## Modification for Professional Development of Multilingual Learner Instruction

**Poster Abstract:** In this multi-year study, we analyzed how design-based research can be utilized to design more responsive professional development for teachers of multilingual students. The study was conducted in a 100% online, asynchronous master's level program at a research university in the Southeast United States. We describe mixed methods of data collection and analysis from a first cohort of 30 teachers, K-12. To reach the study goal of designing more responsive professional development, the intervention enacted was multilayered and included two implemented essential elements: (1) Provide teachers with evidence-based practices of instruction in professional development, and (2) Assess self-efficacy for both multilingual students and teachers. This presentation addresses the following research question: How can design-based research be enacted to meet teacher needs for multilingual learners? Findings illustrate the modifications made between years one and two of the study based on the inhibiting, enhancing factors, and unanticipated outcomes and conclude on how these factors informed the modifications. Actions were taken to design and include a writing module and a small group instruction module to include in the orientation course for teachers, to create and deliver synthesized district resources available, and to develop a module introducing digital tools that can be used in class with multilingual learners. These targeted modifications were made following initial needs assessment, teachers' feedback, and per semester survey results and suggest local, pedagogical actions taken to realize professional development designed to follow social cognitive and dual-capacity building theories.

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**Theoretical framework:** This study is informed by the Dual Capacity Building framework (DCBF) (Mapp & Kuttner, 2013), a model for refining education systems by taking a holistic approach to educational improvement. DCBF recognizes that changes in one area (e.g., professional development, teaching) can positively impact other areas (e.g., student learning and self-efficacy). We use DCBF in tandem with social cognitive theory, specifically looking at the impact of modifications on teacher and student self-efficacy.

**Method:** We used design based research (DBR), an interdisciplinary team approach to reach our goal of designing more responsive professional development for teachers of multilingual students. To study interventions, DBR looks iteratively and retrospectively (Gravemeijer & Cobb, 2006) at enhancing and inhibiting factors, modifications made, progress toward the goal, and unexpected outcomes (Reinking & Bradley, 2008).

**Research question:**How can design-based research be enacted to meet teacher needs for multilingual learners?

**Participants:** 30 in-service teachers in an online MEd program for ESOL and literacy certification.

**Setting:** Modifications made between years one and two of a 100% online, asynchronous masters' level program pursued by a cohort of in-service teachers.

**Data Collection and Analysis:** Mixed methods of data collection specific to DBR (Reinking & Bradley, 2008) inclusive of teacher surveys, teacher interviews, instruction logs, course assessment trackers, student surveys, district surveys, and a research log. Grounded theory and constant comparison methods (Charmaz, 2014; Glaser, 1965) and more holistic, retrospective analysis (Gravemeijer & Cobb, 2006) each semester.

**Results:** Table 1 Summarizes modifications made between Years Two and One of the project as a result of enhancing and inhibiting factors.

Enhancing Factors	Inhibiting Factors	Resulting Modifications
	Digital tools use with MLs	<ol> <li>Module on digital tools and spotlighted teachers using exemplar use of technology</li> <li>Flexibility in digital tool choice in the practicum course</li> </ol>
	Current ESOL teachers and coordinators and prospective ESOL teachers in the district not interacting and teachers unaware of ESOL resources in district	<ol> <li>Resource page with district ESOL resources</li> <li>ESOL teacher spotlights</li> <li>Required interaction with district ESOL teachers in the practicum course in the MEd program</li> </ol>
	Teachers need PD on how to communicate and engage with caregivers.	1. A resource page with ways to reach and involve MLs caregivers in school life more to be shared on the grant website.
	A place for teachers to communicate	1.An introduction page for the teachers where they shared contact details and professional background
Teachers are motivated to become ESOL instructors		1. Spotlights for ESOL instructors in the district
Needs assessment revealed strengths and weaknesses of teachers with WWC principles.		<ol> <li>A writing module for the orientation course</li> <li>A small group writing module</li> </ol>
	Need from instructor feedback and teacher suggestions for caregivers for more focus on diversity, equity, and inclusion (DEI)	1. Creation of DEI module for participants

**Discussion:** Teachers reporting positive gains in confidence of caregiver suggestions and knowledge, self-efficacy, and implementation ratings on all items.