



Becoming a Mathematics Teacher: Tracing Teacher Identity Development Throughout an Initial Teacher Education Degree

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This paper reports on a qualitative case study that traced one preservice secondary mathematics teacher's identity development across three school-based placements during an initial teacher education program. Teacher professional identity is central to motivation, resilience, and commitment to the profession, yet remains vulnerable during the transition from student to teacher. Drawing on Self-Determination Theory (Ryan & Deci, 2017) and Three-Dimensional Space Narrative Structure (Clandinin & Connelly, 2000), the study investigated how autonomy, competence, and belonging were shaped through placement experiences. Regular semi-structured interviews throughout each placement facilitated narrative analysis.

The participant, Mei (pseudonym), entered her first placement feeling anxious and uncertain. Classroom management and language challenges were prominent in her early reflections. Supportive supervisors and collegial relationships offered reassurance and contributed to an emerging sense of belonging, while positive student interactions provided initial feelings of competence. By her second placement, Mei demonstrated greater self-efficacy and began experimenting with teaching strategies, though tensions remained between her own pedagogical preferences and those of her supervisor. Her final placement provided increased autonomy and responsibility, which enhanced confidence but also intensified stress as she confronted the realities of teachers' workloads. Across her trajectory, Mei's narratives reflected a gradual shift from seeking reassurance to greater independence, though she remained acutely aware classroom management and workload challenges.

Mei's story highlights the transformative role of school-based placements in shaping teacher identity. Placements can foster autonomy, belonging, and competence, and these elements shaped by supervisory support and school contexts. For international preservice teachers, cultural and linguistic factors add additional layers of complexity to identity formation. Importantly, Mei's experience demonstrates that even positive placements may leave new graduates questioning the sustainability of teaching as a long-term career. This emphasises the need for structured induction and continued professional learning to build upon gains made during initial teacher education. Sustained support is essential if we are to address mathematics teacher shortages and retention issues.

References

- Clandinin, D. J., & Connelly, F. M. (2000). *Narrative inquiry: Experience and story in qualitative research*. San Francisco: Jossey-Bass.
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications.

For more information, please refer to the following paper presented at the 47th Annual Conference of MERGA in July 2025.
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