Chapter 15
Multimodal Literacy and Creative Computing Badges in a Teacher Quality Partnership Residency Program:
Putting P–12 Students at the Center Right from the Start

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ABSTRACT

Introducing micro-credentialing into Lehman College's teacher residency program provides candidates with opportunities not afforded in Master's courses of study. Through the micro-credential offerings, residents learn to integrate literacy strategies and computational thinking across subject areas and grade levels. This chapter explores how micro-credentials validate non-credit "course" structures by linking content knowledge with pedagogy and theory with practice. The design and execution of both the micro-credentials described in the chapter make explicit connection between competencies and student learning.

INTRODUCTION

Lehman Urban Transformative Education—Science, Technology, Engineering, and Mathematics (LUTE-STEM) is a federally funded Teacher Quality Partnership residency program. Each year for four years (2020–2024), up to 25 master's degree candidates from diverse backgrounds who are committed to integrating computer science and computational thinking into their disciplines and work in high-need urban settings are selected for a paid residency. Residents work as co-teachers in one of five partner schools, complete a master's course of study, and qualify for a New York State teaching certificate after passing all required state assessments.

Introducing micro-credentialing into Lehman College's teacher residency program provides candidates with opportunities and proficiencies not afforded in their master's courses of study. Through micro-credential offerings, residents learn to integrate multimodal literacy strategies, computer science principles, and design thinking across subject areas and grade levels. This case study explores the ways that micro-credentials validate non-credit "course" structures by linking content knowledge with pedagogy and theory with practice. The design and execution of both micro-credentials described below make explicit the connections between competencies and student learning.

BACKGROUND

Teacher Residencies

Field-based teacher preparation grounded in the realities of practice is not new. What is relatively new is the notion of teacher residencies. Teacher residency programs emerged over the last decade with significant support provided by the United States Department of Education in the form of Teacher Quality Partnership grants. An audit of teacher residency programs in 2016 revealed that there were at least 50 teacher residency programs across the nation (Guha et al., 2016) What do teacher residencies have in common? Paull et al. (2021) developed an operational definition that covers three major categories: curriculum, structure, and collaboration. Curricula, often tailored specifically for residents, weave theory into practice, focus on research-based best practices, and foreground culturally responsive/sustaining pedagogy. Structurally, residents are co-teachers rather than teachers-of-record, work alongside experienced mentor teachers, and spend either half days or full days in their placements across an entire school year. District partners co-construct the residency experience with higher education institutions with the intent of preparing a diverse pool of candidates who are, according to the latest parlance, ready to teach on day one.

Despite the paucity of empirical research, there is evidence that residency models compare favorably to traditional teacher preparation programs. Teacher residency programs have been able to recruit a diverse pool of candidates (Azar et al., 2020). In addition, graduates of residency programs are more likely to stay the course in high-need schools (NCEE Evaluation Brief, 2014, 2015). However, it is unwise to generalize about the effectiveness of teacher residencies. In their introduction to the special issue on Urban Teacher Residencies in *Urban Education*, Hammerness et al. (2016) highlighted case studies from New York City and San Francisco that underscore the importance of contextualizing both the curriculum and structure of residencies.

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