Changing Mindsets: Reducing stereotype threat and implicit bias as barriers to student success
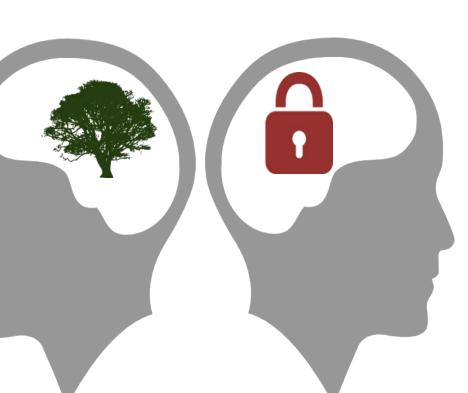
Student & Staff Intervention

GROWTH MINDSET

*Believe intelligence is **malleable** and can be **developed** through hard work and persistence*

FIXED MINDSET

*Believe intelligence is something you are **born** with and that you **can't** do much to change it*

Changing Mindsets is a student and staff workshop-based intervention that builds a growth mindset: the belief that ability develops through effort and by embracing challenge. Initially developed at the University of Portsmouth, the intervention aims to close the attainment gap in student experience, retention, progression, academic attainment and employability by changing mindsets and eroding stereotype threat (Osborne, 2007) and implicit bias (Staats, 2014; Devine et al, 2012) as barriers to learning. The pedagogic approach taken in both staff and student workshops is to present concepts, evidence and strategies in an engaging and interactive way, using, as appropriate multi-media presentation, self-assessments, illustrative examples, sharing of own experience, individual and group discussion, practical exercises, modelling language, interaction and self-voice, and exploring common scenarios.
Flexibility/Adaptability of the Intervention: The intervention, by design, is flexible and adaptable. While there are key learning outcomes, each university is empowered to embed the intervention in a way that fits with their institutional needs and existing programmes. In order for any intervention aimed at addressing unequal degree outcomes to be successful and to be widely adopted, it must be adaptable and flexible to meet the unique needs and challenges of a wide range of higher education providers.
Theoretical Framework: The intervention and evaluation is underpinned by psychological (King, 2012; Dweck, 2011; Cury, Elliot, Da Fonseca, & Moller, 2006; Gonida, Kiosseoglou, & Leondari, 2006), sociological (Mirza & Joseph, 2010; Lawler, 2008; Brah & Phoenix, 2004), and educational (Apple, 2013; Ball, 2013) theories.
Conceptual Framework: Utilising the conceptual framework proposed by Mountford-Zimdars et al (2015) the Changing Mindsets intervention will address the impact of mindset, stereotype threat and implicit bias on student retention, progression, experience and attainment, by focusing on the macro, meso and micro levels:

Macro
- Exploring socio-historical and cultural stereotypes around factors such as race, ethnicity, gender, age and social background and supporting the development of Growth Mindset beliefs in staff and students that are mutually exclusive to fixed attainment stereotypes;

Meso
- Exploring the implicit bias of staff and students within institutions that form the social contexts within which BME and students from low socio-economic backgrounds learn, and using 'habit breaking' techniques shown to be effective to erode implicit bias;

Micro
- Exploring students' own salient identities that result from individual student and staff interactions in the HE environment, that may make them prone to stereotype threat, supporting them to develop personal coping strategies and beliefs in order to support resilience and persistence in the face of challenging situations.

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Focused on Students

Changing Mindsets

The intervention is focused on closing the attainment gap in student experience, retention, progression, academic attainment and employability for two student populations: **socio-economically disadvantaged students** (as measured by POLAR3, Quintile1 (P3/Q1) and Quintile2 (P3/Q2) and qualification for income-based bursaries) and **Black and Minority Ethnic (BME) students**. Additionally, there will be demonstrable benefits for other student groups (e.g. based on gender, age, disability). Across the project partners the overall target intervention sample (over two cohorts) will be approximately 5,200 students (Autumn 2017: 2600; Autumn 2018: 2600) and 800 academic staff (Autumn 2017: 400; Autumn 2018: 400). Intervention targets per partner institution Autumn 2017, Cohort 1:

University of the Arts, London Students: 525 Staff: 100	University of Brighton Students: 625 Staff: 100	Canterbury Christ Church University Students: 475 Staff: 60	University of Portsmouth Students: 700 Staff: 100	University of Winchester Students: 275 Staff: 40

Strong Partnership

All five institutions in the partnership have clear strategic priorities that align with this project. The project partnership includes staff with excellent credentials including a Learning Gain Project lead, TEF panel member, Principal Fellows of the HEA and National Teaching Fellows. They have a track record of conducting empirical research into student diversity and learning, and translating this into successful interventions to address inequity in education.

- University of Portsmouth: Professor Paul Hayes, Pro-Vice Chancellor Education and Student Experience (responsible for project delivery and success); Professor Sherria Hoskins, Dean of Science (PI/lead academic for the project); Dr Jessica Gagnon, Senior Research Fellow
- University of the Arts, London: Professor Susan Orr, Dean of Learning, Teaching and Enhancement and Professor in Creative Practice Pedagogy; Diane Lucas, Academic Development and Services Administrator; Lucy Panesar, Educational Developer (Diversity and Inclusion)
- University of Brighton: Professor Gina Wisker, Professor of Contemporary Literature and Higher Education; Jennie Jones, Research Fellow, Centre for Learning and Teaching; Catherine McConnell, Senior Lecturer in Learning Development
- Canterbury Christ Church University: Rayya Ghul, Head of Academic Professional Development
- University of Winchester: Dr Nicola Barden, Director of Student Services

Robust Evaluation Methods

Core Evaluation Methods: For ease of data analysis and comparison, all five partners will adopt the same core evaluation methods, which includes the following **pre-intervention data**:
- Attainment and outcome student data for the past five years in the schools in which the intervention will be run
- Online student survey data from the intervention cohorts (including quantitative and qualitative responses)
- Online staff survey data from the intervention cohorts (including quantitative and qualitative responses)

Post-intervention data will be collected at each institution in the following ways:
- Attainment data for the cohort of students who participated in the intervention after the first term concludes and at the end of their first year
- Online student survey data from the intervention cohorts (including quantitative and qualitative responses)
- Online staff survey data from the intervention cohorts (including quantitative and qualitative responses)
- Individual interviews with a sample of student participants
- Focus groups with a sample of staff participants

Longitudinal data will be collected through Higher Education Access Tracker (HEAT).
Additional Evaluation Methods: To enable use of appropriate impact evaluation methods in each partner institution there will be flexibility. In addition to the core evaluation methods, each partner institution may choose which optional or additional methods (of their own design) to adopt.

	Learner Analytics using existing student records data	Online Survey Tools (cohort 1 intervention staff and students)	Individual Interviews with student participants and focus groups with staff participants to assess the intervention learning outcomes
Ten Impact Goals to be Assessed	1. Narrowed retention, progression and attainment gaps for BME and P3/Q1 students; 2. Narrowed employability gaps for BME and P3/Q1 students (after the life of the project)	3. Improved BME and P3/Q1 student learning experience. 4. Improved staff and student growth mindset, reduction in stereotypes and bias habits. 5. Improved lecturer efficacy in creating equal learning experiences.	Improved understanding of: 6. their own mindset 7. the interaction between stereotype threat, implicit bias and mindset 8. the impact of their own and others' mindset on their own and others' behaviour, language use, and expectations 9. the impact of behaviour, language use, and expectations on learning and educational outcomes 10. strategies for developing their growth mindset, inclusive behaviours, high expectations for all and enabling language.
Data analysis	Lens modelling and probability statistics	Multiple regression analysis	Thematic analysis
Level of impact assessed	Quantifying the impact (primary impact)	Quantitatively identifying what has led to the impact (secondary impact)	Qualitatively identifying what has led to the impact (secondary impact)