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How Marginalized Students Persist in TPC Academic Programs

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Abstract: Retaining students to graduation is a persistent problem in higher education. This problem is especially prevalent for students from traditionally underrepresented racial and ethnic backgrounds. Non-white students face unique challenges when pursuing a college degree which leads to lower degree completion rates. Recent research from technical and professional communication (TPC) scholars has discussed the need to diversify TPC academic programs. However, few studies have examined TPC student retention, and the responsibility TPC program administrators have in helping the students they recruit persist to graduation. This article reports the results of interviews conducted with TPC undergraduate students, graduate students, and pre-tenure faculty members, who identified as a person of color, regarding how they persisted in their degree programs. Results show that important factors for persistence included faculty support, financial support, family support, peer support, and self-motivation. Recommendations for program administrators regarding facilitating strong information/support networks are discussed.

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Student Strategies for Persistence in TPC Academic Programs

While working as a university staff member, my supervisor shared with me his experience as an adoptive father of two African American boys. He, like me, is a straight, cisgender, white, middle class, male. As he recounted the challenges his sons have faced every day regarding racism and discrimination, I asked him how it felt to be experiencing these things firsthand. "I'm experiencing them secondhand, not firsthand," he said. "They're the ones that have to go through it. I might be helping them, and advocating for them, but I'm not experiencing it, they are." For those interested in social justice, redressing the inequalities present in higher education will give more students the opportunity to enjoy the benefits of a college education if they choose to pursue it. Because of the challenges created by both personal and institutional limitations, it is important for technical and professional communication (TPC) program administrators to actively communicate with students and seek information about how they can support them successfully.

Although limitations differ, every person who works as faculty, staff, or administrator for an academic program has limitations in their ability to understand and support the students in their programs. I may see the challenges students are facing, but my background limits my ability to really understand the challenges and struggles of the students of color in our technical communication academic program. Those limitations are compounded by colleges and universities themselves. Institutions of higher education in the United States were designed for white middle- and upper-class students (Kuh & Love, 2000; Stephens, Townsend, & Dittman, 2018). Students who do not come from a majority background often struggle at colleges and universities much more than their white middle- and upper-class counterparts (Kuh & Love, 2000; McClain & Perry, 2017; Museus & Quaye, 2009). The extra challenges faced by students from marginalized backgrounds highlight the limitations of an inadequate system. Many studies have been done regarding student retention and the factors affecting student withdrawal and persistence (Gentry, 2014). Although solving retention issues is often tried by creating a new program or policy, generalizable issues of student support and retention are often communication and networking problems. What may be lacking in our understanding and treatment of retention issues in higher education is that they are not treated as communicative.

This article reports responses from interview participants who identified as a person of color and were also either a TPC undergraduate student, graduate student, or pre-tenure faculty member. The primary purpose of this research project was to answer the question "what sustains TPC students/faculty who identify as a person of color over time while navigating an academic career?" The participant answers relating to this question specifically focus on how students persist in TPC academic programs. To be clear, the purpose of this article is not to offer advice to TPC students to better navigate a discriminatory system, but to inform program administrators of the difficulties students from marginalized backgrounds face so that they can begin to recognize problems and develop strategies to help their programs become more supportive thereby helping their students to persist to graduation.

Literature Review

Much of the conversation in higher education regarding students from minority racial and ethnic backgrounds surrounds increasing diversity in terms of numbers at colleges and universities. However, the achievement gap seems to be closing in regard to the number of students who are from underrepresented racial and ethnic backgrounds enrolling in college (Casselman, 2014; Haycock, 2001; Ohene-Okae, 2017). Although program administrators need to continue to focus on increasing diversity in their academic programs, a bigger problem academic institutions face is their ability to support these students and help them persist to graduation (McClain & Perry, 2017). Colleges and universities do a poor job of supporting the students who do attend college but do not come from a white, middle-class background (Kuh & Love, 2000; McClain & Perry, 2017; Museus & Quaye, 2009). Because of this, students of color are much more likely to drop out of college than their white peers (Casselman, 2014; Lynch & Engle, 2010).

Literature regarding student persistence and retention is prolific in higher education research (Gentry, 2014). A comprehensive review of the literature regarding student retention would be impossible to fit into a single article; however, most scholars seem to agree that the major factors influencing student retention are the student's precollege characteristics (e.g., family background, academic preparedness, and prior skills and abilities), the student's ability to integrate socially into the institution, and the student's ability to integrate into their academic community (Boyraz, Horne, Owens and Armstrong, 2013; Hartley, 2011; Hu & Ma, 2010; Hu, McCormick, and Gonyea, 2012; Lee & Choi, 2011; Tinto, 1975, 1993).

Although many of the same problems with retaining the general population of students also apply to students from minority backgrounds (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn,1999; Carter, 2006; Tauriac & Liem, 2012; Reid, 2013), research concerning underrepresented groups and the lack of college achievement has pointed out several unique challenges which represent some of the primary obstacles for these students as they try to enroll, persist, and graduate from college (Dukakis, Duong, Velasco, & Henderson, 2014). Some of these include:

1. College undermatch

When an otherwise academically qualified student chooses to attend a less selective institution, this is undermatching. Students who undermatch are more likely to drop out of college (Smith, Pender, & Howell, 2013).

2. Insufficient and/or inaccessible financial aid information and support

The general lack of financial aid for post-secondary education is a significant barrier to college persistence and completion. Regrettably, while financial aid is generally available for students from low socioeconomic or underrepresented backgrounds, the potential student often remains unaware of that aid or how to access it. Higher education researchers have found that students from low socioeconomic backgrounds often find the financial aid process to be too complicated and do not know to apply for financial aid early to maximize benefits. These students are unfamiliar with the real cost of attending college and the differing costs among individual

colleges. (De La Rosa 2006; King 2004; Kirst & Venezia, 2004; Roderick, Coca, & Nagaoka, 2011).

3. Racial biases and stereotypes

"The threat to an individual that others' judgments on their own actions will negatively stereotype them in the [educational] domain, has a significant negative effect on standardized test scores and leads to educational disengagement" (Dukakis, Duong, Velasco, & Henderson, 2014, p. 8). In other words, stereotypes that blanket students and are reinforced by others, whether perceived or not, create anxiety for the students in question, causing them to falter in their educational pursuit until the burden becomes so overwhelming that leaving education seems preferable.

4. The lived experiences of students from marginalized backgrounds

The lived experiences of students of color often contain many factors which affect academic performance including economic inequality, residential segregation, and poor performing schools (Ainsworth-Darnell & Downey, 1998; Massey & Denton, 2003; Savas, 2014; Tinto, 1975). A student's background can contribute heavily to her/his success in college. Not only will students from underrepresented backgrounds have a more difficult time graduating, colleges and universities are ill-equipped to give these students adequate support (Kuh & Love, 2000; Museus & Quaye, 2009). The norms of an institution can reproduce disparities on the campus. A pioneer in research regarding student retention, Vincent Tinto asserted that students must "physically as well as socially dissociate from the communities of the past" to fully integrate into college life (1993, p. 96). However, in the late 90's and early 2000's, higher education scholars began to critique the assumptions in Tinto's theory of integration for being culturally biased and its inadequacy in explaining the departure of students of color (Hurtado & Carter, 1997; Kuh & Love, 2000; Nora & Cabrera, 1996; Rendón, Jalomo, & Nora, 2000; Tierney, 1999). Research now shows the importance of cultural integrity, showing that college students from minority backgrounds benefit greatly from being secure in their cultural heritage (Helm, Sedlacek, & Prieto, 1998; Museus & Quaye, 2009; Tierney, 1999.

Along with cultural ignorance and insensitivity on the part of college administrators, outright discrimination still occurs on college campuses, and racial climate is a contributing factor in students from underrepresented racial and ethnic backgrounds leaving the academy at higher rates than white students (Ancis, Sedlacek, & Mohr, 2000; McClain & Perry, 2017). Open racial conflicts may not be as common on college campuses as they were in the past; however, subtle racial discrimination continues to be widespread for students of color. Colleges still struggle with institutional racism. "American institutions, especially schools, have embedded ideologies maintaining inequality. Thus, minority students are more likely to perceive a hostile racial climate on campus compared with majority students whose values are generally more valued by schools" (Savas, 2014). Hostility on campus can include blatant racism and a weak response by institutional administrators (McCoy & Rodricks, 2015, pp. 2-3) as well as more understated microaggressions which lead to low retention rates of students of color at predominantly white institutions (McClain & Perry, 2017).

Although there is still much to do, in the past few decades colleges and universities have implemented many policies and programs in an effort to improve diversity, equity, and inclusion (DEI) on campus. The most common (DEI) initiatives implemented by college and universities include hiring an administrator to take charge of DEI initiatives, increasing DEI education efforts, conducting a policy review, developing DEI focused curriculum, and modifying faculty and student recruitment practices to focus on diversity (30 Colleges, 2021, Aronson, 2021; O'Malley, 2022).

Many explanations exist as to why students withdraw or persist in an academic program. However, few studies have explored the role communication plays in implementing an effective retention strategy (Hawking, 2005; Yook, E. L. 2012). Along with reporting student perspectives on persistence, this article seeks to explore the importance of treating retention issues as communicative issues.

Diversity and Inclusion in TPC Academic Programs

As pointed out in Felicia Chong and Aimee Roundtree's recent article on student recruitment, "Our field has expressed a need for and interest in recruiting more diverse students as industries diversify, globalize, and tackle social justice policies and issues" (2020 para. 3).

Although little scholarship exists regarding diversity and inclusion in TPC academic programs, the past decade has seen growing interest in these issues. Several increasingly seminal articles were written on the subject in the early 2010's. Savage and Mattson used the perceptions of program administrators to point out that "[TPC program administrators] need to do a great deal more than most of us have done so far to diversify student and faculty populations in programs and to incorporate diverse cultural perspectives in curricula" (2011, p. 43). Savage and Matveeva showed that there may be opportunities to increase racial and cultural diversity in TPC through outreach and partnerships with HBCUs and TCUs, but urged caution: "HBCUs and TCUs exist because of social and cultural realities with deep roots in histories of colonization, slavery, and genocide" (Savage & Matveeva, 2011, p. 81).

In their often-cited guest editorial in *Programmatic Perspectives,* Jones, Savage, and Han Yu updated the field on the status of diversity initiatives in technical communication (2014). They reported some progress but stressed that much needs to be done to bring TPC research on issues of diversity up to the level of other English-related disciplines as well as other applied fields. More recent scholarship regarding efforts to increase diversity have shown how students from diverse background have difficulty discovering the field (Dayley & Walton, 2018), the importance of building interpersonal relationships with prospective students and increasing program inclusivity (Alexander & Walton, 2022), and how current "recruitment efforts alone may not be enough to more suitably engage with the interests and needs of diverse student populations" (Popham, 2016, p. 73).

Specific scholarship regarding student persistence in TPC academic programs is exceptionally rare; however, one excellent example of this type of scholarship was recently published by Phillips and DeLeon. In their analysis of Latinx testimonios (culturally situated narratives), "Testimonialistas expressed how they navigate the complexities of being first-generation

students and described how they persist and enact social justice" (2022 p. 197). This study showed that "Lack of familiarity with university bureaucracy; contending with department and university politics; ineffective mentorship; a dearth of resources such as tutoring, counseling, and funding; arduous communication interactions; and oppressive behaviors compound to create unsafe, unwelcoming, and unsupportive environments" (Phillips & DeLeon, 2022, p. 197).

As technical and professional communicators, our focus on user advocacy can and should inspire TPC faculty and program administrators to lead the way in inclusion efforts that ultimately lead to better student persistence. As a field with advocacy as its core mandate, technical and professional communication (TPC) can play a vital role in justice causes that work to enact change in communities because the field of TPC interfaces with audiences, perhaps more than any other discipline as a consequence of its advocacy and discursive practices (Agboka & Dorpenyo, 2022, p. 6).

Although the conversation regarding increasing diversity in TPC academic programs is starting to increase, more scholarship is needed to address the lack of information regarding the ways in which program administrators can help the students they recruit into TPC programs persist to graduation. This article seeks to add to this conversation by sharing the experiences of TPC students and pre-tenure faculty members regarding the ways in which they persisted in their own degree programs.

Methods

This IRB-approved research project was a phenomenological study in which I interviewed TPC students who identified as persons of color. Answers from interview questions were meant to produce data regarding participants' experiences as technical communication students who identify as persons from traditionally underrepresented racial and ethnic backgrounds.

Recruitment

Participation in this study was limited to college students living in the United States and were studying TPC as well as pre-tenure TPC faculty members. Although participation in this study was open to all types of institutions, all participants attended public universities. Each of the study participants identified as a person of color. The initial participants were recruited from a previous research project where participants were asked if they would be willing to participate in an interview after taking a survey (Dayley, 2020). I contacted each participant who indicated that they would be willing to be interviewed and also identified as a person of color by email. To increase the number of participants, I used snowball sampling by inviting participants to refer others who may be interested in participating. Faculty member participants were identified through personal knowledge of TPC faculty members of color and through referral from other faculty member participants. The total number of participants included five undergraduate students, six graduate students, and five pre-tenure faculty members.

Participants

I interviewed five undergraduate students, six graduate students, and five pre-tenure faculty members in total. In this article, four undergraduate students, five graduate students, and three pre-tenure faculty members are represented in the report of the data. The interviews produced a large amount of data. The participant comments in this report represent comments made about the subject of the present article. To protect their privacy, interview participants are identified by a pseudonymous first name or with the title "Dr." and a pseudonymous last name in the case of the pre-tenure faculty members.

Undergraduate students

All undergraduate students I interviewed were female. Undergraduate participants included:

- Juliet, an undergraduate student who is African American, Native American, and white. She is a non-traditional student in that she's a bit older than most students and has children. Juliet attends a mid-size midwestern university.
- Laurel, an undergraduate student who is as a South Asian person from Palestine and attends a mid-size southern university.
- Muriel, a Hispanic undergraduate student at a mid-sized western university. She works as a technical communicator at the IRS.
- Viola, an African American student at a mid-size southern university. She also considers herself to be a non-traditional student as she is older than the average student.

Graduate students

Graduate student participants included:

- Andrea, a Native American and white female who attends a midsize southern university.
- Audrey, an African American female who attends a mid-size southern university.
- Byron, an African American male who attends a mid-size southern university.
- Barbara, and African American female who attends a large southern university.
- Miles, an African American male who attends a mid-size eastern university.

Pre-tenure faculty

I interviewed faculty members who were early in their career to gain insights from their experience as students as well as their transition into a mentoring role. Pre-tenure faculty participants included:

- Dr. Fuller, a Hispanic male working at a mid-size southern university.
- Dr. Stone, an African Caribbean female working at a mid-size eastern university.
- Dr. Simmons, an African American woman working at a large southern university.

Data Collection

During the interview, participants were asked a set of questions regarding their experiences in a TPC academic program. Interviews were conducted over the phone and the audio was recorded with permission. The interviews were semi structured in order to elicit and interpret participants' experiences of meaning making (Charmaz, 2006; Crotty, 2003; Goldberg & Allen, 2015).
I created a list of 11 interview questions (see appendix). Because of the size of the dataset, only a subset of participant answers are reported in this article. Interview questions were created based on the previously mentioned survey. Quantitative survey results that needed more detailed information informed the initial interview questions. Qualitative interview questions were developed which would elicit in-depth responses relevant to the students' experiences in TPC academic programs (Brinkman & Kvale, 2015; Roberts, 2020). Questions were worded with the intent that they would be easily understood and participants would share freely (Brinkman & Kvale, 2015; Rubin & Rubin, 2012).

Each participant was asked all 11 questions, but occasional follow-up questions were asked when clarification was needed. When conducting interviews, I tried to create a space where participants felt they could openly express their thoughts and experiences (Shenton, 2004). Interviews lasted about 30 minutes. I recorded each interview and created a transcription of the interview from the recording.

Data Analysis

After data collection, I used an in vivo coding method. This common qualitative coding method places emphasis on the actual spoken words of participants. In vivo coding is used to "prioritize and honor the participant's voice" by using words and short phrases from the participants' own language in the data record as codes (Miles, Huberman, & Saldaña, 2020, p. 65). I used a spectrum of "prefigured" and "emergent" codes to analyze the data for emerging themes (Crabtree and Miller, 1992, p. 151). The prefigured codes were based on the interview questions and emergent codes developed as the data in each prefigured code was analyzed.

I carefully read each transcription in a word document and highlighted the participants' answers to each interview question. After doing this, I created a comment in the document which summarized each highlighted quotation in a few words. After creating short summaries for each highlighted answer, I then grouped the answers to each interview question according to emerging themes based on my short summaries.

As part of my coding method, I used member checks wherein participants were asked to read transcripts of the interview in which they participated. I emailed each participant their interview transcript. I then asked the participants to read over the transcript and let me know if any changes needed to be made so that I could make my reporting reflect what they were trying to say as accurately as possible. Any requested changes were made in the transcription document and that document was used for all quotations and analysis in this study.

When quoting interview participants, I used exact quotations leaving in slang, alternative grammar usage, etc. However, if an interview participant used "filler words" excessively such as "um," "like," or "you know," I removed those words. This was meant to allow the words of participants to be understood clearly (Lindolf & Taylor, 2011).

When data coding was complete, I formed conclusions by stepping back to consider the analyzed data and its implications on my research question. I then revisited the data to verify emergent conclusions and verify validity so that "the conclusions being drawn from the data are credible, defensible, warranted, and able to withstand alternative explanations" (Berkowitz, 1997, Para. 29).

Results

This section reports interview participant answers regarding the ways in which they were able to persist in their degree program. Each section represents a major theme that emerged in the coding process. Participant responses are heavily represented in this section with some discussion of the responses to help put them in context with each other.

Mentors help sustain students over time

Although there is some mention of other types of mentors, the majority of responses focused on faculty mentors. Throughout this article, when I refer to an "adviser" I am specifically talking about faculty members serving as mentors to students and not professional academic advisers. When Dr. Simmons moved to pursue her PhD, she felt out of place and isolated, but support from faculty advisers helped her to be successful:

> It got a little bit more difficult when I went to [my PhD institution in the west]. I think because I was kind of out of my element. I am born and raised in [the south]. I've always been from the southeast and I was in [the west] by myself with my five-year-old, you know, and didn't know anyone. It was really a kind of an isolating experience. I think PhD programs can be isolating anyway and so it was even more so but I had a really great support there. At the time [the chair of the department] was just so kind. I remember I took one of my classes from her my first semester there and my childcare fell through and she was like "bring your daughter to class" and I was like "OK, I can do that." And after [the department chair] left [a new department chair] took over and, oh my gosh, this woman she [was] a straight shooter. In the best way she really pushed me to develop my research skills. I actually joined a research group with her and learned how to do mixed method research. I mean, I sat with her and went through like statistics tutorials, I went to statistics study groups. I couldn't do it now but she pushed me to my limit. And then my major advisor... he supported my interest in like social justice and activism and narrative... So my mentors continued to be the people that were teaching me.

For Dr. Simmons, her career trajectory was altered because of a faculty adviser who introduced her to academic research, which ultimately led Dr. Simmons to a PhD program and a career as a faculty member herself:

> I would have to say for my master's program definitely [my master's degree adviser] was a big influence. Because originally, like I said, I came in wanting to just harness that degree and capitalize on it for a job in industry and so the research really began to fascinate me, and then, of course, after I was like able to work with her to actually do a research project and understand how research is conducted and what it looks like at the

> professional level in academia. So I would say through my master's program the motivation [to complete my degree] was easy.
> Faculty can influence students in other ways as well. Viola said “I had a great professor who actually helped me figure out what I wanted to do in life.” This professor who worked with Viola directly guided her to discover her passion for helping others. This led her to work in a mentorship program where she was able to teach other students. This program also helped sustain her when times became difficult.

Although individual mentoring experiences with faculty, such as the ones described previously, are valuable, faculty influence doesn’t always have to come from one-on-one mentoring. It also happens in the classroom. Muriel had a professor who taught classes she enjoyed. This helped her to look forward to going to class and made her feel like her time spent in her degree program was worthwhile. Muriel said:

> I’ve had some really good professors. [My professor] is someone that let me know about [your research project] and I actually had her class in the fall and I really enjoyed just being in her class. We had a lot of fun. She's got some very different ideas about teaching, that it shouldn't just be lecture, lecture, lecture. I really enjoyed it and just—I just felt like this would be something that I could do in my current job as well as really anywhere else I wanted to go.

Faculty support was also important to Miles. He said:

> Yeah, definitely my thesis adviser... I didn't have her my first semester, but I had her on my second semester. Kind of immediately, you know, sort of a mentorship formed. My thesis grew out of a paper that I wrote for one of her classes. She was always willing to meet with me.

Dr. Fuller noted that it’s not just his assigned adviser he relies on while working on tenure. He receives support from the entire department:

> I do have a mentor but I would consider that most of, not most, all the faculty here have been very thoughtful and considerate of my being a junior faculty and wanting to help me to succeed to gain tenure, and beyond that—just the basic practicalities of being an academic, the things that you wouldn't otherwise know even as a PhD student, especially being an academic at this university, the ins and outs, etc. I never feel that I can’t ask people to help me with a question or even getting feedback on research ideas or whatever so I would certainly agree that I have the support I need.

Mentor support plays a key role in student success. Having a support system helps students overcome challenges that would otherwise impede their education. Mentor support can also help students feel included in an academic program. Mentors can help students find a place in their program and give them a person to turn to when difficulties arise.

Knowledge about financial support helps students to persist

Faculty mentors and other advisers can offer more than just academic knowledge and emotional support. One example is knowledge about financial opportunities for students. Byron said:

> I actually learned about [a] fellowship because my advisor had kind of came across it and told me that I may have a good chance of being awarded that financial support if I went for it. So just having faculty members who can see those opportunities and are able to guide students to those opportunities I think helps a lot as well.

Helping students find financial support they may not have otherwise known about can relieve a large burden of stress for the students and families. Byron went on to say:

> One [aspect of student persistence] which is important for not only students of color but for all students is financial support. There's just no way that I would be able to continue doing or pursuing this degree if I didn't have some kind of financial support from the University and so through my teaching assistantship I've been able to continue learning and also through an on-campus organization at the graduate school... I was able to receive a fellowship there and that was just more financial support.

Often the financial opportunities are there, as Byron discovered, but students don't know where to look. When talking about financial issues being a barrier to completing college, Viola said:

> I think most students will say the financial aspect of college is what deters them from finishing. A lot of people want to [attend college,] but college is so expensive. When you get to the point where you can't get all of the grants because you're over a certain age, and/or you can't get every scholarship because you applied and so did a million other students, it's really hard. I think a lot of people understand that it's work, pay for college, plus your life outside of school, so I think a lot of students have that same issues paying for school period. Especially when you have 400 dollar books that you barely open, it just becomes really costly going to school.

Difficulty in finding ways to pay for college can be a factor in students being able to persist to graduation. However, some study participants said that lack of finances was one of their primary motivations for finishing their degree. Andrea said:

> It wasn't like [my tuition] was coming out of, you know, a parent's pocket or anything like that so I mean I had, you know, received a scholarship, but it was a very small scholarship—it didn't even pay for an entire semester. So anyway, it was the motivation on the investment piece that really kept me going.

Andrea felt that since she had invested money into college, she needed to graduate in order to see a return on her investment. The same was true of Dr. Stone who was an international student before becoming a faculty member. Her financial situation, as well as her visa status, meant she couldn't take her time in finishing her degree:

> There's something about being an international student. If you say to them "what motivated you?" they will say to you "I have a visa, it needs to get done," or like my

> adviser is saying to me, “your funding runs out in three years; we don’t have any other resources.” And so there were really tangible pressing things, you know, that one deals with in a five-year period. I had met people in the program and [graduated before them] because they were working full-time jobs and I had to get done.

In Dr. Stone’s case, her financial burden was less about being able to pay and more about the money she did have being cut off. This threat of the loss of finances served as motivation to complete her degree quickly.

Family members help influence and sustain students

Another important motivator identified by research participants was the influence of family members. One example of how a family member helped to motivate a student to continue on through a difficult time is a story that came from Viola. She got bad advice from an academic adviser regarding what classes she needed to take in order to graduate. She was about to quit but found motivation to persevere after talking with her mother:

> Yeah, there was actually a time when I got really close [to dropping out], probably about three semesters ago, where I actually was going to drop out but I didn’t. It was just a lot of factors going on at one time. I ended up finding out from my advisor, I'm not gonna say she's horrible but she wasn't really the best, really close to me being able to graduate, that I had four classes I still hadn't taken and it was kind of like one of those things where I thought I was so close and I was like “oh I may have to be here another semester.” Being told that you have to do one more semester when you think you're about to graduate it just kind of sucks, and I was at a point where I'm now having to pay for college out of pocket so I kind of wanted to give up. I had to have like a really long talk with my mom and although it was really, really hard, and I remember nights where I was working my butt off and then I had to come home and do homework, I knew I was too close give up now.

Viola also found motivation from the example of her family. Her mother didn’t go to college until later in life, but her sister and her cousins went on to college right out of high school and she wanted to do the same:

> The generation before mine didn't go to college. My mom, she went afterwards, but they didn't go automatically right out of high school. All of me, my sister, and my cousins we all went because [our mothers] wanted us to go and I can't lie—I kind of wanted to because they did.

Viola decided to attend college because of the influence of her mother as well as her cousins. Having close family and friends attend college can be a good motivator for a student to attend college themselves. Like Viola, Laurel also found motivation to attend and graduate from college because of the encouragement of her family:

> I guess it's maybe because ever since I was younger, my family or my parents, they instilled this value, you know, the importance of learning. So I was always one to kind of

> take my education seriously. They also told me I remember, you know before I started University, your degree is gonna be like a key or a weapon for you later. In case anything happens, it's there if you want to get a job or you need to make money or anything like that.

Juliet found support from her family as well. However, rather than receive motivation from her parents, Juliet found help and motivation in her daughter. When asking about how she stays motivated in school, Juliet said:

> I would say most definitely my family, especially with my kids. My oldest, she wrote this thing at school kinda like "who's your role model." She was only in first-grade. [The assignment] was filling in the boxes and she picked me and said that like I was really good at math and helping people understand things. She's the one, she would monitor me when I would do my homework and would point out "Hey mom you spelled that wrong. Isn't it time that you take a break? Isn't that what you tell your students?" One of my reasons for doing it was to make things better for her. When I first started I was just a single mom so everything was always about making sure she didn't suffer for anything with only having one parent. She also became like a slave-driver like "Mom, do you got homework today? Oh, you do? Well, you better get working on it." So she'd be sitting there doing her little homework by me while I was doing mine.

In Juliet's case, it wasn't just her daughter's motivating words that helped drive her. It was also her desire to make a better life for her daughter and her family. Parents may want to motivate their children to go to college to take advantage of the opportunity they never had and to help lift their family out of the cycle of poverty. Parents who are students may be motivated to finish school in order to give the gift of class mobility to their children.

As we can see from these responses, families can be a strong motivator for students' success both through verbal communication and by example. As we can see from previous sections, support from other people is a key to success in an academic program. Along with support from faculty mentors and family, peer support is also an important aspect of an academic program.

Peer groups offer support to students

A group of students, whether formal or informal, that meets regularly and supports each other is common in many programs. However, two students in this study did not have that type of group in their programs. Byron said this about his program:

> I will say I think something that would be super beneficial for students that I didn't necessarily have because our program is so small is to have like a cadre of students formed. I didn't necessarily have that because a lot of the technical writers are maybe more well-established in their careers when they come back for their PhDs. They're in their 40s and 50s and have families and might be commuter students who are also doing full-time jobs, whereas I was I guess 22 or 23 when I came into the program and I just didn't have the same kind of relationship that other graduate students have when they

> were able to form a cadre. If I had other people around me who were doing the same thing as I was that would help a lot, I think.

This is an important consideration for some TPC programs. “Commuter schools” include some of the largest institutions in the nation. Traditionally, students at a “commuter school” come to the institution to attend class and then immediately go home when their classes are done. They don’t stick around on campus. This can be a problem for students who could benefit from support from other students. Dr. Stone said something similar about her program:

> I'm going to say I don't think there was anybody in my program who wasn't also working which meant that once our courses had stopped I didn't see any of my colleagues unless they were perhaps teaching a course. So what I had hoped for in a PhD program that would have allowed me to engage with colleagues and to be able to have these collegial relationships and have a cohort, that was absent for me which is one of the reasons I went on to do a postdoc.

Dr. Stone was missing a support group during her PhD studies. She felt like she wasn’t able to form those valuable relationships that students at more residential campuses form. For students from underrepresented racial backgrounds, having a support group of other students can be especially important. Barbara said of her experience:

> My program is predominantly white so that kind of makes things a little difficult, but one of my cohorts... she’s a black female who also came from a historically black college, she and I both have kind of the same educational background so she and I have been able to make connections in the class some of our peers can’t. The first two years it was me and my cohort..., but there were also three other black students in the MA program so all of us kind of formed our own family where we were kind of leaning on one another to get through those two years. Luckily I was done for the coursework by the time they graduated so it's definitely a situation where we needed each other much more than we could have imagined because I know I couldn’t have made it through if I didn't have all of them.

Barbara found comfort in a group of students with a similar background to hers. Her group formed organically and was not formally created by the program. Purposefully creating a space on campus where students can support each other can be challenging but is possible. There may already be spaces available at the institution. Miles found a place at his campus’ writing center:

> It also helps I think if writing [academic] programs are connected to like a writing center on campus. I found that a lot of my discussions about writing and identity actually either involved or occurred in the Writing Center physically. I was a graduate tutor for the Writing Center and we would talk a lot about theorizing the space of the Writing Center and how the Writing Center is a race space on campus. Like, how do we treat African American vernacular English or how do writing centers—how can writing centers be complicit in reinforcing, you know, oppression?

The ability to work and socialize with other students seems to be an important factor in the success of many students. However, there are some challenges that students must overcome on their own.

Students use self-motivation to sustain themselves to graduation

Another aspect of persistence in academic programs mentioned by interview participants was self-motivation—the ability to motivate oneself to persist to graduation. This is not to say that asking for, and receiving help is not important and valuable. Only that some overcome certain challenges through personal effort. Self-motivation can come in many forms. One form is the fear of failure. An example of this can be found in Dr. Simmons's experience when she moved from the southern United States to the west for her PhD program:

> I think if I'm honest, [I was also motivated by] fear of failure. I came all the way over [to the west] with my kid. My parents were like "what in the world are you doing?" So it was just like "I have to do this and I have to do it well." You know? So even though I felt isolated and frustrated, I said there's no going back. I want to do this, it's going to happen and so some of that was honestly fear of failure like I didn't want to go back to [the south] with my tail between my legs.

Dr. Simmons's fear of failure relates to family motivation as discussed previously. She did not want her parents to be disappointed if she was not able to finish her degree. However, motivation from family is not always a factor in persistence to graduation. When I asked Audrey if there was anyone who influenced her to choose to study a TPC program or who helped her persist in her program, she said:

> No, it was just me. I mean, I don't like quitting. What kept me motivated is really just 1. the accomplishment of knowing that I finished something and 2. how it would potentially help me in the future.

It seems that even though Audrey didn't have a support structure, she was able to motivate herself through focusing on creating a better future. Similarly, Andrea kept herself motivated by concentrating on the investment she was making in her future career. Like Dr. Simmons, she was worried that her former co-workers would be disappointed in her if she failed:

> What kept me going was that I realized that I only have this one opportunity to finish this investment and I wasn't just going to quit after I had already started because it was coming out of my pocket... and I was determined to get it because I had started the process so I was determined. It had been such a big deal because I had left my career and it was a really successful career and I was unbelievably happy and thought I would never leave that place so everyone knew the reason I was leaving was because I was getting my degree so I, you know, had to save face, too.

Andrea made a personal sacrifice to invest in her future. This sacrifice kept her motivated because she wanted that sacrifice not to be wasted. Muriel also decided to get a degree to better

her future, but she was motivated to continue in her degree program by her desire to learn new things. When asking about her motivation to continue in her degree program, Muriel said:

> I would say the types of classes they have in the department [motivated me]. There are a lot of different types of classes so I was able to take different classes to see if I liked different things. I was able to take a couple of coding classes, I was able to take a desktop design class where we basically did all of our projects in Adobe products. I was able to take technical editing classes. The program's got a good sort of sampling of classes and so you can figure out what you like. Right now, I'm taking [a professor's] grant writing class so that's another thing that kind of pops up. You're like "well I don't know if I like to write grants, I don't know if I would be good at this." So you get a chance to take other classes and then and then sort of get introduced to all these different technologies you just become interested in them. So as I would find out, for example, what single source authoring is, or what new technologies are used primarily in industry. It makes you want to take classes and makes you want to learn so that's kind of driven it.

Personal motivation can come in many ways including a desire to learn, wanting to make a better future, and not wanting to disappoint friends and family.

Discussion

Part of the purpose of this research project was to try and find out what unique issues TPC students of color face when trying to persist to graduation and how they overcome these issues. The literature review states important factors in student persistence including precollege characteristics (e.g., family background, academic preparedness, and prior skills and abilities), the student's ability to integrate socially into the institution, and the student's ability to integrate into their academic community. The findings of this study confirm what other studies have found regarding the general marginalized student population. Although the strategies for persistence pointed out by study participants are not completely unique to the TPC student population, technical and professional communicators do possess skills that can help solve many of these issues. As stated in the literature review, technical and professional communicators' focus on user advocacy means that TPC academics and professionals can and should be leading the way on social justice issues. Each of the themes identified by study participants point out an issue that can be helped or solved by better communication practices.

As you can see from participant responses, building a communication/information network of contacts who can not only offer support but are also knowledgeable regarding resources students can access both on and off campus is extremely important for student success. The first four themes from the previous section all have to do with the student's ability to communicate with, and receive support from, a mentor. Since TPC students are often not in a position to seek out support, TPC programs may need to facilitate ways to get that support to students. Program administrators likely can't add more tasks to an already full plate but may be able to facilitate a distributive method where students and faculty can work together to create a thriving mentor/peer mentoring community. In order to address the issue of providing all students with a strong network of support, program administrators can:

- Identify those people and groups who are central to communication/information networks
- Remove barriers that prevent access to those connected people/groups or prevent those people/groups from being as informed and connected as they can be.

Faculty Mentors

Mentors with the most knowledge and ability to help students persist in their degree programs are program faculty members. For TPC students, TPC faculty members are the people who will understand TPC students best. Students will likely have access to counseling, academic advising, and several other services, but TPC faculty members are the people students will interact with most. They have more insights into the field and may have knowledge about contacts and resources that other people on campus do not have.

Many responses from participants regarding their ability to persist in their degree program revolved around students receiving help from faculty members. This aligns with the current research on the importance of faculty mentorship (Brill, Balcanoff, Land, Gogarty, & Turner 2014; Chelberg & Bosman, 2019; Livinţi, Gunnesch-Luca, & Iliescu, 2021; Young, VanWye, Schafer, Robertson, & Poore, 2019). Sometimes a student may feel lonely or isolated when starting a new degree program, especially if that student is from a background that is different from the students them. They may not know how to find a faculty member and contact her/him for help or even that a faculty member can help. Graduate students were more likely to report having a close relationship with a mentor, but both graduate and undergraduate students generally have little interaction with program faculty outside of class.

Faculty members face several barriers when trying to increase mentoring time for students. Many faculty members are already stretched thin in regard to time. Also, since many TPC students are considered “non-traditional,” meaning that they have jobs and families, they can’t spend extended time on campus. One solution may be to build some mentoring time into classes. Muriel’s response regarding her faculty mentor’s innovative teaching methods reminded us that most students’ experiences with their degree programs begin and end in the classroom. In fact, most of the undergraduate participants in this study didn’t speak beyond their classroom-based interactions. This is an example of why inclusive TPC programs should identify and support inclusive teaching practices like, as Muriel suggests, employing a variety of active learning approaches to the course material beyond lecturing and helping students articulate how they might apply the course materials outside of the classroom. Inclusive teaching practices may foster mentoring opportunities between faculty and students by making students more comfortable approaching the faculty member for help. Faculty members can also be proactive in their classrooms in presenting resources and opportunities for students. Faculty mentors generally have more experience navigating higher education and have a better understanding of the opportunities available at their institution. Students often find the bureaucracy of higher education daunting. Students of color may find it especially difficult as institutions of higher education are built around white middle- and upper-class norms. Taking some time during class to help students learn about available resources, or where to find resources themselves, could be extremely helpful.

Department chairs can help facilitate this type of in-class mentoring. By taking some time during department meetings to educate faculty regarding the challenges faced by marginalized students and educating faculty about resources such as counseling, tutoring, and supportive clubs and organizations, department chairs can give faculty members the tools they need to inform students while not asking them to take up more of their own time to learn.

This type of training can also apply to financial aid. There is a myth in higher education that people of color have many more financial opportunities than students who are white. However, students of color certainly also struggle with finances. Sometimes this financial burden is compounded because the student may come from a background of poverty and may have gone to an "at-risk" school with counselors who are not knowledgeable about financial opportunities for college. The student may also lack a mentor who knows how to navigate the college process. Since more white people have historically attended college, there are more white parents and mentors available to white students to help them through the college process. People who have graduated college know how to navigate the financial challenges of college because they have faced these challenges themselves.

Administrators looking to foster inclusiveness in their programs need to specifically address the financial aid issue. Administrators can work with faculty, staff members, and financial aid offices to create clear communication informing students about available financial resources. This could include department training for both staff and students, a special section of the student orientation addressing financial aid, and the inclusion of financial aid information in recruitment materials, admission letters, and syllabi. As faculty and staff gain more knowledge, they can proactively reach out to students to inform them of financial aid opportunities.

Student Groups

According to study participants, having peer support greatly helps student success. Facilitating opportunities for students to support each other could go a long way in encouraging success among students of color in TPC academic programs. One way to do this may be for faculty and program administrators to become familiar with the resources already on campus, such as a Black Student Union or a Latin American Student Association and communicate those opportunities to their students. These mentors could not only tell students that these organizations exist but reiterate the importance of being involved with a support group to find academic success. Administrators can also encourage the creation of new groups with support such as funding, meeting space, and providing a faculty advisor for the group.

As mentioned previously, many TPC students are considered "non-traditional" students. In addition, many TPC programs are online programs (Meloncon, N.D.). Having an online program adds another layer of difficulty in trying to facilitate peer support groups. Administrators and faculty often try to create official student groups for online students in their learning management system (LMS) or on social media with little success. This may be because students are reluctant to show that they need help in front of faculty members (Barreira et al., 2018; Cornwall et al., 2019). Some programs seem to be seeing more success with unofficial, student created groups on apps such as GroupMe (Galliart, Thornton, Freeman, Bradley Pospisil, Csaposs, Dorn, Eller, & Grover, 2022). These apps can simulate the unofficial meetings students

may have on campus in a café or a grad student office. Students can speak freely about the difficulties of campus life and offer help and suggestions to each other.

Family

Students may face many difficult challenges when working through their degree programs. Family members can be a strong support system to help them through these challenges. Undergraduate students specifically were more likely to talk about the influence and motivation of family members when asked about their ability to persist in their degree programs. This may be because undergraduate students don't generally have close relationships with faculty members who influence them to persist to graduation.

Often, family is completely separate from the educational experience. Making family a part of the experience may encourage more family support for students. Administrators can work with university and department communicators to create a family focused web page and family focused communication. This type of communication could center around family support and how families can help students persist to graduation. If possible, families could be encouraged to visit campus and be welcomed at department events. Department student orientations could encourage students to communicate with their families and give tips regarding balancing family life with schoolwork.

Personal Motivation

A recent trend in student services departments is to offer workshops teaching "grit." Grit is an important aspect for student success; however, a student should not be left to feel like personal grit is their only for support. TPC programs can support personal motivation simply by supporting students in the ways that have been mentioned so far as well as in other ways. When supporting students, academic programs give students a better chance of being able to support and motivate themselves.

Limitations and Future Research

The primary limitation of this study, as with most qualitative studies, is the small number of participants. In order to understand how students from underrepresented racial and ethnic backgrounds persist to graduation, researchers will need to speak to many more students. Another limitation of this study is that the participants only include those who have been successful in higher education. If program administrators want to find out how to keep students enrolled and moving forward in their degree programs, they will need to find out why students drop out. A future research project could include students who ended up leaving their degree program. Information gained from this type of project could be very valuable in discovering why students leave a degree program and how TPC degree programs can retain as many students as possible.

A question that the results of this research study bring up is whether or not some of the obstacles faced by TPC students are unique to TPC. Students in different fields likely face discipline-specific challenges to persistence. Field specific factors for student departure are being studied

by other fields (Bir & Ahn, 2019; Cooper et al., 2019; Huerta-Manzanilla et al, 2021; Livinţi, Gunnesch-Luca, & Iliescu, 2021; Young, et al, 2019). Technical and professional communication students likely face their own unique challenges. Issues like lack of visibility of the field (Dayley & Walton, 2018), and the need for the practice of technical communication to expand its scope to be more inclusive of different perspectives and life experiences may be of interest to TPC researchers. A future research project could identify and focus on issues specific to TPC and how faculty and administrators can overcome those issues.

Another area for future research is to speak directly with TPC program administrators and department chairs. Researchers could explore which programs are trying to incorporate retention initiatives and how recommendations, such as the ones in this article, might be implemented.

Conclusion

The most important function of student support is helping students to persist to graduation. There are many factors that help students to persist in their academic programs. These factors include, among other things, family support, peer group support, the desire to improve personal circumstances, and the desire to better oneself. When TPC programs bring students from minority backgrounds into their programs, they have a responsibility to support those students. Most programs care about their students and want them to graduate, but there is a lot more TPC programs can do to increase inclusivity with the intent of retaining students.

Although TPC program staff, faculty, and administrators are often extremely busy, and are limited in their ability to make changes at their institution, they can aid in student retention by identifying the people who are central to students' information and communication networks, and facilitating clear, consistent, and targeted communication. This type of communication is a specialty of technical communicators. TPC program administrators can empower faculty mentors by making sure they have training on available resources and how to work with students from marginalized backgrounds. Faculty mentors can take a small amount of class time to make sure students are educated about available resources and understand where they can go for help. TPC programs can also facilitate communication with families by encouraging families to come to department events and creating a special section of the web site and/or specific email communication for families.

Students do not enter a degree program with the intent to exit early. Though a college degree may not be right for everyone, the vast majority of those who enroll at a college or university do so with the intent to graduate. Colleges and universities, just like all institutions, have embedded cultural norms and practices that have been highly influenced by students, faculty, and other higher education institutions. If a student's social, cultural, and financial background does not match that of the institution where they are enrolled, they are likely to struggle. This adds an extra burden for marginalized students that makes access to a college degree unequal for marginalized students. If TPC program administrators are committed to social justice in their programs, then they also need to be committed to doing everything in their power to support their students to graduation including changing cultural norms and assumptions that exclude and create barriers for students and faculty who don't fit in with the currently accepted social and cultural norms. Although the problem of retention of students from marginalized backgrounds

persists, what might be lacking in our understanding and treatment of those issues as communicative. Program administrators who listen to their students, and work to implement proper support structures can make an enormous difference in helping students to achieve their educational goals.

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APPENDIX

Student and pre-tenure faculty interview questions:

- How did you learn about the field of TPC?
- Why did you decide to study TPC? (The answer(s) to this question led to follow-up questions that attempted to discover deeper insights regarding the subject's motivation to choose TPC)
- Who influenced you to study TPC? (If no one was credited, I asked follow up questions, such as "Did a teacher or friend or family member influence you?")
- Why did you stay in TPC? What keeps you participating in the field?
- As you pursue your education/career in TPC, who helps you?
- Did you face any challenges or barriers with finding TPC? With remaining in the field?
- What kinds of support got you to the field in the first place? What kinds of support keep you participating in this field, as opposed to leaving for another major/career, etc?
- Do you think you support others in finding out about TPC? Why? How?
- Do you think you support others in staying in TPC? Why? How?
- How many students in a typical TPC class are persons of color?
- What are your career aspirations? What kinds of support would you need to achieve those aspirations?
- What advice do you have for recruiting more people of color to TPC as a field ? For recruiting more people of color into TPC academic programs?
- Why do you think people of color are underrepresented in TPC? Why do you think there aren't more people of color in TPC?