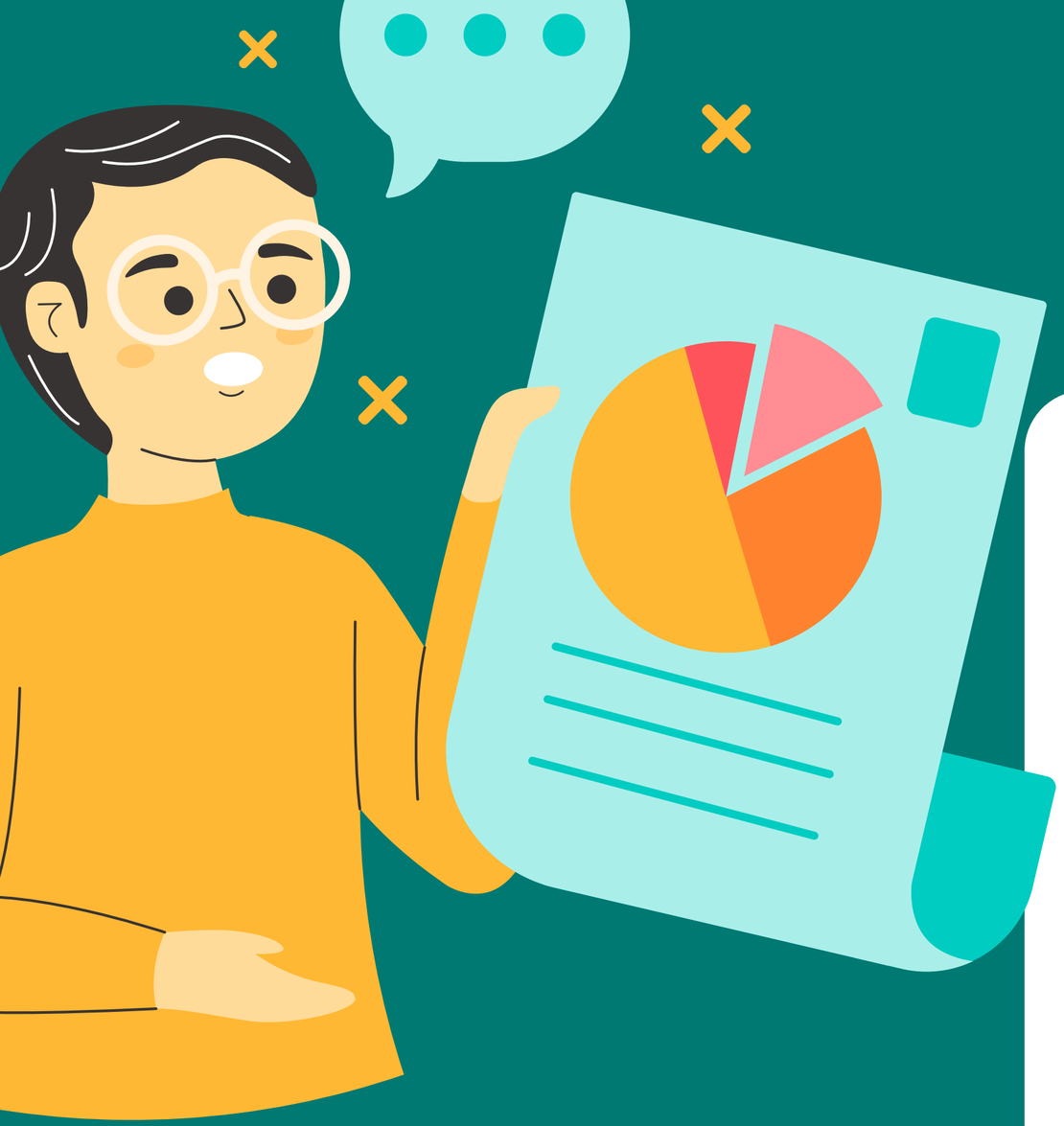

It’s Not Just “Doing Technology” in the Classroom:
Embedding Computational Thinking into the “Grammar of Schooling”

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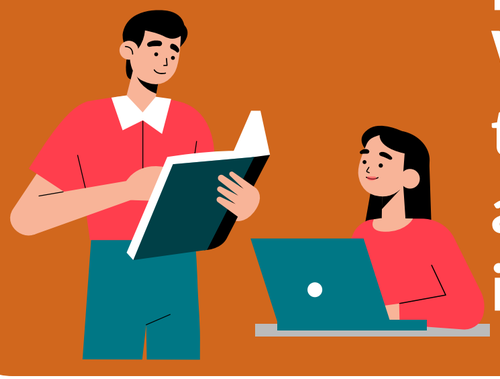
SUMMARY

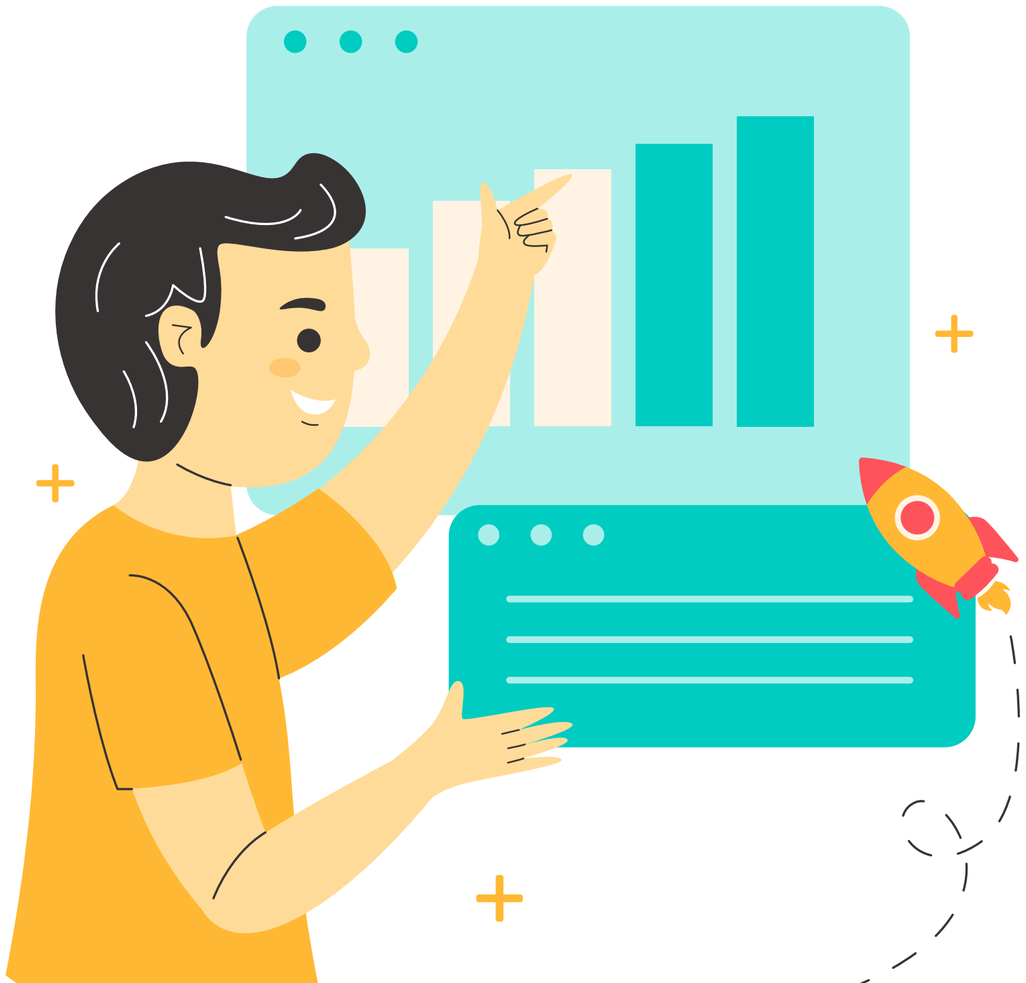
This research examines a paradigm shift in a postsecondary teacher education program that endeavors to advance a pedagogical reform in N-12 schools.

Since 2022, the Teacher Education faculty at our research site, a large public community college in New York City, has been a part of a Computer Integrated Teacher Education (CITE) program that embeds Computational Thinking (CT) into teacher preparation programs and courses.

We explore how this faculty feels about CITE training, their competence to integrate CT in their classrooms, and their perceptions about continuing to integrate CT in their courses.



RESEARCH QUESTIONS

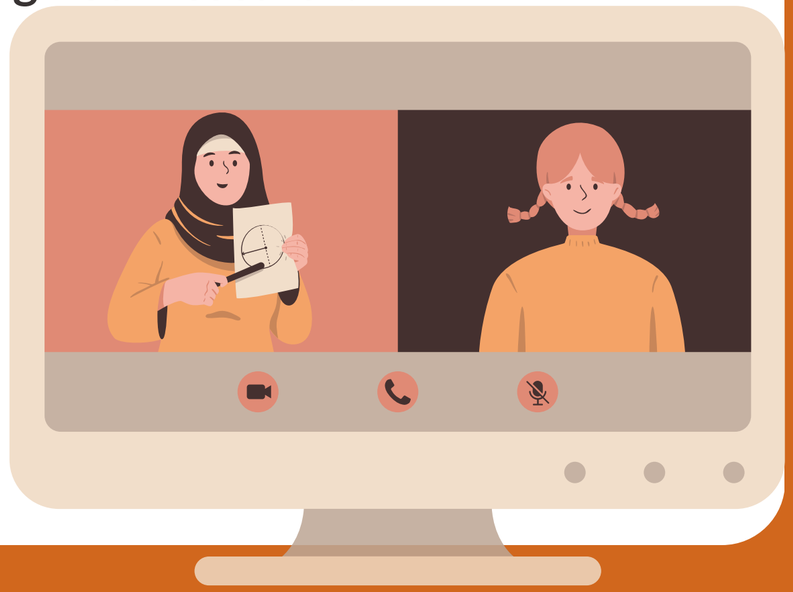


- How do you support a paradigm shift among teacher education faculty that enables a pedagogical change in the N-12 teaching workforce?
- How do the faculty feel about using computational thinking in their Teacher Education classrooms?
- After CITE training and incentives are done, will instructors at the BMCC Teacher Education programs feel competent to continue to use computational thinking strategies when designing and developing coursework?
- In what ways have teacher education faculty embedded a critical lens in their work with CITE?

RESEARCH

Prior scholarship has evaluated how pre-service teachers adopt CT strategies (Bal et al., 2022; Yadav et al., 2022) and how digital literacies shape N-12 student development (National Association for the Education of Young Children & Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College, 2012)

We lack research on the first step of the process outlined in Figure 1 in which college faculty integrate CT into their teaching. We aim to help fill this gap through our research.



Methods and Data Collection

- BMCC TED faculty (n=8) were gsthered to comple guided written reflections about their experiences, feelings, challenges, and the changes to their own perceptions and teaching practices when integrating CT into their course content.
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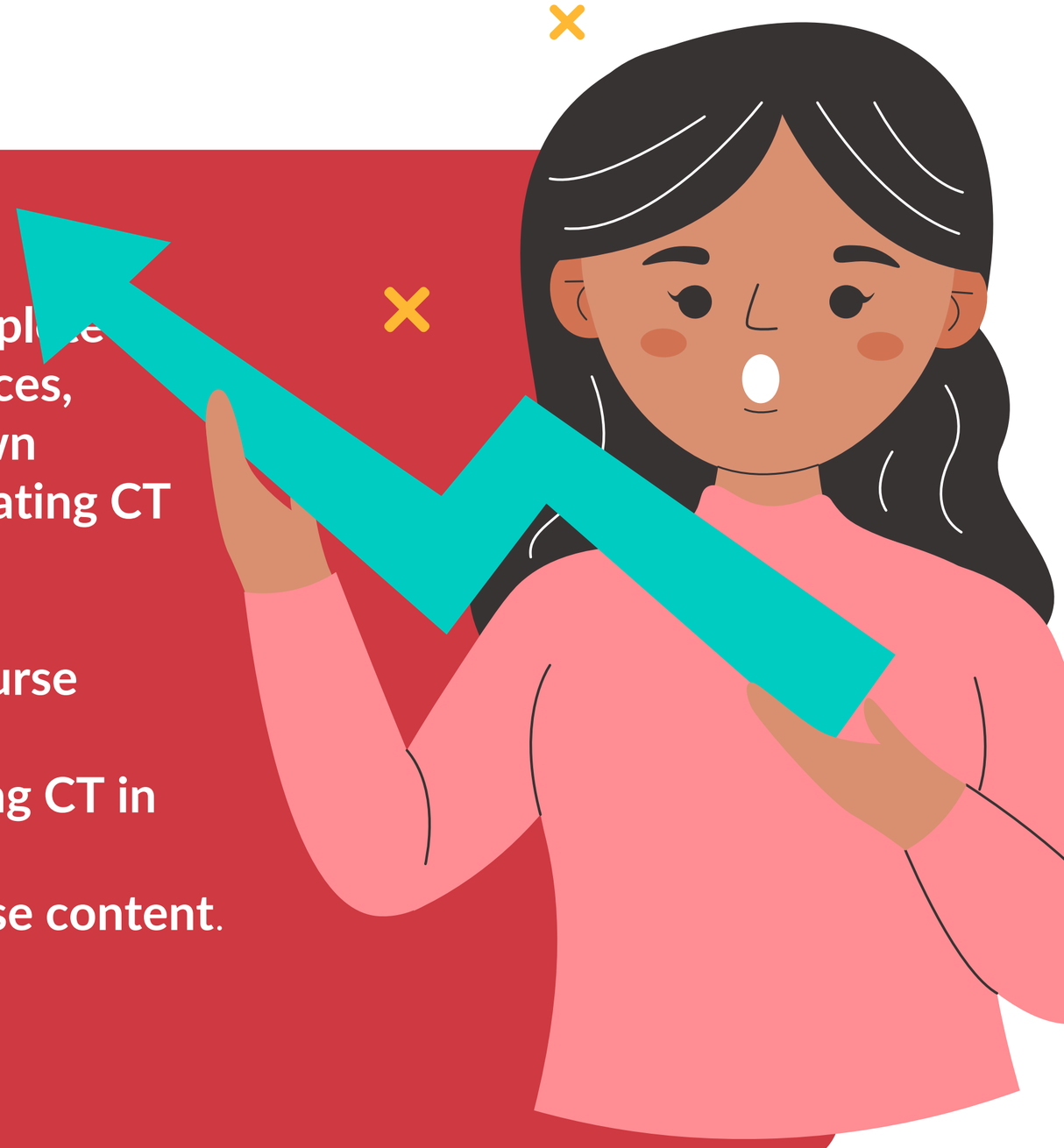
    - 1st- before faculty integrate CT in their course content.
    - 2nd- during the semester they are integrating CT in their course content.
    - 3rd - after faculty integrate CT in their course content.
- Focus groups immediately folllowing
- Syllabus Collection and Analysis



ANALYSIS

- Phenomenological study
- Code interview transcripts and guided reflections to detect emerging themes related to the adoption and integration of CT thinking strategies into their courses
- Look for common themes in faculty's guided reflections and focus group transcripts of specific descriptive language where faculty reflect on their teaching, classroom philosophies, actions, attitudes, and emotions throughout the semester towards integrating CT in their courses
- Note where faculty communicate their future plans integrating CT
- Collect and interrogate syllabi of participants

EARLY FINDINGS

- All faculty acknowledge the importance of the CITE work and program
- A wide variety of experiences and feelings about its implementation and potential for longevity.
- Some early adopters strongly believe in the principles of the CITE program and the need to fully integrate this work in N-12 schools
- Hesitant adopters feel that they need ongoing training and more time to learn about the principles and strategies being taught, especially if they want to adopt the program long term.
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