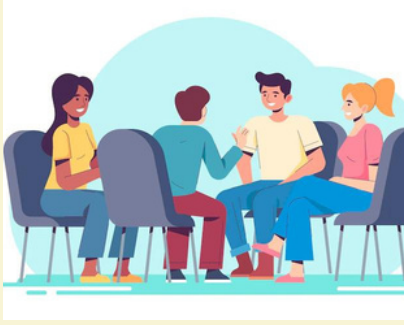


PRE-SERVICE TEACHERS' PERSPECTIVES OF MATHEMATICS CONTENT COURSES

STUDY BACKGROUND



Secondary mathematics pre-service teachers (PSTs) are required to take university-level mathematics content courses (e.g., abstract algebra, calculus, statistics) to develop their mathematics content knowledge. These courses are usually taken with other students in Science, Technology, Engineering, or Mathematics (STEM) programs. Through a series of semi-structured interviews, our study provides a first-hand account of PSTs' experiences in mathematics content courses.

OUR FINDINGS

We found that mathematics content courses were challenging for secondary mathematics PSTs. Yet, the PSTs developed coping strategies to benefit from these courses.



PSTs' CHALLENGES WITH MATHEMATICS CONTENT COURSES

Difficulties with Course Content

- PSTs struggled to grasp course content at the required pace.
- PSTs struggled to find value in the courses because the content felt so disconnected from what they would be expected to teach at the secondary level.

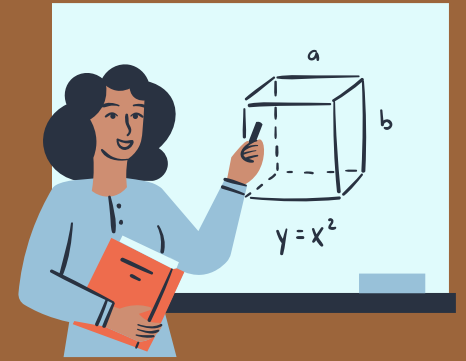


Feeling like Outsiders

- PSTs felt inferior to other students in the courses who were in STEM programs.
- PSTs had difficulty establishing relationships with these students.

Difficulties with Mathematics Instructors

- PSTs felt that instructors exhibited poor teaching practices and did not know how to teach their courses in effective ways.
- PSTs felt that instructors were more interested in discussing their own research or content that was more advanced than what was in the course description.



PSTs' COPING STRATEGIES

Becoming Reflective Practitioners

- PSTs considered the impact their instructors' actions had on them as mathematics learners.
- PSTs used their experiences in these courses to consider their future teaching practice.



Developing Community

- PSTs organized study groups in response to the academic challenges they faced in the mathematics content courses.
- The study groups evolved into friendships and emotional support structures for the PSTs.



CONCLUSION AND IMPLICATIONS FOR TEACHER EDUCATION PROGRAMS

- Community and support can help PSTs navigate the challenges of mathematics content courses and prepare them for successful teaching careers.
- Teacher education programs should provide opportunities for PSTs to form community with peers.
- Course instructors play an important role in PSTs' experiences. They are models of teaching practices and should create a collaborative and supportive learning environments, particularly important when dealing with challenging course content.



REFERENCE

Jao, L., & Sahmbi, G. (2023). Sticking together in a world full of sharks: Pre-service teachers' perspectives of mathematics content courses. *International Journal of Mathematical Education in Science and Technology*, 1–21. <https://doi.org/10.1080/0020739X.2023.2171923>