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## **EMBRACING THE RISK AND RESPONSIBILITY OF STARTING A PEDAGOGICAL PARTNERSHIP PROGRAM FOCUSED ON FOSTERING INCLUSIVITY AND RESPECT IN SCIENCE**

*Sabid Hossain, Davidson College Class of 2021*

### **Introduction**

“Taking Roads Less Traveled: Embracing Risks and Responsibilities Along the Way to Leadership,” by Arshad Ahmad and Alison Cook-Sather, excellently captures the excitement and fear of challenging pedagogical practices in higher education institutions that have previously been thought of as rigid. In their essay, they highlight the forms of risk that they experienced when trying to support pedagogical partnership in higher education. First, they bring up their decision to pursue work in a field that differed from their undergraduate focus as a major risk. Second, they acknowledge the risk of taking ownership and responsibility for redesigning the education they facilitated. Finally, they acknowledge the challenge of insisting on student-faculty partnership in the context of clear social hierarchy in academia between professors and students. They recognize the risk of introducing ideas into this rigid space that might change or alter this previously undisturbed structure. In short, although they recognize the layers of risk and uncertainty in them achieving their goals, they chose to pursue this path because of an urgent sense of responsibility.

My name is Sabid Hossain, I am a senior Physics major in Davidson College, a small liberal arts college in North Carolina. As a student facilitator trying to reform pedagogical practices in academia, I empathized with the struggles Ahmad and Cook-Sather described in their essay. I was born and raised in Queens, New York City, one of the most diverse places in the world in demographics, and always enjoyed the benefits from living in a society representative of different identities and perspectives. Although I have navigated predominantly white institutions most of my life, Davidson College was my first experience living in one of these institutions. Very quickly, I realized how my identity was not only a barrier in social settings, but in academic places such as the classroom as well.

In my sophomore year at Davidson College, there was an incident in which a student was revealed as being a closeted Neo Nazi who actively created and shared content on Twitter that was racist, anti-Semitic, and xenophobic. Although the student was removed from campus, it left a deep feeling of unease among the student body. And while the incident generated discussion among the student body, it felt as if people were asking the wrong questions. Debates sparked over whether the college authority had the right to suspend a student indefinitely for speaking freely online. These are valid concerns, but nobody seemed to be asking about the safety of students and how this promotion of protecting hate speech, even if it is free speech, could affect the mental wellbeing of marginalized individuals.

The reality became even more jarring the next day when students went to their routine morning classes, some indifferent to the previous night’s events while others were deeply disturbed. What they found was a large disparity in responses from professors. Many professors took time during their class period to address the xenophobic incident, and some professors even cancelled

their class completely and held class discussions on processing and healing. But many professors did not even address the event.

This disparity was most prevalent when comparing professors from STEM backgrounds to professors from the social sciences or the arts. Many students, both prospective majors as well as actual majors, from every STEM discipline offered by Davidson College reported their discomfort in classrooms that day. Some professors ignored the event completely and taught class as usual, but other professors brought their own personal opinions into the matter; they argued that these conversations did not belong in a STEM classroom. In their eyes, taking the time away from their rigid syllabus to discuss an event that had profound effects on the student body was a large disservice. These professors would prefer to keep a normal environment where students can focus on their studies rather than address the outside factors that were hindering the students' focus itself.

I think this experience is what catalyzed my journey working towards establishing more equitable teaching practices. Social advocacy has always been a large part of my educational experience, both in high school and in college. It was only natural; I was a brown man contained in predominantly white institutions for the past eight years. I grew up in a low-income household with vastly different cultural values from my white Christian counterparts. My environment was a constant reminder that I was an outsider and I strived to create an environment where everyone could fit in.

### **Starting Conversations, Taking Steps toward Partnership**

With the help of Dr. Mario Belloni, chair of the Physics Department at the time, we facilitated a department-wide conversation regarding the presence of Neo Nazis on campus and the promotion of hate speech. The conversation expanded to how identity impacted individuals in physics. It was a truly remarkable moment for a male-dominated department to address gender disparities within the department and introduced approaches to creating a more inclusive department. But while the conversation seemed productive, it was not enough. Attendance was larger than I expected, but still relatively low. And the majority of those who attended were students or professors who participated in other forms of social advocacy. We held more dialogues, but each succeeding event had a lower turnout. For the remainder of the term, I felt like a guest in my own department.

At the end of the semester, I left Davidson feeling dejected and isolated from a community that I had always considered a haven. Even worse was the sinking feeling of hopelessness that perhaps there truly was no space within the math and sciences to discuss these issues of equity.

Dr. Belloni convinced me this was not the case. The day before the start of the next term, Dr. Belloni invited me to join a new pilot program known as the FIRST Action Team. FIRST, or Fostering Inclusivity and Respect in Science Together, was a five-year initiative funded by the Howard Hughes Medical Institute (HHMI) to promote equity and inclusivity within Davidson STEM disciplines. More specifically, the FIRST Action Team was a group of students from different STEM disciplines and of various marginalized backgrounds. The team was tasked with

identifying structural barriers within Davidson College's STEM departments that hindered the educational advancement of people of marginalized backgrounds. Additionally, the team had the ability to propose solutions that would be reviewed by the FIRST Leadership Team, a group of faculty and staff members that worked toward more inclusive pedagogies.

On January 2019, I joined the pilot FIRST Action Team with Claudia Hernandez '20, Haleena Philips '21, Kasey Leung '20, and Jonathan Kim '19 along with a staff mentor, Annie Sadler '17. Together, the five of us began our journey in trying to break down the rigid structures of academia within STEM. Each of us hailed from different disciplines, an intentional measure to survey the STEM disciplines at large. But we were new to this kind of work; none of us had any experience in educational reform and we weren't provided many resources to begin with. At this point, I felt myself resonate with the first of the three risks addressed by Ahmad and Cook-Sather. Not only did I have to juggle the workload of intensive courses such as Computational Physics and General Chemistry, but I also had to dedicate extensive time to researching something far removed from my field. I spent hours scouring the Internet for how different institutions conducted office hours and how students reviewed these methods instead of studying for upcoming exams. I combed through Davidson College's educational policies to see how STEM classes could fit the criteria for the Cultural Diversity Requirement and the Justice, Equality, and Community Requirement, researching social issues that I had no prior knowledge of.

We convened weekly, and after extensive reflection on the experiences of our peers as well as our own experiences, we eventually were able to address five main barriers within the STEM disciplines at Davidson College. First, we identified a lack of student feedback to professors on their pedagogical approaches due to a fear of developing bad relationships. Without a proper system where professors can understand the perspectives of the students in their classroom, professors are often oblivious to which of their pedagogical approaches are effective and which are not. Second, we observed that there were disproportionately more classes in the humanities with the JEC or Justice, Equality, and Community requirement when compared to the sciences. In fact, out of the 57 JEC courses offered, only two were courses within STEM. Third, we compiled the racial and gender demographics of guest speakers invited by the STEM departments from the previous nineteen years and acknowledged an alarming trend; at least 80% of the invited Physics speakers and at least 90% of the invited Chemistry speakers identified as White, with the majority being white male speakers. This situation constantly served to reinforce notions of which identities end up as the successful and reputable scientists. Fourth, we discovered a disconnect between students of marginalized identities and their utilizing of resources such as office hours. We noticed a trend of specifically first-generation students unwilling to attend their professor's office hours. Because of this observation, we studied inclusive office hours practices and surveyed students for positive and negative office hour experiences. Finally, we looked to create affinity groups for marginalized students within each individual STEM department. We proposed this final idea so that marginalized students could access a student mentor that would help them navigate the social barriers of STEM rather than simply the academic barriers.

## **Becoming a Partnership Program**

Having identified tangible goals, the FIRST Action Team gained traction as an organization and we began reaching out to other STEM students and professors to assist us in our goals. We wanted feedback on our ideas but more importantly, we wanted to recruit new students and professors to take risks and assist us in transforming academia. This is the part of my journey where I comprehended the second risk that Cook-Sather and Ahmad referred to. I had to take agency for the proposed changes that my team and I were suggesting and faced an overwhelming amount of criticism from peers and professors alike. I was ridiculed by my former professors who felt threatened when I approached them to share their approaches to hosting their office hours. Some students critiqued our focuses for the semester and encouraged us to prioritize other concerns such as the lack of faculty of color in the Chemistry and Physics departments. And sometimes, I would simply propose an idea and would endure painfully long lectures about the potentially devastating unintended consequences rather than engagement on the problem the idea meant to address and whether this idea was a meaningful solution.

Despite these hindrances and forms of pushback from some individuals in the STEM community, for the most part we received general approval for the work we were accomplishing. In May 2019, we presented our five proposals to the FIRST Leadership Team and received approval for three of our projects. Additionally, our success solidified the FIRST Action Team into an ongoing student organization with more recognition and permanence in the Davidson community. The three accepted projects were: 1) to create more STEM courses that satisfied the Justice, Equality and Community (JEC) requirement, 2) to invite more people of color as STEM guest speakers with an emphasis on guest speakers with other marginalized identities such as gender or physical disabilities, and 3) to create MILE – More Inclusive Learning Environment, a pedagogical partnership program.

MILE, or More Inclusive Learning Environment, was inspired by a pedagogical partnership program at Bryn Mawr and Haverford Colleges known as SaLT, or Students as Learners and Teachers. SaLT hires students outside of the STEM discipline to sit in a class and observe the pedagogical approaches practiced by the professor. Examples of what the student-partner can address with the professor include how the professor starts their lectures, how they orient themselves when writing notes on the whiteboard, and which students they generally call on, and as the partnerships develop, the student-faculty pair identify other areas of focus. The student-partner are typically paired with a professor outside of their discipline so they have very little risk of having a conflict of interest or ruining a potentially important relationship and also so that they can bring a “naïve” perspective to the dialogue, raising questions that students with disciplinary expertise might not think to pose. The student-partner and teacher-partner meet individually and discuss pedagogical approaches that are successful and those that can be improved. A program coordinator facilitates the relationship between student-partner and faculty-partner in the case of arising complications between the two participants.

MILE officially launched in the fall of 2019 when it was piloted in Dr. Belloni’s Physics 125 class, an introductory physics course intended for potential physics majors, pre-med students, and students looking to fulfill their scientific thought requirement. Dr. Belloni was the perfect candidate to be the pilot teacher partner; his involvement on the FIRST Leadership Team had demonstrated his commitment to creating a more equitable classroom environment. Furthermore,

Dr. Belloni had already read over all of our documents on pedagogical partnership programs like SaLT and was able to model a similar framework within his classroom. Finally, as a tenured professor, Dr. Belloni risked minimal professional consequences for participating in such a revolutionarily program. The fall semester of 2019 welcomed Esther Lherrison '19 as the new FIRST Program Analyst who coordinated MILE. Esther played a vital role in facilitating the pilot program as well as checking in on both student and faculty partners.

The FIRST Action Team had ambitious goals with the MILE pilot, and we hoped to inspire faculty members with the success of the pilot and encourage more professors to join for the spring semester. The pilot for the fall semester began seamlessly; students taking PHY 125 began to feel comfortable voicing concerns to someone who did not control their grade. Their feedback was then directed from the student partner to Dr. Belloni, who tried his best to incorporate the students' valuable input into his lessons. Additionally, the student partner was able to provide their own feedback on how the classroom could become more inclusive, feedback that was not observed by either students or Dr. Belloni. Unfortunately, the pilot did not progress as smoothly as hoped because the student partner was not able to attend sessions on a regular basis and as a result, the fall semester pilot did not galvanize as much support from faculty as we had hoped. Yet, we were still able to expand the pilot to the Spring-2020 semester where we established student partners in three classes.

During the fall semester pilot, we began our process for selecting the next round of MILE faculty partners and student partners. At the start of November of 2019, information on MILE as well as the application for faculty partners for MILE were released to faculty members of the Natural Sciences & Mathematics departments. The applications were due by mid-November, and within a week, the participating faculty partners for the spring semester were confirmed. Then, the same process began to search for student partners. In late November of 2019, MILE student partner applications were circulated by both the FIRST Leadership Team and the FIRST Action Team to the general student population. The applications gave preference to students of marginalized backgrounds or students who have experience in social reform in the hopes of recruiting more effective student-partners. The applications were due by early December and were reviewed by the FIRST Action Team. The student partners were then notified whether they were selected and which faculty partner they were placed with. By the first week of January of 2020, a document regarding specific information on MILE, a list of questions and answers, and a list of resources were sent to each student and faculty partner.

### **Making the Partnership Program Our Own**

As exciting as it was to see the program expand after only a semester, the fall pilot showed there was a lot to improve on. The spring pilot semester had three faculty partners, all of whom were not members of the FIRST Leadership Team. Unlike with Dr. Belloni, there was no guarantees of having a faculty partner who would be 100% committed to improving their pedagogical practices. We were worried that these new faculty partners would not be conscious of maintaining a healthy relationship with their student partners. Furthermore, there was the added risk of the experience ending poorly for either the faculty partners or the student partners, thus reducing credibility of the FIRST Action Team and/or MILE. In short, we wanted to redesign

some components of MILE to address directly the power dynamics between faculty members and students at Davidson College.

We began by evaluating and restructuring the logistics of MILE. The FIRST Action Team had previously reached out to Alison Cook-Sather, creator of SaLT, to address some of our initial logistical concerns. We, however, decided to deviate from how SaLT handled certain issues to create an experience more unique to Davidson College. Unlike SaLT, which does not have a shared orientation program for their student and faculty partners, MILE orchestrated an orientation to introduce the new partnerships. The faculty partners were already responsible by the first week to share their syllabi with their student partners, incorporate the student partner into all lines of communication that any student would have for that class, and send any required texts/materials to the student partners. In the second week of January, the first MILE orientation dinner was hosted for student and faculty partners. The focus of the first part of orientation was to introduce both parties informally, review the experiences of MILE in PHY 125, and review the structure and expectations of the MILE program. These expectations included a 60-hour time commitment from both student and faculty partners for the entire semester. Soon after, the second MILE orientation dinner was held. While the first session was intended to be an introductory meeting, this second gathering focused on more details, such as how students could constructively communicate feedback to a faculty member.

The MILE Orientation was only one of the many changes we made following the pilot semester. Even with a cooperating faculty member such as Dr. Belloni, there were still clear power dynamics at play between the student partner and the faculty partner due to the rigidity of academia. We were worried this issue would be exacerbated for the Spring-2020 semester due to how strongly misogyny has historically dominated in the natural sciences & mathematics fields. One of the major objectives of MILE is providing a transformative process for students to recognize themselves as equal partners in academia alongside professors. We did not want to perpetuate some of the very inequalities that we were trying to combat. This transformative process for student partners was, however, not as smooth as we hoped for. It was hard for students and professors alike to adjust from the standard norms of academia, even when they were actively attempting to do so.

To ensure that any problems that student partners or faculty partners faced could be addressed and resolved during the Spring-2020 semester, an emphasis was placed on weekly check-ins for both the student and faculty partners. We anticipated the weekly check-ins would help alleviate the stress for both parties; the student partners had a safe place to express any grievances or concerns with their relationship while faculty partners were able to have guidance on how to leave their comfort zone in teaching methods but still provide the best possible educational experience to their students. Additionally, we adopted a memorandum of understanding (MoU) based on a document that Alison Cook-Sather created for SaLT. This MoU was a document signed by both student partner and faculty partner and established expectations that both parties needed to be respectful, communicative, open-minded, and be willing to listen. Throughout the entire MILE process for student partners and faculty partners, expectations were constantly outlined that the faculty partners and student partners needed to invest in practicing and providing substantive feedback to each other through collaboration.

We tried our best to foresee any potential issues in the Spring 2020 semester but unfortunately none of us were able to predict the COVID-19 pandemic and its devastating impacts on the college experience. On one hand, the switch to online learning could be considered an essential time for student partners to provide valuable feedback so that professors could adapt their strategies quickly, as was the case for Weiler and Williamson (2020) and Labridy-Stofle (2020), for instance. On the other hand, it can be challenging for student partners to provide feedback when they see the challenges professors face. Although the COVID-19 pandemic created many complications for the MILE process, we were able to adjust strategies so that student partners could still participate in the classroom while understanding the current circumstances of education were not permanent.

### **Recommendations for Student Leaders of Future Partnership Programs**

To any students reading this essay and interested in bringing a form of this work to your institution, whether it because you are actively looking for resources to design your own pedagogical partnership program or because you read this and became inspired, I want to offer some guidance. I will list several recommendations that best aided us in establishing MILE in Davidson College.

My first recommendation is to research any peer institution similar to your own and see if they have any pedagogical partnership programs such as SaLT or MILE in place. One of our biggest resources in creating MILE was SaLT, and by reaching out to Alison Cook-Sather, we received access to a plethora of documents with suggestions, guidelines, and contracts. All of these resources were critical in establishing the framework for MILE. Reach out to as many institutions that participate and promote pedagogical work as you can find; there is much to be learned and much that can be altered.

My second recommendation is to have a designated faculty or staff member in charge of running MILE. It is a difficult task to change the rigid definitions of academia, and it is not something that can be done by students alone as a secondary obligation. A designated role is required not only to facilitate the relationships between student partners and faculty partners, but also to continue researching the structure of the pedagogical program and finding ways to improve it.

My third recommendation is to start early and start small. Find a group of invested faculty members willing to sponsor your pedagogical partnership program and who will recommend involvement to their peers. Rather than trying to rope in a large group of faculty members and launch the program in as many different classrooms as possible, focus on creating a pilot run where both faculty partners and student partners feel safe and comfortable to communicate and share feedback. This group of small but committed members is essential to being able to scale the program into more classrooms and establishing your educational pedagogical program as a permanent program in your institution.

My final recommendation is to be willing to take risks and be willing to face backlash. There are many tenured professors who will feel threatened by this work and actively voice their disapproval. There will be tenure-track professors who might feel that participating in this work could endanger their chances of achieving tenure. There will be skeptical students regarding



why professors are focusing on these aspects of the classroom instead of the content of the courses. There will be times where you will doubt the validity of the work that you are doing and your purpose in accomplishing this goal. Do not waver. It is important to understand why you are doing the work that you are doing. Reaffirm your values and remember that improving the pedagogical practices within classrooms helps every party involved and helps institutions take a step closer to a more equitable and inclusive environment. There is always more work to be done!

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