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Stakeholders' Perspectives on a Coordinated Developmental Mathematics Course

Introduction

From my own experience as a graduate student and adjunct instructor of developmental mathematics courses (DMCs), I was interested in contributing to the field of developmental mathematics (DM) research by conducting an exploratory, qualitative study documenting the perspective of educator stakeholders involved with College Algebra, a second-level DMC. The participants, informed by their experiences and values as educators, demonstrated a strong commitment to their students, expressing hope for students' mathematics future and a desire to improve their practice.

Research Questions

1. How do stakeholders describe the purpose, goals, and outcomes of College Algebra?
2. What kind of professional development (PD) do DMC instructors receive and what PD would they like to receive?

Methods

I interviewed five stakeholders involved with College Algebra, the math department's second level DMC.

- John (he/him), adjunct instructor
- Diane (she/her), non-tenure track instructor
- Nancy (she/her), course coordinator
- Sarah (she/her), coordinator of developmental math
- Rae (she/her), leadership in math department

For the past several years, the math department has undertaken efforts to redesign its DMCs in response to the needs of the growing DM student population. These efforts were mentioned by nearly all the participants and meaningfully shaped our conversations.

Big Ideas

Stakeholders unanimously stated the goal of College Algebra as preparing students for pre-calculus and beyond.

The stakeholders valued gaining pedagogical content knowledge through the experience of teaching.

For more details on my study, scan the QR code or email me at katherine.j.burke@temple.edu. I'd love to continue our conversation!



Results

Participants described the development of students' academic maturity as another necessary purpose of this entry level course; they expressed a willingness and desire to help their students make the transition from high school to college. Overall, the participants viewed College Algebra as successfully achieving its preparatory purposes, especially since the DM redesign. Similarly, though PD had not been a requirement for DM instructors in the past, with the concerted attention paid to DMCs going forward, upper-level stakeholders described the creation of PD attuned to the needs of DM instructors; a new grading PD session was well-received and appreciated by a participant of this study.

Discussion and Future Work

The participants of this study provided insight into the systemic operation of developmental mathematics, as well as perceptions of this system and the DM student population. With recent DM redesign efforts, the participants depicted an increasingly cohesive and comprehensive program that works to serve and support both its instructors and students. That said, the means through which the branches of this DM system achieve its aims warrant further study. I am interested in pursuing the following lines of inquiry:

- Building on this study with a larger population of instructional stakeholders, namely adjunct and graduate student instructors
- Repeating this study with first-level DMC educator stakeholders
- Investigating how DMC instructors support their students in practice
- Understanding how DMC instructors' enacted practices are perceived by students