

# Professional Shame amid Faculty-Student Interactions

## Abstract

Prior research on faculty-student interactions in engineering education generally conceptualizes the function of these episodes to be supportive of professional development. In this paper, we examine the experience of professional shame amid faculty-student interactions. More generally, we examine the emotional significance of interactions between faculty and students and how such moments can affect how students cope with the experience of professional shame. Our findings are based on a thematic analysis that followed a broader qualitative mixed-method investigation of how engineering students experience professional shame. Specifically, we analyzed specific episodes of moments where the experience of shame was connected to faculty members within focus group transcripts ( $n = 10$ ) of engineering students ( $n = 38$ ) and interview transcripts with engineering students ( $n = 16$ ). We generated three themes that characterized the experience of professional shame amid faculty-student interactions. First, faculty would engender shame through conveying vague, holistic expectations of what it means to be an engineer. Second, students would cope with the experience of shame by blaming the faculty member for the experience. Finally, some students saw the faculty member as a source of hope while they experienced professional shame. These findings point to the crucial role that faculty play in not only preparing engineering students for professional practice but also for cultivating environments of well-being within engineering programs.

**Keywords:** *professional shame, emotion, faculty-student interactions, qualitative research, thematic analysis*

## Introduction

In this research paper, we examine episodic moments of professional shame as experienced by students when they interacted with faculty members. Anchored in theoretical foundations of psychology and sociology [1-4] and in empirical foundations of our prior work [5-9], we use Huff et al.'s [9] conceptualization of professional shame as “a painful emotional state that occurs when one perceives they have failed to meet socially constructed expectations or standards that are relevant to their identity in a professional domain” (p. 414).

The findings of this study provide suggestions to engineering faculty members on how they can improve overall well-being outcomes and cultivate systemically inclusive environments by understanding the ways that students might be experiencing professional shame in their engineering courses. In summary, we aim for faculty members to harness the power of emotional moments to demonstrate care—toward themselves and their students—rather than avoid the emotional experience of professional shame and perpetuate maladaptive cycles that counter the well-being needs of students and faculty.

## Background: Faculty-student interactions in engineering education

Previous research identifies faculty-student interaction as playing a crucial role in developing high performance and retention of students in engineering education. For example, Bjorklund et al. [10] quantitatively established a direct and positive relationship between faculty-student interaction and students' perceived positive outcomes of the course. In their study, students

reported feedback from professors as the most important factor contributing to their perceived improvement in group communication skills, problem-solving skills, occupational awareness, and engineering competence. The second leading factor to the students' perceived success was collaboration in the classroom related to design projects. However, it was not the design projects themselves that correlated to the experience of learning. Rather, the in-class collaboration led to more interactions with the teacher who supported, advised, and critiqued the students' work [10].

Other work complements these findings that student performance improves with more frequent interactions between students and faculty. For example, Allen et al. [11] found that students who experience more interactions with their instructors report higher levels of self-efficacy as well as increased persistence in education. They further noted that student performance was most positively correlated with the number of visits between students and faculty during an academic term and the total amount of time in which they interacted.

While students generally perceive teacher-student interactions to be valuable, Briody et al. [12] noted that research-intensive universities tend to have the lowest teacher-student interaction rates. In their qualitative study on engineering faculty, staff, and students, they described how such low rates of interaction between teachers and students are rooted in the organizational culture of the given university. Their study closely examined the culture surrounding what they call *professor avoidance*, which is characterized by students consulting their peers or the teaching assistant, if necessary, and ultimately excluding the professor from the list of potential contacts that could guide them. Failure to engage in active teacher-student interactions deprives students of "crucial opportunities for (1) mentorship, guidance, and advice, and (2) developing interpersonal and networking skills with the 'adult' technical experts in their lives" [12] (p. 683) that will enhance the learning experience as they master their courses.

The oft-described dissonance between the expectations of the relationships between faculty and students is explained well by Heller and colleagues [13], whose survey research demonstrated that students and faculty have different viewpoints on what engagement means. Students viewed engagement as something that the faculty offered to them, including through interactions that occur outside of the classroom while faculty expected their students to be engaged with the material based on its inherent value. The implications of Heller et al.'s [13] findings illustrate that the level of faculty engagement and enthusiasm has a critical impact on the learning of engineering students.

While previously discussed studies [10-13] and others [14-17] characterize a nascent body of research on faculty-student interactions, the dominant trend in this work is that they examine the overall development of learning gains and retention of students within engineering as a result of such relationships. Our work examines the mechanism of faculty-student interactions as it pertains to the overall well-being experienced by students in engineering programs. We approach our study with a holistic view of the student and faculty noting that emotional and mental states surrounding one's identity can impact the classroom and the lived experiences within it, particularly that of professional shame.

### **Theoretical framework: Professional shame**

We organize this particular study within a broader investigation on *professional shame* as experienced by engineering students. By professional shame, we refer to an emotional phenomenon characterized by four features, as defined by Huff et al. [9]:

(1) Individuals perceive themselves to have failed to meet socially constructed expectations that are relevant to their identities in a professional domain;(2) individuals experience a painful emotional state amid such perceived failure; (3) individuals attribute the failure to meet expectations to an inadequate whole, or global, self rather than a domain-specific feature of a certain identity; and (4) individuals within professional domains not only experience the emotional state of shame but also contribute to expectations that establish the conditions for professional shame to occur” (p. 415).

Our prior research into this emotional phenomenon demonstrates several key insights that establish the context for this particular study. First, we have found through interpretative phenomenological analysis studies that engineering students experienced professional shame when they perceived that, within the context of engineering programs, they were failing to meet expectations that are central to their identities [8, 9]. The experience of professional shame tends to inhibit social connection with other engineering students or faculty. Indeed, women participants and racialized participants tended to experience the emotional state as one that would isolate them from others in the engineering program [8] and white male participants demonstrated a tendency to replicate the pattern of shame for themselves and, likely, others [9]. When students experienced shame in ways that were healthy, the phenomenon was marked by a pursuit of finding social connection amid the vulnerable experience [8, 9]. Further, our ethnographic analysis of student focus groups demonstrated that the emotional experience, and the cultural scripts for expressing or regulating the emotion, were connected to the identity-relevant expectations that pervaded engineering programs. Students collectively defined being an engineer as connected intellectual performance and work ethic, and when they inevitably failed to meet such expectations, they were often unable to express the emotional experience in the context of their engineering programs [5-7].

Here, we examine the data from our larger investigation to carefully scrutinize and characterize the moments of faculty-student interactions that occurred amid the experience of professional shame. Based on our findings and the above definition for *professional shame*, faculty play an important role in propagating the experience in at least two key ways. First, faculty hold an influential voice over framing the expectations associated with what it means to be an engineer [18], thus holding power over the context in which professional shame occurs. Second, as our prior work demonstrates, the experience of professional shame can be reparative for the student (rather than destructive) when experienced in social connection to others. Faculty hold great promise in cultivating environments of social connection both directly through engagement with students and indirectly through the cultures they create within their courses and programs.

## **Methods**

Our analysis in this paper follows a broader investigation in which we conducted in-depth interviews ( $n = 16$ ) and focus groups ( $n = 10$ ) with engineering students ( $n = 38$ ). We analyzed the interviews with engineering students using an interpretative phenomenological analysis (IPA) approach [6-7, 19], and we analyzed the focus groups using an ethnographic perspective [5-7]. These findings, and our rationale for using a qualitative mixed-methods approach to study the sociopsychological phenomenon of professional shame [20], are published elsewhere. For the present study, we conducted a secondary analysis [21] of excerpts in which students experienced professional shame during moments that were directly connected to a faculty member's actions or inactions. Specifically, we carefully examined the interviews and focus group transcripts to

identify accounts of professional shame that directly involved the experience of the emotional state being connected to students' interaction with faculty, either directly or through communication that was directed to an entire class. Our process followed a somewhat deductive mindset applied to a thematic analysis of the transcripts [22], where we were specifically examining instances of faculty-student interactions amid professional shame—a phenomenon that was more specific than the general experience of professional shame which anchored our data collection efforts. Once we had gathered all excerpts that involved faculty-student interactions, we organized these excerpts into four themes that suggest patterns in which students experience shame through their direct interactions with engineering faculty.

Our secondary analysis of the data is limited in relation to the contextual depth that we can achieve in deconstructing how teacher-student interactions may give rise to professional shame. However, we present this work to establish the robust, suggestive context for future research into examining the presence of professional shame as experienced by faculty or students in the context of their interactions with one another. By examining the emotional phenomena that accompany teacher-student interactions, we may better understand how to promote positive relationships within engineering programs that facilitate systemic equity and advance well-being in engineering programs.

## **Findings**

Our analysis demonstrates three patterns that students demonstrated when coping with their own sense of professional shame amid faculty-student interactions. First, they experienced the emotional state amid vague expectations from their instructors related to what it meant to be an engineering student or engineer. Second, in response to the shame experience, they redirected the responsibility for failing to meet professional expectations toward the faculty who conveyed the expectations. Third, when seeking recovery from professional shame, some students looked to the faculty as the harbinger of hope for repair amid failure.

### ***Theme 1: Vague expectations for being an engineer facilitate moments of professional shame***

In the experience of professional shame, students judged themselves to be inadequate compared to expectations they perceived to be present within the engineering educational culture. These expectations were often articulated by professors and, in many cases, were relevant to students' experiences both inside and outside of classrooms. Students, in turn, interpreted these expectations in terms of how they should “be” as an engineering student and, ultimately, a holistic individual. Rebecca explained some of the attributes that professors expect of engineering students saying:

So they expect you to manage your time well um, expect you to do your work and get it done. Sometimes they give you a lot and they expect because of the caliber of student that they, I guess, become an engineer. It's not for the fainthearted. They expect you to be able to handle it. Like I said, time management is a huge, huge thing (Rebecca)

While time management is a skill, many of the words Rebecca uses to describe expectations were global traits of the whole person, not a specific set of actions relegated to an engineering student. She even specified that professors expect a certain “caliber” of students within the engineering program. Here, Rebecca seems to suggest that professors' expectations not only describe a global way of being, but the word caliber also implies a sense that the expectations are high, mysterious, and potentially unattainable for some students.

Even within the domains of academic performance, expectations were sometimes described by participants as lofty and undefined. Faith stated, “[P]rofessors are like ‘You don’t have to know everything.’ But deep inside you, you feel you need to know everything.” Charles similarly described the expected knowledge as “a vast sea of knowledge that he could pull anything from.” Again, because expectations were difficult to define, students were left with a sense that there was an ambiguously high standard without specific actions they can take to reach it. In reaction to these vague expectations, students described an expectation of “figuring it out.” Bill stated that engineering was “a lot of just trial and error, figuring out what works, what doesn’t work, and what, at the end of the day, needs to be in the project, in whatever you’re presenting.” Jackson echoed this sentiment: “And I think there’s that expectation that we’re going to—I’m going to say this once, and if you don’t get it, you have to figure out another time besides class to figure it out yourself.” Wade further described how the expectation to “figure it out” was perceived:

I think like the expectation, kind of just figure it out. . . . Lots of times like if I asked him [the instructor] about a problem and didn’t know how to do it, like he’d kind of just be like, “Alright, well, figure it out,” and like maybe push me in the right direction, but the bottom line is say figure it out, and so there’s, I guess something a little bit inside me is kind of like, alright, like you don’t think I can do it, well, like here you go, like—but I think—I feel like that sometimes with that expectation.

Wade’s impression of having to “figure it out” was that his professor perceived him as incapable. Certainly, the professor’s actions might have been delivered with the intent to motivate Wade to “figure it out,” with the instructor confident in Wade’s abilities to do so. However, this interaction left Wade questioning the professor’s confidence in his ability to academically perform well. And the lack of specific actions that could be taken to reach the standard left an ominous feeling of global failure and, thus, set the stage for experiencing professional shame.

### ***Theme 2: Blaming faculty as a maladaptive mechanism for coping with shame***

When participants failed to achieve expectations, the professor played a critical role in whether the emotional reaction was one of guilt or shame. When participants felt guilt, they saw failure as something they had done and responded with an effort to repair the perceived failure. Steven exemplified this as he explained his failure philosophy saying, “It’s okay to fail. It’s okay to do bad. It’s okay to make mistakes because again, as I had said, as I said before, you learn from your mistakes.” When participants experienced shame, they saw failure as a reflection of their global ability to be an engineer and responded by withdrawing from both engineering coursework and community. While shifting the mindset from shame to guilt offered the most reparative outlet of coping with the emotional experience, it was not the most accessible. Instead of working through failure, many participants attempted to share the responsibility for failure with others. Roger explains that as he was experiencing failure in a course:

I definitely put blame on my professor for not teaching it well, or my friends for not explaining it well because I felt I gave my part . . . I’d say with most all of my classes, there comes a breaking point that I’m just frustrated with myself, or with a professor.  
(Roger)

At that breaking point, where he was feeling the intensity of failure, Roger sought to reduce the weight of shame by sharing the blame of his perceived failures with his professors and friends. While solely emphasizing the actions that led to failure (guilt) would put full focus on repair, Rodger diverted some of his energy into finding someone to blame. He stated, “I’m going to

dedicate myself even harder, but also still holding residual feelings of contempt for [a classmate] next to me, or for the professor and having to work through that.” In Roger’s case, blaming the professor introduced another negative emotional experience that he had to work through—resentment. Here, avoiding shame, although it might offer some temporary relief to the student, is ultimately unproductive and damaging to the relationship between the student and their professors and peers. Thus, going forward, the student will likely have a more difficult time progressing through the major because they harbor a general resentment towards the course and professor. This type of response is interesting because, although it seems to be a natural avenue for dealing with shame, it is not a productive one. Steven gives insight into why shifting blame is appealing to someone experiencing shame. He stated:

When you take a test or a quiz, it’s literally all you. It’s you, and the paper, and the material that’s on the paper, and the pencil of course, and calculator. But when you realize that everyone else is doing the same thing, you’re thinking, okay, maybe it wasn’t your fault. Maybe it’s not because of the way you studied or maybe it’s not that you don’t know the material. Maybe it’s because it’s more on the professors’ side for making the test too hard, or putting material that they never taught.

Here, Steven explained that being able to blame the professor gave relief to the feeling that failure is a reflection of his global engineering identity. The idea of failure being “all you” or “maybe it wasn’t your fault” is the difference between laughing at a poor grade and experiencing shame. Being able to relate to others and allocate responsibility outside of oneself allowed the student to avoid shame, and externalizing the responsibility of performance to the professor was a patterned response in coping with the experience of failure.

### ***Theme 3: Viewing the professor as the harbinger of hope for repair amid failure***

When participants experienced failure, professors played a critical role in whether they felt that failure could be repaired, which either alleviated or intensified the emotional experience of shame. Nicole gave insight into how the faculty-student relationship was integrated into the experience of failure:

Especially when I was looking at the test in front of him, just felt like I’d let him down. Like, like I made him feel like he didn’t do a good enough job teaching. . . .But I definitely, like that was the first thing that hit me when I saw my test. I saw the red, I was like, ‘He probably is so upset with me.’ He wasn’t.” (Nicole)

Nicole identified her first thought following failure was concern about the personal relationship with her professor, not about academic impact. Not meeting the expectations of a course meant, to some participants, that they were betraying a relational bond with their professor. Accordingly, to some, failure of expectations within the experience of shame felt deeply personal. Martin described how failure, without the possibility of action-repair, affected his ability to continue in the class:

Look like um— That class I guess I felt kind of stuck and hopeless in that class, just because I had fallen so low, I couldn’t just see a path to figuring it out quickly. By the time I had realized I’d fallen so low it was like midpoint of the semester, so I was like, ‘I’m not going to be able to recover from this completely,’ so I wasn’t as motivated I guess, because I couldn’t see a path out of it.

Martin was frustrated because he “couldn’t see a path out of it” and that left him feeling hopeless and unmotivated. Martin had described elsewhere that he perceived the professor as being able to create that path out of failure—otherwise, he would remain “stuck.” Here, professors, as the holder and embodiment of expectations, might also be seen as the embodiment of hope. Steven distinguished how grading policies communicated attitudes towards failure and repair

You could be doing the right thing as being able to solve the problem, but then there’s one little thing that messes up in the middle, that messes up the entire thing. But you still had the same concept, so you have the right idea. So a lot of professors see that. So because of that, they give you a lot of partial credit and everything. But there’s one professor, if you got it wrong, it’s completely wrong. So that’s like minus 25 points already. So you’re already at a 75. So you’re just like, . . . what now? (Steven).

In the question, “what now?” Steven demonstrates a feeling of hopelessness when there was no avenue of repair. The professor, by setting the policies for repair is also setting the policies of hope. And, with that, professors either offer students a way to frame failure as an action that can be repaired or reinforces failure as fixed and permanent. David recounted how a professor offered to let him partially repair his grade following his failure of the final, thus enabling him to keep his scholarship. By allowing David to take action and repair his failure, this professor offered hope. However, we also noted moments where the students were experiencing shame in ways that were not visible to others. Even when not approaching the professor for some sort of curve or ability to repair an academic failure, the professor is still integral in repairing shame. In a moment when Mickey was feeling that he was wholly inadequate in the context of engineering, a professor’s comment offered hope:

The professor told us, he said, ‘This discussion that you’re all having, this is really good.’ He said, ‘I usually see this exact type of discussion out of managers like big time managers and companies. They’re constantly thinking about how to better implicate people stuff,’ and so it made me realize that I may not be as smart as other people but I have other qualities that could still make me a great engineer. It really helps me out, and those things made my day or so they say, I walked out of that class and I thought, ‘You know what, I am able to do this.’ (Mickey)

Mickey recounted this moment as formative in his development of identity as an engineer and as someone who is capable of doing engineering. These ideas were foundational in counteracting the message of shame which told students that their failure is not repairable. Whether professors were willing to offer some avenue for academic repair or not, they held the power to affirm that the student belonged within the engineering program or to amplify the messages they experienced through shame, namely, they were without hope.

### **Discussion and Future Work**

The findings of this study illustrate some modes of how faculty behaviors subtly interact with the lived experiences of professional shame in engineering students. In courses or office hours, faculty have numerous opportunities to convey expectations of what it means to be an engineer, whether or not this identity message is what they are intending to convey. However, by attributing success in engineering to ambiguous and global patterns of identity, faculty might create unattainable expectations for students who are relying on them to validate their worth as

pre-professional engineers (Theme 1). Faculty can nurture cultures that validate emotional well-being by providing feedback to students that is task-focused and action-focused. By amplifying vague messages of how engineering involves rigor and tenacity, for example, faculty do little to provide clear messages of what it means to actually do engineering and create holistic personal standards that students may not feel they can measure up against [19]. Rather, by focusing feedback on specific skills and knowledge, faculty might provide constructive templates for improvement that are within the reach of their students to achieve.

Additionally, amid the experience of professional shame, students may attempt to cope with the emotional experience by blaming the faculty member for their emotional experience (Theme 2). While blaming may provide the student a temporary reprieve from shame, including by fostering a bond with fellow students who may share the grievance, such externalization does little to help the student cope with the experience of shame in a way that is healthy for them. Rather, by attributing the responsibility for failure to the faculty member, the student is avoiding the pain of their own failure and denying themselves an opportunity to learn and grow from the experience. This finding is important for faculty to be aware of when interacting with students.

If faculty expect students to approach them for help when they face challenges within courses, this finding highlights how students may be conveying a need for help when they engage in avoidant [12] or even subtly hostile behaviors toward the faculty. Faculty can respond to such behaviors by creating an ecosystem of care within their courses. One practical strategy to develop an ecosystem of care might be to normalize the process of asking for help within course discussions. For example, rather than asking if there are *any* questions when conveying expectations on assignments, faculty can ask *what* questions students might have. Additionally, when conveying expectations that are commonly met with confusion in courses (e.g., complex assignments or difficult concepts), faculty might elicit feedback via a think-pair-share strategy, where students privately register their questions, then discuss in dyads or triads with other students, before choosing whether or not to bring their questions before the course. While such a reflective strategy is often promoted for deeper learning in courses [23], it also allows for multiple layers of meeting relational needs during vulnerable moments where students feel uncertain about whether or not they are meeting identity-relevant expectations.

Finally, faculty have immense opportunity to create positive and constructive avenues for hope through their grading policies and encouragement to students (Theme 3). By implementing assessment strategies that promote mindsets of growth [24], faculty are not only establishing a cogent strategy to retain future engineers, but they are also actively promoting emotional well-being within their courses. One collection of teaching strategies that promote constructive avenues of learning is assessing the course through a mastery assessment paradigm [25], in which failure to perform academic tasks is an expected step in the overall learning journeys of students. Such a paradigm allows for the faculty to actionably demonstrate support for the student development within their course by rewarding growth rather than penalizing failure.

The findings of this study demonstrate the emotional significance of faculty-student interactions in engineering education, a dynamic that has often been theorized to be supportive of conceptual learning gains or professional commitment [10-17]. Beyond the professional preparation of engineering programs, faculty-student interactions are central to meeting our needs as holistic individuals who are pursuing social connection. By allowing for engineering spaces to facilitate social connection, we can advance well-being within our programs and create spaces that facilitate equitable access to learning and community.



While the findings of this paper depict a contextually rich illustration of how students experience professional shame amid faculty-student interactions, they also depict a one-sided version of the story—where students are seen as multidimensional, emotionally complex individuals and faculty are seen as flat, supportive figures in their world. How do engineering faculty experience professional shame? How does their emotional experience inform the culture of well-being within their programs and courses? These questions anchor our future work that launches from the findings of this particular investigation. To cultivate engineering spaces that foster diversity and equity, we must attend to how well-being is nurtured by faculty within engineering programs, both on an interpersonal level with students and on an intrapersonal level within themselves.

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