

# Queer Students in STEM: The Voices of Amber, Charles, Jenny and Juan

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*Abstract: This report provides a rich narrative documenting the experiences of four queer students in STEM, which showcase both the challenges and power of being queer in STEM. Students viewed the nature of STEM through a paradoxical lens of a discipline that is objective and thus neutral to issues of identity, yet hostile and exclusionary to non-normative identities in STEM spaces. In response, queer students in undergraduate math courses described the difficulties in navigating the amount of personal information they reveal about themselves or be faced with the psychological burden or cognitive stress derived from presenting in non-normative ways.*

Keywords: Queer, STEM, LGBT, oSTEM, Narrative Analysis, Equity

Despite growing attention paid to student identities, when it comes to the topic of sexual orientation, the research literature remains largely in the closet; it neglects to address the impact or representation of queer individual in STEM. However, there is some evidence suggesting that marginalization due to sexuality might be felt more acutely within STEM-related courses (Bilimoria & Stewart, 2009).

We recruited students from two LGBTQ-friendly universities (Pride Index, 2017), that have active oSTEM student organizations. Four students, Amber, Charles, Jenny and Juan agreed to participate in the study. We used a semi-structured interview protocol (Ginsburg, 1997) to target information about their experiences as a queer student in STEM; how they perceive the nature of STEM; their favorite courses and instructors; description of the “coming out” processes; advice for other students; and the completion of two mathematical tasks. A narrative analysis based in grounded theory was utilized to identify emergent themes (Strauss & Corbin, 1994).

The students in this study described multiple ways in which they conceived of the nature of math and science, resulting in paradoxical experiences. The students made mention to STEM as an objective set of processes, focused on facts or rules. Yet, their queer identities are often at odds when viewed through a lens of precision within the STEM discipline. Furthermore, the students felt that the nature of STEM is removed from their personal identities, and described the classroom as a vacuum operating without consideration to the external world. As an example, Jenny characterized her bisexual identity in STEM as “silent,” and felt that her math professor did not create space for processing traumatic events (e.g. impact of presidential election).

The students’ stories further showcase challenges and the impact of being queer in STEM. Students described “coming out” in STEM spaces as either a form of information control or as a psychological distractor. For instance, Charles uses a form of “vetting.” If Charles deems a person “safe enough,” he will slowly engage the person in conversation to determine whether he will “come out” to the person. Charles also stated that he had “very few positive experiences coming out or being queer within my major.” In contrast, Amber did not feel that they have a choice when conveying their gender fluid identity. Amber described feelings of psychological stress induced by presenting in gender non-conforming ways in math classrooms.

While this study seeks to capture and promote voices of queer students using narrative accounts as a means of centering queer identities in STEM discourses, it calls to attention the many voices often silenced by resistance. As an example of persistence in the face of resistance, Juan stated, “not everyone saw the rationale in creating a space for queer in STEM. So that was so discouraging. I was so angry. But that fortunately lit a fire under me.”

## References

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