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Sense of Belonging: Exploring the Narratives of Latinx Construction Education Students

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The demand for construction managers (CMs) in the United States continues to increase. Being predominately white and male-centric has not helped reduce the challenge that comes with the need for more CM professionals. This research explores the lived experience and supports systems Latinx students experience in construction education at a predominately white university utilizing the Latinx critical race theory (LatCrit) lens. Four first generation Latinx undergraduate students - two Latino (male) and two Latina (female) - participated in this study, and a semi-structured interview protocol that the Institution Review Board (IRB) approved was utilized. All study participants shared insights and reflected on their "sense of belonging" as construction education students at a predominantly white university. The female participants, in particular, explored how being a woman with limited construction work experience created a barrier to their sense of belonging. "Sources of support" like participating in a learning community, counterspaces, professor support, group involvement, and volunteer opportunities helped to boost individual morale and sense of belonging.

Key Words: LatCrit, Sense of Belonging, Gender, Construction Management, Women

Introduction

University-educated construction managers (CMs) are in high demand in the United States (U.S.), and higher-than-average industry demand for CM professionals is projected to continue through 2031 (BLS, 2022). Like other STEM professions, women and underrepresented racial/ethnic minorities (URMs) are unrepresented in the CM workforce when compared to their participation rate in the U.S. workforce overall (BLS, 2022). Additionally, evidence suggests women and URMs are underrepresented in university construction education programs and that the academic success gaps between non-Latinos and Latinos in construction education mirror overall higher education trends (Burgoon & Elliott, 2022; Excelencia in Education, 2019).

While previous research has suggested the possibility of academic success gaps between Latino and non-Latino students in CM education, the reasons for these gaps remain largely unexplored. Furthermore, while numerous researchers have addressed factors that propagate the underrepresentation of women in construction education, research exploring the perceptions of Latina

women and other women of color in construction education is minimal. As such, this study aims to explore the challenges and support systems of Latinx students enrolled in construction higher education. Specifically, this study will utilize a critical framework to explore four Latinx students' sense of belonging. This study also adds to the limited body of knowledge surrounding critical inquiry and Latinx students' sense of belonging in architecture, engineering, and construction (AEC) education.

Theoretical Framework

Latinx critical race theory (LatCrit) provided a theoretical framework for part of this study. LatCrit is a framework that focuses on individuals' lived experiences as a means of identifying patterns and practices of racial and ethnic exclusion (Villalpando, 2004). Emerging from the legal scholarship of critical race theory in the U.S., LatCrit positions Latinxs at the center of analysis within the broader context of oppressive social systems. Furthermore, the theory encourages participants and practitioners to take action to disrupt oppressive systems (Delgado & Stefancic, 2001). Within the higher education setting, Villalpando (2004) outlines five foundational tenets of LatCrit. These tenets are: 1) the existence of racism in the U.S. education system and the importance of intersectionality in understanding oppressive societal systems; 2) the importance of challenging dominant ideologies regarding 'race neutrality,' 'colorblindness,' and 'equal opportunity' in higher education; 3) the role of social justice practice in creating more equitable educational systems; 4) the recognition of experiential knowledge as a legitimate basis for understanding social inequities; and, 5) an emphasis on the effects that historically inequitable policies and practices in higher education have on Latinx students.

Paramount to LatCrit for this study is the utilization of storytelling (and counter-storytelling) in constructing experiential knowledge. Counter-storytelling confronts dominant narratives and can support URM communities in at least four ways: creating a greater sense of community, challenging long-held narratives and beliefs, helping individuals feel less alone, and providing a framework for deriving a more meaningful existence (Solorzano & Yosso, 2001). LatCrit provides a relevant lens for this study because: 1) all participants self-identified as 'Mexican' - independent of whether or not they were born in the U.S. or Mexico; 2) participants were enrolled in a predominantly white institution (PWI) in the U.S.; and 3) Latinx individuals, especially women, are underrepresented in the CM profession and education (BLS, 2022).

In addition to exploring the stories and counterstories of Latinx students from a critical perspective, the authors felt it is also important to examine the systems and organizations that have supported the student participants during their academic pursuits. As such, two umbrella questions guided interviews and analysis:

1. What challenges has the student experienced in CM education – including challenges experienced at the university more generally
2. What organizations, systems, or individuals have provided the students support while pursuing their CM degree

In exploring these guiding questions, it is important to remember that from a LatCrit perspective, each participant's lived experience is considered legitimate experiential knowledge. As such, all participants are uniquely qualified to speak on their sense of belonging in construction education. Furthermore, while not generalizable, accepting individuals' narratives as legitimate knowledge could

assist CM educators and administrators in areas ranging from student-faculty interactions to admissions policies (Darder, Baltodano & Torres, 2003).

Methodology

This study focused on the first-person narratives of two (2) Latina and two (2) Latino undergraduate students majoring in construction education. Perspective participants were solicited through an email from the Latino Cultural Center (pseudonym) – the university's Latino support office. Participants took part in individual, in-person, semi-structured interviews, which ranged between 53 and 97 minutes. Interviews were audio recorded and subsequently transcribed for analysis. Institutional Review Board approval was granted before beginning this study.

This study was bounded to first-generation Latinx undergraduates enrolled as construction education majors at a single public university in the Rocky Mountain region of the U.S. All participants were enrolled in junior or senior-level construction education coursework at the time of the interviews. Participants were asked to identify their salient identities and to select pseudonyms to maintain confidentiality and anonymity. These are identified in Table 1.

Table 1

Description of Participants' Identities (Self-identified)

Pseudonym	Preferred Ethnic Descriptor	Gender
Isabella	Mexican	Female
Osiris	Mexican	Male
Wade	Mexican	Male
Yatziri	Mexican	Female

Findings

Multiple themes were identified during analysis and are supported with direct lines by the participants. For this study, the authors have chosen to focus on students' perceived sense of belonging in construction education (and, by extension, the university) as the primary theme for evaluation. All participants acknowledge that a sense of belonging has been an essential aspect of their secondary and post-secondary education journey.

Sense of Belonging

Goodenow (1993) defined "sense of belonging" as the extent to which an individual feels accepted, respected and supported in their social environment. As first-generation students that attended racial/ethnic diverse high schools, three of the student participants expressed feeling a sense of other while attending the predominantly white university. This article uses "sense of other" to suggest the opposite of sense of belonging (Goodenow, 1993). For example, as told by Wade in describing his first year:

Honestly felt like I stood out. I know I don't look it, but even the feeling that when we first came ... [to the university] and into the CM program, there wasn't very many Hispanics or Latinos and everything like that. So, I didn't really have anyone to really relate to at that

point. The only other Hispanic I knew was the guy that was here, and I only talked to him briefly. So I didn't really feel like the part; I felt like I stood out.

For Osiris, he stated that he never felt "discriminated against" or "talked down to" in the CM program, but he still thinks that "some people will notice the difference in appearance." As part of the larger campus community, Osiris, a junior, had recently begun attending the Latino Cultural Center occasionally because:

I get homesick. And the environment that I know at home is, you know, speaking Spanish and seeing people who look like me. And, you know, walking around campus, you don't see that very much. So, I go there sometimes just to relax. It's a small environment. I like, you know, I feel like I'm refueling myself; recharging my like social battery in a way. And a lot of my friends hang out there too, and more Hispanics... I like seeing people who resemble me and come from different backgrounds sometimes.

Isabella explained how coming to a PWI was a different experience than what she was raised with:

Coming to college, I realized the difference it is here from [name of hometown]. But growing up, I thought I lived like a normal life. You know, it's like my mom and dad, speaking Spanish and English, because everybody's Hispanic, like, mostly everyone is Hispanic. So it wasn't like, there's a difference from what I see [at home] to other places. But then, coming to college, I realized, whoa, like, it's way different than what I realized.

While all participants felt supported in the CM program overall, they also felt that they lagged behind most of their colleagues when it came to construction work experience. Wade stated: "Everyone came from a family that had a super strong background in construction and like their dads run something, or they've been in it their whole life. Or, you know, just things that I couldn't relate to. My family didn't really have a construction company." Osiris expressed a similar sentiment:

I think it makes it a bit, a little bit more challenging here as a CM major, because like, coming in freshman year to college, I was taking classes and there were a lot of people who had like a lot of construction experience. You know, there are people who had like families who like had small companies. There were people there who were already working for their companies. And I was just there, like, this is all brand new to me. And that kind of made me feel like I was behind everybody.

Yatziri and Isabella expressed similar thoughts (which will be further explored in the next section) but felt a great sense of other because they are women with construction limited experience.

Gender and Experience

Both Yatziri and Isabella expressed how being a woman – particularly a woman with limited construction work experience - affected how they interacted with classmates, faculty, and potential employers. Discussing her interaction with "guys" in classes, Yatziri stated that while she's never had anything "bad happen" and that her "guy" classmates were regularly "supportive" and "think it's kind of cool that I'm like one of the like few girls that are actually in the program," she also acknowledges that "sometimes you can feel like the vibe, or like the energy, that like someone gives off that they don't really appreciate your presence..."

She also provided a specific example of when she was treated differently because she is a woman:

In the lab, sometimes...they [male classmates] kind of just take over sometimes. Like they want to do it because they think I'm not gonna do it right. And at that point... I'm not gonna like stand there and be like, 'no, let me do it.' I just kind of, like, let it happen, you know, like, 'okay, if you want to do the work.'

When asked why she felt male colleagues would take over, she stated:

I think it's because I'm a girl, okay... like, when I had to carry something that, like, they kind of sometimes ruin it. Like, you know, it's kind of like being a gentleman. They'll be like, 'I'll carry that,' and it's like, okay, like, 'you can carry it,' but like... 'I can carry it too you know.' So it's just kind of making me feel like a girl all the time.'

While recognizing that her male classmates were likely trying to be "gentlemen," she ultimately stated: "sometimes it's really annoying that they don't let me do things for myself."

Concerns around how she is perceived as a woman also affected Yatziri's desire to seek assistance from faculty instructors. As described by Yatziri:

I feel like I'm definitely more scared to, like, go and talk to professors. I don't like going to office hours. I hate it! I don't know, I don't like it just because I feel like, I'm a girl. And like, I'm already, like, asking for too much help already...the times that I have gone. They're very helpful. But I just feel like, I like bother the professor. It's like, oh, like this girl, you know.

Similar to Yatziri, being a woman with limited construction work experience in classes with "guys" who have more construction work experience has been challenging for Isabella:

It is definitely hard, because, like, you have the guys. Like a majority of the guys in class are guys [men]. And they're tall and everything. It's kind of scary...a lot of them have experience [construction work experience], so they know what they're talking about. And me, coming in with nothing of experience. It's kind of hard, like, feeling committed to the [CM degree] program or thinking I could do it and finish it.

She went on to describe the way she modified her appearance to better fit in during her first year in the program:

I think it affected me, physically, which is kind of weird, because I told myself like, 'I can't dress girly.' Like I had to dress, not tomboyish, but, you know, like, not girly, so they take me serious. So, I remember freshman year. I wouldn't get ready...I don't know how to explain it. But I'd be like, 'some of the will guys to take me serious,' you know?

Despite completing two years as a construction major, Isabella admitted that she was planning to switch majors to business administration. When asked why she explained:

So, I think a lot of it has to do with not knowing a lot about construction. Like, I definitely have learned a lot more but not having that experience has pushed me to have, like, the thought, "is this right for me"? "Am I doing what I'm supposed to be doing"? "Am I using the skills I have, and something that will help me out in the future"? And sometimes I feel scared, I guess like, if I do stick to construction, like once I go out there, like I don't know

anything, I don't know anyone, and I'm a woman in construction. So, I think that's the kind of scary part which has pushed me to [majoring in] business.

Sources of Support

While participants identified numerous challenges to their sense of belonging as CM and university students, they also identified numerous support systems, communities, and individuals that bolstered their sense of belonging.

As previously mentioned, Osiris found support and felt like he is "recharging" and "refueling" by socializing at the Latino Cultural Center and had recently joined a fraternity and CM club. However, attending after-hours events was difficult because the: "last shuttle leaves at like 6:40."

Like Osiris, but even more so, Isabella found that her first-year experience in a learning community, which notably included volunteering: "helped a lot." More generally, volunteering was a way for Isabella to learn and feel more connected. Specifically, she volunteered with the Latino Cultural Club, and Habitat for Humanity to help: "families who need a home and to learn about construction." She also participated with the Women in Construction club her first year which allowed her to see that "women can succeed and be the boss as well." Isabella also stated that she would be willing to stay in CM if a faculty member would help her to get an internship. Specifically, she said, "I think a lot of the me moving into the business major is being scared of not getting an internship or not having work experience." Still, at the same time, she showed reluctance to individualized support as: "other students already have internships and work experience. So like, I should be able to too."

Wade actively sought mentoring during his first year through the Latino Cultural Center to help him: "adjust and learn how to do things in college." During subsequent years, Wade joined a CM competition team and took a leadership role in a CM club. Pivotal in his decision to join a team and take on a leadership role was a single professor who: "convinced me to join the sustainability team and, you know, when elections came, he pushed me more towards actually taking your position in the club." When asked whether the professor's Latino identity had anything to do with his perception he stated it: "absolutely had nothing to do with his background, ethnicity, whatsoever. Just [professor's name] as a person."

Yatziri found support through the women in construction program before even attending college:

So Mr. [high school teacher's name], he did women in construction. And he brought a bunch of people. And he brought [names of two faculty/staff women from the university's construction program] from the program here to like, go speak to us girls, about you know, possibly doing construction management. And I think back then, what like, I think it was like 5% or 6% that of the girl ratio to guy that was doing the program. So I was like, 'wow, like all these other like, ladies seems like so bossy and I was like I really want to be like them.'

The Latino Cultural Center also provided Yatziri with: "connections that I do have today." Paramount in this was the connection she made with the center's director – who also serves as her scholarship advisor:

She [the program director] would tell me about like events going on, like opportunities organizations that I could join, you know. When I was looking for a job, like I went up to her

and I was like, [director's name], like, I need a job and I don't know what to look for. And she like, kind of helped me guide me through that, too.

The same professor that Wade mentioned, Yatziri mentioned too.

Discussion

Viewed through a LatCrit lens, the students' perspectives provide counterstories and insights to dominant narratives. As described by all participants, counter-spaces, in this case, the Latino Cultural Center and racially/ethnically diverse learning communities, provided students with various forms of support as they transitioned to life at a PWI. As described by Yosso et al. (2009), counterspaces can be both social and academic and may help Latinx students to cultivate a "sense of home and family, which bolsters their sense of belonging and nurtures their resilience ." (p. 677) While learning communities provided first year support for two participants, the Latino Cultural Center provided different forms of support for all participants. For Wade, support came through mentorship from others during his first year of college, while Isabella's interaction with the program offered her opportunities to provide volunteer service to others. For both Osiris and Yatziri, the social interactions they experienced at the Latino Cultural Center were essential to their well-being and sense of belonging on campus.

While only mentioned by the two women participants, intersectionality played a role in the lived experiences of Isabella and Yatziri. While not generalizable, Isabella's and Yatziri's experiences align with the experiences of other Latinas in white male-dominated fields and shows the importance of proactively creating learning environments where students with diverse experience levels and backgrounds can continue to grow and develop (Lara, 2017). Given the specific comments mentioned by the participants, CM educators could evaluate how much emphasis they place on students' construction work experience in the classroom, as this may create perceptions of superiority and inferiority among students and ultimately disenfranchise less experienced students from participating in class discussions or seeking faculty support.

By exploring the sources of support for individual students, CM programs and educators can begin identifying sources of support for Latinx (and potentially other URM) students. While some of these supports could be substantial, based on the size of the CM program and university (e.g., a CM-specific learning community), others could be implemented with little to no financial resources. For example, mentorship programs and CM clubs (specifically those aimed at supporting women or URM students) could yield positive results (Lavorico, 2018).

Conclusion

In conclusion, construction education programs are morally obligated to create a more inclusive and supportive environment that promotes a sense of belonging for all students – specifically those traditionally underrepresented or marginalized. Exploring student stories and viewing them through a LatCrit perspective could drive long-term change for those Latinx, and other URM students, who feel a decreased sense of belonging by challenging dominant narratives and helping students feel less alone in their experiences (Solorzano & Yosso, 2001).

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