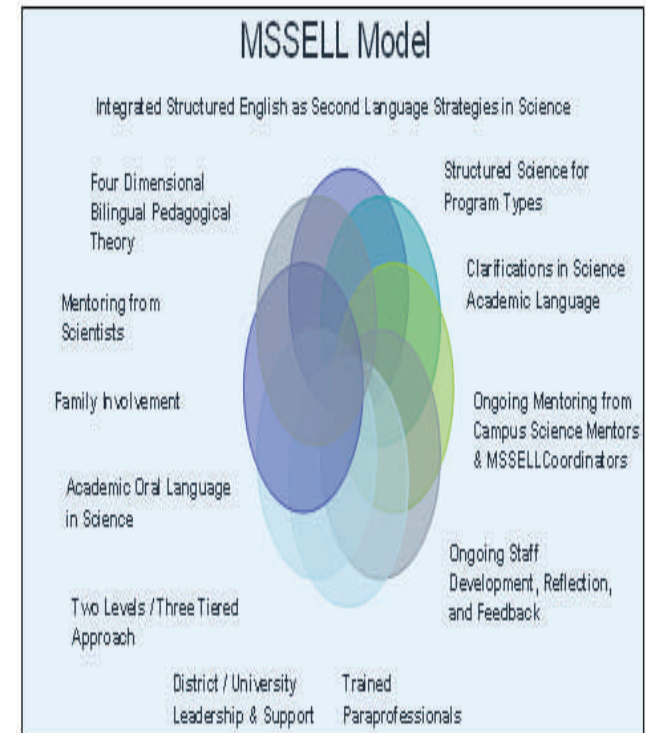


Figure 2. Project MSSELL Intervention Model.