

Uncomfortable Conversations with Faculty and Students in Zoom: Experiences with diversity and inclusion spurred by police brutality and racial injustice in the U.S.

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Introduction

Engineering colleges and departments have been historically quiet in regard to racial and social justice issues, existing in the status quo, and often perpetuating a materialistic and militaristic culture rooted deeply in the history of engineering as a trade and subsequently a profession[1]. Engineers are often less concerned with social issues, and rarely reflective of how their social and cultural identity impacts society and world, including engineers in academe. However, there has been a shift recently in the socially and politically charged climate of the United States, particularly within the past decade where racially charged protests and protests against police brutality have become increasingly common and at the forefront of our attention. The murder of George Floyd on May 25th 2020 sent undeniable shock waves across the United States and the world. The video capturing his death shared across the globe brought the world's attention to the glaringly ugly reality of police brutality. Paired with the COVID-19 pandemic, the Black Lives Matter movement, and a U.S. election year, conditions were ideal for silences to be broken and grow to a roar that no one could ignore. Numerous people have spoken up, including Former NFL player, Emmanuel Acho, initially with podcasts, and then by his book "Uncomfortable Conversations with a Black Man" [2]. In his book he addressed various social justice issues such as: racial terminology (i.e., Black or African American), implicit biases, white privilege, cultural appropriation, stereotypes (i.e., the "angry Black man"), racial slurs (particularly the n-word), systemic racism, the myth of reverse racism, the criminal justice system, the struggles faced by black families, interracial families, ally-ship, and anti-racism [2].

Faculty and students at Texas A&M University felt compelled and committed to set aside the time to meet and discuss Emmanuel Acho's book and the societal events that led up to the writing of the work. A total of sixty of these faculty and students chose to use the video conferencing client Zoom to form a book club and conduct these discussions due to the looming COVID-19 pandemic. A diverse group of facilitators in science, technology, engineering, and mathematics (STEM) and beyond were asked to lead these discussions and to bring topics discussed by Acho in his book into conversation, pushing participants in these meetings to consider those topics critically and personally.

Each meeting was focused around a section of the book being played as an audio book excerpt with session facilitators ensuring that the group was a safe space for discussion, ensuring that viewpoints and opinions would be welcomed and respected without fear of judgment. After the completion

of the book by Acho, the group transitioned to another text “Pedagogy of the Oppressed” (1996 revised) by Paulo Freire [3] which is currently being listened to and those issues discussed.

The focus of this work is to explore the following research questions related to faculty, staff, and graduate student experiences with this electronic book club:

- *How do engineering faculty and staff describe their experiences in a social justice oriented book club?*
- *How does participation in a social justice oriented book club influence engineering faculty and staff in their professional and personal lives?*

These questions were addressed through focus group interviews with a subset of predominately engineering faculty and staff of this book club, allowing for a fluid and dynamic discussion between members to assess their individual perceptions of their experiences. In addition, a survey of 10 questions was also distributed to participants, including many from the focus group discussion. The qualitative data obtained from the focus group was analyzed using a grounded theory approach [4] and the survey data is presented with descriptive statistics due to the small sample size. At this time graduate students are not part of the population being studied in this work, although they were participants of the book club. The majority of participants in the book club were members of college of engineering at TAMU.

Literature Review

Social Justice in the context of engineering is a historically overlooked field, and incorporation of social justice issues into engineering work is often bound to the extent for which it is relevant to an engineers practice in their profession. Cech has written on this topic at length, and in particular cites two ideologies as major culprits for this aversion to social justice by engineers, depoliticization and meritocracy [5]. Depoliticization being “the belief that engineering work, by definition, should disconnect itself from social and cultural realms because such realms taint otherwise pure engineering design methodologies” [5], and meritocracy being a belief that success in life is a result of individual talent, training, and motivation, and those that lack these traits will not achieve such success[5–8].

The concept of depoliticization directly opposes the reality that engineering is intimately intertwined with society and the fact that decisions that engineers make do impact all levels of our society. This connection exists regardless of the intentions an engineer might have to remove themselves and their work from the societal issues that exist in every facet of our lives[5]. However, most engineers when conceptualizing their work consider it beyond an emotional, societal, or political framework, including social justice issues [5]. A theme of engineering culture that Cech speaks at length about is the idea that engineers do not talk about social justice issues, politics, religion, or any other “hot button” topics, because it does not feel appropriate to discuss those topics with their colleagues, notably at a student level, and especially prevalent with faculty and student interactions.[9]. Some work by Cech reveals how some students in engineering are actually interested in these topics, but due to the heavy involvement in their major engineering coursework , they simply do not have the time to participate in activities associated with areas that seem “taboo” to mention to other engineers[10]. However, the culture that engineering students are being socialized

into has a dominant depoliticized worldview, and Cech found that throughout an undergraduate's time in an engineering program, the importance of social justice issues decreases due to the depoliticization ideology propagated throughout the culture of engineering [7]. This stigmatization of social justice in the culture of engineering serves to propel those issues in perpetuity.

The ideology of meritocracy, defined above, is cited as the most prominent explanation of social inequities in the U.S. [11]. Meritocracy relies on the assumptions that people are personally responsible for their societal position, the overall system of opportunity and reward is by design equitable and fair, and that opportunity for individual achievement is widespread [12]. This notion has been disproved repeatedly as opportunity for individual success is impacted by many factors such as quality of education that someone's family might be able to afford, discrimination of women and minorities, and structural and cultural processes hindering one's opportunity [13–17]. However, this ideology is rooted deeply into the culture of the engineering profession, so much so that scholars can trace the history of engineering culture. Meritocratic ideology has been a central tenant of the worldview that has been promoted for over a century [18, 19]. Exemplification of this ideology can be seen in “celebrity engineers” like Elon Musk, Jeffrey Bezos, and the late Steve Jobs, whose success perpetuates the idea that anyone can work hard enough to reach that level of success, the “American Dream”, the meritocratic dream.

These two ideologies oppose many of the efforts that social justice activists have been working towards for decades, and these ideologies are so centralized and ingrained into the engineering culture and professional identity it is difficult to separate the ideologies from engineering as a discipline and profession. Cech [5] suggests that by re-framing the (mis)framed social justice topics that engineers avoid, there is hope that engineers can bypass the parts of engineering culture that inhibit social justice discussions, and that social justice can be better intertwined into the culture of engineering in the future. One important component of that is the deconstruction of the ideologies that oppose social justice topic discussions. That is best accomplished through a consistent exposure to these issues and discussions, rather than a single seminar or lesson in a university course [5]. That is where the work of this study fits in, we are creating a space where educators and students are able to begin having these discussions to spur the process that changes the culture of engineering slowly to consider social justice topics as relevant in their engineering lives and studies.

Moreover, Book clubs serve as an excellent tool for professional development for professors [20]. It can provide a cultivated, non-threatening environment to share thoughts and feelings about topics that are often sensitive and difficult to engage in other settings. Additionally, when participants find the environment conducive and safe enough to engage in dialogue, book clubs can promote critical thinking, self-reflection, perspective-taking, community, teamwork, communication, and decrease occupational stress and strain. Professional development through book clubs have been found to be more effective than traditional ways of professional development [21]. Studies have found book club participants making changes in their instructional practices, academic thinking, and even personal beliefs as a result of their participation in book clubs [21]. Literature has reported several ways in which book clubs impact the lives of participants that includes book clubs serving as productive spaces for professional development [22], helping in professional identity development [23], challenge existing beliefs and biases [24], providing space for reflecting on current practices [25], etc. The environment created for book club participants play a huge role in

overall success as well [26]. We have tried our best to cultivate a safe space where book club attendees could freely share their thoughts during discussions.

Methods

I. Weekly Book Discussion

An hour-long virtual meeting was held every week for participants followed by discussion. Facilitators ensured the environment was open and safe where everyone could freely share their thoughts and feelings regarding racial inequality and its implications for the classroom and beyond. A free physical copy of the book was provided to all the participants who registered for one. Weekly email reminders were sent out to all the participants in advance of the meeting. "Uncomfortable Conversations with a Black Man" by Emmanuel Acho was the first book chosen for reading and subsequent discussions. The weekly discussion started in Spring 2021 semester and is currently progressing. Due to the overwhelming interest to continue, the book discussion club decided to select another book, to continue the virtual meeting through Summer 2021. Pedagogy of the Oppressed by Paulo Freire was selected by a vote of participants as the next book to expand on some topics that Acho touched on in his work, and to understand some of the historical context of literature on oppression, particularly in an educational framework.

II. Focus Group Interview

Focus group interviews were conducted with participants who volunteered for the discussions. The discussions were recorded with participants permission via Zoom and lasted for approximately an hour. A set of prompt questions were developed, however, the conversation evolved organically as the focus group participants felt more comfortable and safe to engage. There were eight participants that included five faculty and three staff out which four of them were male and four of them were females. The participants consisted of four White, two White (Middle East), one Black, and one Asian member. The main prompts for the hour-long interview were, "How has your participation in the book club impacted your understanding of social justice issues?" and "What was your favorite part of the book/topic of discussion/overall experience? What was the part that you liked least?". Our goal was to uncover if the experience of participating in the book club impacted participants personally as well as professionally, and solicit input from the attendees that others interested in similar endeavors could utilize. The interview transcript was pulled from the Zoom client recording and analyzed qualitatively with grounded theory principals guiding the analysis[4]. In this analysis various themes were found from transcript of participant interactions. A selection of those analysis findings are discussed in our results.

III. Quantitative Survey

A Likert scale style survey was created by the authors to measure the impact of book club; the survey was sent out to the faculty and staff who participated in the book discussions. The contents of that survey can be seen in Table 1. These Likert scale for these questions was based on a 5 point scale with 1 being strongly disagree and 5 being strongly agree. The intention of the survey was to capture how a participant's membership in this book club influenced their professional and personal lives.

Table 1: Survey Questionnaire

Order	Question
1	As I reflect back on my experience attending the book club, the time I spent attending the book club discussions were highly beneficial for me
2	As I reflect back on my experience attending the book club, I learned something new that I was not aware of before
3	As I reflect back on my experience attending the book club, the discussions that I had with my peers were useful
4	As I reflect back on my experience with the book club, my professional life have been impacted
5	As I reflect back on my experience with the book club, my personal life have been impacted
6	As I reflect back on my experience with the book club, I see that I have made either small or big decisions for my future
7	As I reflect back on my experience with the book club, I think I felt comfortable sharing my thoughts during discussions without fear of judgement
8	As I reflect back on my experience with the book club, I think I have become more comfortable to discuss difficult topics relating to DEI with others in future
9	As I reflect back on my experience with the book club, I think there were many take-aways from the book club that will stay with me throughout my life
10	As I reflect back on my experience with the book club, I never had such an experience where I could freely discuss difficult topics relating to DEI at the university before

Results

I. Focus Group Interview

The first major theme revealed from analyzing the interviews was that of “Exposure” to social justice. The focus group participants mentioned several ways that participation in the book impacted their personal and professional lives. One of the participants was previously afraid of making terminology mistakes when partaking in diversity, equity, or inclusion-related conversations. However, the participant reported being more comfortable and even feeling brave about the possibility of having conversations related to social justice, diversity, equity, and inclusion-related topics in the future. Another participant recanted a feeling of greater freedom after spending time reading and discussing with peers. One participant expressed that one of the books summarized what that participant had always believed to be accurate regarding complex topics such as diversity, equity, inclusion, and social justice, and the experience was “eye-opening” for another participant. They also expressed that the book choices were appropriate and commented that the first book did a noble job of disclosing upfront that these conversations would be uncomfortable and the issues would be complex and at times difficult to engage with at times. One participant mentioned that people generally tend to have ingrained definitions for terms such as social justice, and that makes it even more challenging to hold a discussion about those issues and how they are evolving over time. However, that same participant also added that the group successfully navigated through all such confusions and were able to have healthy conversations.

The second theme revealed from this analysis was “Expansion” of the participants’ mindset and understanding of social justice issues. The knowledge gained through this participation experience has expanded the thinking of the attendees beyond their own spheres of knowledge. One of the participants shared: *“We’re all knowledgeable in our own ways within our own kind of subgroups. I think we all have some ignorance about other groups”*. It was also mentioned that the diverse nature of the book club participants in terms of backgrounds, identities, and views added richness to conversations. The participant also said: *“to be a part of this, I will call it a movement to enhance diversity equity and inclusion in our community.”* Participants also reported an overall improvement in understanding social justice related topics that came not only from listening to the audio book but also from listening to stories and views of others. One of the participants mentioned that *“My understanding of social justice issues didn’t change drastically, but it was more refined.”* The participants also praised the opportunity provided through this book club. It presented space for “sitting down and having a dedicated moment to analyze the situation” which is often challenging amid various responsibilities.

The third theme is the discussion group having been successful in creating a “Trustworthy environment”. The focus group participants were also diverse and stated that they could share their thoughts freely regardless of where they were from, and other members would value them. Another participant expressed that it was challenging to sit through various discussions as the topics invoked emotions. The participant also expressed concern about the situation where *“it only ever stays a discussion and never goes anywhere, and we need to be more than that.”* Some participants were hesitant to speak up due to their identity and became more comfortable in joining conversations with time; *“Towards the end, I was a lot more confident and comfortable participating.”* The participants also showed interest in advancing this in the future, *“I look forward to covering more material and hearing more from people.”*

The fourth theme centers around the focus group participants’ “Favorite Aspects” and “Least Favorite Aspects” of the book club. The book club format where participants did not have to read ahead of time, engagement of participants, hearing participants relating topics to their personal experience, having feisty discussions, moments of quiet reflection, and seeing participants say brilliant things after being quiet for a long time were expressed as the favorite aspects of focus group participants during their experience in book club. The virtual nature of the book club, the dead silence, long audio clips that sometimes did not leave time for discussion were mentioned as the least favorite aspects of the book club.

II. Quantitative Survey Responses

The percentage responses of 18 participants (15 faculty, 3 staff, 10 female, 8 Male, 8 White (non-Hispanic), 2 White (Middle East), 2 White (Hispanic), 3 Black and 3 Asian) are given below in Table 2. There was only one person out of a total of eighteen participants who did not think that book club discussions were highly beneficial, and it accounts for 5.6% of the total participants who filled the survey. The rest of the sixteen participants either strongly agreed or agreed that book club discussions were highly beneficial for them. Seventeen out of eighteen participants (94.4%) either strongly agreed or agreed that they learned something new that they were not aware of before. All of the eighteen participants either strongly agreed or agreed that discussion they had with peers were useful. Four out of eighteen participants (22.2%) neither agreed nor disagreed that their

professional life was impacted, and nine out of eighteen participants (50%) neither agreed nor disagreed that their personal life was impacted . Fourteen participants (77.7%) either strongly agreed or agreed that their professional life was impacted, and nine participants (50%) either strongly agreed or agreed that their personal life was impacted. The professional life of the participants seem to be more enriched than the personal life of participants. Eight of the participants neither agreed nor disagreed (44.4%) that they made any new decisions, however, ten of the participants (55.5%) made either small or big decisions for their future after the book study experience. Except for two people (11.1%), the rest of the participants strongly agreed or agreed that they felt comfortable sharing their thoughts during discussions without fear of judgement. Except for one person (5.6%), the rest of the participants strongly agreed or agreed that they have become more comfortable to discuss difficult topics relating to diversity, equity or inclusion with others in the future. Everyone either strongly agreed or agreed that there were many takeaways from the book club that will stay with them throughout their life. Thirteen participants (72.2%) never had an experience where they could freely discuss difficult topics relating to diversity, equity or inclusion at the university before.

Table 2: Quantitative Survey Responses Q1-Q10

Response	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Strongly agree	61.1%	44.4%	61.1%	33.3%	22.2%	27.8%	50.0%	38.9%	55.6%	38.9%
Agree	33.3%	50.0%	38.9%	44.4%	27.8%	27.8%	38.9%	55.6%	44.4%	33.3%
Neutral	0.00%	5.60%	0.00%	33.3%	50.0%	44.4%	5.60%	5.60%	0.00%	22.2%
Disagree	5.60%	0.00%	0.00%	0.00%	0.00%	0.00%	5.60%	0.00%	0.00%	5.60%
Strongly disagree	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Discussion

An initiative such as this is a tiny ripple that could first cause change within the participants, and then spread within departments, into the university and then to the community and beyond. This is a significant event and a perfect opportunity to fulfill some of the needs that Cech [5] asserts is needed in the culture of engineering. This might only be a small number of faculty and students at Texas A&M University (TAMU), but the continued immersion for the participants will allow for these kinds of discussions to grow and propagate throughout TAMU, even if our initial sixty members grow to a few hundred participants. As long as that population continues to grow our own institutional culture around engineering might have a chance to evolve.

The virtual nature of the Book club had its advantages as well as disadvantages. A major advantage being the accessibility and a non existent commute time for faculty and staff as the participants belonged to various departments and colleges of a very large university. The disadvantage was missing out the comfortable nature of face-to-face interactions and interpersonal connections that are an integral part of in-person engagement. However, we believe that the advantages outweigh the disadvantages as commuting to a particular physical location would have been a huge obstacle in the midst of everyone’s busy schedule.

Our initial findings suggest that our initiative, although small, serves the larger goal and purpose of ultimately creating an inclusive engineering culture and classroom that better prepares graduates and models a more progressive professional practice. We believe that these book clubs help to spread scholarly knowledge about social justice, diversity, equity, and inclusion topics that faculty and staff generally do not have an opportunity to engage in due to the historical and current state of engineering programs and the culture within those programs. Overall, the qualitative and quantitative data illustrate that this endeavor has made a positive impact in the lives of participants and has several implications that could impact a variety of arenas including personal lives of participants, their classrooms, and their sphere of influence within their workplace. This experience can serve as a model of how “uncomfortable conversations” can be cultivated to promote diversity, equity, inclusion, and access activities amongst faculty and staff to create more inclusive practices, policies, and processes at the university, college, and departmental levels.

Limitations

There are several limitations regarding this research most obviously the relatively small sample size of focus group interview participants and survey respondents. This is in part due to the relatively small groups of participants, and the natural availability issues with transitioning from the summer semester to the fall semester. This work is expected to continue indefinitely and as the membership grows we hope to expand our work on this topic greatly.

Acknowledgements

We would like to acknowledge the faculty, graduate students, and staff at the TAMU for their efforts in making the Weekly Book Discussion Group a success. We also acknowledge the willingness of all the faculty, graduate students, and staff across campus who joined in this endeavor. We also express our gratitude to all those who served as facilitators during weekly discussion.

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