Value of Accreditation of Computer Science Degrees by Professional Bodies: Is the model generated by a UK Case Study Portable?

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ABSTRACT

This poster presents a model for the value provided by professional body accreditation of Computer Science Degrees, in one jurisdiction namely the United Kingdom (UK). The proposed model is that of The BCS, The Chartered Institute for IT (BCS). Parable accreditation regimes exist in a number of other jurisdictions, providing the opportunity for exploring the portability of and extensions to the proposed model.

CCS CONCEPTS

• **Social and professional topics** → **Accreditation**; *Computing education programs*; Employment issues.

KEYWORDS

Accreditation, Professional Body, Curricula Design

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1 THE MODEL

The value of professional body higher education accreditation regimes as a kite-marking exercise or to support a globally mobile workforce [5] remains high. Equally the regimes are criticised for being perceived to be: unnecessarily bureaucratic and constraining innovation [4]; revenues streams in their own right rather than for the benefit of a discipline or wider society [5]; or colonial [6]. The model presented in this poster was generated by insights gained from the views of Higher Education Institutes (HEI's) canvased as part of 18 BCS accreditation visits (from September 2018-September 2019), workshops ran in November 2018 and November 2019 as part of the operation of BCS Academic Accreditation Committee (AAC) and survey based feedback gained from BCS Academic Assessors, attendees of the ACM Computing Education Practice Conference [3] and the readership of ITNow [2]. The proposed model represents a commitment to continuously review and enhance practices in response to criticism (e.g. remove bureaucracy, further support graduate employment, etc.) and to enhance the value provided. The following are aspects of the current value to accredited HEI's.

- Raising output standards, essentially performing a kite-marking function.
- Employ internationally-recognised standards and memoranda (e.g. Seoul Accord, Washington, Washington Accord European Quality Assurance Network for Informatics Education (EQANIE)) to promote the global parity of Compute Science education and hence the mobility of graduates.
- Ensuring curricula relevance e.g. coverage of cybersecurity [1], team working and professional environment
- Identifying and disseminating practice highlights either directly [7] or via other means such as conferences (e.g. ACM Computer Education Practice Conference [3])
- Industry relevance by mandating the inclusion of industrialist upon accreditation panels
- Accrediting work experience in degree programmes.

2 FUTURE WORK

The feedback to date indicates that generic criticisms of professional body accreditation regimes not withstanding, the developed model is broadly accepted in the UK jurisdiction. The next step is to explore the portability and applicability of this model to other jurisdictions.

REFERENCES

[1] Tom Crick, James Davenport, Alastair Irons, and T. Prickett. 2019. A UK Case Study on Cybersecurity Education and Accreditation. In *Proc. IEEE Frontiers in Education Conference*. IEEE, USA.
[2] Tom Crick, James H Davenport, Paul Hanna, Alastair Irons, Sally Pearce, and Tom Prickett. 2020. Repositioning BCS Degree Accreditation. *ITNOW* 62, 1 (02 2020), 50–51. https://doi.org/10.1093/itnow/bwaa023
[3] Tom Crick, James H. Davenport, Paul Hanna, Alastair Irons, and Tom Prickett. 2020. Computer Science Degree Accreditation in the UK: A Post-Shadbolt Review Update. In *Proceedings of the 4th Conference on Computing Education Practice 2020* (Durham, United Kingdom) *(CEP 2020)*. Association for Computing Machinery, New York, NY, USA, Article 6, 4 pages. https://doi.org/10.1145/3372356.3372362
[4] Lee Harvey. 2004. The power of accreditation: views of academics. *Journal of Higher Education Policy and Management* 26, 2 (2004), 207–223.
[5] Jane Knight. 2015. The International Race for Accreditation. *International Higher Education* 40 (2015), 2–3. https://ejournals.bc.edu/index.php/ihe/article/view/7490
[6] Sybert Mutereko. 2017. Analysing the accreditation of engineering education in South Africa through Foucault's panopticon and governmentality lenses. *Assessment & Evaluation in Higher Education* 43 (2017), 235–247. https://doi.org/10.1080/02602938.2017.1330395
[7] BCS The Chartered Institute for IT. 2020. Practice Highlights. https://www.bcs.org/deliver-and-teach-qualifications/university-accreditation/practice-highlights/ Accessed: 2020-02-29.

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