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Reframing Rigor: A Modern Look at Challenge and Support in Higher Education

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Reframing Rigor: A Modern Look at Challenge and Support in Higher Education

Abstract

What is “hard” about college? The concept of academic rigor has been remarkably narrowly defined in contemporary higher education. Rigor is often equated with hard work in terms of the number of hours students spend studying or the quantity of assignments—or “piling on” a lot of work for students (Arum & Roksa, 2011). Alternatively, as derived from the recent K–12 standards movement in the No Child Left Behind act, rigor may be seen as an advanced level of curriculum (achieving mastery of prespecified content; for example, less rigorous algebra versus more rigorous calculus) (Matusevich, O'Connor, & Hargett, 2009). Yet, if we ask students what was “hard” about college academics—many other understandings may emerge—perhaps what was “hard” was maintaining one's identity while learning material that does not align with one's cultural values. Perhaps what was “challenging” was shifting basic assumptions that have been a core part of an individual's experiences. Or, perhaps, the “rigor” was learning scholarly writing in a second language. Perhaps what was “hard” was learning to move from memorizing facts to analyzing and evaluating them—becoming a producer and interpreter rather than a consumer of information. Perhaps what was “hard” was coming to see oneself as an academic. All of these can be seen as a challenge of the academic experience at college—and resolving each of these challenges has been associated with student learning (Braxton, 1993; Castillo-Montoya, 2017; Castillo-Montoya & Torres-Guzmán, 2012; Fries-Britt, Johnson, & Burt, 2013; Neumann, 2014).

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Comments

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Part I: Conceptions of Rigor

A Past, Present, and Future Look at What Rigor Means in College

This chapter describes the limitations of the traditional notions of academic rigor in higher education, and brings forth a new form of rigor that has the potential to support student success and equity.

Chapter 1

Reframing Rigor: A Modern Look at Challenge and Support in Higher Education

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What is “hard” about college? The concept of academic rigor has been remarkably narrowly defined in contemporary higher education. Rigor is often equated with hard work in terms of number of hours students spend studying or the quantity of assignments—or “piling on” a lot of work for students (Arum & Roksa, 2011). Alternatively, as derived from the recent k-12 standards movement in the No Child Left Behind act, rigor may be seen as an advanced level of curriculum (achieving mastery of pre-specified content; e.g., less rigorous algebra versus more rigorous calculus) (Matusevich, O’Connor, & Hargett, 2009). Yet, if we ask students what was

“hard” about college academics—many other understandings may emerge—perhaps what was “hard” was maintaining one’s identity while learning material that does not align with one’s cultural values. Perhaps what was “challenging” was shifting basic assumptions that have been a core part of an individuals’ experiences. Or, perhaps, the “rigor” was learning scholarly writing in a second language. Perhaps what was “hard” was learning to move from memorizing facts to analyzing and evaluating them—becoming a producer and interpreter rather than a consumer of information. Perhaps what was “hard” was coming to see oneself as an academic. All of these can be seen as a challenge of the academic experience at college—and resolving each of these challenges has been associated with student learning (Braxton, 1993; Castillo-Montoya, 2017; Castillo-Montoya & Torres-Guzman, 2012; Fries-Britt, Johnson, Burt, 2013; Neumann, 2014).

Yet, as the field of higher education (and education at large) has discussed “rigor”—all of these could have been bypassed. For example, the field of higher education might imagine a calculus course to be more rigorous than a developmental math course; or a biology course that required weekly quizzes where students spent countless hours memorizing different facts to be more rigorous than a philosophy course where students grappled deeply with one or two key ideas throughout the semester that they discussed in class and out of class with peers. The kinds of challenging educational experiences that we describe as rigorous in this volume could be (and very likely are) taking place in developmental courses, (which have often been deemed as the “least rigorous” options in college) and in all disciplines. For example, thinking deeply about core ideas of an English literature course, evaluating who is seen and unseen in historical documents, or helping a student to see herself as “math competent” when she had previously thought math was “not for her.” These examples may all have been missed if rigor had been

defined in traditional ways. Yet, these are important educational challenges that students may face in college that support learning.

This volume understands rigor, broadly, as *academic challenge that supports learning and growth in students*. By expanding our understanding of what rigor may encompass, the broader definition emphasizes what is important about rigor. Namely, we claim that “challenge” is only meaningful to educators if that challenge produces learning or growth. We assert that doing more work or including advanced content is only important if it produces the desired result of learning, growth, or retention in college. Then, after zooming out, we zoom back in differently—to better understand one form of rigor that has not traditionally been labeled as so. Here, we build off of Schnee’s (2008) definition of rigor, by focusing on *rigor as deep, inquiry-based and equity-based learning that sufficiently challenges and encourages all students to achieve their full potential, including both academic and broader development*. In this way, we examine the *process* of learning that is rigorous—a learning process that questions modern problems and power structures. Returning to the examples in the previous paragraph, these examples may be better understood using this new conceptualization. This is a form of academic challenge that produces learning and has often been overlooked in the rhetoric around rigor in higher education. This form of learning has also been connected, specifically, with learning by racially and ethnically diverse students (Castillo-Montoya, 2017; Fries-Britt, Johnson, Burt, 2013; Ladson-Billings, 1995). There may be grave equity implications of excluding this form of rigor, and narrowly defining rigor in a way that considers rigor as the quantity of work or specific curricular content (Bensimon, 2007; Bensimon & Dowd, 2016).

As such, the purpose of this chapter is two-fold: 1) to offer evidence that the current narrative in policy and practice surrounding rigor has potentially negative consequences,

especially for students of color; and 2) to offer a new conceptualization of rigor that deeply challenges each student based in their own experiences and provides sufficient support for students to meet such challenge. To do this, we will consider examples of rigor from graduate students of color. We chose these examples because they demonstrate the ways in which notions of rigor and equity intersect. We examine graduate students of color because these students represent equity of access and they have achieved a high level of traditional rigor (i.e. they have been accepted to graduate school) but they also face significant challenges as students of color.

We describe the academic experiences of graduate students of color in different disciplines to demonstrate the way that notions of rigor are salient to student success. We begin by offering examples of how black men in engineering graduate programs experience traditional notions of rigor. These examples bring to the surface how the narrow notions of rigor have affected students of color who have persisted in academe. Then, we offer alternative examples of graduate students of color in education who have experienced rigor as “deep, inquiry- and equity-based learning.” Finally, we deepen upon our conceptualization of rigor that we use in this volume.

Traditional Notions of Rigor: The Case of Black men in Engineering Graduate Programs

The elusive nature of meritocracy in engineering graduate programs are rooted in "traditional" (i.e., Eurocentric and male) policies and practices masked as academic rigor. This case study provides an example of how Black men in engineering graduate programs experience the traditional “rigor” narrative. Their educational experiences, based on practices rooted in traditional conceptions of rigor, threatened their identification with engineering and participation in STEM. The data used for this case study derives from qualitative interviews with 33 Black men in engineering graduate studies, enrolled at three top U.S. institutions. Broad questions were

asked regarding students' collegiate backgrounds, expectations for graduate school, post-graduate aspirations, and identification with and intentions to remain in engineering. The goal of this research was to capture participants' lived and shared experiences in engineering, and in doing so, add to the limited existing scholarship on Black men in engineering graduate programs (Burt, forthcoming; Burt et al., 2016; Robinson et al., 2016).

Rigor, the Research Laboratory, and Unintended Consequences. The work of engineering graduate students is generally completed in the research laboratory. Their research (e.g., dissertation work) is tied to the lab and to the lab supervisor's work (Burt, 2014). The extensive time spent in the lab makes the lab a location where teaching and learning take place (much like classroom experiences are for students in other fields and disciplines). The unspoken expectations regarding presence at the lab are often traditionally considered to be rigorous practice, assumed to result in merit (e.g., research competence, publications, top post-doctoral, industry, and faculty positions). The often unspoken expectation appears to be that students should "live" in the lab by working through the night and returning early in the morning to start the cycle all over again. Many described learning the expectations of having long lab hours from observing their more advanced research group peers and lab supervisors (i.e., faculty advisors).

SAMUEL. Samuel, a 5th year doctoral candidate in civil engineering, described his lab experiences:

When I started the program, my advisor sometime will require you to work over the weekend. Because meetings are scheduled on Mondays, you have to produce something for Monday. So you have to work on the weekend...If you show up on campus over the weekend, she's there. Sometime it put that pressure on you and then you say, "Oh, my

boss is there over the weekend, why? I shouldn't be home and doing fun things. So you will go [to the lab].”

Some might argue that Samuel was being socialized to the practices of doing rigorous research. For Samuel, however, long hours in the lab also came at a personal cost. Samuel is a foreign-born student. On several occasions, he described his feelings of isolation and the impacts that had on his mental health. While he described desperately needing to have time to connect with his friends and family from his home country (in a different time zone), he was conflicted with the unspoken expectation that he also needed to be in the lab. It was the expectation of long hours in the lab that made him declare that when he becomes a faculty member he will not go to campus on the weekends to work.

ISAAC. Similar to Samuel, Isaac, a 4th year doctoral candidate in agricultural engineering, described his transition to graduate school, including his time spent in the research lab:

When I got here...I was in lab the next week. I started working on my projects...I was kind of a geek to get the ball rolling. I really didn't have any official formal training being in a laboratory...I felt like I needed to hit the ground running just so I could be efficient and confident in those skill sets and be able to reproduce that [results within his research] throughout my time here...I don't have that much free time anymore. I do a lot of my work in the lab on the weekends...During the week, I'm just trying to make it, but on the weekends, that's when I do most of my work.

Isaac is a hardworking student. What is not as evident in the quotation above was his need to prove his worth as a graduate student in a top engineering program. Isaac felt alone at the

institution, within his college and department, and research group, which contributed to his need to prove his academic excellence. While it appears from his quotation that his time in the lab was all for the purposes of learning, it actually was to prove that he was good enough to be a graduate student in the program, and to assuage his feelings of loneliness. Several students in the study described experiences like Isaac; their long hours in the lab were in efforts to prove to their non-Black peers and faculty advisors that they deserved to be graduate students. This finding relates to the “proving process,” a phenomenon where high-achieving Black students attending predominantly White institutions feel they have to demonstrate their intelligence (Fries-Britt & Turner, 2001).

What is further evident in Isaac’s quotation is his reflection on how he learned to work in the lab. From his reflections, learning appeared to be self-guided, “trial by fire.” From this approach, students learn from failed experiments, but rarely is this learning intentionally scaffolded around incremental learning objectives (e.g., learning where the tools in the lab are located, learning how to use one tool that will then help to use a more sophisticated machine, taking what one learned from an experiment and writing up one’s findings, making sense of an experiment and writing a conference proposal). These steps (i.e., scaffolding) might be indicators of deep learning for engineering graduate students.

CHRIS and ALPHONSO. Again, the assumption that long hours in the lab results in engineering merit is flawed. Most participants in this study provided examples of unintended consequences that result from the assumption of engineering rigor. Two students’ exemplified how time in the lab also comes with the price of their mental and physical health. Chris, a 5th year doctoral candidate in chemical engineering, explained:

One thing that I've always been struggling with is, maintaining the desire to do the research. There are days when things don't go well—experiment fails, analysis—experiment may work, but data doesn't come as you expect. And there are times where I would allow those things to discourage me, and it just starts affecting everything else. The way I operate in the lab, and I lose efficiency. The way I'm not as eager to get up in the day and go into work. It's just like problems are piling up and piling on.

Alphonso, a 5th year doctoral candidate in electrical engineering, also shared: “You're putting a lot of time and effort even if you don't necessarily have success. It's very discouraging. You lose confidence with yourself, you [may] have issues with your advisor's confidence in you.” From the voices of Chris and Alphonso, we see how time in the lab does not always result in merit. In fact, the men in this study described that when their research experiences were not positive, they considered leaving graduate school and the field of engineering. It could be perceived that failed experiments are par for the course in science and engineering. But what should also be considered are the added pressures of being Black, and students' feelings that their experiments are extensions of their proving process.

This case study of Black men problematizes *rigor* in engineering graduate programs, and how *traditional* (i.e., Eurocentric and male) conceptions of rigor serve as barriers to broadening participation in STEM. The challenge with rigor in science and engineering is that it traces back centuries. The assumption that one must obsessively work in the lab is a remnant of traditions and legacies of science. They are reinforced as the “right way” because “that's how it's always been done.” Generations of students, their professors, and their professors before them, were socialized to learn science and engineering in this particular pedagogical tradition and to see this form of rigor as meritorious (Anderson & Louis, 1994; Strauss, 1961). The pedagogical legacies

and traditions of science may be hard to change so long as faculty members are set on the ways that science has been taught over the generations. Newer teaching pedagogies, particularly in the research lab, are necessary in order to more fully understand other ways to prepare students from a learner-focused perspective.

We have now demonstrated specific examples of how a narrow conceptualization of rigor that is focused on quantity of time may have negative implications for student success and wellbeing (in this case, for black engineering graduate students). The next section offers alternative examples of rigor, as experienced by doctoral students of color in education. These students have experienced a learning process that reflects the form of rigor that we assert in this volume, *deep, inquiry-based and equity-based learning that sufficiently challenges and encourages all students to achieve their full potential, including both academic and broader development.*

Rigor Reframed: The Ways Doctoral Students of Color in Education Experience Inquiry and Equity Based Learning

Traditional notions of rigor (amount of time, standards, and quantity of work) provide a limited understanding of what is rigorous and challenging for doctoral students. Much of their curricular work occurs outside of classroom settings and yet is central to completing academic benchmarks. Part of doctoral socialization into the academy requires that doctoral students develop new and innovative approaches to solving complex problems. In so doing, they begin to cultivate an academic identity which is shaped by the type and level of rigor that they experience while in school. Rigor for them, means that they feel both challenged and supported in their search for solutions to some of our most basic and complex problems. The African American students presented here are beyond their coursework phases of study, yet are reflecting upon the

times in which they felt challenged by a task and supported by a faculty member through that task. The challenges that these students experienced (e.g., a faculty member challenging one's ideas; instilling a sense of efficacy for seeing oneself in the field) were challenges that support learning, but would not be seen as rigor using more traditional understandings. The data presented are part of a much larger phenomenological study that explored how African American doctoral students experienced race at their predominantly white institutions (Dortch, 2016). As part of this study, each participant was asked to describe their racialized experiences pre-doctoral study, their everyday experiences while in school, and lastly they were asked to make meaning out of those experiences. The vignettes below are the stories of two students in Education: Taylor, a fourth-year female student who was in the dissertation proposal phase of study and DaShawn, a fifth-year male dissertating student.

The vignettes below are examples of the ways in which doctoral students of color in the field of education experience rigor. For them, rigor was about the cognitive complexity and substantive contributions to their ideas, which propels them to move their ideas forward. The shaping and nurturing of their ideas, allows for students to create work that they believe contributes to their fields of study.

TAYLOR. Taylor reflects upon a time in which she had begun to harness her ideas and received some encouragement and “tough love” from a faculty member that she respected. She described how the faculty member praised her central research focus, but did not ignore the structure of her presentation and paper which required Taylor to revise her work.

I remember my final presentation for my professor's class...And...her comments. She wrote, “I'm so excited about how you're thinking about your work.” “I wish I could see your brilliance and your confidence in your presentation that I see in you every day in

class, but it was like you shut down.” She said that her way of grading things is not just comments on paper, ... she [wrote] : “You are amazing, you know. You’re going to change the field.” And I still have that paper with her feedback...it was almost setting me up for just being here in general...She’s tough when it comes to the actual grading...I did have to rewrite the paper, but it was like tough love. [She made comments such as] “Your presentation and your paper look completely different so let’s build this up.” It wasn’t like, “Ugh, you suck! Rewrite it.” It was like, “Okay, I’m gonna give you an A, but you’re gonna have to rewrite this [laughs] so it can be an A.”

Taylor described the positive impact that her professor had and indicated that her professor was “building her up” by saying that she was going to “change the field” but that she needed her written work and her presentation style to reflect the quality of her ideas. Taylor demonstrated the value of the professor’s statements by keeping the original paper several years later to remind herself of her own potential. The faculty member’s statements about Taylor and the significance of her future contributions to the field created space for Taylor to approach her paper revision process differently. The faculty member’s reframing of rigor (i.e., your ideas are A quality and we want your writing to match your ideas) supported Taylor in her revision process.

DASHAWN. DaShawn describes a time in which he realized that he was not being challenged in his current department on the intersections of social identities until he enrolls in a methods class that was outside of his program which prompted him to transfer departments.

I took a methods course...and the professor blew me away. It’s like, “Man, ...we definitely don’t have professors like that in the department that I was in.” ...[My professor’s] level of engagement with my work, I had never experienced up until that point as a college student – as a graduate student... And that’s when I knew I had to

transfer [departments]. Because ...-I didn't necessarily feel like I was getting ... the type of feedback that I know I needed ... That professor not only read it, but gave me the feedback that would help move me forward...that's what it's all about, moving your research and your ideas forward. After I took that second methods class ...I'm like, I came here to learn something. And I need to be with someone who's going to help facilitate that, and challenge [my thinking]. ... At this point I was three years in [and friends and colleagues] were like, "why would you [transfer departments] now?"...It wasn't about doing the four years and getting the degree, [it's] knowing that you feel comfortable with your thoughts, and your ideas, and your positions...For me, gender and identity, sexual orientation, race, class, all these intersecting identities-- it's a lot of heavy lifting... I wasn't getting...that type of engagement around the work of the literature [in my original department].

DaShawn made key connections during his reflection that are important for understanding more contemporary facets of rigor. His initial program was rigorous according to traditional conceptions of rigor (meaning that it focused heavily on the amount of work), but it was not providing him with the necessary skills that he needed to elevate and nuance his thinking about social identities through challenging and deconstructing deeply rooted and socially constructed beliefs. The faculty in his department of original expertise was outside of Gender and Women studies, therefore he sought additional training in this area and transferred to a department in which he could focus on the intersections of race, gender, social class within the context of education even though making this transfer would prolong his time as a doctoral student. Rigor in this instance focused on the cognitive complexity, the nuances and perceptions articulated from written and verbal feedback, *and* substantive contributions to idea formation; it

was *not* the amount of work given or the time it takes to complete a task. The subject matter expert, a faculty member at the same institution in DaShawn's story, encouraged him to transfer to her department so that he could further utilize and maximize the support that he was receiving from her expertise and her program in ways that were more specific to his academic needs. Because his initial program lacked subject matter experts, DaShawn felt unchallenged from his initial program. Having his new advisor and faculty from the new department helped him to understand and grapple with his perceptions, his thinking, and his world view. His academic identity was being shaped here by subject matter and his positive approach to rigor was enhanced because of the support that he was now receiving from his new advisor. What is key here is the way the faculty member helped to challenge and strengthen DaShawn's ideas. Although the faculty member played an important supportive role, the rigor here is not how DaShawn was advised about transfer—it was how the faculty member posed new content that was relevant to DaShawn's ideas.

From these vignettes, it becomes clearer that each student was offered both written and oral feedback which allowed for them to feel more confident about successfully completing the individual tasks, but beyond that, helped them to see that the quality of their ideas was an important part of rigor that is sometimes overlooked. In doctoral education, the task itself becomes secondary to idea formation and explanation. The task in Taylor's case was an oral presentation and writing her paper cogently. The faculty member in Taylor's vignette illustrated through her praise and critique that she was more concerned with Taylor's oral and written expression of ideas rather than with grammar, syntax, and the mechanics of writing. In DaShawn's example the task was learning content specific material which enhanced his academic identity opposed to graduating without it. For DaShawn, he was encouraged to develop

additional subject matter knowledge to challenge and nuance his thinking about social and cultural identities even though this would extend his time to degree. Rigor in DaShawn's experience was more about the cultivation and complexity of ideas. For African American doctoral students, rigor may manifest differently given systemic barriers they may experience, such as needing to prove oneself in their fields. The feedback that they received shapes their attitudes toward rigor, which determines how much time is spent on the cultivation of ideas and engaging in academic activities, how much confidence they exuded, and their academic identity moving forward within the respective programs.

Clarifying the New Form of Rigor

The examples of traditional rigor and those of reframed rigor that we provided in this chapter are similar in important ways: they speak to the academic experiences of graduate students of color—a group that has both been successful in the current higher education landscape (given they completed undergraduate degrees and were selected for graduate school) and represent a group of students who are a growing, but still marginalized in higher education. However, the first examples demonstrated how traditional notions of rigor in academe (for example, time spent in lab) can have negative implications for student success for black graduate engineering students. By contrast, the examples of reframed rigor demonstrated how faculty held high expectations for students' ideas in ways that supported their identities as graduate students of color. Although these examples are of graduate students, we see these examples as the ultimate manifestation of a system of higher education that values traditional notions of rigor. We believe (and later chapters will describe) how the traditional notions of rigor miss important rigorous experiences in undergraduate education as well. In this section, we now return to the

revised conception of rigor to drill down on the definition and why we see it as an important reframing that may have implications for equity in higher education.

Once again, this volume defines rigor, broadly, as *academic challenge that supports learning and growth in students*. We then assert a specific form of rigor that has traditionally not been classified as rigor, but meets the above definition: *deep, inquiry-based, and equity-based learning that sufficiently challenges and encourages all students to achieve their full potential, including both academic and broader development*. “Deep learning” refers to a process of learning that focuses on the underlying meaning of information, such as integrating knowledge, creating connections, and metacognition (Nelson Laird, Shoup, & Kuh, 2008; Marton & Saljo, 1976). Deep learning is often contrasted against surface learning, which refers to rote memorization. By “inquiry-based learning,” we refer to a process of learning that asks students to respond to questions or problems as a way to construct knowledge and understanding (Spronken-Smith & Walker, 2010). We see learning as “equity-based” if the learning specifically deconstructs power structures, issues of privilege, or the status quo, and works to build up new understandings that legitimate and support marginalized and underserved groups toward a more just society (Bensimon, Dowd, & Witham, 2016). Examining the commonalities among these forms of learning, they each propose a challenge to the learner—and they each have been associated with learning and developmental gains by students.

This definition departs from the contemporary notions of rigor in four ways. First, this form of rigor focuses on the learning process (how the subject matter is posed) rather than outcome (how much time; what level of content). If we imagine rigor as a mountain, the traditional notion of rigor might ask how high did the students climb? But the “challenge” in climbing a mountain is not at the summit. Rather, the challenge is the voyage on the climb.

While it is important to know “how high”—this reframed understanding of rigor also considers how students climb the mountain, what do they need to get there? It also recognizes that the height of the summit may be the same for all students who climb it—but the voyage is not. The challenge is not.

Secondly, this definition offers a focus on how faculty and other higher educators *pose a rigorous process*. This focus follows on Bensimon’s (2007) contention that equity in higher education rests on focusing on what practitioners can do rather than on the amount of student effort in studies. In this way, the focus in the case of DaShawn was not how he sought out a new department that was more rigorous, but instead that the second advisor challenged DaShawn to think differently about the core ideas to his dissertation—so much so that these ideas called DaShawn to transfer departments.

Third, we put aside “challenge” that does not contribute to learning and development. This new form of rigor both challenges and encourages students to learn and develop. If students work more hours but eventually consider leaving their program (for example, Chris and Alphonso in the section on traditional notions of rigor), this form of rigor may be unproductive. We seek examples of rigor that support learning. The example of Taylor is a case in point. Taylor’s professor challenged Taylor to rewrite her paper, while validating her identity as a member of her field. In this way, Taylor met the professor’s high expectations while also developing a sense of belonging.

Finally, the new form of rigor that we suggest in this volume allows a focus on how rigor manifests for *all* students, rather than the “selected” students. By this, we mean that the notion of rigor that focuses on curriculum standards would see that certain courses are rigorous, while others are not (based on content). Understanding rigor by way of standards means that students

that are in “rigorous” courses have the opportunity to experience rigor, while others do not. By contrast, the form of rigor that we examine closely in this volume can be located in any area of higher education. Deep, inquiry-based, and equity-based learning that challenges students’ ideas can take place in developmental education, in community colleges, in STEM education, in the liberal arts, in doctoral education—and moment to moment in the classroom, outside the classroom, and among students, faculty, and peers.

Returning once again to the examples of rigor that we described in this chapter, we wondered: which forms of rigor would have been “counted” in higher education today? Staying long hours in a laboratory and working over the weekends (as seen in Chris and Alphonso) follows the traditional notions of rigor that place an emphasis on the amount of work the student must do. These students might be “counted” in terms of number of hours they studied, the number of research reports, or the amount of time on task. However, these students also began to doubt their identity as engineering graduate students and reconsidered their place in academe.

Now turning to Taylor and DaShawn, the challenges they experienced may have gone unseen as rigor in higher education. Taylor was asked to revise a paper. She was given extensive feedback that challenged her to clarify her ideas. All the while, her professor validated her place in her field. In this way, Taylor was able to meet the high standards of writing her assignment without sacrificing her identity. Her story also does not describe how “hard” she worked. Instead, it focuses on the way her ideas were elevated by the faculty member facilitating a rigorous and thorough revision process. The process changed her so deeply that she has kept that paper years later as a reminder of the caliber of work of which she is capable. The focus is not on student work, but instead on faculty expectations, support, validation, and challenging ideas. Likewise, DaShawn’s experience may not have been counted as rigorous by

traditional notions. The focus of this story is not how many hours DaShawn worked in the new program. Instead, the story is about how DaShawn was attracted to the second program because of the caliber of ideas the faculty member introduced to DaShawn's own ideas. The faculty member questioned DaShawn's assumptions and helped him think more deeply about the intersecting identities within his own subject matter. Taylor's experience demonstrated deep learning, and DaShawn's experience demonstrated both deep and equity-based learning.

This new form of rigor may have important implications both for student learning and equity in higher education. If these forms of rigorous practices were counted (along with the traditional notions of rigor), perhaps the assessments of rigor and academic challenge would not see the achievement gaps that are so often reported by race and socio-economic status. Perhaps if rigor was understood and seen in this additional way, faculty and other higher educators could better identify a broad range of challenges that diverse students experience, and therefore better consider how to support them to achieve success in those challenges. Perhaps if faculty owned and practiced this form of rigor as their responsibility (rather than place the onus on students to "work more"), we would see additional learning gains in college given that deep, inquiry-based, and equity-based learning processes have been associated with student success. Moreover, perhaps if this form of rigor was valued in higher education at large, institutions that practiced these principles would be more recognized in higher education. We see this new form of rigor as an important complement to traditional notions that could elevate and expand how we understand a rigorous process in college in a way that supports both learning and equity.

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