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# How faculty-student interactions affect the BIPOC design student experience

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# How Faculty-Student Interactions Affect the BIPOC Design Student Experience

## Abstract

Although there is a growing emphasis on decolonizing design curricula and integrating design justice into engineering design, little research explores the lived experiences of BIPOC (Black, Indigenous, and People of Color) design students. In this pilot study, we conducted in-depth interviews with 13 students from historically excluded backgrounds who were studying various studio-based design majors (architecture, interiors, and product design) at a public US university. Interviews covered a variety of topics and were designed to identify areas that might be worthy of further study. Interviews were coded and analyzed using thematic analysis. In the present paper, we present results related to student-faculty interactions and design pedagogy. The major emerging themes included: faculty appearing out of touch with students' current realities, perceptions of unclear and subjective grading, and unfair or discriminatory treatment of students during studios and critiques. Design education is highly dependent on faculty feedback, either through informal in-class feedback or formal design reviews and critiques. Our results suggest that women and students from historically excluded racial backgrounds may reap less benefit from faculty relationships and feedback opportunities compared to white students and man students. Students perceived that faculty did not care enough about their well-being and that faculty were fostering studio environments in which students could not get enough sleep and could not afford project materials. This pilot study points to a need for further research into faculty-student relationships and interactions and faculty pedagogical choices in design education.

*Keywords:* design education; diversity; equity; inclusion; race; gender

## 1. Introduction

Even though designers create the products and spaces that people of all backgrounds use every day, most design fields are not diverse. White men are overrepresented in architecture, design engineering, and industrial design, and white women are overrepresented in interior design in the United States [1], [2], [3], [4]. Of course, professional demographics do not paint the entire picture of diversity, equity, and inclusion (DEI) in design education (or lack thereof). While the lack of diversity is certainly one problem, deeper issues are at play in design education. In the year 2020, student design organizations around the country raised concerns through open letters to college administrators and through Instagram posts, drawing attention to issues like lack of BIPOC (Black, Indigenous, and People of Color) faculty and role models, poor retention rates of Black students, lack of financial support for expensive course materials, lack of diversity in invited guest speakers, lack of funding for students organization that support students from historically excluded backgrounds, and a curriculum that fails to incorporate an anti-racist perspective, among other issues. Professional designers raised similar concerns, and in 2020 founded "Where are the Black Designers?" to "support, amplify, and make space for the entire spectrum of Black creativity" [5].

Student concerns expressed in 2020 centered around structural issues with education. Similarly, multiple authors in engineering education have called for research that rejects deficit models, which place a focus on deficiencies within students, and instead focus on structural problems and solutions [6], [7]. Furthermore, limited research in engineering education addresses equity in terms of curriculum [6], [7]. Such research should ask questions which critique the system in which participants are situated [6], [8]. This qualitative study centers student perspectives and asks the research question: *How do student-faculty interactions impact the educational experiences of design students from historically excluded groups?*

In the present work, we present some initial findings from qualitative interviews with students studying in studio-based design majors (architecture, interiors, and product design). One of the driving motivations of our study is the fact that design pedagogy is distinct from other engineering or general university pedagogy. Design pedagogy requires a considerable amount of personalized feedback through methods such as critiques and design reviews. Because of these fundamental differences, DEI research situated specifically in design education is an area that is worthy of more attention and is essential to the construction of a strong workforce.

## 2. Background

Design exists across many disciplines, and there are a variety of approaches focused on making design more equitable. For example, there is a growing movement toward "decolonizing design," which includes putting indigenous first, dismantling tech bias and racist bias in the European Modernist Project, making amends, and reprioritizing resources [9]. Another relevant framing is "design justice," which is defined as "a framework for analysis of how design distributes benefits and burdens between various groups of people" [10]. Design justice "aims to ensure a more equitable distribution of design benefits and burdens" [10]. Engineering design researchers are increasingly seeking to incorporate justice into design [11]. These approaches and frameworks focus on improving equity in design processes and methods, and design *education* is not the main focus. However, research indicates that "engaging in equity based design approaches fostered inclusive learning in engineering education" [12].

One distinction of design education is the reliance on the pedagogical tool of a design jury or a design review, in which a panel of professors and/or professionals provide feedback to students presenting their work. We are only aware of one study, now over 30 years old, which considered diversity-related issues in design juries. The study found patterns of prejudicial behavior among and between jurors and students of different genders and races, and suggested that this could be a phenomenon that discouraged talented women and underrepresented racial minority students from continuing in the design profession [13]. Another 20-year-old study found that architecture education lacked women professors, failed to equally support women students, and had gender biased grading [14]. Not enough research looks at the recent experiences of design students from historically excluded backgrounds, and updated research is needed. Problematic gender dynamics are at play in fields like architecture and industrial design [15], [16], [17]. Thus, any study looking at racial dynamics in design fields must take an intersectional approach [18] which also considers the role of gender.

### 3. Author Positionality

All four authors have an educational background in various design disciplines, including architecture, interiors, industrial design, and engineering design. Our own backgrounds and experiences in design education have contributed to our interest in the topic of DEI in design education. Authors one and two are design faculty and also have prior experience as design professionals. Authors three and four are current design students at the university where this study was conducted, which added to their depth of understanding of the experiences shared by the participants, many of whom were their peers and/or classmates. Author one identifies as a white American heterosexual woman. Author two identifies as a South Asian American woman. Author three identifies as a South American homosexual male from a rural background. Author four identifies as Southeast Asian American heterosexual female from an immigrant background.

### 4. Methodology

We conducted semi structured interviews with 13 design students. Interview participants were recruited through a survey distributed to the College of Design student email list at a predominantly white land grant university in the Southern USA. Purposeful sampling was used to select a diverse group of interview participants from survey respondents. We prioritized inviting students from historically excluded racial and ethnic backgrounds and expanded to other historically excluded identities to fill our remaining interview slots. The first 11 interviews were conducted by pairs of one faculty researcher and one student research assistant, and the final two interviews were conducted by individual faculty researchers. Interviews lasted about one hour and were conducted in person or via video call.

To protect the anonymity of our participants, we are presenting the demographics as a conglomerate rather than sharing details about individuals. The interview participants included the following demographics: Asian (1), Black (4), Hispanic/Latiné/o/a/x (4), white (2), Hispanic/Latiné/o/a/x and white (2), men (6), women (7), undergraduate students (12), graduate students (1), heterosexual (10), gay (1), bisexual (2), architecture majors (9), interiors majors (2), and product design majors (2). During interviews, participants identified themselves with more specific identities than what we name in this paper. For example, a student may have described herself as a Costa Rican woman rather than a Latina woman. In order to protect the anonymity of the participants, we have used more general identity terms in this paper than the exact terms the participants used to describe themselves.

The interviews were fairly broad in nature because this study was designed to be an exploratory pilot study to look for issues that may be worthy of further research. During the interviews, participants were asked questions about how they chose their major, what their experience has been like as a design student, how they feel their identity has impacted their experience as a design student, how well they feel they fit into the culture of their department and their discipline in general. They were then asked how they might change design education to better suit students like themselves. Throughout the interview, the research team asked follow-up questions to better understand what the participants were sharing, and at the end of the interview, participants were

invited to share anything else they wanted to share with the research team. All activities followed a university IRB-approved protocol, and interview participants were compensated for their time.

Interviews were audio recorded, and the recordings were transcribed using a paid transcription service. The research team then manually checked the transcripts for accuracy and de-identification. The research team used thematic analysis [19] to code and analyze the interviews. Each member of the research team coded interviews individually using an inductive approach, and then the four researchers came together to determine a common set of codes. All names presented in this paper are pseudonyms, and quotes have been edited to improve clarity and remove pause words.

## 5. Results

Many different themes emerged during the interviews. In the present paper, we have chosen to focus on themes relating to design pedagogy and student-faculty interactions. These themes included: faculty appearing out of touch with students' current realities, perceptions of unclear and subjective grading, and unfair or discriminatory treatment of students during studios and critiques.

<u>Theme 1: Faculty appearing out of touch with current reality of students</u>

Design studio courses are often lengthy courses which meet as many as nine to twelve hours a week (for example, three days a week for three or four hours at a time). Students are still expected to work extensively outside of the class to develop their projects. For example, one student research assistant was told to work 24 hours a week outside of class on studio projects. Our interviews revealed a mismatch in expectations between students and faculty members in terms of appropriate workload. Many students expressed frustration with a so-called "toxic culture" of being expected to overwork and spend all their time in the studio:

> "My freshman year, I remember being told by a studio professor that we're expected to work an additional 18 hours at minimum outside of the studio. So, when are we supposed to sleep? When are we supposed to eat?" – Kelly (a Black woman)

> "Teachers always expect us to do so much more than we possibly have time in the day. When am I supposed to sleep if I have to do all this work?" – Natalie (a Latina woman)

One of the explanations that students heard from professors to justify the working conditions was that the professors themselves had made such sacrifices when they were students. For example, Ahmed (an Asian man) shared the following:

> "I think personally the studio culture that our professor is preaching about is very toxic to one's physical and mental health, because the other day, a professor was comparing his life to his students and how he sacrificed eating properly for printing a bulletin board when he was in school... And it seems like he was pushing to expect us to do the same thing." – Ahmed

Jennifer (a white woman) similarly speculated that design professors normalized sleeping in studio or skipping meals and showers to work on studio projects because they had a similar experience when they were young design students. Ahmed went on to share that his roommate,

who was majoring in computer science, was shocked when he accompanied Ahmed to the studio at midnight on a Sunday and found it filled with working design students. Knowing that computer science was also a difficult major, Ahmed wondered why design students were expected to dedicate more hours to schoolwork than students from other difficult majors.

Another domain in which the participants felt professors were out of touch was with students' financial constraints. Students were frustrated that they were expected to pay high printing costs to print out their work for a single design review. Students also faced difficulties paying for other model-making materials. Janelle (a Black woman) told a story of her professor asking students to spend $100 on printing for a single review, where the posters would only be hung on the wall for a few hours at most:

> "I can say that [Professor's name] was one of the more frustrating studio professors, because he has no sense of money, and he doesn't care. He doesn't care about money. Because the whole printing thing… I don't understand how you think it would ever be feasible for anybody to spend $100 on printing, especially when you're going to tear it down and throw it away afterwards."
> – Janelle

Janelle eventually had to be the one from her class to approach the professor and tell him that she (and others) could not afford the $100 for printing and was met with a condescending reaction from the professor. Jennifer similarly reported paying up to $150 for printing posters for a single review. Jessica (a Latina woman) expressed frustration at having to ask her parents to pay for her printing but felt lucky that her parents were able to help her, since that wasn't the case for some of her peers. Natalie felt that not having money for printing and materials limited her motivation in her projects. She said,

> "I feel like when I can't afford printing or prototyping materials, I'm like, well, what's the point of me doing all this work if I can't even make it how the professors want it?" – Natalie

The expectations of long work hours and high material costs were especially challenging for students who worked jobs outside of school. Ahmed currently worked 50 hours per week but had previously worked as many as 70 hours a week (split between multiple jobs), waking up at 4:00 am and finishing his workday at 10:00 pm. Natalie said she is already working all day on schoolwork, so she donates plasma for money as it requires less time than a typical job. She said,

> "My dad pays for school and so I have to pay for all my expenses, living, eating, all those…The only way I eat is by donating plasma. I get $50 twice a week and so I get $100 a week and that's how I buy my groceries." – Natalie

Kelly felt that professors have unreasonable demands, both in terms of the number of iterations of design concepts they expect from the students, and the in terms of how late into a semester they expect students to pivot their project directions. She said,

> "It is psychotic thinking that students have the time to create 40 and 60 sketches a week just to appease you. It is psychotic thinking to think that somebody can just scrap a project four and five weeks into the semester and redo it." – Kelly

Iteration is often seen as a key aspect of the design process. While participants understood the value of iteration, the disconnect seemed to be with the scope of iteration, professors asking for a greater number of iterations than what students felt was appropriate or realistic, and the timing of iteration, with professors asking students to rework an entire project later in the semester than what the students felt was realistic given the amount of time it would take.

Theme 2: Perceptions of unclear and subjective grading

Another theme that emerged in the interviews was that participants felt that studio grading was subjective and based on whether or not the professors liked them. Others felt that grades may have had a reason behind them, but that the reason was unclear to them, and no feedback was provided. Participants shared:

> "I hope I have an 'A' or I hope I have a 'B.' I'd never know. I'm just hoping that they like my things to get the good grade. Because it's all biased… My worst grade that I got was a 'C' with [Faculty member], and I just assumed that it was because he hated everything that we did and none of it was good. I had no idea because he didn't like any of our stuff that we were doing."
> – Natalie

> "And that's one of my biggest problems with studio. It's subjective, it is very subjective."
> – Kelly

> "I have no clue how grading is decided, absolutely none." – Jennifer

One of the student research assistants agreed that studio grading was unclear. She said that while seminar courses often provided rubrics and comments alongside grades, studio professors did not provide rubrics. The only mode of formative feedback in studio courses was a midterm grade, and besides that, there was no feedback provided until the final grade. Students typically learned their final grade by checking their university grades online, at which point many felt it was too late to try to discuss their grade with the professor.

Tim, a Black man, similarly expressed frustration that "design is so subjective." Tim was particularly discouraged by an experience where his classmate and friend had been accused of plagiarism in two of his design courses, yet neither Tim nor the classmate agreed that the plagiarism charge was fair or accurate. Ahmed felt that students often disagreed with professors' assessments of their work, particularly when they knew how much effort fellow students had put into the work. The work was all in vain if the professor didn't like you. Ahmed said,

> "I think students can see effort. And we all spent countless hours in the building together working, so they've seen effort being put in. And if their professor just doesn't like you, then just kind of makes it like, 'What's the point of all the effort?'" – Ahmed

One of the reasons that students were so frustrated by the seemingly arbitrary nature of the grading was that some students had GPA-based scholarships, and studio courses are 6-credit hours in architecture, meaning that whatever grade a student receives in studio could affect their GPA twice as much as a grade in another course. Some students were concerned about losing their GPA-based scholarships with grades that felt outside of their control.

One interview participant, John, a Latino man, expressed a different opinion, that he was able to get clear feedback and understand his studio grades. John said that even when he didn't get the grade he wanted, he received feedback by talking to the professor, which helped him understand his grade and learn how to improve.

Theme 3: Discriminatory treatment during critiques and studios

Feedback in the form of critique is one of the primary pedagogical tools of design education. Professors will typically use studio time to go around to each student individually to give "desk critiques." At the midpoint and endpoint of the semester, there is typically a more formal critique, also called a review panel or jury, where panels of guest reviewers join the professor to give feedback to the students. Guest reviewers may be other faculty members or professional designers from outside the college. Multiple participants agreed that feedback from professors and reviewers was a valuable commodity which was not allotted equally to everyone. Women students, Black students, and especially Black women students appeared to be subjected to the most unfair treatment in terms of getting overly critical or unhelpful feedback.

Jennifer described an experience in which she observed the review of a Black male non-traditional student who missed 2 weeks of school to stay home with his sick child during COVID. The professor embarrassed the student with harsh criticism in the review in front of his peers, even though the professor was aware of the students' situation, which affected his ability to complete the work. Jennifer viewed this treatment as possibly discriminatory, given the fact that other friends of hers who are people of color shared with her that they were discriminated against by their professors. Jennifer had also witnessed multiple professors misgender people and not respect peoples' pronouns during studio interactions.

Maya, a Black woman, felt that professors tiptoed around her and gave her less verbal feedback because they were afraid of offending her because she was Black, and this was not to her benefit:

> "I feel like I am somewhat neglected, if that makes sense, because you would sometimes see people get help and their help would be in detail, a lot more information, and then when it comes to me, it's like lessened and it's sweet and nice and it's all nice things, but is it good? We all know that no design is perfect, but the feedback is not as helpful when it's only nice…And I'm like, 'I know there's something wrong with my project. I know that there's something wrong. There could be something else said, but why aren't you saying it?'" – Maya

Maya was frustrated by this experience, but also expected that in her future career she might have similar experiences, because there was a good chance that she might find herself as the only Black person at a design firm. She was not comfortable with being treated differently for being Black:

> "It's a little uncomfortable because I feel like a quota sometimes. I'm getting certain things because I'm Black and that they want me to feel included, but do I actually deserve them? Is there someone else that deserves them more than I do? I'm a hard worker, so I want to get things that I know that I deserve, not something just because of my skin tone, which was a little uncomfortable." – Maya

Kelly described an experience when she realized that the professor had her mixed up with another Black woman student in her studio. This mix-up came to light through a condescending email Kelly received from the professor accusing her of skipping studio when she was actually present. The mix-up happened about three quarters of the way through the semester, at a point when Kelly felt that it was not reasonable for the professor to still be learning names. Kelly described having to work harder to prove herself, in light of the fact that her professor didn't even know who she was:

> "I feel like I get overlooked for a lot of things because especially in studio and it was very evident to me this semester, obviously when you're mixing up students…As a Black female in architecture, you have to work five times as hard to get the same grade as someone else. You will come to review, and you will dress up really well, you will take all the additional stops." – Kelly

Kelly was not the only Black woman who reported being mixed up with other Black women students. Janelle, who was not a classmate of Kelly's, also shared that people mixed up her and another Black girl in her class all the time. Kelly said that she accepted early on in her studies that she was never going to get the same level of feedback as her peers. She observed professors talking for over an hour with some students, which left no time to talk to her. The fact that Kelly was not given an equal amount of help and support in studio made her even more frustrated with an experience where she received a lower grade than she felt she deserved.

Janelle highlighted a problem with the fact that review panels are typically not diverse, which put students of color in the position of feeling like they have to prove themselves, not just present and defend their work. She had a recent review in which the reviewers were all white men except for one non-white woman faculty member. Janelle said of this experience,

> "Just having to talk to white men feels like a challenge. I feel like they're going to challenge you because you're different, whereas you're not going to have that issue if you were someone of the same background. I don't know if it's true… it feels like you are not only trying to explain your project, but you're also trying to get through this debate of why you're actually here trying to prove yourself or something every single time that you have a reviewer that is a white man. Every single time it feels like you also have to argue why you're here and say that you have a place here and that's utter bullshit. That's so fucking stupid."

Janelle felt certain that every student of color felt the same way when facing panels of white reviewers. The student research assistant agreed.

Both Janelle and Kelly expressed that their experiences were not only shaped by the fact that they were Black, but that gender also played a role. Janelle said that women students faced difficulties and had a friend who dropped out of the program because a professor who was being especially hard on her told her, "I'm not going to let up, because you're going to be pushed even harder, because you're a woman in this field." While Janelle believed that the professor had good intentions, the fact that the comment drove her friend to drop out was certainly not positive. Kelly agreed that women design students face a lot of misogyny. She said,

> "I think a lot of girls will attest to the fact that you'll work twice as hard as some guys in studio, and you will not get the same level of respect or care during and outside of reviews." – Kelly

Jennifer shared a similar observation that women design students did not receive the same level of positive feedback as men students, even when their projects were equally good or better:

> "I've noticed as a woman specifically on reviews, a lot of the panels I've been in have been predominantly men on the panel. And I've seen people maybe put forth, I'm not trying to dog anyone's project, but I've seen a guy put forth a project that was pretty cool, pretty good, maybe didn't have as much thought to it, and I've seen the reviewers say the guy knocked it out of the park…And then I've seen women been come up with a great project that's equally as good, if not better, and really beautifully empathetically thought about. And reviewers are like, 'It was good. It was good.' I feel like I've seen a lot of men have trouble handing out a compliment to a woman who did a good job on a project. It's like we have to make sure women are humbled…You go to the end, you work hard on this project, it's great, great, great, and someone craps on it. Even if you don't want to take that to heart, it still hurts, it's still there." – Jennifer

There was a general sense that older white male design professionals, who were often invited as guest review panelists, did not facilitate a culture that was positive toward women and students of color. However, professors held these design professionals in high regard and continued to platform them as examples that students should look up to.

## 6. Discussion

Grant et al. (2022) argued that the overall curriculum and pedagogy of engineering education "must shift to hold space for Black and Brown students to be their full selves" [20] and called for faculty to see inclusion as a fundamental piece of an engineering education program. In this section, we provide ideas for how design faculty can make changes to their teaching in order to improve the experience for students from all backgrounds, based on our findings.

Feedback is essential to the learning process. What became clear from our interviews was that many design students from diverse backgrounds did not feel they were getting helpful or effective feedback, in a formative or summative sense. Instead, they saw patterns of more helpful feedback being given to men and non-Black students than to women and Black students. Additionally, students felt that grading was not clear and must be based on whether the professor liked them or not, leaving room for discrimination and inequity. An environment where students feel this way is not one that is likely to be conducive to their learning. Our suggestions for design faculty are to provide written, structured feedback justifying grades to students in the form of annotated rubrics, or to conduct a grading conference in which verbal feedback is provided. In instances where feedback is given orally at critiques or in class, consider using a timer to ensure that each student receives the same length of commentary.

Ensuring that each student receives the same *quality* of feedback is a greater challenge. Consider the case of Maya, who felt that teachers were afraid to provide her with honest, critical feedback and just gave her "nice" comments which weren't helpful, leading her to feel tokenized. We know from experience as design faculty that not every student is equally easy for us to engage. Using a rubric or a structured document to guide feedback might help ensure that the quality of feedback is more consistent from one student to another. How can faculty better connect with and relate to students of different backgrounds so that they are able to provide them with candid feedback instead of holding them at arm's length? Making students feel a sense of belonging

must start early in the classroom to create a collective sense of psychological safety and trust. One way to do this is for professors to actively affirm the many unique identities and backgrounds present. This includes acknowledging their own positionality, both in relation to the academy and the profession. Affirming students' identities and the associated subjective experiences can be as simple as allowing students to share something about their backgrounds, and having the class collectively reflect upon it. Another idea is for faculty to reimagine their role in providing feedback. Design pedagogy often positions the professor as the all-knowing expert, but the faculty member can also create classroom scenarios to facilitate peer feedback or use other creative approaches to break down hierarchies.

A recent study found that design instructors use juries and critique to uphold what they believe to be the quality standards of the discipline [21]. If one outcome of white male design juries is that students from historically excluded backgrounds feel challenged just because of their identity and background, as Janelle explained, then we must consider changing the structure and makeup of design juries. The makeup of review panels or design juries is something that is well within the control of design faculty. Rather than inviting panels of older white male design professionals, faculty should intentionally invite diverse groups of reviewers so that the students can get feedback from individuals who share their identities. One pool to draw from could be young alumni of the program, as panelists do not necessarily need to be far along in their career. Perhaps the hierarchy of having a panel of older "experts" is something that we can discard in order to create a better environment for students. If the purpose of the review panel is student learning, we should consider not only the value of the "expertise" that the panelists bring, but also their ability to deliver feedback in a manner that students will be open to hearing and that will actually benefit student learning. In the event that the local pool of potential panelists is not diverse, faculty may also consider inviting panelists to join via videocall in order to expand the pool.

While we only interviewed students from historically excluded backgrounds, some findings apply to students from any background, particularly the finding that students were under financial stress and that design studio workload can become unmanageable for students who work jobs outside of school. In a sense, design faculty must also play the role of project managers. Design faculty must manage the schedule and budget of the course and doing so can be a greater challenge than in a non-design course where the scope of work is more predictable. When design faculty ask a student to spend a lot of extra time reworking a project at the last minute or spend a lot of money to make a model or print a poster when the students weren't planning on it, the students' frustrated reactions make sense. In a professional workplace, a boss who constantly did such things would not be well-liked. Rather than recreating "toxic" design school environments that they experienced when they were students, design faculty must understand that students today (rightfully) have higher expectations surrounding physical and mental health. Design professors who want students to pivot projects late in the semester should build time into the schedule so that students do not feel pressured to pull all-nighters to meet expectations. Design faculty should also consider ways to offset project and printing costs. As one example, the college where we conducted this study is now providing a $50 printing credit to each student annually. Another option is to ensure that students understand the course costs up

front, so they are not blindsided. Open discussions about the unit's budget priorities may enable the allocation of specific funding to purchase studio materials in bulk. Taking these steps could help design faculty to create an environment where students feel better supported and understood rather than feeling like they are at odds with the professors.

## 7. Conclusion and Future Work

In this initial analysis of a pilot study on the experiences of design students from historically excluded backgrounds, we identified three important themes: faculty appearing out of touch with students' current realities, student perceptions of unclear and subjective grading, and unfair or discriminatory treatment of students during studios and critiques. Emerging approaches like decolonizing design and design justice are considering how we might reshape design methods and practice to become more equitable. Our work suggests that we also need new approaches to make design education more equitable and inclusive. As future work, we plan to perform further analysis on our interview data. However, our initial analysis presented here already indicates that faculty-student interactions, especially as they relate to feedback and expectations, are important areas for future research.

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