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for English Language Education

Researcher
Lana Zeaiter
McGill University

Title of Project
Building Bridges: A Holistic and Non-Linear
Framework for Training Language Teachers in
Technology-Mediated Plurilingual Pedagogies

Research Supervisor
Prof. Angelica Galante
McGill University

TIRF Research Topic Investigated
Plurilingualism in Business, Industry, the Professions, and Educational Contexts

Bio
Lana F. Zeaiter holds a PhD in Educational Studies at McGill University, Canada. With over a decade of experience teaching English and French as additional and foreign languages, her Ph.D. research employs innovative methodologies to explore the training of language teacher candidates in technology-mediated plurilingualism. You can find her full research profile on her academic website: www.lanazeaiter.ca.

Final Report

Motivation for the Research
Plurilingualism and digital technologies play a crucial role in supporting multilingual societies by allowing individuals to mobilize their full linguistic and cultural repertoires across educational, professional, and social domains (Cutler & Røyneland, 2018; Séror, 2022). In Canada, where English and French are official languages, nearly 23% of the population reports a first language other than these two, and over 200 languages are spoken (Statistics Canada, 2021). This linguistic diversity necessitates inclusive approaches in language education, particularly through plurilingual pedagogies that are supported by digital tools. However, despite growing research on the affordances of plurilingualism (Galante, 2022; Piccardo, 2017) and digital learning (Bahari, 2023; Ng, 2015), these domains are often explored in isolation. Moreover, teacher education programs continue to rely on linear models of professional development that overlook the complexities of teacher learning, such as institutional policies, classroom realities, and individual beliefs (Baird & Clark, 2018; Strom & Viesca, 2023). This fragmented landscape results in persistent challenges for language teachers, who often lack sustained and integrative training.

To address this gap, my dissertation proposed a holistic, non-linear framework for supporting technology-mediated plurilingual pedagogies in teacher education. Developed through three interrelated studies, the framework recognizes teacher learning as dynamic and context-dependent. The study investigated how French as a Second Language (FSL) teacher candidates

(TCs) perceive and enact the integration of digital technologies and plurilingualism in their practice, while identifying the individual, interpersonal, institutional, and societal influences shaping their development. While the study was situated in the FSL context, its implications extend well beyond. The findings are relevant for a wide range of teacher education settings, including TESL, TESOL, CELTA, and B.Ed. Programs, where plurilingual realities and digital expectations are increasingly present. The framework offers practical tools and strategies—such as context-sensitive uses of digital resources—that support teacher agency and adaptability.

Central to this research was a bottom-up approach that centres the voices and experiences of TCs. Rather than positioning them as passive recipients of policy or curriculum mandates, the study viewed them as active agents capable of shaping their own learning through reflection, collaboration, and contextualized experimentation (Setiawan, 2020; Macias, 2017). This perspective promotes more equitable and responsive teacher development, acknowledging real-world challenges while fostering innovation and inclusion in language education.

Overarching Objective

Although my dissertation was structured around three distinct studies, each with its own set of research questions, they collectively responded to one overarching objective: to develop a context-sensitive and integrative framework for preparing language teachers to implement technology-mediated plurilingual pedagogies. This doctoral dissertation deconstructs and reframes the dominant narrative of resistance in the literature, unfairly attributing teachers' reluctance to adopt technology-mediated plurilingual pedagogies primarily to individual skepticism or unwillingness. Achieving this objective required examining teacher learning from multiple angles — from the macro-level influences (such as institutional and societal structures) to the micro-level trajectories of individual TCs, as well as the digital tools and strategies they adopt in classrooms. This multi-layered approach reflected my commitment to ecological and rhizomatic understandings of teacher development, recognizing that professional learning is complex, adaptive, and situated in its context.

Research Methodology

This dissertation embraced a framework of methodological pluralism, recognizing that no single method is sufficient to capture the complexity and non-linearity of teacher learning. Rooted in ecological and rhizomatic perspectives, the research design accounted for the diverse, interconnected factors — from institutional norms to individual experiences — that shape how TCs engage with technology-mediated plurilingual pedagogies. The study followed a qualitative design, with three interrelated studies that examined teacher learning across multiple layers.

- **Study 1 – Identifying training strategies for language teachers:** This study highlighted the practical insights and recommendations from FSL TCs themselves about plurilingual pedagogical practices and digital technologies in FSL education. The objective of this study was to identify the strategies TCs found most effective during their training and the digital tools they selected to foster plurilingual instruction. It used four data collection instruments: a demographic questionnaire, FSL tasks designed by TC participants, individual reflections and individual semi-structured interviews. Data were analyzed using thematic analysis (Braun & Clarke, 2006), allowing for the identification of recurring patterns across

participants' practices and rationales. Coding focused on how tools were selected, recontextualized, and negotiated about plurilingual goals and contextual constraints.

- **Study 2 – Understanding TCs' perceptions:** The second study investigated TCs' perceived affordances and challenges of technology-mediated plurilingual pedagogies. Using an ecological model (Bronfenbrenner, 1979; Van Lier, 2010, 2011), the study examined how individual, interpersonal, institutional, and societal factors influence the integration of technology-mediated plurilingual pedagogies among TCs. The study employed five data collection instruments: demographic questionnaires, FSL tasks designed by participants, group audio-recorded peer feedback, individual reflections, and individual semi-structured interviews. Data were analyzed thematically, with a focus on the predefined categories of the ecological model (individual level, interpersonal level, institutional level, and societal level).

- **Study 3 – Exploring TCs' individual learning trajectories:** The third study examined how TCs develop the skills and knowledge needed for integrating technology-mediated plurilingual pedagogies, focusing on the unique, individual learning trajectories that shape their approach to teaching. Through a rhizomatic approach (Deleuze & Guattari, 1987), the objective of this study was to investigate how TCs navigate their individual learning trajectories by engaging with various interactions, decisions, and influences, both within and outside the teacher education program, to construct practice. It utilized four data collection instruments: demographic questionnaires, group audio-recorded peer feedback, individual reflections, and semi-structured individual interviews. Data were analyzed using rhizomatic analysis (Masny, 2016) and Strom's analytical framework (2014, 2015), employing an inductive approach that involved data-walking (Eakle, 2007), rhizomatic mapping (Deleuze & Guattari, 1987), and situational analysis (Clarke, 2003; Clarke, Washburn & Friese, 2022).

Summary of Findings

This dissertation challenged the dominant narrative of teacher resistance by demonstrating that teacher candidates (TCs) are not unwilling to adopt plurilingual and digital pedagogies, but are navigating complex, layered constraints with limited support. Synthesizing across three studies, three key insights emerged:

1. Teacher development as multidirectional and emergent: TCs' learning is shaped by both structured interconnections (ecological layers: individual, interpersonal, institutional, societal) and unpredictable, iterative processes (rhizomatic development). Institutional factors—such as monolingual ideologies or lack of training—often limit the adoption of innovative pedagogies. However, learning does not follow a fixed path: TCs engage in cycles of experimentation, reflection, and adaptation, developing practices that are highly contextual and nonlinear.

2. Experiential learning and supportive communities drive change: TCs' most significant growth occurred when they engaged in authentic, hands-on learning experiences within a supportive learning community. Peer collaboration, guided experimentation, and structured reflection enabled them to test, refine, and reframe their strategies for integrating plurilingualism and technology. The teacher educator (myself) served as both mentor and facilitator, assisting in translating theory into practical application. These communities provided safe spaces to innovate, fail, and grow—essential conditions for sustainable change.

3. Plurilingualism and digital tools work best together: Although often seen as separate areas, plurilingualism and digital technologies can support each other. TCs used tools like collaborative platforms, translation services, and multimedia resources not just for technology's sake, but to activate learners' full linguistic and cultural repertoires. Their classroom innovations demonstrated how digital tools can bring plurilingual principles to life—encouraging inclusivity, cultural awareness, and multimodal engagement.

Implications

Taken together, these findings support a nonlinear, integrated approach to teacher education— one that embraces complexity, prioritizes TCs' agency, and provides scaffolding for both practice and reflection. Instead of following fixed stages, this approach allows TCs to develop context-sensitive, adaptable practices that can endure across different teaching environments. The dissertation's findings challenge the common belief that teacher resistance is the main obstacle to implementing plurilingual pedagogies and digital technologies. Instead, they show that what is often seen as resistance actually results from systemic constraints and insufficient training. This insight underscores the need to rethink how teacher education programs are designed: they should move away from rigid, one-size-fits-all models and adopt flexible, iterative, and contextually driven strategies. Supporting teachers involves not only giving access to tools and theories but also providing sustained opportunities for experimentation, reflection, and collaboration within real-world learning communities. Crucially, the research indicates that plurilingualism and digital technologies are interconnected and mutually reinforcing; their integration should be regarded as a core teaching competency. In essence, preparing language teachers today means equipping them to navigate complexity—not by oversimplifying it, but by providing the support and space they need to respond meaningfully. This research addressed that need by presenting a practical, holistic framework that supports teacher learning as a complex, evolving process. The framework, rooted in real-world practice and teacher voices, empowers educators to confront challenges meaningfully and incorporate plurilingual and digital practices not as separate innovations but as essential, harmonious skills.

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