EDI Module

Lecture 4 Notes

Race and Racism

Aakeen Parikh;

* State schooled
* Imperial Mech Eng degree
* Imperial Mech End PhD
* Director of Minazi Consultancy
* Works for Department for Energy Security

Part 1: What is racial equality?

* People from all walks of life should have the same rights and access to the same opportunities.
* Case for EDI/DEI
  + Diversity is a strength
  + Equity is fair access to all opportunities and advancement for all people
  + Inclusion – all people are respected and supported to participate
* BAME – Black, Asian and Minority Ethnic

What is systematic racism?

* Barriers are areas people do not have control over
* Different types of racism include the following:
  + Internalised – personal beliefs
  + Interpersonal – biases shown between people
  + Institutional – discriminatory policies and practices
  + Systematic racism – ongoing inequalities maintained by society
* There are many factors that play into systematic racism. Here are some of the main factors
  + Wealth disparity
  + Employment
  + Education – Does everyone have access to the same educational opportunities?
  + Criminal justice – Does the law see everyone the same?
  + Housing
  + Surveillance – Is everyone treated similarly by the police?
  + Health care – Does this meet everyone’s needs?
* Why does systematic racism matter?
  + Because equality is a right!
* Why does systematic racism matter for engineering?
  + Who has access to engineering education? Is the access equitable?
  + Who has access to engineering job opportunities?
  + There is a right to equal treatment, yet engineering is not perceived to be inclusive.
  + There is a right to products that support their needs; products, services and workplaces are not designed for everyone.
  + How does development happen disproportionately in some regions more than others? What does this mean in terms of equal opportunities in engineering?
* How can you influence racial equality in engineering?
  + The slide includes a model Aakeen developed which asks 3 questions about the engineering problem
  + ‘Who solves it?’
  + ‘Who does it affect?’
  + ‘How is it solved?’

Status of racial inequality in the sector

* ICE – Institution of Civil Engineers
* They released several reports after the murder of George Floyd. This included findings from a survey conducted about experiencing racism. 81% stated racism presented itself in their projects. Further breakdown of this statistic can be found in the slide and the report linked as well.
* The survey found perception interpersonal behaviour/racism low in comparison to unconscious bias and systematic racism. This may mean that participants are not aware that designs/processes are racist.
* Other sets of statistics come from the Royal Academy of Engineering (RAEng) and the Inclusive Tech Alliance Report from the ELA Committee.
  + BAME backgrounds account for only 9.6% of senior leaders in the top 10 tech firms and 70.6% of boards have no BAME members.

Debate and discussion

* Prompt question: How can engineering courses be tailored to students from BAME backgrounds?

2023 Answers/Discussion from the prompt question

* Promoting professors from BAME backgrounds; this shows them, their colleagues and their students that people from BAME backgrounds can be in these roles
* Allow BAME students to present on topics from their specific experiences / geographies /impact of development
* Reduce drinking culture around events, Catering for food restrictions
* Have events which are integrated rather than separate BAME related societies
* Extra curricular classes on design (or other subjects) where those students haven’t had prior access to those topics

2022 Answers/Discussion from the prompt question:

* Individual projects vs group projects - projects are based on supervisors’ interests who are mostly white men. It was surprising and interesting to see a project involving a breast pump as it was a departure from all the other projects proposed. It was suggested students have some agency in choosing backgrounds.
* More role models from minoritized backgrounds, and more students from these backgrounds.
* Race equality and inclusion doesn’t feel integral to the course. It feels like it is added to the end.
* Aakeen spoke about her experiences as an undergrad and feeling a sense of community within MechEng. There were a lot of students who felt MechEng was a big part of their identity.
* 81% felt a sense of belonging to MechEng in the recent EDI Student survey.
* Good feedback mechanism for students to explain problems and for staff to make the changes proposed and take EDI issues seriously. Town halls within MechEng are an interesting and useful tool for feedback.
* Equal the playing field when students first come in. There is an assumption that all students come from the same educational background. People should not be made to feel inferior if their educational background is different. For example, there is an assumption most people on the course did an A level in further maths.
* Universities are trying to bring people from lower socioeconomic backgrounds but not much is being done to ease the transition to university. Students from these backgrounds are expected to match those who came from private education.
* Aakeen discussed her experience being from a lower socioeconomic background. She mentioned not having the same training or access to extracurriculars as her peers at that time. She had to work that bit harder and more quickly to catch up. The learning experience within the department should take this into account to make it more inclusive.
* Aakeen conducted a survey with friends as participants who graduated in 2018. The participants came from a BAME background. The findings of the survey are elaborated on the slide.

Social experiment activity

* Various names are shown, and students are asked to raise their hands if they recognise them. Students raised their hands at the list of white men. Not as many students raised their hands at the list of diverse historical figures in STEM.
* The activity demonstrated diversity is not embedded in history and what is remembered.
* Anna Mani is an alumnus of Imperial. She was not awarded her PhD because she did not have a university degree. At the time university degrees were not awarded to women. She designed meteorological instruments and started a company to manufacture them.

Part 2

Engineering is connected to why the world looks the way it does, hence the next activity’s relevance:

Colonial Impact reflection

* There is an activity where juxtaposing images are displayed. Images can be viewed on the slides.
* The activity prompted thinking about why different areas are more developed than others and why resources are allocated to some technologies over others.
* Technology can clearly be developed for everyone rather than a small few rich individuals.
* There were multiple examples of the impact of colonialism on other countries’ infrastructures. Why were western water infrastructures brought into countries which had completely different environments?
* Examples included irrigation systems in India, water management systems in the Indus Valley and railways in India. The interventions created by colonialism ran under the assumption other countries did not know how to come up with efficient infrastructures.
* The development that happened before colonisation was largely ignored, as well as the context and conditions of the countries that were being colonised.

Key areas for racial equality in the engineering sector

* The 3 key areas are engineering teams, pipelines and products and solutions.
* What could be preventing graduates from joining engineering teams? Aakeen reflects on her own experiences during a placement year. She was only one of 3 women in a department of 40 people. She was the only engineer out of those women. She was also the only BAME female engineer. She was offered a job but did not accept it due to the lack of diversity. Part of her experience as the only BAME female engineer in that setting made her question her own abilities, though completely capable and qualified.
* Nav Sawhney is the founder of the washing machine project. The project deploys washing machines to refugee camps.
* SEB – Socio-economic backgrounds and ethnicity; this can make it hard to get an interview, harder to succeed at interview, and harder to progress within a company.
  + “People should not have to change their name to get an interview”
  + “Once you’re in a job, you need to feel welcome and that you are doing some important and valuable”

Designing for racial equality

* Human centred design (HCD) – design should involve the human perspective in all steps of the problem-solving process. The slide lists 5 HCD principles.
* Community should be at the start of the process. The social, cultural, and geographical contexts impact the design space. Contextualisation is important.
* Empathy is important and design solutions cannot come out of pity.
* One size does not fit all, using the same product in different countries does not work.
* It takes a large collective effort to change the world.
* Design for ownership. This is important for humanitarian aid. A solution cannot be designed without the transfer of knowledge being part of the process. People need to be empowered to adapt the solutions towards their contexts.

Pipelines

* Why do pipelines matter? Engineering is not textbook science but has to take into account the real world including end users and pipelines
* Pipelines include supply chains and procurement.
* Are engineering and geopolitics linked? YES;
* Exploitation in the current climate is about exploiting resources. Africa is the richest continent because it has a lot of resources that people want.
* The western world believes the rest of the world needs to “look like us” / “work like us” and implements western methods in other contexts despite the fact that they are inappropriate there. Examples of this;
  + Developed countries are ‘clean’, developing world is ‘unclean’ yet west makes the most waste but then exports it to developing world
  + Developed countries are ‘green’ and developing world is unsustainable, but the energy crisis is caused by the industrial revolution in UK and USA and we continue to use fossil fuels are an immense rate through flight, space launches etc.
* To decolonise we need to use modern examples and collaborate with a wide range of individuals
* Design bias – white washing water system by assuming the western way is the best. Huge infrastructures were not designed for the environments the communities were based.
* Toilets – Why is there one idea of a functioning toilet? Historically there were other ways to deal with waste that did not involve high water usage and creating large sewage systems.
* Malaysia –Westminster council recycling was found in Malaysian landfills. Human exploitation manifests differently, like shipping waste to another country.

Question to Aakeen

* What would you change about your experience at Imperial?
  + The way things are taught, lectures do not change due to workload but use the same examples
  + Assumed knowledge, for example, Aakeen didn’t do further maths as it wasn’t accessible
  + Found the experience difficult as a result
* Anecdote about a project in Rwanda – development sanitary pad avoiding plastic. Aakeeen was going with a cardboard box because that’s what Aakeen is used to. Then she visited Rwanda and realised this idea is not compatible once there. Proper context was needed.

Further discussion

* Critique; What did you disagree with or feel was under evidenced or otherwise missing in detail
* New; what was new to you; how did your positionality affect how you received or interpreted this information?
* Implement; Identify something at Imperial which we could change to improve racial equity, how would you make this change?

