

Submissions Abstract Book - All Papers (Included Submissions)

0530

Tue 07 Dec 2021

15:40 - 16:00

Positioning and Sustaining Accessibility Expertise and Teaching in the Computer Sciences and the Digital University

Andy Coverdale¹, Sarah Lewthwaite¹

¹*University of Southampton, Southampton, United Kingdom*

Research Domain: Academic practice, work, careers and cultures (AP)

Abstract: This paper reports from an ongoing UKRI research study (2019-2024) into the unique pedagogy of digital accessibility in Higher Education and the workplace. In this under-researched area, we present new findings from expert panel research with 14 pedagogic leaders in the teaching accessibility in universities across 7 countries. We focus on the challenges they face in promoting and teaching accessibility within Computer Sciences disciplines in which this topic is frequently marginalised. Findings suggest how accessibility expertise might be developed, shared and sustained within faculties. We conclude by considering the role that those who teach accessibility can play in ensuring it is foregrounded within both teaching programmes and university strategies for Equality, Inclusion and Diversity. We welcome any delegates interested or engaged in accessibility education or digital inclusion to join us in critical dialogue on these themes.

Paper: This paper draws on the ongoing UKRI research study, 'Teaching Accessibility in the Digital Skill Set' (2019-2024), which aims to build understanding of the unique pedagogy of digital accessibility in Higher Education and the workplace and promote educational research and evidence-based practice in Computer Science education.

As digital technologies continue to transform daily life, the need to create digital tools, platforms and services that enable all users to participate meaningfully in society remains an ethical and social imperative. While digital accessibility is increasingly legislated to ensure compliance with international standards - with new state structures for monitoring and enforcement (Lewthwaite & James, 2020) - the digital exclusion of disabled and older users, heightened by the ongoing global pandemic, persists (Goggin & Ellis, 2020).

Therefore, teachers and trainers need to equip graduates with the knowledge and skills to effectively engage with accessibility and build capacity in the digital workforce. Yet our systematic literature review of primary research (1999-2020) (Lewthwaite et al., Forthcoming) indicates the teaching of accessibility is under-researched, with a limited literature focused on curriculum and course design and teaching accounts that are largely descriptive, reflective, and experiential. This has highlighted

the need to develop cross-case pedagogic insight and discourse.

We report on new findings from two phases of research using 'Expert Panel Method' (Lewthwaite & Nind, 2016) which, by engaging with experienced teachers of accessibility, 'set the cultural tone' in the field, establishing sites of pedagogic expertise and leadership (Lucas & Claxton, 2013). This draws on interviews and subsequent forum discussions around initial data analysis with 14 academics from the UK, US, Germany, Australia, Ireland, Austria and Brazil engaged in teaching accessibility across a range of university computing courses and curricula.

We observe how academic practice and disciplinary cultures within Computer Sciences influence and enable faculty expertise in accessibility, and the development and sustainability of how accessibility is taught. We also reflect on the experiences of our expert accessibility teachers in positioning accessibility within Equality, Inclusion and Diversity strategies and practices in their universities.

Accessibility is often marginalised within technology-oriented Computer Science disciplines (Lewthwaite & Sloan, 2016), and the expert interviews confirm the levels, distribution and influence of accessibility expertise vary across faculties. Two models of cultural practice emerge. In one, teachers describe 'hubs' or 'centres of excellence' in which accessibility practices are historically and culturally embedded in both teaching and research activities, often with established links and interaction with user groups. In contrast, others identify with what one teacher described as the 'hero model' - 'there has to be someone that brings it there ... that valorises it. Not always, but commonly' - working largely alone to promote accessibility and influence colleagues. Several acknowledged the challenges of persuading teachers who are already overworked or have little say in the designing of curricula.

The cultivation and sharing of expertise in accessibility, and how accessibility may be integrated in the curriculum, are often articulated in expressions of 'bottom-up' and 'top-down' forms of academic practice. Where accessibility expertise exists in 'pockets', teachers attuned to specific faculty cultures can act as 'local change agents' (Shinohara et al., 2018). However, several teachers expressed concerns about how this is sustained when individuals move on. Others suggested a top-down, structured approach is essential to ensuring accessibility awareness, competence, and expertise is embedded across faculty.

We notice that those with expertise in accessibility are also engaged in interdisciplinary activities and service roles to inculcate accessibility and disability inclusion across university education, IT and procurement systems. There is a clear impetus for universities to embed disability inclusion throughout, but protocols oriented towards access for disabled students and staff in the digital space is observed by many to lag behind those in the built environment. As one expert we interviewed suggested, those teaching accessibility can play a key role addressing this but need to develop a holistic and nuanced understanding of how it fits within institutional strategies and policies. For some already engaged, this represents just one of a 'number of battles' in positioning accessibility at the forefront of the collective conscience of our universities.

As the theme of SRHE 2021 suggests, the transformative nature of Higher Education, redefined in the ongoing response to the Covid-19 pandemic, might be best served by collaborative approaches that recognise a shared responsibility in tackling the types of challenges facing universities. Our presentation will engage conference delegates in a critical dialogue that explores these themes

through the unique perspectives of teachers of digital accessibility and their role in ensuring inclusion and diversity in our universities.

References: References

Goggin, G. & Ellis, K. (2020) Disability, communication, and life itself in the COVID-19 pandemic. *Health Sociology Review*, 29(2), 168-176. <https://doi.org/10.1080/14461242.2020.1784020>

Lewthwaite, S., Coverdale, A., & Butler-Rees, A. (Forthcoming) Teaching Accessibility in Computer Science and Related Disciplines: A Systematic Literature Review and Narrative Synthesis.

Lewthwaite, S. & James, A. (2020) Accessible at last?: what do new European digital accessibility laws mean for disabled people in the UK? *Disability & Society*, 35(8). <https://doi.org/10.1080/09687599.2020.1717446>

Lewthwaite, S. & Nind, M.A. (2016) Teaching Research Methods in the Social Sciences: Expert perspectives on pedagogy and practice. *British Journal of Education Studies*. 64(4) 413-430.

Lewthwaite, S. & Sloan, D. (2016) Exploring pedagogical culture for accessibility education in Computing Science. W4A 2016, Montreal. <http://dx.doi.org/10.1145/2899475.2899490>

Lucas, B. & Claxton, G. (2013) *Pedagogic Leadership: Creating Cultures and Practices for Outstanding Vocational Learning*. London: The 157 Group Limited.

Shinohara, K., Kwas, S., Ko, A.J. & Ladner, R.E. (2018) Who Teaches Accessibility? A Survey of U.S. Computing Faculty. SIGCSE'18, Baltimore, MD. <https://doi.org/10.1145/3159450.3159484>