

Workshop: 'Universities and Professional Bodies Working in Partnership to Decolonise the STEM Curriculum'

Date of Event: 6 July 2022

Location: Microsoft Teams

Number of Participants: 70-75

Host Organization: University of Leeds, sponsored by Heads of University Biosciences (HUBS) – a special interest group of the Royal Society of Biology

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Workshop Summary

Introduction

The purpose of this workshop was to bring together Higher Education Institutions (HEIs) and relevant Professional Bodies/Learned Societies to explore how we work in partnership to drive forward decolonisation of curricula (within STEM) in a more unified and impactful way. The schedule was divided into two parts, (i) a series of presentations delivered by select HEIs and Professional Bodies/Learned Societies focusing on sharing policy, practice and evidence across organisations and (ii) facilitated round table discussions to explore and make recommendations for future cross-organisation working to effect co-ordinated national change.

Over 70 guests participated in the workshop from across a number of different HEIs across the UK. Professional Bodies/Learned Societies represented included: Royal Society of Biology, Institute of Physics, Royal Society of Chemistry, British Psychological Society, Physiological Society, British Pharmacological Society, Geological Society, and Biochemical Society and The Institution of Engineering & Technology.

Sharing policy, practice and evidence

During the morning session, various themes emerged from presentations (for talk synopses see Appendix 1) by representatives of HEIs and Professional Bodies/Learned Societies. These included:

1. **Definition and process of decolonisation:** That cultural biases remain with the idea that science is either 'culturally neutral' or a product of the West or both and this persists through hierarchies of recognition or validation of knowledge;
2. Therefore decolonisation in practices involves: *Identifying* colonial (primarily Eurocentric) systems, structures and power relationships, and working to challenge them; *Questioning* the origins of the knowledge taught and the colonial legacies that are replicated within practices; *Recognizing* whose knowledge and voices are undervalued and silenced and *Acting* proactively to rebalance unequal power dynamics. Therefore to effectively decolonise requires a 'praxis' of both '**Undoing and Redoing**' (Walsh and Mignolo, 2018) in

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order to uncover how coloniality continues to be experienced before using this knowledge to (begin to) decolonise resources and practices.

3. **Engaging staff and auditing practice:** several examples of how Universities are ‘undoing and redoing’ were presented. One of these included a 4-stage process (rationale, resourcing, accountability and reflection) to audit and embed activities to decolonise the curriculum at the School of Biological & Environmental Sciences at Liverpool John Moores University. The audit template includes five key tenets: (i) diversifying the curriculum (ethnicity represented in reading list, speakers), (ii) discussing perspectives (within/outside UK related to ethnicity), (iii) critical thinking (related to ethnicity and cultural diversity), (iv) historical context (related to ethnic inequalities and knowledge systems) and (v) bias in real world outcomes (social, economic factors).
4. **Working in partnership with students to support decolonisation of curricula:** Several examples of collaborating with students were highlighted including (i) production of student-generated and accessible resources highlighting the contribution of bioscientists from under-represented communities in an infographic Case Study (Kingston University) and (ii) employing UG students as curriculum developers to review courses including auditing of teaching practices, teaching methods, reading lists and representation, and running surveys of and focus groups. The latter leading to the generation of resources such as ‘Decolonising and Diversifying guide (Faculty of Life Sciences)’ (Bristol University).
5. **Professional Bodies/Learned Societies supporting the development of Inclusive Curricula.** The British Pharmacological Society highlighted that the Society has developed a set of guiding principles to support inclusive implementation of the revised undergraduate pharmacology curriculum, due to be launched in August 2022. This work has been framed as inclusive implementation, taking a 3-D approach ‘democratisation, diversification and decolonisation’ as the meaning for an inclusive lens. A priority area is building up inclusive education resources to support implementation of the framework for use across the sector. The Geological Society highlighted work to support further research into decolonisation of the curriculum e.g. *Decolonising UK earth science pedagogy: from the hidden histories of our geological institutions to inclusive curricula*.
6. **QAA benchmarks, accreditation criteria and inclusive curricula.** Two examples were presented (i) The Institute of Physics (IOP) have recently revised their degree accreditation criteria comprising 5 overarching principles of which one is: “Universities and physics departments must have a clear commitment to equality, diversity and inclusion and this should be evident within the university and departmental culture, environment and physics curriculum” and (ii) The Geological Society and how they have embedded the QAA subject benchmark of graduates to be “culturally aware, show ethical behaviour, consideration and respect and ...reflect on equality in the context of their discipline” into the Geological Society accreditation scheme, specifically (a) recognise the importance of equality, diversity and inclusivity and develop behaviours that support EDI and (b) appreciate the need to act and work in an ethical and sustainable manner and in compliance with relevant legislation.
7. **Challenges and barriers identified included:** Defence of coloniality (‘white defensive moves’), cultural and structural change take a long time; belief that diversity and

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decolonisation are the same thing and lack of evidence of 'what works', staff buy-in, workload and availability of resources.

Overview: Roundtable Discussions

During the afternoon session workshop participants had the opportunity to join breakout groups. Four prompts were used to facilitate conversations. Prompts and key discussion points are summarised below:

1. Use of terminology: inclusive curricula or decolonisation of curricula?

- There are advantages and disadvantages to using/retaining the term 'decolonising' and delegates were divided on what is most helpful.
 - Using the term decolonising ensures the focus remains on both recognising and addressing colonial pasts, and keeps issues around systemic race and racism to the fore.
 - However, diversity, geographic bias or inclusive curricula are less political or emotional terms so can be easier to start discussion at grassroots, particularly for "apolitical" societies.
 - In addition, many of the problems related to both issues of diversity and equity have their roots in colonial histories and so alternative terminology such as a 3-D approach 'democratisation, diversification and decolonisation' could be more effective in supporting educational change.

2. How can universities and professional bodies work together and with others to support educational change?

- Clear acknowledgement that professional bodies have a responsibility to show leadership in this area. This could be through accreditation criteria (where learned societies accredit degrees) and/or other routes (e.g. influence benchmark criteria, encourage editorials and discussions within Society journals/publications; support projects/research through funding).
- There was also strong support for learned societies to come together to make a broad, joint statement in support of the agenda and/or joint statements around accreditation criteria for impact, clarity and coherence.
- In addition, linked to the above, clarify the remit of EDI statements: e.g. should these be/are they about teaching students EDI or the EDI environment. Currently the focus appears to be on the EDI environment and less on specifying criteria associated with the delivery of teaching/curriculum.
- The need for more examples of good practice and case studies including what works was identified. For example, do we have the evidence of what is and is not working? What can be measured and how to develop the impact of these activities and how to measure them? (i.e. the need to treat the area like an academic exercise - highlighting existing research and creating new research).

3. To what extent should our disciplines, PSRBs and Universities acknowledge their own colonial histories?

- Strong agreement that disciplines, learned societies and Universities should be acknowledging their own colonial histories.

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- Noted that projects to acknowledge the histories should be developed alongside, but not instead of, development of curriculum. Funded separately and perhaps with external expertise.
- 4. How do we include students in the decolonisation process?**
- Recognition that lots of work is being done, involving students, but in pockets and therefore opportunities exist for linking this work going forward (e.g. through cross/multi-institutional projects, showcasing of resources/ projects, regular conferences/workshops).
 - Participants noted that topics surrounding racial bias are sensitive and as such, a safe space ought to be created for discussions surrounding such topics. Bringing in subject matter experts from other fields for facilitated conversations may be helpful.
 - The need for interdisciplinary exchange as it applies to the decolonisation of STEM specific curricula was also noted.
 - In discussing student involvement within the decolonisation process participants were cognisant of over burdening students from BAME (Black, Asian and Minority Ethnic) backgrounds, particularly where numbers of minoritised students are low.
 - Participants also discussed scenarios in which student participation can be increased with this process e.g. through advertising and payment of students involved in associated projects.
 - Recognition that that educational change needs to start pre-University – with the embedding of more inclusive attitudes and critical thinking about science at school.

Recommendations:

Some suggested next steps/recommendations derived from the discussions above are noted below for consideration:

1. A group of learned societies/professional bodies professional bodies come together to produce a joint statement (or some commonalities) relating to ‘Equality, Diversity and Inclusion’ (or 3-D approach ‘democratisation, diversification and decolonisation’) and accreditation criteria for impact, coherence and clarity;
2. Universities and Learned bodies consider how they can jointly work together to support curriculum development (e.g. facilitate cross-institutional projects to support curriculum development; collate and disseminate evidence of practice including support through resourcing (financial and time);
3. Run an annual ‘decolonising of STEM curricula’ event, as a means of tracking progress, sharing practice and facilitating networking.

Appendix 1: Talk Descriptors: Higher Education Institutions and Professional Bodies/Learned Societies

1. Professor Jacqueline Stevenson’s (University of Leeds) introduction evidenced the ways in which cultural and racial biases remain within STEM subjects and how they are taught, leading to – amongst other concerns – under-representation and inequalities of access to opportunities. Definitions and rationales for decolonising were explored as well as some of the practical ways this was being undertaken across the sector and at the University of Leeds.

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2. Professor Steven Tucker and Dr Anna Zecharia's talk outlined the work of The British Pharmacological Society (BPS) in embedding inclusive principles for delivery within its Core Curriculum. The British Pharmacological Society (BPS) Core Curriculum was launched in 2016 and has been subject to recent review and development by the BPS Education and Training Committee. In line with its vision for inclusive pharmacology, BPS have established an Inclusive Pharmacology Education Steering group to inform the ongoing review of the curriculum, to ensure equity, diversity and inclusivity was embedded within the process and its output. The talk explored the intersection of these two work streams in the production of an expanded curriculum and inclusive principles for its delivery.
3. Dr Nicola Koyama at Liverpool John Moores University (LJMU) discussed LJMU's positionality and how the institution overcame initial challenges, reflecting on progress made in terms of understanding what decolonising the curriculum means and whether change has been 'tokenistic' or meaningful. This talk outlined LJMU's approach including resource provision, auditing programmes, engaging students, module planning templates and structural support e.g. programme validation.
4. Ms Robyn Henriegel, provided a brief update on what the Institute of Physics (IOP) is doing to promote inclusivity in the physics curriculum and to support departments to make their provision more inclusive. The revised accreditation scheme was described, with a focus on a new EDI principle and the implications for the teaching and assessment of physics.
5. Dr Nick Freestone (Kingstone University) outlined how using students as agents for change and utilising their experiences and backgrounds can provide a "low risk" way of making tentative steps into the contested political arena of decolonising the curriculum. The talk demonstrated the student generation of a resource that may be used to promote inclusivity in teaching and decolonise the curriculum.
6. Dr Alicia Newton outlined the work of the Geological Society. With a history dating back to 1807, the foundations of the early practice of geology and the Geological Society itself are heavily linked with exploration and colonisation by the British Empire. Initial efforts to understand and contextualise these links have led to the formation of a working group on memorialisation policies. The need to decolonise the geological curriculum has also been recognised by the QAA subject benchmark working group, and consequently incorporated into the Society's degree accreditation scheme.
7. Caroline McKinnon described the work undertaken at the University of Bristol to decolonise and diversify teaching content within their Biomedical Sciences curricula. Students, as paid partners, review teaching materials, producing an "Emerging Themes" document, have helped to shape changes within teaching content in the units analysed thereby leading to a new 'Equality and Inequality in Science' learning resource. Additionally, questionnaires have been sent to all staff and students to obtain baseline data of knowledge and views on decolonising work. It has also fed into their 'Faculty Decolonising and Diversifying the Curriculum Working Group' and forged collaborative relationships with other Schools and faculties. This has helped them produce a booklet, which includes tangible steps staff can take to start decolonising and diversifying their teaching material. This work has opened conversations between staff and students and will be part of a continuous, open-ended process to make their curriculum more inclusive.