

Association for Academic Outreach Conference 2019

Presentation abstracts

Welcome talk: 09:50-10:00

Understanding the context of outreach: why can't you do it?

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In this talk, I will examine the ways in which universities are increasingly asked to justify their existence by virtue of their contribution to social goods with which the academy was only vaguely acquainted in the past. I suggest that this reflects a systematic failure of institutions collectively to recognise socio-economic drift in late capitalism, but argue that it offers academics genuine scope for fostering goods in ways that would have been barely conceivable in the past.

Session 1: Embedding HE in communities: 10:00-11:05

Chair: Dr Angela O'Sullivan, NTF, Associate Professor DMU Local and Engagement, Faculty Head of Widening Participation, Faculty of Health & Life Sciences, De Montfort University, Leicester. aosullivan@dmu.ac.uk

Community Engaged Universities: approaches and context

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Wider society needs proactively engaged universities to contribute to addressing the complexities of contemporary social, political, economic, environmental and wellbeing challenges. These range from planetary grand challenges like those articulated in the United Nations' Sustainable Development Goals to everyday ones facing individuals and communities in their homes and neighbourhoods. Very often there are causal links across the spectrum of challenges. Here I want to go beyond the very narrow, contemporary recruitment-driven conception of outreach present in the UK to reflect on potential university modes of response and to also expand the conversation to include the concept of learning cities, specifically the model being promoted by UNESCO.

The first mode of response, 'Science and Community', draws on Boyer's (1990) imperative that 'higher education must focus with special urgency on questions that affect profoundly the destiny of all' (77). He proposed a model with four key scholarship functions: discovery, integration, application and teaching. To meet Boyer's imperative universities must be both engaged as communities of scholars and intellectuals and simultaneously conscious of the needs of society.

The second mode of response, 'Building Bridges and Cognitive Flexibility', I build around Granovetter's (1973, 1974, 1983) theory on the strength of weak ties. His work is extremely important in helping us understand two closely related concepts, bridging weak social ties and cognitive flexibility. Both of which are critical for the generation of bottom-up resilience and openness to consider ideas, concepts and solutions that are novel and emerging from worldviews to which we may not personally subscribe.

This all speaks to a much broader (and internationally recognised) conception of outreach that is, sadly, being subsumed by governmental attempts to mitigate the consequences of neoliberalism in the United Kingdom.

Considering the impact of academic outreach with the participants of a participatory research project in a disadvantaged area

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Since Boyer (1990, 77) called for higher education to 'focus with special urgency on questions that affect profoundly the destiny of all', the contribution of university academic outreach has been conceptualised in a myriad of ways, e.g. as civic, community and democratic engagement. These capture the social responsibility of the university sector towards the public good, embedded through numerous approaches across universities including participatory and applied research. Outreach is now

recognised as the third mission of universities and reflected in government funding agencies and the strategic plans of universities. However, evaluating the impact of this academic outreach has thus far received less systematic attention.

This paper presents an evaluation of a participatory research project in one of the most disadvantaged estates in Cork City, Ireland currently undergoing regeneration. The project involved 15 mature students enrolled in a part-time Diploma (60 ECTS credits over two years) with the centre for Adult Continuing Education, UCC. Most were early school leavers and faced barriers engaging in higher education, including financial and socio-cultural. The students co-designed a household survey and became field researchers to gather the views of fellow residents. The paper documents both the students experience of partnership with academics from their own point of view and the perspectives of the participating academics. It thereby aims to assess two dimensions to evaluating academic outreach as highlighted by Votruba (1996): 1) what difference did it make, and 2) to what extent did it enhance the teaching and research mission of the university? Overall, the paper aims to ascertain the specific value and contribution of this form of outreach in a disadvantaged area.

Post-truth politics and public trust: how can universities regain legitimacy in the public sphere?

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The era of 'post-truth' politics and a seeming lack of public trust in expert knowledge poses a series of existential questions for higher education institutions. As such, the question of how universities regain their legitimacy in the public sphere, particularly amongst disadvantaged communities, is of pressing concern. Engaging with local communities, specifically those with low rates of participation in higher education, is at the core of the mission of the Centre for Lifelong Learning (CLL) at the University of Warwick. This workshop presents two differing examples of CLL outreach activities. Anil Awesti reflects on the experience of teaching a free, open access 'Analysing UK-EU Brexit Negotiations' monthly seminar series amongst members of the public in a city which voted 'Leave'. Jim Judges examines an initiative of using student Digital Skills Mentors to provide support with the use of technology to public users of two local libraries. In doing so, the papers analyse the extent to which university outreach activities are effective in tackling inequality and disadvantage experienced in communities which surround higher education institutions and explore the role of universities in public engagement in a period in which 'people in this country have had enough of experts' (Gove).

Session 2: Inequality and mobility: 11:05-12:10

Chair: Matthew Johnson, Senior Lecturer in Politics, Director of Engagement, Politics, Philosophy and Religion, Lancaster University. m.johnson@lancaster.ac.uk

Rethinking Disadvantage: A social capital approach to Widening Participation

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The rise of £9,250 tuition fees and concern more broadly about social mobility has created an industry of initiatives aimed at Widening Participation in Higher Education. Increasingly, critics argue that these initiatives have failed to achieve genuine representativeness, with lower ranked universities absorbing higher numbers of students from under-represented groups, who then face additional challenges in securing progression to employment. In this article, we examine dominant narratives Widening Participation programmes in England and Wales in order to assert means of widening more effectively access, in the first instance, but also retention and progression. Rejecting non-subject-specific instrumental approaches that focus directly on graduate labour market value and earnings, we argue that effective Widening Participation ought to focus centrally on the institutional value of Higher Education and on fostering social capital, especially in lower ranked universities whose graduates are already discriminated against in the labour market. To this end, we evaluate deployment of a Politics-based Widening Participation programme, Rethinking Disadvantage, asserting a set of conclusions for colleagues in other disciplines and institutions seeking to develop their own approaches.

Do Cultural Capital, Habitus or contextual sources of Social Capital in addition to school attended affect progression into HE? An analysis using a recent British Cohort (LSYPE 04)

Dr Jack Whybrow, Tutor in Business, NBS, University of East Anglia. J.Whybrow@uea.ac.uk.

We provide evidence that cultural and social factors are significantly associated with Higher Education (HE) participation in the UK. In addition we find that school attended (and their characteristics) exhibit an independent association with HE participation. Our findings are important because the current UK HE literature focuses almost exclusively on individual and family background characteristics. We argue that a more complete understanding of cultural and social influences has the potential to make significant contributions to our understanding of HE participation and that research in this area may highlight an underutilised policy avenue for achieving Widening Participation (WP) objectives.

Writing Wrongs Schools Programme

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Becca Kirk, Outreach Officer, School of Law, University of Warwick. B.Kirk@warwick.ac.uk

The Writing Wrongs Schools Programme (WWSP) is the only writing programme in the UK which empowers young people to write about social justice issues, as well as providing them with the opportunity to develop their research and writing skills through support from academics and professional writers. WWSP was first developed by the University of Warwick in 2015 and since then has successfully worked with more than 250 students from disadvantaged backgrounds. WWSP is a collaborative venture from academics in the School of Law and the Department of English and Comparative Literary Studies.

This presentation will showcase WWSP's unique qualities including the way it engages academics and professional writers, and how it addresses lacunas within the school curriculum. It will also identify the key added value for participating students; the opportunity to interact with, and receive individual feedback and support from academic staff over an extended period, thereby raising students' aspirations and increasing their confidence around successfully transitioning to university level study. Whilst the content is shaped by academics, the delivery of the programme is co-ordinated by the Outreach Officer. This includes advertising to target students/schools, monitoring and evaluation, and ensuring that the programme meets its outreach objectives in line with changing university and sector priorities. In order to expand WWSP, since 2017/18 Warwick has worked with 12 other universities to establish the programme in institutions across the country, as well as developing a sister programme for years 9 and 10 based in local schools.

Session 3: Widening Participation and Recruitment: 13:00-14:05

Chair: Matthew Johnson, Senior Lecturer in Politics, Director of Engagement, Politics, Philosophy and Religion, Lancaster University. m.johnson@lancaster.ac.uk

Reach Out for Outreach

Dr Angela O'Sullivan, NTF, Associate Professor DMU Local and Engagement, Faculty Head of Widening Participation, Faculty of Health & Life Sciences, De Montfort University, Leicester. aosullivan@dmu.ac.uk

Outreach has been recognised for decades as an important element of widening participation in higher education with social mobility as a key driver. However, this area is complicated by the fact that outreach activities are developed and delivered in different modes in different institutions and social mobility is complex and difficult to quantify. This paper outlines the successful bespoke and targeted outreach activities developed in collaboration with academics in all schools in the faculty of Health and Life Sciences at De Montfort University, students and stakeholders.

The key element to the approach undertaken by this widening participation (WP) team is that of collaboration and innovative engagement for targeted audiences where there is under-representation in a specific career. This approach moves away from marketing and the delivery of 'one size fits all' activities which are very generic and may not be delivered by academics. The faculty team has academic representatives from each school in the faculty who collaborate with academics, students and stakeholders to develop outreach activities that demonstrate not only the wide range of healthcare careers, but also the importance of multi-disciplinary teams.

The example activity presented here is a four day Easter School which follows a virtual patient through a mock Accident and Emergency ward, biomedical and psychological tests and results in the students producing a pharmaceutical emollient cream. The applicants are selected according to WP

and under-representation criteria (e.g. increasing the number of men in nursing) and are exposed to a range of professions in a practical and engaging healthcare mystery.

Outreach at Coventry: Enhancement of Coventry University students' experience through integration with the local community

Dr Sharon Williams, Senior Lecturer, School of Life sciences, Coventry University.
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For the last few years it has been great to use several community outreach activities as an opportunity to engage Coventry University students with the local community. We received grants from the Royal Society of Chemistry, the Royal Society of Biology and the Biochemical Society. The primary goal of the outreach activities was to connect kids from the local West Midlands community age 7-11 years old, and their families, to the relevance of Chemistry/Biology to their everyday life. The series of introductory activities takes part in the FabLab in the Coventry city center once a month on Fridays and Saturdays. The evaluation of the program is by following up with the school students attending the session and how the activities encouraged them to pursue a science discipline. Science students from Coventry University as well as volunteers from the different societies help to run the activities. The university students connect with the young kids very well, this allows the younger kids to more clearly see themselves as science students at university in the future. The university students, especially those far from home, enjoy the engagement with the local community and the excitement of the younger kids for science. The university students can also use the activities as work experience and improve their CV. I am happy to share information on our outreach activities with other disciplines and colleagues to learn more about the national expectations and policies around outreach.

Blurred boundaries: Encouraging greater dialogue between student recruitment and widening participation

Chris Bayes, Faculty of Arts and Social Sciences Outreach and Success Officer.
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This paper explores the changing relationship between Widening Participation (WP) and Student Recruitment (SR) within the UK Higher Education (HE) Sector over the past decade. The paper examines how as a consequence of successive policy changes and the development of a 'mass marketplace' within the sector, the two functions are operating more closely than ever before. This has led to an underlying tension between attempts to widen participation in HE amongst under-represented groups, set against individual institutions goals to grow their own student number intake by taking market share from their competitors. The paper seeks to address the following research question: How can Student Recruitment and Widening Participation effectively work together in this context?

In order to answer this question, the paper draws on data obtained via consultation with colleagues working across SR and WP roles within UK HE Institutions. Firstly, I asked a selected sample of colleagues working in SR and WP roles to complete a survey on the relationship between the two functions and how this has evolved over time. Following on from this initial sample, I conducted a series of focus groups and interviews. The paper discusses an issue under-researched within the literature and seeks to encourage further dialogue between professionals working within these fields. A key finding from the research is that the institutions thriving within this current context are operating in a 'Student Lifecycle' context, in which Widening Access and Student Recruitment are becoming everyone's responsibility rather than the sole preserve of a central team.

Session 4: Employability and progression: 14:05-15:00

Chair: Dr Emily Danvers, Lecturer in Education, University of Sussex, E.Danvers@sussex.ac.uk

Students as co-creators

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At UEA it has long been recognised that our current undergraduate students are uniquely placed to support outreach work, particularly with young people, by acting as role models the young people can identify with. As in many institutions students have been employed as ambassadors or appointed as volunteers to support sessions delivered by academic and research colleagues, taking on roles such as demonstrators or facilitating small group discussions.

The dual benefit of providing additional resource in stretched departments and enhancing the students own employability skills also saw students taking a more active leadership role, delivering the sessions unaided, therefore allowing the reach of the projects to grow substantially. Whilst it is undeniable that transferrable employability skills are enhanced by involvement in outreach, the scope for personal development is much broader.

During this session I will explore how we can look beyond these immediate benefits of resource and employability and challenge ourselves to consider how involvement in outreach can enhance our students understanding of their own scholarship and the place of Higher Education within communities.

I will focus on a project that was born following the request of a group of students who, after being involved with the more traditional ambassador roles, have created their own outreach projects; involving themselves in everything from the creation of materials, training of peers, evaluation and promotion through conference. I will set out how the experience has shaped future learning outcomes (theirs and mine) and share the reflection of my students.

Enhancing Student Success Through Self-Assessment and Self-Efficacy Beliefs

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This presentation describes a pedagogical intervention promoted at the University of East Anglia to develop and enhance student self-assessment skills as a means to increase self-efficacy beliefs, retention and success. The pedagogy has been successfully implemented for Economics students, but it is progressively being rolled over other disciplines. Embracing an active learning approach, students are continuously exposed to problem-based formative assessment questions. Initially, students are instructed to solve these problems in isolation and formulate a self-assessment statement to reflect on their abilities and skills. At a second stage, students are encouraged to discuss the questions with their peers, prior to formulating a second response and a second self-assessment statement. This active learning peer-instruction approach was facilitated by wide adoption of student-response technology, which allows for immediate feedback to students, and for the collection of a rich dataset, uncovering the patterns of student learning. The analysis large basis of data collected over 5 years of the study confirms that the pedagogy was very effective at developing self-assessment skills and improving confidence level within every cohort object of the study. Advantages of this pedagogical approach are: (i) adaptability to different subjects, (ii) scalability to large cohorts of students, and (iii) an evaluation framework directly embedded within the pedagogy. Whilst quantitative indicators can only be related to student performance and student development of metacognitive skills, qualitative analysis indicates that the pedagogy largely benefits students displaying poorer performances, also improving their confidence levels. This result aligns to the increasing body of evidence supporting the effectiveness of active learning approaches to support the progression, retention and success of students coming from a disadvantaged background. We celebrate this as a good example of inclusive education, rejecting ethically questionable deficit-models, in favour of an approach that foster high-impact pedagogies for all. We particular emphasize the positive effects created by peer-instruction, which enhances sense of belonging and community engagement for all students.

Incorporating outreach into practice through curriculum design: perspectives from Initial Teacher Education

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Teacher Education is aspect of the University which is naturally school facing, however, students and academics within the discipline are not necessarily engaged with activity which could be described as outreach. This paper will consider two case studies from the Primary and Secondary Postgraduate Certificate in Education (PGCE) programmes, developed through the curriculum design process with the aim of providing rich, authentic, learning experiences for the trainee teachers. Both of which have consequently led to highly valued outreach activity.

The first case study focusses on developing trainees' understanding of science capital and transition within the science curriculum. It involved cross-phase working between primary and secondary trainees to develop outreach workshops for a local primary school as part of British Science Week.

The second case study examines collaborative outreach with primary PGCE trainees, the School of Life Sciences, and partnership schools which match widening participation criteria. Trainees cascade

their learning of delivering exciting science to primary pupils on campus, gain experience and develop their confidence. Pupils develop their aspirations for science and of attending university. Both case studies align with research on science capital (Archer et al, 2015) and the Wellcome (2017) report on lack of confidence in primary science teaching. Findings will be shared from evaluations of the two activities, alongside reflections from the academics who led the process; the trainee teachers involved; and teachers, students and parents who participated in the activities.

References

Archer, L., Dawson, E., DeWitt, J., Seakins, A. and Wong, B. (2015). "Science capital": A conceptual, methodological, and empirical argument for extending bourdieusian notions of capital beyond the arts. *Journal of Research in Science Teaching*, 52(7), pp.922-948.

Wellcome (2017). *'State of the nation' report of UK primary science education*. Leicester: CFE Research.

Session 5: Public science: 15:15-16:45

Chair: Dr Séamus Ó Tuama, Director of ACE (Adult Continuing Education) and Senior Lecturer in the Department of Government & Politics, University College Cork. sotuama@ucc.ie

Parents in Control: the Extreme Citizen Science of Parenting Science Gang

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Inequality can be inherent to research outreach where the messages to be transmitted are determined by the researcher. Our project, Parenting Science Gang, redresses the balance by placing the power with the project members, enabling them to manage the content and direction of the dialogue. Parenting Science Gang is a Wellcome-funded, online, user-led citizen science project. Citizen science enables members of the public to get involved with research efforts, typically by collecting data (eg recording ladybird sightings), or by crowdsourcing analysis tasks where computational methods are unsuitable (eg categorising galaxies from photos). The Parenting Science Gang model, however, takes this one step further by putting the participants in charge – giving them the power to identify the research question based on their needs, and select, in collaboration with researchers, research methods that are appropriate to their circumstances. Over two years, Parenting Science Gang has enabled 2500 parents across eight groups to design research projects that have including thermoregulation of carried infants, development of gender stereotypes, an analysis of the components of breastmilk and more. Papers are currently being submitted to leading journals detailing their results. To ensure ongoing engagement with parent members, the project was optimised for flexibility, using Facebook to address the barriers facing a geographically disparate, time-poor audience. Weekly member-led Q&A sessions with leading scientists developed interactional expertise and a wide knowledge base. The project has provided a transformational opportunity for participants to experience science as a means to explore and shed light on aspects of parenting that have a high impact on their lives but are often down-played by society. For individuals, participation leads to notable positive impact on multiple dimensions of science capital. This mini-workshop will introduce the Parenting Science Gang model from the perspectives of members, researchers and public engagement professionals; examine the myriad benefits of user-led research through the lens of equality; and explore how lessons learned can be applied in the wider outreach agenda.

Our experience with nation and international outreach and engagement for #worminspace

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We conducted the first UK-led experiment on board the International Space Station and wanted to have a strong outreach element. Our initial plans for outreach were to create a website (www.mme-spaceworms.com), engage the media, coordinate a documentary, visit two dozen local schools, and visit museums in the capitals. Given academic time pressures, creating the website was difficult. Providing updates via twitter (@worms_space) was easier and was retweeted by national funding agencies and the press. Allowing BBSRC to lead the coordination of the press and public outreach proved an excellent choice resulting in media coverage starting at the beginning of the school year, with

a BBC Breakfast piece, and continuing through key milestones of the experiment. BBSRC and the UK Space Agency produced video clips, coupled with our own twitter and podcasts outputs, ended up being our “documentary” of the experiment. Attending science fairs increased our reach to 2,500 students per year, however, museums proved difficult to engage with. We produced activity packs to allow others (i.e. school teachers) to replicate our engagement activities. These, along with a description of the activities, comprised a conference presentation and peer reviewed publication, which gives a small amount of academic credit for the time spent absent from research, as well as documenting academic leadership of the outreach vs. research. Documenting our activities in Researchfish has proven more time consuming than anticipated. As with most academic outreach, we are not set up for tracking any meaningful metrics of the long impact of our efforts.

Reaching out to the hard-to-reach: a mixed-methods analysis of a pilot Welsh STEM engagement project

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S4 (Swansea University Science for Schools Scheme) was established in 2012 by Professor Mary Gagen and Dr Will Bryan as an inclusivity-facing science outreach and engagement programme for low STEM (Science Technology Engineering Maths) and HE (Higher Education) participation demographics in South Wales (UK). S4 workshops are free at the point of access, hands-on, and research-led. We report here on our post intervention evaluation with 61 student participants (KS1-4) and three teachers who took part in the S4 programme between 2012 and 2015, using the theoretical lens of science capital. Our results indicated that participants, despite their ‘low science capital’ backgrounds, are enthusiastic and ambitious, and confident in their abilities in both science and wider spheres. However, certain aspects of their ambition were mediated by socioeconomic status. Despite pupils having notably high aspirations, teachers cited low literacy and numeracy, household poverty, entrenched generational unemployment, rural isolation, disabilities, caring responsibilities and teenage pregnancy as barriers to STEM and HE STEM for their pupils. S4’s intervention had the greatest impact on views about STEM in those in the extremes of socioeconomic deprivation, both in terms of bolstering existing aspirations and increasing the ‘thinkability’ of HE.

Rather than participation in HE being motivated by a lack of aspiration or the discourse of family habitus (‘people like us’), S4 participants were aware of the socioeconomic obstacles in their lives. We found no poverty of aspiration, and encourage a policy move away from an ‘aspiration raising’ approach to STEM outreach in Wales.