

Evaluating the Value of Professional Body Computer Science Degree Accreditation in the UK

Full Paper

2. Research-to-Practice

Tom Crick¹, *Alastair Irons*², *Liz Bacon*³, *Kevin Chalmers*⁴, *James H. Davenport*⁵, *Paul Hanna*⁶, *Alan Hayes*⁵, *Cathryn Knight*¹, *Steve Pettifer*⁷, *Tom Prickett*⁸

¹ Swansea University, UK

² University of Sunderland, UK

³ Abertay University, UK

⁴ University of Roehampton, UK

⁵ University of Bath, UK

⁶ Ulster University, UK

⁷ University of Manchester, UK

⁸ Northumbria University, UK

This Research-to-Practice Full Paper critically evaluates the perceived value offered by the computer science degree accreditation scheme of a large professional body/learned society based in the UK. The value and relevancy of degree accreditation in computing and engineering-related disciplines remains contested in many jurisdictions, especially in the context of graduate employability and higher education institutions needing to "better meet the needs of industry and society". The degree accreditation process has been criticised for being overly burdensome and bureaucratic; adversarial rather than enhancement-led; simultaneously too hard and too easy to obtain; perceived as focused on generating revenue for the accrediting body rather than providing value to the discipline; and for being colonial and paternalistic if the accreditor is not from the same jurisdiction as the institution being accredited. Equally, the value presented by degree accreditation has been cited as a kitemarking exercise, promoting international graduate mobility and a globally portable workforce; highlighting internationally recognised standards; focusing on outcomes and raising output standards; promoting and disseminating best practice; ensuring industry relevance of curricula; and even reigniting the debate on the need for a "licence to practise" in certain areas of IT and software engineering. However, it is unclear which of these various perceptions dominates in term of stakeholder, from across academia, professional body/learned society, industry, government, the wider public and indeed learners themselves.

However, taking into consideration the potentially divergent requirements and perceptions of these various stakeholders, it is the academic institution that chooses to (or to not to) seek accreditation of the degree programmes they offer; as such, this research study primarily focuses on the perceptions and experience of academic faculty. It draws from across the career ladder and academic hierarchy in the UK, from early-career junior faculty, through to tenured professors and senior leadership. Furthermore, this takes place in the context of evolving international accreditation processes, such as AHEP4 and EQANIE.

This study thus addresses two key research questions in the context of UK computer science degree accreditation:

- i) What are perceived to be the key aspects of value presented by degree accreditation processes?
- ii) What are perceived as the key challenges for future degree accreditation processes.

This work adopts a mixed methods approach, drawing on the quantitative and qualitative findings from a national-level survey in 2021 of computer science faculty in the UK, collected through a convenience sampling approach. It is augmented by in-depth focus groups and semi-structured interviews with representative UK faculty identified through purposive sampling. The outcomes of this wider study provides deeper insights into the current perceived value of computer science degree accreditation in the UK, as well as making a number of recommendations across policy and practice for how it may change in the near future. In doing so, it presents a rationale for improved articulation and

communication of the benefits of degree accreditation (in both the UK and internationally), as well as action to address the challenges for both professional bodies and memorandum organisations to ensure they maintain their relevance in the context of ongoing global disruption from COVID-19 to learners, institutions, employers and society as a whole.