

Equality, diversity, and inclusion in the CS curriculum

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Abstract

The computing discipline has long-standing issues in equality, diversity and inclusion (EDI). Here we reflect on a curriculum review, embedding diversity-related learning outcomes to meet accreditation requirements by Professional, Statutory and Regulatory Bodies. We give examples of local initiatives, which have been successful in improving the environment for women in computing, women in science, engineering and technology, as well as LGBTQ+ people. Their success can be brought into the classroom, with accreditation acting as the catalyst for such change in the CS curriculum.

CCS Concepts: • **Social and professional topics** → **Computing education.**

Keywords: curriculum, equality, diversity, inclusion, AHEP4

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1 Motivation

Higher education institutions must undertake accreditation processes for Professional, Statutory and Regulatory Bodies (PSRBs) to endorse courses that meet agreed professional standards. In our case, the relevant PSRB is the Engineering Council (which sits as a regulatory body above the organisations which conduct accreditations). It defines requirements for accreditation, including promotion of equality, diversity, and inclusion (EDI). Engaging in our most recent curriculum review exercise has given us the chance to reflect on:

- (a) the increased awareness of the need to embed EDI into the professional development of computing graduates;
- (b) the success of local initiatives to promote EDI in the working environment of our faculty and wider institution, which needs to cascade into our teaching too.

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2 AHEP 4

The growing awareness of the need to embed EDI in computing degrees is reflected in the requirements from professional bodies for re-accreditation, particularly those mandated by the Engineering Council in the fourth edition of the Accreditation of Higher Education Programmes (AHEP 4): “Departments delivering accredited degrees are expected to promote equality, diversity and inclusion in line with applicable national regulatory frameworks, [...] as well as embedding inclusive design within the curriculum where relevant” [1]. This is critical, as the current gender imbalance across the sector (both in academia and industry) gives rise to a low sense of belonging, more acutely felt by intersectional students [3].

3 Local initiatives

The success of some of our local initiatives could be brought into our teaching. These are exemplary for other HEIs [2] and evidence of the institutional capability on EDI matters:

- (a) **WiSET+**: Formed in 2013 for women in science, engineering and technology, it broadened its remit in 2018 for university-wide inclusivity. It organises an annual guest lecture and awards for outstanding contributions in EDI, and informal mentoring through its networks.
- (b) **The Campbell group**: Since 2019, it is a forum for women in our school at all seniority levels and job families, attending informal meetings and some special sessions with distinguished speakers.
- (c) **IDAHOBIT day**: The International Day Against Homophobia, Biphobia and Transphobia is celebrated on campus since 2018. It promotes inclusivity and diversity in our school, with many volunteers serving on stands offering themed gifts and opportunities to chat.

4 Discussion

Our long-standing local initiatives contribute to a positive sense of belonging amongst our staff, evidence of our commitment to EDI. Still, this commitment had been yet to be embedded in our computing curriculum. The main driver to do so now has come from our accreditors, as evidenced in the discussions part of our most recent curriculum review. EDI completes the professional development of our graduates, and therefore it is of paramount importance. We argue that, with these drivers, we can build on the success of our

initiatives to translate them for the classroom, being mindful that we also need to go beyond promoting gender diversity.

References

- [1] Engineering Council. 2020. The Accreditation of Higher Education Programmes (AHEP). <https://www.engc.org.uk/publications/>
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- [3] Catherine Mooney and Brett A. Becker. 2020. Sense of Belonging: The Intersectionality of Self-Identified Minority Status and Gender in Undergraduate Computer Science Students. In *United Kingdom & Ireland Computing Education Research Conference*. (Glasgow, UK) (*UKICER '20*). Association for Computing Machinery, New York, NY, USA, 24–30. <https://doi.org/10.1145/3416465.3416476>