Changing Mindsets
Mid-Project Report
June 2018

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EXECUTIVE SUMMARY

This report explores the different institutional approaches to intervention delivery and mid-project initial findings from the two-year Office for Students (OfS) funded attainment gap project titled "Changing Mindsets: Reducing stereotype threat and implicit bias as barriers to student success". Changing Mindsets is one of 17 OfS-funded projects focused on closing attainment gaps currently underway across the United Kingdom. The project is focused on addressing unequal student experiences and outcomes for two student groups: Black and Minority Ethnic (BME) students and socio-economically disadvantaged students. The project is a multi-university partnership led by the University of Portsmouth (UoP) and including the University of the Arts London (UAL), the University of Brighton (UoB), Canterbury Christ Church University (CCCU), and the University of Winchester (UoW).

Mid-project findings discussed in this report include initial analysis of pre-cohort data and pre-intervention survey data as well as an exploration of some of the emerging themes from the qualitative interviews and focus groups (conducted by 1st April to allow for time for analysis and writing for this report). Data for cohort one is still being collected. Data collection and analysis for cohort one is scheduled to conclude in August 2018 and the final report of both cohort one and cohort two data will be published in March 2019.

In addition to detailed intervention stories from each of the five project partners, providing insight into different approaches to workshop delivery for staff and students, this report includes initial mid-project findings. Highlights from those findings include:

- Institutional average attainment gaps may hide substantial variations and outliers. Across the project partnership, findings within the pre-cohort data (five-year average attainment gaps for the schools and programmes participating in the intervention) vary widely, including lows of three percent and highs of more than 30 percent.
- The pre-cohort data collected across the project indicate that the attainment gaps cannot be explained by a student's tariff on entry (qualifications) into university, which is aligned with findings from previous attainment gap research (Mountford-Zimdars et al, 2015).
- Staff and students who have growth mindsets are more likely to want to create inclusion and to overcome bias. Within the pre-survey data for both staff and students, there are statistically significant positive correlations between growth mindsets and creating inclusion and overcoming bias.
- Staff and students with fixed mindsets are more likely to hold stereotype beliefs. Within the pre-survey data for both staff and students, there are statistically significant negative correlations between growth mindsets and stereotypical beliefs.
- Most staff and student survey participants indicated that they are committed to speaking out against hate and to making all students feel welcome and part of the campus community. However, nearly all staff and students who completed the survey also admit to unintentionally stereotypical thoughts.

Arising from the initial findings from the Changing Mindsets project, recommendations include:

- Universities should develop strategies to tackle attainment gaps using learner analytics to examine existing institutional data to better understand patterns of inequalities at the school or programme level.
- Given the potential for variation in attainment gaps even within the same faculties (or similar disciplines) within the same institution, university strategies to address inequalities should be tailored to account for those differences.
- University strategies for tackling attainment gaps should include myth-busting campaigns to dispel widely-held erroneous beliefs about why inequalities in student experiences and outcomes, including attainment gaps, persist (including the myth of tariff on entry explaining attainment gaps).
- Since our findings indicate that most staff and students are likely to want to actively work towards creating inclusion, universities should provide opportunities for staff and students to work in partnership to develop Growth Mindsets and to learn strategies for breaking bias habits.
- University strategies to address inequalities should be multi-faceted, including multiple research-informed and evaluated approaches, and should be embedded within the institutional culture in order to contribute towards the possibility of real, lasting change.

FOREWORD

By Professor Patricia Devine
University of Wisconsin Madison
Advisor for the Changing Mindsets project

Although abundant evidence consistently reveals drastic increases in positive societal attitudes related to equality, members of marginalised groups face continuing discrimination and adverse outcomes across a variety of domains related to success and well-being. Many interpret this disconnect between people's self-reported explicit intergroup attitudes and ongoing intergroup disparities as an indication that self-reports cannot be trusted — that social pressures lead people to be dishonest on explicit measures of bias, while they still harbor and privately express prejudiced attitudes.

My early work took a more optimistic approach, rooted in connecting the national paradox to a parallel, intrapersonal paradox driven by a deeper understanding of cognitive mechanisms that give rise to behavior, including biased behavior. My work demonstrated that automatically activated stereotypes can lead to biased thoughts, feelings, and behaviors, even among people whose values strongly oppose bias. Like unwanted bad habits, these unintentional biases are automatic and can be extremely difficult to control. My early pioneering work forms the foundation of our contemporary understanding of how people who consciously renounce prejudice have unintentional or implicit biases that leads them to be unwittingly complicit in the perpetuation of ongoing intergroup disparities. Indeed, since my early work, unintentional or implicit bias has received an impressive amount of attention, both empirically, within the field of social psychology, and culturally, as the term "implicit bias" became ubiquitous in public discourse related to intergroup relations. Unintentional bias is thought to be a key contributor to a wide variety of intergroup disparities including medical care, employment, education, police aggression, and negative interpersonal interactions.

The specter of unintentional discrimination has inspired widespread calls from researchers, scholars, and public policy officials to develop effective interventions to reduce and eliminate the negative effects of unintentional bias. Addressing these issues requires a deeper understanding of the underlying causes of both the mechanisms that perpetuate stereotyping and evidence-based strategies to mitigate the impact of unintentional biases. Many of the responses to these calls, however, have taken the form of interventions that are not evidence-based. And, though well-intentioned, these efforts at best do not work and very often make bias problems worse. Effectively solving social problems, like that of unintentional bias, requires evidence-based interventions that produce changes that endure and affect real-world outcomes — as one prominent scientist has argued, experimental and real-world assessment of bias and diversity efforts "should be considered an ethical imperative, on the level of rigorous testing of medical interventions" (Paluck, 2012). Within social psychology over the last 20 years, many studies have tested methods to reduce implicit bias, but almost none have been assessed long-term or outside the lab. Effectively addressing bias requires evidence-based interventions that are rigorously assessed over time.

The Prejudice Habit Model
The very notion of "implicit bias" or "unintentional bias", which is now omnipresent in discussions about bias and diversity issues, can be traced back to my groundbreaking early work. This early work (Devine, 1989; cited over 6700 times) revolutionized the field of prejudice and intergroup relations by demonstrating that race can influence people outside of awareness, and in opposition to their conscious values that oppose prejudice. My model conceptualizes prejudice as a habit that, if it goes unchecked, leads to discriminatory outcomes. Prejudice reduction is a process of "breaking the prejudice habit," which requires awareness and concern about bias and one's own role in perpetuating bias, motivation to overcome bias, and tools to aid or guide one's efforts to reduce bias. Whereas previous models of prejudice suggested that prospects for true change

were dim, my model offers encouraging prospects for true reductions in prejudice. Over the long arc of my career, my research has tested and refined the prejudice habit model, increasing our precise understanding of the interpersonal and intrapersonal mechanisms and processes involved in both the expression of unintentional bias and efforts to overcome it. To effect enduring change, I argue that process of reducing unintentional bias requires intentional efforts in the service of a long term goal to reduce bias.

### *The Prejudice Habit-Breaking Intervention*
The prejudice habit model proposes that "breaking the prejudice habit" can be achieved through a combination of awareness, concern, and effort. Decades of research by my colleagues and myself have empirically supported the components that make up the prejudice habit model, but only recently has this basic work been translated to application, in the form of the prejudice habit-breaking intervention. This multifaceted intervention was designed to create long-term reductions in unintentional biases and to address a number of common stumbling blocks on the path to breaking the prejudice habit. Specifically, although many people feel motivated to overcome biases in their behavior, they are not always aware of their biases, nor do they always know how to productively channel their motivation into behavior that will help overcome bias. In contrast to other methods of reducing unintentional bias, which are typically implemented merely at the behest of an experimenter, the prejudice habit-breaking intervention engages participants as active participants in their own change process, empowering them to deploy evidence-based strategies in service of their personal goals to combat bias.

I am inspired by the work the Changing Mindsets scholars are pursing. They have drawn from the strongest empirical evidence to create an intervention designed to reduce achievement gaps and to reduce intergroup biases. Their exciting application of the intervention to alter mindsets work and to reduce unintentional biases is just the type of approach called for by Levy and other renowned scholars who take seriously the need to take action but action that is rooted in rigorously tested approaches that afford real opportunities for improving students' success.

ABOUT THE PROJECT

The National Union of Students and Universities UK recently launched a joint initiative to tackle attainment gaps across the higher education sector. Universities UK also recently launched the Opportunities for Everyone campaign and the Office for Students has called for faster change in the sector to address the inequalities students face in higher education. The Changing Mindsets intervention is designed to be part of a larger institutional strategy to address persistent inequalities in student experiences and outcomes.

Mindsets Theory or Implicit Theories of Intelligence refer to an individual's beliefs about the nature of intelligence. A Growth Mindset is the belief that ability and intelligence develops through effort and by embracing challenge and a Fixed Mindset is the belief that intelligence is something that you are born with and that you cannot do much to change (Dweck, 2017).
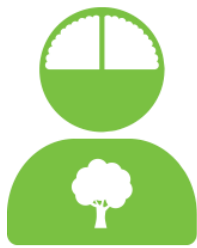
Growth Mindsets
I can continually grow, learn and develop

Fixed Mindsets
I am (not) talented/ it's difficult learning outside my comfort zone

Developing a Growth Mindset has been shown in research studies to increase students' effort (Ericsson, Krampe, & Tesch-Romer, 1993); improve students' motivation (Dweck, 2014); suppress stereotype effects (Good, Aronson & Inzlicht, 2003); and increase attainment (Blackwell, Trzesniewski & Dweck, 2007; Paunesku, Goldman & Dweck, 2011).

Implicit biases, also referred to as unconscious or unintentional biases, are unintended, automatic prejudiced thoughts or actions, sometimes in contradiction to a person's explicit, conscious beliefs and values (Devine et al, 2012). Stereotypes are deeply rooted within our culture, which facilitate the development of implicit biases even if a person does not explicitly agree with those stereotypes (Carnes et al, 2012; Devine et al, 2012). Implicit biases impact teaching and learning and, thus, contribute towards unequal degree attainment. For example, 'research indicates that teachers tend to express lower expectations of the abilities and aspirations of minority ethnic pupils' (Archer and Francis, 2007:119).

Stereotype threat is the risk of conforming to a stereotype about a social group to which you belong and the impact has been most notably documented in academic performance (Osborne, 2007; Steele, 1997). Much work around stereotype threat focuses on the complex area of salient identity. See, for example, Sinclair, Hardin and Lowery (2006).

Breaking Bias Habits has been shown through research to be possible, but, as with all habits, breaking bias habits requires motivation and sustained effort over time (Devine et al, 2017). The Equality and Human Rights Commission found that Unconscious Bias Training (UBT) "can be effective for reducing implicit bias, but it is unlikely to eliminate it" and "educating participants on unconscious bias theory is likely to increase awareness of and reduce implicit bias" (Atewologun, Cornish, and Tresh, 2018). Implicit, unconscious, or unintentional bias training alone is not the solution to lasting change, as Professor Patricia Devine, advisor for the Changing Mindsets project, has found in her decades of implicit bias research. In an interview with *The Atlantic* in 2017, Professor Devine stated: "There are a lot of people who are very sincere in their renunciation of prejudice. Yet they are vulnerable to habits of mind. Intentions aren't good enough" (Nordell, 2017). In a 2018 interview with PBS, national broadcast news in the United States, Professor Devine discussed breaking bias habits (PBS News Hour, 2018):

> Once you understand the problem like that [unintentional bias], you can make a commitment to change. … Without the motivation, nothing will happen. … Like any other habit [that someone wants to break], they are going to have to put effort into it over time. It's not something that happens all at once. There is not a quick fix or a silver bullet. But we can empower people to make the change and we can provide them with assistance in the process to overcome these unintentional biases.

The Changing Mindsets intervention includes strategies researched by Professor Devine for breaking bias habits, but the motivation to change and the effort to break bias habits must be done by the individual. When an institution makes a commitment to change, then individuals are more empowered to develop their motivation and sustain their efforts to break bias habits.

NATIONAL GAPS BY THE NUMBERS

In light of the recent headlines (Busby, 2018; Adams & Bengtsson, 2017) revealing stark inequalities in British higher education, this section of the report outlines some of the existing national gaps by the numbers relevant to the Changing Mindsets project, highlighting inequalities in Higher education (HE) for the two student groups on which this project is focused: Black Minority Ethnic (BME) students and low socio-economic backgrounds students. It should be noted that one of the limitations of the numbers discussed in this section is that the data is not usually explored intersectionally (Christoffersen, 2017; Crenshaw, 1989) with some exceptions (for example: ECU, 2017). Nevertheless, these numbers provide insight into some of the inequalities that we are working towards tackling through this project.

The first number to highlight is zero. One of the five project partners involved in Changing Mindsets, the University of the Arts London, has set the goal of fully closing the attainment gap between British BME and British white students. "By 2022 the percentage of first degree home Black, Asian and minority ethnic (BAME) students achieving a 1st or 2:1 will be the same as for first degree home white students". (UAL, 2016, p. 13). The target of fully closing the attainment gap sets the bar high for other UK universities to follow suit. There is no level of inequality that should be acceptable, so zero percent is the only target that should be sought.

Admissions Gaps

Despite being more likely than their white British counterparts to enrol in higher education generally (Modood, 2012), British students from BME backgrounds continue to be strikingly under-represented in the UK's most prestigious universities (Boliver, 2016). The admissions gap has once again recently hit national headlines with Oxford University continuing to fail to address inequalities in their admissions process (Busby, 2018; Adams & Bengtsson, 2017). This is exasperated further by the fact that "*when applicants from BME backgrounds apply to Oxford University or to Russell Group universities more generally, they are substantially less likely to be offered places than white applicants with comparable A-level qualifications*" (Boliver, 2016).

Attainment Gaps

Research carried out by Broecke & Nicholls for the then Department for Education and Skills (DfEs) found that students from BME and low socio-economic backgrounds were less likely to achieve good degrees (first/2:1) than White students even after controlling for other factors such as prior attainment, age, gender, discipline and type of institution (Broecke & Nicholls, 2007; Mountford-Zimdars et al, 2015). It is through Broecke & Nicholls' (2007) calculations that we understand the achievement gap.

The BME degree attainment gap in the UK was 15% based on 2015/16 Higher Education Statistics Agency (HESA) data (down from 18.8% in 2005/06). 78.4% of white students received a first/2:1 compared with 63.4% of BME students. The gap was largest in England, where 78.8% of white students received a first/2:1 compared with 63.2% of BME students (ECU, 2017). The attainment gap for students from the least advantaged backgrounds (based on the POLAR 3 classification, quintile 1) is 14% in comparison with those from the most advantaged quintile (specifically, 45% of POLAR 3/Quintile 1 students were awarded a first or 2:1, while 59% of those from the most advantaged quintile did so). Students from the lowest HE participation areas (quintile 1) are least likely to get a degree and go into a job. Only around two-fifths (41%) got a degree and went on to a graduate level job or further study (Mountford-Zimdars et al, 2015).

As mentioned by Broecke & Nicholls (2007) prior qualification, although a key factor in degree outcomes, does not explain the differences between ethnic groups. Taking into account prior qualifications, BME students are less likely to gain a first or upper-second degree. For example, 72% of white students who entered HE with BBB at A-level gained a first or upper second. This compares with 56% for Asian students, and 53% for black students entering with the same A-level grades (Mountford-Zimdars et al, 2015).

Withdrawal Gaps

Black students are 50% more likely to drop out of university in England than their White and Asian peers (UPP Foundation and Social Market Foundation, 2017). 8.8% of students from low socio-economic backgrounds withdraw from university compared with less than 5% withdrawal rates among students from the most advantaged backgrounds (OFFA, 2017).

Progression to Further Study Gaps

Around 8% of white students progress to taught degrees and 2% to research degrees, whereas the corresponding figures for Black-Caribbean students are 5% and 0.3% (Wakeling and Hampden-Thompson, 2013). Graduates from low socio-economic backgrounds are slightly underrepresented among those progressing to higher degrees and have slightly lower rates of progression than those from more advantaged backgrounds, particularly for research degrees (Wakeling and Hampden-Thompson, 2013).

Employment and Income Gaps

Working class students are less likely to be employed in as high paying jobs as their middle class peers after graduation (Ashley et. al. 2015; Wakeling and Savage, 2015). Similarly, findings from the Office for National Statistics (ONS) Labour Force Survey, analysed by the Trade Union Congress (2016), showed that "*the pay gap between all black, Asian and minority ethnic (BAME) workers with degrees and white graduates is 10.3%".* However, the figure is significantly worse for black graduates specifically, as findings showed that *"Black workers with degrees earn 23.1% less on average than white workers with degrees".*

These numbers shed light on some of the persistent inequalities within British higher education for these two student groups. In addition to the numbers, there are complex experience gaps reported by students (such as being treated differently in the classroom based on their identity) that are harder to quantify (for example, please see: NUS, 2011). There are also a number of studies that explore inequalities faced by other student populations (for example withdrawal rates of mature students (HEFCE, 2017), or declining numbers of part-time students (HESA, 2016)).

PROJECT OVERVIEW

Changing Mindsets is a student and staff workshop-based intervention that is intended to build a growth mindset: the belief that ability develops through effort and by embracing challenge (Dweck, 2017). The intervention was initially developed at the University of Portsmouth in 2012 by Professor Sherria Hoskins and has been run with staff and students from primary schools through to higher education. This Office for Students' funded Changing Mindsets project aims to close the attainment gaps in student experience, retention, progression, academic attainment and employability by changing mindsets and eroding stereotype threat (Steele, 1997) and implicit bias (Devine et al, 2012) as barriers to learning.

Developing a growth mindset has profound motivational impacts on learners and on staff expectations of learners that have been shown to close attainment gaps (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 2006; Dweck & Molden, 2000; Gunderson et al., 2013; Mueller & Dweck, 1998; Paunesku et al., 2015). Mindset interventions have been shown to narrow attainment gaps caused by stereotypes around ethnicity and gender (Good et al, 2003; Aronson et al, 2002). The mechanism by which this intervention works is by expanding staff and students' knowledge about the nature of intelligence and ability that removes the impact of stereotype threat and implicit bias. Stereotype threat is the self-fulfilling, negative impact of a stereotype on a group of learners, for example 'girls are not good at mathematics'. Implicit bias is a relatively unconscious and automatic feature of prejudice/stereotype based judgment and behaviour. Stereotype threat and implicit bias can create barriers to learning via self-limiting identities, peer interactions, teacher expectations and teaching and assessment approaches – in other words they can impact the whole learning culture. However, they are notoriously difficult elements of learning culture to eradicate. Growth Mindsets are evidenced to be mutually exclusive to stereotypes and implicit bias (Good, Aronson & Inzlicht, 2003).

The intervention workshops and evaluation research is underpinned by psychological (Dweck, 2017; Devine et al, 2012), sociological (Bhopal and Preston, 2012), and educational (Apple, 2015) concepts and theories. Utilising the conceptual framework proposed by Mountford-Zimdars et al (2015), the intervention seeks to address the impact of stereotype threat and implicit bias on student retention, progression, experience and attainment, by focussing 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.

Adaptable, Flexible Intervention

The intervention, by design, is flexible and adaptable. While there are five key learning outcomes and five project aims, each university partner has been 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 to meet the unique needs and challenges of a wide range of higher education providers. An additional advantage of this flexibility is that each partner has delivered the intervention at different times, for different periods, and using a range of different approaches. This has enabled us as a partnership to pilot and evaluate a variety of approaches, to share best practices, and to share challenges we have faced and different strategies we have implemented to tackle those challenges.

The workshops take staff and students through a process in which they explore their own beliefs around the nature of ability and intelligence. This is conceptualised within the context of Mindset research, and leads them to explore their own Mindset, and the impact of this on their expectations for self and others, on their behaviour and decision making, and on their language and feedback (internal and to others). From here they explore strategies to develop a Growth Mindset, inclusive behaviours, bias habit breaking strategies, setting high expectations (of self and others), and using Growth Mindset language for all learners. 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 examples, 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.

Intervention Targets

The project's approach to creating institutional change is especially innovative in two ways:
1. While other interventions tend to focus solely on students, thus further contributing to the deficit discourses (Burke, 2013) that construct underachievement as personal failing rather than as a systemic problem, this intervention focuses on both students and staff.
2. While other interventions tend to focus only on specific populations, thus creating inequitable treatment which further risks creating a sense of 'otherness', this intervention is delivered to and benefits all participants, not just the two target populations. Thus there is more chance of cultural change.

Across the project partnership the target intervention sample (over two cohorts) will be approximately 5,200 students and 800 academic staff. For cohort one workshops were delivered between September 2017 and April 2018 and the targets included delivering the intervention to 2,600 students and 400 academic staff across the partnership. The targets for each partner university for each cohort is:

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

Ten Project Impact Goals

The ten impact goals of this intervention, including five key learning outcomes for intervention participants and give project aims, are intended to benefit students, staff, and the higher education sector as a whole. The goals are:

Five Key Learning Outcomes
Intervention participants will have improved understanding of:
1. their own mindset
2. the interaction between stereotype threat, implicit bias and mindset
3. the impact of their own and others' mindset on their own and others' behaviour, language use, and expectations
4. the impact of behaviour, language use, and expectations on learning and educational outcomes
5. strategies for developing their growth mindset, inclusive behaviours, high expectations for all and enabling language

Five Project Aims

6. Narrowed retention, progression and attainment gaps for Black and Minority Ethnic (BME) and socio-economically disadvantaged students
7. Narrowed employability gaps for Black and Minority Ethnic (BME) and socio-economically disadvantaged students
8. Improved Black and Minority Ethnic (BME) and socio-economically disadvantaged students' learning experience
9. Improved staff and student growth mindset, reduction in stereotypes and bias habits
10. Improved lecturer efficacy in creating equal learning experiences

At the end of the project, after the intervention is fully delivered and evaluated, there is scope to roll out the workshops across the higher education sector. The goals of narrowing the retention and attainment gaps and improving teaching and learning are expected to continue to contribute towards narrowing the employability gaps for the target student groups. Closing the attainment gap (amongst the other goals of this work) for BME and P3/Q1 has the potential to increase social mobility in the UK and increase and diversify the talent pool in the workforce, creating a positive cycle of further social mobility. Narrowing the attainment gaps and narrowing employability gaps will also create greater confidence in the value of higher education, especially for families and students concerned about whether taking on student debt will lead to greater financial stability in post-graduation employment. The knock-on effect is widening access to higher education amongst underrepresented groups through evidence-based outreach.

Evaluation Methods

Core Evaluation Methods: All five partner institutions have adopted 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 and programmes 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 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
- Individual Interviews or Focus groups with a sample of staff participants

Longitudinal data will be collected through Higher Education Access Tracker (HEAT).

Data Collected Across the Partnership

As of 1st June 2018, the current data collected for cohort one includes five years' worth of student outcomes within the pilot schools and programmes; 1154 student surveys, 230 academic staff surveys, and 50 staff and student interviews/focus groups across the project partnership. Collection of data for cohort one is still in progress. Data collection and analysis for cohort one is scheduled to conclude in August 2018.

	Pre-survey (students)	Post-survey (students)	Pre-survey (staff)	Post-survey (staff)	Student interviews (completed)	Staff focus groups/ interviews (completed)
UoP	242	234	52	29	13	0
UoW	84	24	0	14	7	0
UoB	164	9	60	6	11	2
UAL	221	107	39	25	14	3
CCCU	69	0	5	0	0	0
Totals	**780**	**374**	**156**	**74**	**45**	**5**

This mid-project report explores the initial analysis of the data collected across the partnership as of 1st of April 2018, allowing for time for analysis of pre-survey data and initial qualitative interviews and focus groups.

INITIAL PROJECT FINDINGS

The findings discussed within this section represent initial, mid-project findings from pre-cohort attainment data, student and staff pre-survey data, and student interviews that were collected by 1st April 2018 to allow for time for analysis. Cohort one data is still being collected across the partnership. The final report of cohort one and cohort two data will be published in March 2019. This section provides a snapshot of emerging findings and related recommendations.

Initial Project Findings: Pre-cohort Data

The collection of five academic years of pre-cohort data across the partnership was undertaken to establish the baseline for the schools and programmes within the project to determine the attainment gap for either ethnicity or socio-economic background of the student. This section provides insight into four initial findings: the ways that institutional average attainment gaps may hide variations in gaps in individual schools and programmes; the significance of tariff (qualification) on entry on attainment gaps; the relevance of Low-Medium-High risk classification of students and their potential attainment; and the impact of qualification type on entry on attainment gaps.
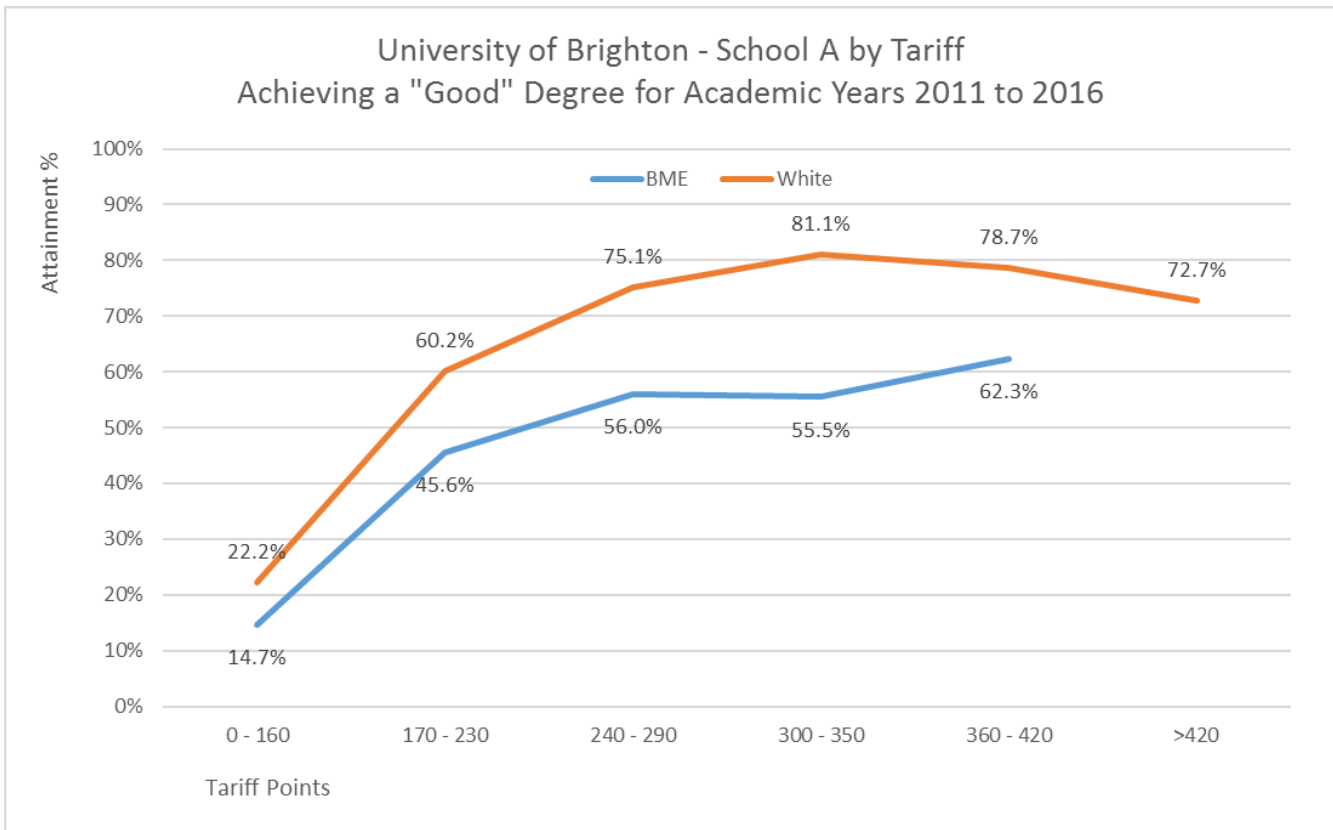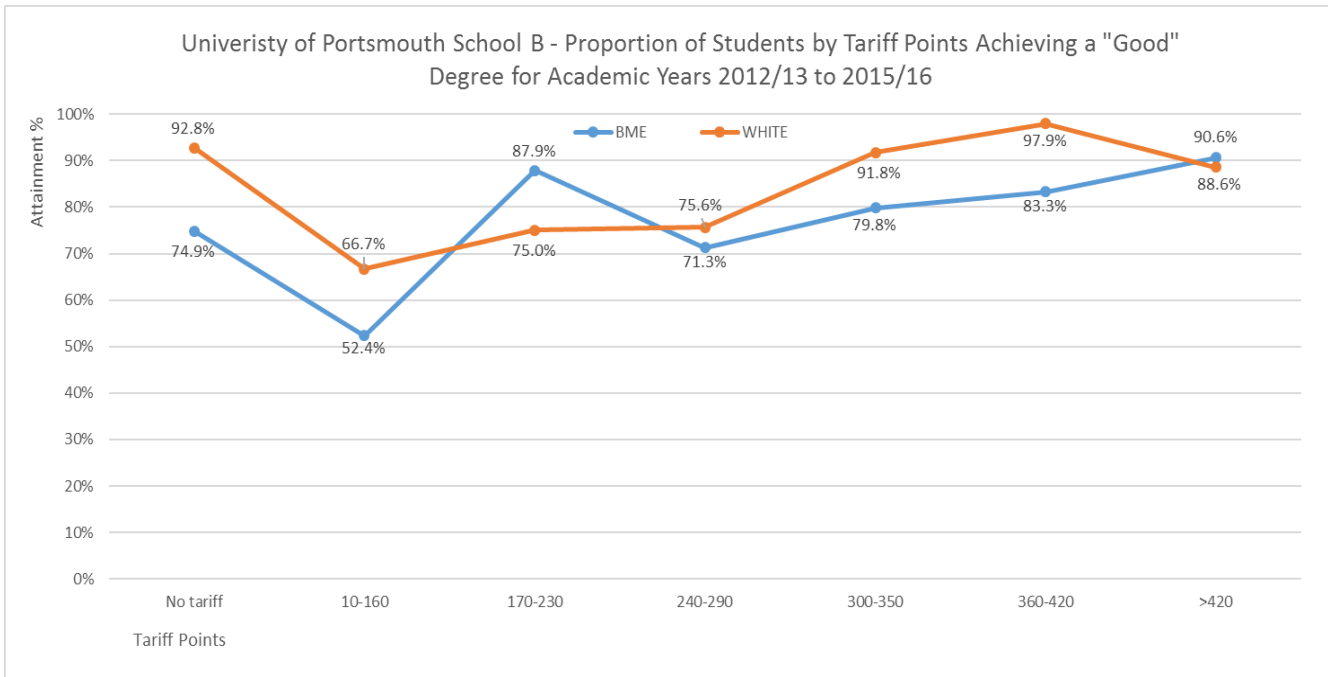
Institutional Averages

Our initial findings indicate that institutional average attainment gaps may hide substantial variations and outliers. Across the project partnership, findings within the pre-cohort data (five-year average attainment gaps for the schools and programmes participating in the intervention) vary widely, including lows of three percent and highs of more than 30 percent. More detailed information about the attainment gaps for each participating school and programme is available within the individual partner sections later in this report.

Tariff on Entry

Within the pre-cohort data, the analysis of student outcomes by tariff on entry does not account for persistent attainment gaps within the schools and programmes participating in cohort one of the project. This finding is consistent with similar findings by Mountford-Zimdars et al (2015). The following two graphs illustrate, as examples, the differences in outcomes by ethnicity for different tariff entry points for two of the participating intervention schools. Where there were fewer than 10 students who entered with a particular tariff group who achieved a good degree, these percentages were removed from the graphs.

University of Portsmouth School B - Proportion of Students by Tariff Points Achieving a "Good" Degree for Academic Years 2012/13 to 2015/16

University of Brighton - School A by Tariff Achieving a "Good" Degree for Academic Years 2011 to 2016

The following graph illustrate, as examples, the differences in outcomes by socio-economic status (Quintile 1 compared to Quintiles 2-5) for different tariff entry points for one of the participating intervention schools. Where there were fewer than 10 students who entered with a particular tariff group who achieved a good degree, these percentages were removed from the graph.

University of Brighton - School A by Tariff
Achieving a "Good" Degree for Academic Years 2011 to 2016
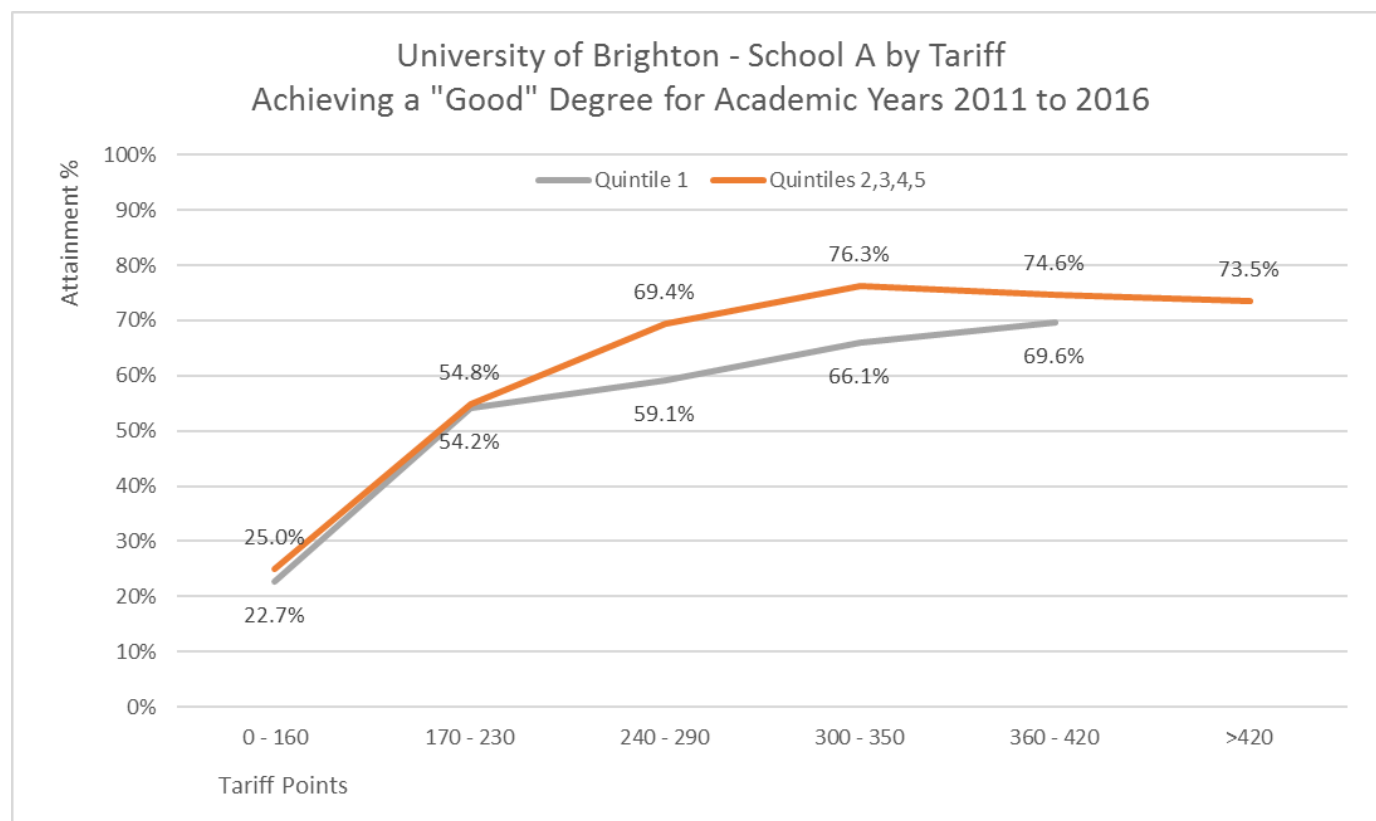
Low-Medium-High Risk

Students who achieve low tariffs are sometimes considered high risk students for recruitment purposes, while students who achieve high tariffs are considered low risk students (HEFCE, 2012). What the pre-cohort data for the project suggests is that students who enter university across all tariff points have the potential to achieve good degrees, including so-called high risk students. The implication that this finding may have is that universities may want to reconsider whether their recruitment strategies are designed to dismiss the potential future achievements of some students deemed high risk.

Qualification Type on Entry

Recent news reports indicate that universities are admitting twice as many students with BTEC qualifications as they did a decade ago (Turner, 2018). However, the type of qualification on entry may not explain the persistent attainment gaps. In three out of the four schools in which we are running the Changing Mindsets intervention at the lead institution, the University of Portsmouth, White students who entered with BTECs were more likely to have attained a good degree compared to their White peers with A-levels. As the illustrative example in the table below shows, in one of the participating intervention school, the five year attainment data average showed that White students who entered with BTECs were more likely to receive a good degree (79.1%) than White students with A level qualifications (77.3%). However, BME students with BTECs were significantly less likely to receive a good degree (39%) compared with BME students with A level qualifications (51.9%) and with White students with BTECs and White students with A levels.

Entry qualifications (as defined by HESA)	School C (2012/13 to 2016/17)			
	Proportion of all students on entry qualification			
	All Students (no. 754)	White (no. 482)	BME (no. 197)	Quintile 1 (no. 99)
A-level (level 3) qualification	37.0%	38.4%	26.4%	30.3%
BTEC/ONC	17.1%	17.8%	20.8%	27.3%
A-levels with combinations of Scottish Highers	13.9%	16.2%	9.6%	10.1%
HE Other undergraduate level	13.0%	10.4%	18.3%	15.2%
HE First degre level	9.2%	8.3%	12.2%	6.1%
HE Postgraduate level	3.8%	3.9%	4.6%	9.1%
Access course	2.5%	1.9%	4.6%	2.0%
Foundation course	1.3%	1.2%	1.5%	0%
Baccalaureate	0.7%	0.2%	0.5%	0%
No formal qualifications	0.7%	0.8%	0.5%	0%
Other qualification	0.3%	0.2%	0.5%	0%
General National Vocational Qualification	0.1%	0.2%	0.0%	0%
Unknown qualifications	0.4%	0.4%	0.5%	0%

Entry qualifications (as defined by HESA)	School C (2012/13 to 2016/17)			
	% of student (within same group) attaining a good degree			
	Good degree (Avg)	White (Good)	BME (Good)	Quintile 1 (Good)
A-level (level 3) qualification	70.3%	77.3%	51.9%	66.7%
BTEC/ONC	65.1%	79.1%	39.0%	66.7%
A-levels with combinations of Scottish Highers	75.2%	82.1%	57.9%	70.0%
HE Other undergraduate level	64.3%	82.0%	44.4%	66.7%
HE First degre level	68.1%	77.5%	58.3%	50.0%
HE Postgraduate level	86.2%	94.7%	77.8%	77.8%
Access course	68.4%	88.9%	55.6%	50.0%
Foundation course	70.0%	83.3%	33.3%	
Baccalaureate	80.0%	100%	100%	
No formal qualifications	80.0%	100%	0%	
Other qualification	100%	100%	100%	
General National Vocational Qualification	100%	100%		
Unknown qualifications	100%	100%	100%	

Initial Project Findings: Student Survey Responses

Across the partnership, the five universities are at different stages with regards to data collection. This mid-project report explores initial analysis on the pre-survey data collected across the partnership up until the 1st of April 2018. Four of the five universities have provided student records information, and thus any demographic analysis will be based on data provided by the University of Portsmouth, University of Winchester, University of Brighton and University of Arts London.

The surveys for staff and students included validated measures including Dweck's (1999) Theories of Intelligence Scale (IToI), the Implicit Theory of Intelligence Scale (ITIS) by El-Fattah & Yates (2006) and a scale developed by Professor Devine and her team on prejudice habit breaking. The IToI is comprised of four items (for example "You have a certain amount of intelligence, and you really can't do much to change it") measured on a four-point Likert scale to assess an incremental (growth) or entity (fixed) mindset. Similarly, the ITIS consists of fourteen questions (such as " When you learn new things, your basic intelligence improves") measured on a four-point Likert scale to substantiate the scores for an implicit theory of intelligence. The scale developed by Devine and her research team includes twenty-six items used to assess implicit bias and prejudicial thinking (for instance "Stereotyping is harmless") was responded to on a slider scale from 0-100 and computed to create three sub-scales: creating inclusion, overcoming bias and stereotype beliefs.

Data was collected from 658 first-year undergraduate students across the five universities with a mean age of 20.25 (SD Age = 4.35 years; Min Age = 17 years; Max Age = 62 years). Information regarding their gender, ethnicity and POLAR were collected via the central student records from each institution and can be found in Table 1. Participation of Local Areas (POLAR) classification (Quintile 1-5) was used as a place-based measure of educational disadvantage that classifies local areas according to the participation rate of young people in higher education (HEFCE, 2017). Ethnicity was recoded into binary variables White British and BAME British (including all other ethnic origins) respectively.

Gender	M= 204; F=344; Unknown= 110
Ethnicity	White= 336; BME= 119; International and Unknown= 203
Polar	Quintile 1= 38; Quintile 2-5= 412; International and Unknown= 208

Table 1: Partnership student demographic information

Implicit Theories of Intelligence (IToI) were measured using four items from Dweck's (1999) Theories of Intelligence Scale. Although Dweck's original scale includes eight items (four entity theory questions and four incremental theory questions), given the length of the survey and the students' involvement in a longitudinal study, Dweck (1999) recommends using the entity-only scale as these are less likely to suffer from social desirability and repetition effects.

Participants responded using a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree) for each item. IToI scores were computed by combining scores from each of the four questions, with higher scores indicating more of an entity theory of intelligence. Below shows the students IToI scores broken down into quartiles.

58.8% 4-7	32.6% 8-11	7.5% 12-15	1.1% 16-20

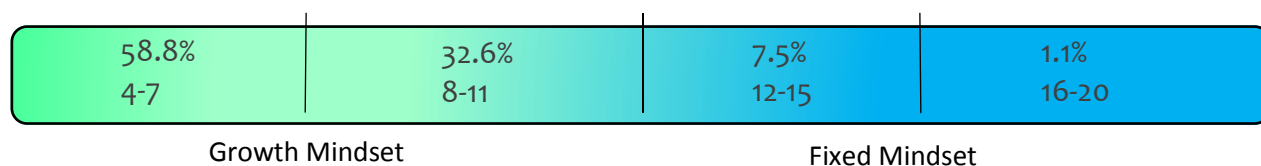Growth Mindset   Fixed Mindset

Table 2: Sum of the Partnerships students' Dweck scores broken down into quartiles

Table 2 highlights that across the five institutions, most students hold a more growth mindset (91.4%) than a fixed mindset (8.6%). This was further confirmed by the Implicit Theory of Intelligence Scale (ITIS – El-Fattah & Yates, 2006) used in the pre-survey which showed that 87.1% of students held growth mindsets.

When we break down the scores from Dweck's scale to focus on the project's two target populations (BME and POLAR1 students) we can see that 92.4% of BME student have a growth mindset along with 93.2% of white students (see Table 3 and Table 4). Similarly, 97.4% of POLAR1 students hold a more growth mindset compared to 92% of students from POLARS 2-5 (see Table 5 and Table 6).

58.8% 4-7	33.6% 8-11	5.9% 12-15	1.7% 16-20

Growth Mindset　　　　　　　　　　Fixed Mindset

Table 3: Sum of BME students Dweck scores broken down into quartiles across the partnership

58.6% 4-7	34.6% 8-11	6.2% 12-15	0.6% 16-20

Growth Mindset　　　　　　　　　　Fixed Mindset

Table 4: Sum of white students Dweck scores broken down into quartiles across the partnership

60.5% 4-7	36.9% 8-11	2.6% 12-15	0% 16-20

Growth Mindset　　　　　　　　　　Fixed Mindset

Table 5: Sum of Quintile 1 students Dweck scores broken down into quartiles across the partnership

58.5% 4-7	33.5% 8-11	6% 12-15	1% 16-20

Growth Mindset　　　　　　　　　　Fixed Mindset

Table 6: Sum of Quintile 2-5 students Dweck scores broken down into quartiles across the partnership

In addition, the project used a scale developed by Professor Patricia Devine and her research team to measure bias and bias habit breaking, including prejudice-relevant discrepancies, and concern about discrimination in society (Devine et al., 2012). Participants responded on a slider scale from 0 (strongly disagree) to 100 (strongly agree) for twenty-six items with scores being computed to create sub-scales of creating inclusion, overcoming bias and stereotype beliefs. Correlations between the IToI, ITIS and Devine scale produced the following statistically significant findings:

- Fixed Mindset negatively correlated with creating inclusion and overcoming bias ($r = 0.985$, $n = 5$, $p = 0.002$), yet positively correlated with stereotype beliefs ($r = -0.231$, $n = 136$, $p = 0.000$; $r = -0.164$, $n = 136$, $p = 0.000$). This suggests that those who hold fixed mindsets are more likely to have stereotypical thoughts and beliefs and less likely to want to create inclusion and overcome biases
- Growth Mindset however, positively correlated with creating inclusion and overcoming bias ($r = 0.193$, $n = 136$, $p = 0.000$; $r = 0.95$, $n = 136$, $p = 0.004$) and negatively correlated with stereotype beliefs ($r = 0.985$, $n = 5$, $p = 0.002$). This suggests that those who hold a growth mindset are more likely to want to create inclusion and overcome biases and less likely to have stereotypical thoughts.

Reviewing the student responses to the Devine et al., (2012) scale, the findings suggest that most student survey participants indicated that they are committed to speaking out against hate and making their fellow students feel welcome and part of the campus community. However, nearly all students who completed the survey also admit to unintentionally stereotypical thoughts.

Initial Project Findings: Staff Survey Responses

Pre-survey data was collected from 136 members of staff across the partnership (Male = 69, Female = 49; preferred not to say = 18), with 98 coming from a white (home/EU) background and 8 being BAME (home/EU) (30 International and Unknown).

The staff similarly responded to the IToI, ITIS and Devine scale. Below shows the staff IToI scores broken down into quartiles.

69.1% 4-7	23.5% 8-11	5.9% 12-15	1.5% 16-20

| Growth Mindset | | Fixed Mindset | |
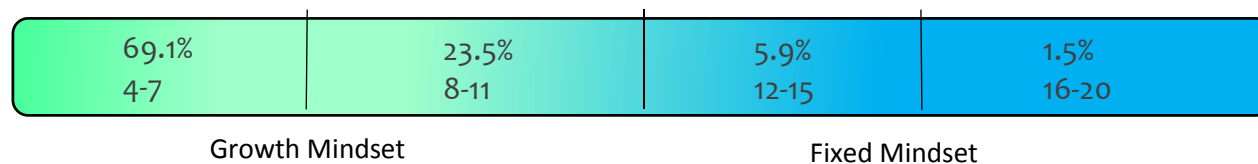
Table 7: Sum of staff Dweck scores across the partnership broken down into quartiles

Table 7 highlights that across the partnership, most staff hold a more growth mindset (92.6%) than a fixed mindset (7.4%). The ITIS also confirms that most staff members hold a more incremental (growth) mindset (94.9%). As only 8 of the staff members across the partnership were from a BME background and POLAR information was not provided by the staff members, analysis specific to the partnerships staff ethnicity and POLAR was not feasible.

Correlations between the IToI, ITIS and Devine scale for the staff members produced the following statistically significant findings:
- Fixed Mindset statistically negatively correlated with overcoming bias (r = -0.269, n = 136, p = 0.002), but positively correlated with stereotype beliefs (r = 0.435, n = 136, p = 0.000). This suggests that those who hold fixed mindsets are more likely to have stereotypical thoughts and beliefs and less likely to want to overcome biases
- Creating inclusion correlated positively with overcoming bias (r = 0.413, n = 136, p = 0.000). In addition, creating inclusion and overcoming bias subscales both negatively correlated with stereotype beliefs (r = -0.336, n = 136, p = 0.000; r = -0.356, n = 136, p = 0.000). This suggests that those who are more likely to want to create inclusion are also more likely to want to overcome biases, and moreover, those who are more likely to want to create inclusion and overcome biases are less likely to have stereotypical thoughts.

Reviewing the staff responses to the Devine et al., (2012) scale, the findings suggest that most staff survey participants indicated that they are committed to speaking out against hate and making all students feel welcome and part of the campus community. However, nearly all staff members who completed the survey also admit to unintentionally stereotypical thoughts.

Recommendations

While the project is still underway, the initial findings from cohort one provide the basis for five recommendations for universities to consider as they work to address persistent inequalities in student experiences and outcomes.

- Universities should develop strategies to tackle attainment gaps using learner analytics to examine existing institutional data to better understand patterns of inequalities at the school or programme level.

- Given the potential for variation in attainment gaps even within the same faculties (or similar disciplines) within the same institution, university strategies to address inequalities should be tailored to account for those differences.

- University strategies for tackling attainment gaps should include myth-busting campaigns to dispel widely-held erroneous beliefs about why inequalities in student experiences and outcomes, including attainment gaps, persist (including the myth of tariff on entry explaining attainment gaps).

- As our findings indicate that most staff and students are likely to want to actively work towards creating inclusion, universities should provide opportunities for staff and students to work in partnership to develop Growth Mindsets and to learn strategies for breaking bias habits.

- University strategies to address inequalities should be multi-faceted, including multiple research-informed and evaluated approaches, and should be embedded within the institutional culture in order to contribute towards the possibility of real, lasting change.

The sections of the report that follow provide insight into each partner institution's approach to delivering the intervention and an exploration of the initial data analysis for the data collected so far within that institution.

UNIVERSITY OF PORTSMOUTH

Introduction by Professor Sherria Hoskins

At the University of Portsmouth we are extremely proud to be leading this project. Having just signed up to pursue the Race Equality Charter, this project provides us with a great platform for understanding, reflecting on and building our action plan to achieve greater equality and diversity across the institution.

While we are keen that the data speaks for itself, we are hugely optimistic that we can make a positive impact with this work. Both the research literature to date and our own experiences with delivering this intervention demonstrate the potential of this project to develop growth mindsets, erode stereotype threat, and break bias habits as barriers to equal student learning experiences and outcomes.

One of the most exciting revelations so far in the first year of this project is the power of learner analytics. Often our superficial and aggregated reporting of already held student data overlooks the valuable and sometimes surprising facts that can be gleaned when data is looked at subject by subject and intersectionally, providing hard to ignore clues as to the cause and solutions of our attainment gaps. This has made has been persuasive and empowering for staff in participating schools and programmes across the partnership.

This report explores the early work of the team at the University of Portsmouth. Under my guidance as Principle Investigator, the team at Portsmouth includes: the Project Lead for the whole partnership is Dr Jessica Gagnon, the Project Officer for UoP is Arif Mahmud, the Learner Analytics Specialist is Juan Batley, and the Project Administrator is Charley Bentley.

We look forward to continuing to collect evaluation data as we close cohort one this summer and look ahead to delivering the intervention and collecting evaluation data with cohort two starting in September.

Professor Sherria Hoskins
Dean of Science, University of Portsmouth

Why University of Portsmouth?

As is written in the University of Portsmouth's [vision] statement, "we respect and celebrate diversity and equal opportunity through an inclusive culture." The University strategic vision includes promoting 'equality, diversity and well-being' and creating 'an environment where research, innovation and educational activities have transformational benefits for students, staff and society', all of which fit within the impact goals of the Changing Mindsets intervention. Within the University of Portsmouth [Access Agreement], we have confirmed our commitment to "promote opportunity and achievement in higher education, bringing life-changing benefits to individuals, their families and the wider community". The strategic ambitions stated within the Access Agreement make clear that, as a university, "we will make a positive, clear and significant contribution to encouraging, extending, and sustaining the engagement of learners, and to inspiring and enabling their access to and success in higher education". This includes a commitment to increase the university participation of underrepresented student groups, including the number of undergraduates from BME backgrounds and from low participation neighbourhoods.

The University of Portsmouth's [Education Strategy] for 2016-2020 declares our commitment to 'maintain high academic standards for educational provision, develop a reputation for a distinctive student experience and systematically enhance the quality of learning opportunities'. This project aligns with a number of the hallmarks of a Portsmouth graduate, which highlights the university's commitment to educating graduates who will:

- Have a critical and reflective knowledge and understanding of their subject, with both the ability and readiness to question its principles, practices and boundaries.
- Think independently, analytically and creatively, and engage imaginatively with new areas of investigation within and across discipline boundaries.
- Be able to synthesise new and existing knowledge to generate ideas and develop creative solutions of benefit to the economy and society. Be intellectually curious, embrace challenges and seize opportunities for development.
- Be able to locate, access and critically engage with information, using current and emerging digital technologies.
- Be informed citizens, with a sense of responsibility allied to a commitment to ethical practice and social justice issues, such as equality, respect and sustainability.
- Be effective team players, able to provide leadership and to support the success of others.
- Be able to communicate clearly and effectively, in a range of forms and to different audiences.
- Have an enterprising spirit, bringing innovation and productivity to the groups and communities to which they belong.
- Be able to work in a range of environments, responding positively to new situations by being aware, flexible, adaptable and realistic in their expectations.
- Be proactive in recognising and addressing personal development needs, and able to make informed career decisions.

This strategic alignment has been further confirmed by the University of Portsmouth being recently awarded a prestigious 'Gold' rating in the [Teaching Excellence Framework], the UK's first assessment of teaching excellence in higher education. The University of Portsmouth is one of only four universities in the South East region to be rated gold, along with the Universities of Kent, Oxford and Surrey. This achievement sees the University ranked among the top 20 per cent of the 299 HE and FE providers in the UK who entered the Teaching Excellence Framework. The University credits its success to offering a distinctive student experience and outstanding support for its students in courses designed to prepare students for successful careers.

Alongside the new Gold rating, the University's outstanding student experience has been reflected in its steady rise in a range of independent guides and awards. It is now ranked in the top 25 universities In the UK, having risen for the fourth successive year in the Guardian University Guide. Portsmouth is 25th in the 2019 guide. The University is 51st in the 2019 Complete University Guide and is ranked 53rd in The Times and The Sunday Times Good University Guide 2018. Portsmouth was ranked in the top 100 young universities in the world, in the Times Higher Education ranking of universities which are less than 50 years old. Additionally, the annual Destination of Leavers in Higher Education reported that over 96% of University of Portsmouth graduates are finding jobs or continuing with their studies within six months of graduating. The University of Portsmouth also does more to boosts its graduates' earnings that any other university. The Economist's own ranking of UK universities reported that five years after graduation the average University of Portsmouth graduate earns £3,100 (or 13 per cent) above expectations. In comparison, the average University of Oxford graduate earns £1,900 (or 5 per cent) above expectations.

This project aligns with the university's strategic priorities and commitments to creating a learning experience where all students may thrive. With student experience at the heart of our strategic priorities at the University of Portsmouth, this project has the potential to have a direct and significant impact on the students, staff and the wider community.

Intervention Story

The Changing Mindsets Project team at the University of Portsmouth (UoP) include the project officer, project administrator and data learner analytics as required and promised to HEFCE. The newly appointed team, along with the PI and project manager have been working on: refining, delivering and scaling up the intervention, collecting and analysing qualitative and quantitative data, and developing the outreach and legacy of the project as a whole.

The UoP have an institutional project group to oversee the project, and to guide the work undertaken by the project team; they meet once a month to have regular oversight of the project and its development. The institutional project group consists of academic representatives from the Student Union, representatives from our Widening Participation department, Registry, Planning, Student Services, and Academic Quality & Development department.

Before the implementation of the project in any institution, UoP sought and received a favourable ethical opinion on the core evaluation methods of the project. The ethics application included a description of the method/protocol, data management and compliance with codes/policies/procedures. Once the ethics approval was granted the partner institutions confirmed that their institution reviewed and accepted the ethical approval granted through the UoP.

Throughout the ethics application the project team constructed a survey measure in order to measure the outcomes of the intervention. This included both the pre-intervention survey and post-intervention survey. The survey was constructed using valid and reliable tools measuring mindset (Dweck, 1999; Fattah & Yates, 2006), stereotype/implicit bias (Devine, 2004) and optional demographic information. Qualitative questions were also incorporated into the survey in order to get a richer understanding of the student experience and staff practice. The survey was tested at UoP by the project steering board and numerous students accessed through the Student Union. After testing the survey, the project administrator branded the surveys to meet the requirements of each partner institution and since then the surveys have been sent out for data collection.

Another evaluation method which is being used by the project is the institutionally accessed attainment and outcome student data for the past five years in the disciplines and departments in which the intervention will be run. The UoP team have subsequently collected the pre-cohort data from all the partner registry teams.

In the summer of 2017 the UoP delivered core intervention training to all project officers who have been in charge of the intervention delivery at their respected institutes. The training consisted of exposure to the current existing Growth Mindset resources at UoP, the resources provided by the project advisor Patricia Devine, along with ways in which all materials could be adapted. All partner project officers have since adapted the core intervention for their institution and further information about the planning, embedding and delivery of the intervention can be found in the individual university sections.

Concurrently, the project team at UoP initially secured the backing of three pilot schools in which to deliver the student and staff interventions at the institution (with a further school being added in early spring). This included schools in the Faculty of Business and Law, Faculty of Science and the Faculty of Technology. All four schools chose different ways to implement the interventions within their current teaching input. However, the Changing Mindsets workshops remained consistent and centred on the implicit theory of intelligence and eroding stereotype threat and implicit bias as barriers to learning incorporating a diverse range of pedagogical practices.

School A

School A, in the Faculty of Business and Law, consists of approximately 220 students. Similar to School B, the workshops were also initially intended to be delivered as an extra-curricular activity by the Senior Project Officer and Project Officer. However, contrary to school B, due to lack of engagement from the students the approach had to been refined and amended. Two teaching staff subsequently volunteered to embed the intervention into the curriculum of two core modules for first year undergraduate students across Term Two (January-April). They maintained and incorporated the core elements of the Mindsets workshops but linked it with the core-module content. The average attendance of the workshops in School A was approximately 200-300 students. The contribution of this school enabled the project to analyse the impact of an intervention embedded into a core curriculum delivered in-house. Due to the teaching staff members' perceived positive reaction from the first-year students to the mindsets content, the lecturers also delivered some changing mindsets material to their second year seminars. This will widen the scope of the project and consequently build buy-in for Cohort 2 of the project.

School B

Based in the Faculty of Science, this school enrolled approximately 120 students in 2017/18. The workshops in School B were initially intended to be delivered as an extra-curricular activity by the Senior Project Officer and Project Officer. However, due to increased interest from school's course leaders, the workshops were

embedded into a tutorial module which was compulsory for all students to attend. Four one-hour workshops continued to be delivered by the Senior Project Officer and Project Officer with the course leaders being in attendance (average attendance was approximately 70 students) throughout the month of November. The contribution of this school enabled the project to analyse the impact of an intervention delivered by external members of staff in a core module.

School C

In the Faculty of Technology, this School consisted of approximately 180 students. School C implemented and embedded the student workshops into a non-credit bearing tutorial module in which attendance was recorded and mandatory. A teaching fellow from the school was trained in the intervention workshops and delivered the student workshops in that department. Four one-hour sessions were timetabled for immediately after the student induction (September) and concluded in October with an average attendance of approximately 110 students. The contribution of this school enabled the project to analyse the impact of a non-credit bearing intervention delivered by a member of staff in the department at the beginning of the course for first year undergraduate students.

School D

As a result of low recruitment numbers for the three initial pilot schools (see above) in 2017-2018, the project team recruited a fourth pilot school (School D) also from the Faculty of Technology. School D consists of over 400 students. The mindsets workshops for this school were part of the first year students' tutorial programme and were delivered by the Senior Project Officer and Project Officer (similar to School B). The workshops had since been refined from the initial three pilot school workshops and consisted of two one-hour long sessions – this was mainly due to timetabling issues and lack of student availability. The sessions continued to maintain and incorporate the core elements of the mindsets workshops, with attendance of approximately 20-40 students. The contribution of this school enabled the project to analyse the impact of a shorter-refined intervention delivered by external members of staff in a tutorial programme.

Pilot School	Student workshop dates
School A	Embedded throughout core module in Term Two (January – April)
School B	4th and 11th October; 1st and 8th November
School C	19th September; 12th, 19th and 26th October
School D	13th February and 13th March

Table 1: Pilot school student workshop dates

Challenges and opportunities

The team at UoP have experienced numerous challenges and setback, however, the team have addressed them accordingly with some challenges leading to better opportunities.
The biggest challenges have come in the form of low student attendance and engagement. Due to timetabling constraints and lack of involvement from leadership, the initial workshops in Schools A and B did not have the desired outcomes in terms of student attendance. As a result, the UoP recruited the help of course leaders and lecturers to gain insight and guidance. For School B, the course leaders provided the opportunity to include the

workshops into a core module where attendance was compulsory for the students. This led to greater attendance and engagement from the students and due to the success of the workshops and positive evaluations from the students, the course leaders have included the workshops into the timetable of the forthcoming academic year 2018-19. For School A, after discussions with lectures, the workshops were embedded into the core curriculum of two modules which provided an opportunity to analyze the effectiveness of the intervention from a different approach.

Another unforeseeable challenge experienced at UoP was the low recruitment numbers in the pilot schools for the 2017-18 academic year. This was addressed by recruiting an additional pilot school (School D) and opening up the intervention to student leaders and course reps across the institution. This has provided the intervention an opportunity to reach a further 4-500 students. As a result of the interest and engagement of leadership in School D for the Changing Mindsets project, this has led a peripheral project focusing on the impact of mindsets on feedback (for further information see below). Similarly, opening up the intervention across the institution has developed awareness, interest and buy-in for Cohort 2. These opportunities would not have been possible if the initial challenges were not presented.

Student engagement

The project has engaged the students in numerous ways. Not only have the students engaged in the teaching and learning activities in the intervention workshops, they have also been provided the opportunity to engage in online VLE discussion groups and forums. This has provided them with a safe platform to discuss pertinent issues related to mindsets but also their perceptions of unintentional bias and stereotype threat at university. Students have also been provided with the opportunity to engage in video interviews for the project and the opportunity to write blogs on project related issues to be uploaded on to the website. Student engagement can also be evidenced in the form of including student members in the institutional project group to provide guidance on the refinement, scaling up and outreach of the project.

Staff workshops

The staff interventions were attended by approximately 100 staff members across the initial three pilot schools and consisted of two three-hour workshops delivered by the Senior Project Officer and Project Officer. The first workshop centred on Professor Carol Dweck's Mindsets Theory was delivered to each school individually. The second workshop centred on both mindsets theory and Professor Patricia Devine's stereotype threat and implicit bias habit breaking strategies and was delivered as a workshop for the staff from all three initial pilot schools. For the staff in the recently added fourth pilot school, the two workshops were scaled-up, refined and combined into one four-hour workshop (7th March). Staff from the initial three pilot school who missed the workshops as well as staff from across the institution were in attendance.

Pilot School	Staff workshop dates
School A Workshop 1	22nd September
School B Workshop 1	20th September
School C Workshop 1	13th September
All schools Workshop 2	27th September
School D Workshop	7th March

Table 2: Pilot school staff workshop dates

Peripheral projects

Similarly, the project has developed peripheral projects with staff members in School A and School B. Both peripheral projects will focus on the role of mindsets on feedback, however will take different approaches in exploring the way feedback can help and develop students learning and outcomes. It is well know that feedback is critical for student learning; it is an essential element for enhancing learning and improving assessment performance. While there is little doubt that students understand the value of the formative feedback, the extent to which they engage with these opportunities and how they use formative feedback is still unclear. School A's project will focus on lecturers approach to providing feedback while School D's project will focus on perception of formative feedback by different student groups, including underrepresented categories and those from non-traditional technological backgrounds, for example: female, mature, BAME (Black, Asian, and minority ethnic). Additionally, the peripheral projects will try to demystify whether "girls prefer coursework

Initial Data Analysis

Pre-cohort Data

School A
- 22.6% attainment gap between White and BME students
- 4.5% attainment gap between Quintile 1 and Quintiles 2-5 students

School B
- 10.2% attainment gap between White and BME students
- 4% attainment gap between Quintile 1 and Quintiles 2-5 students

School C
- 32.7% attainment gap between White and BME students
- 12% attainment gap between Quintile 1 and Quintiles 2-5 students

School D
- 3.3% attainment gap between White and BME students
- 1% attainment gap between Quintile 1 and Quintiles 2-5 students

Data provided by University of Portsmouth. Analysed by Juan Batley, Data Analyst Learner Analytics Specialist

University of Portsmouth - Achieved a good degree (1st or 2:1)				
Schools involved in Changing Mindsets Project	School A		School B	
Achieved good degree group	Average five academic years 2012/13 to 2016/17			
	Overall no.	% Good	Overall no.	% Good
Overall	848	60.4%	1,015	80.7%
Students with bursary support	400	52.9%	469	45.5%
Students without bursary support	448	46.7%	546	53.6%
Quintile 1	117	62.4%	133	77.4%
Quintile 2,3,4,5	528	66.9%	738	84.1%
BME	254	49.6%	555	77.5%
BME with bursary	131	58.0%	316	75.3%
BME without bursary	117	42.7%	237	79.3%
White	460	72.2%	358	87.7%
White with bursary	248	75.4%	146	89.7%
White without bursary	212	67.9%	212	84.9%
Male	309	51.1%	425	74.6%
Female	539	65.3%	590	83.9%
Age <22	789	60.5%	874	81.1%
Age >22	59	55.9%	141	73.0%

Withdrawals	Average six academic years 2011/12 to 2016/17			
Schools involved in Changing Mindsets Project	School A		School B	
	Overall no.	% Withdrawals	Overall no.	% Withdrawals
Average % of withdrawals	218	21.4%	279	22.3%
BME (% of total)	71	33.6%	154	55.0%
Quintile 1 (% of total)	32	14.9%	29	10.1%
Withdrawals with bursary support	65	29.8%	97	34.8%
Withdrawals without bursary support	153	70.2%	182	65.2%
	Total	Average per year	Total	Average per year
Number of withdrawals (all including unknown)	218	36	279	47
Number of BME withdrawals	71	12	154	26
Number of Quintile 1 withdrawals	32	5	29	5
Number of White withdrawals	103	17	84	14

University of Portsmouth - Achieved a good degree (1st or 2:1)				
Schools involved in Changing Mindsets Project	School C		School D	
Achieved good degree group	Average five academic years 2012/13 to 2016/17			
	Overall no.	% Good	Overall no.	% Good
Overall	834	66.3%	1,947	65.9%
Students with bursary support	374	47.6%	527	26.3%
Students without bursary support	460	52.3%	1,420	73.7%
Quintile 1	105	62.9%	204	68.1%
Quintile 2,3,4,5	530	74.9%	944	67.1%
BME	223	47.5%	732	63.4%
BME with bursary	88	56.8%	179	73.7%
BME without bursary	126	43.7%	493	67.3%
White	494	80.2%	925	66.7%
White with bursary	263	78.7%	301	62.8%
White without bursary	231	81.8%	624	68.6%
Male	703	67.1%	1,784	65.4%
Female	131	61.1%	163	71.8%
Age <22	665	67.2%	1176	62.6%
Age >22	169	62.1%	771	70.9%

Withdrawals	Average six academic years 2011/12 to 2016/17			
Schools involved in Changing Mindsets Project	School C		School D	
	Overall no.	% Withdrawals	Overall no.	% Withdrawals
Average % of withdrawals	587	37.1%	1,015	26.6%
BME (% of total)	180	30.9%	407	39.5%
Quintile 1 (% of total)	85	13.9%	97	9.2%
Withdrawals with bursary support	237	40.6%	345	34.1%
Withdrawals without bursary support	347	59.4%	668	65.9%
	Total	Average per year	Total	Average per year
Number of withdrawals (all including unknown)	587	98	1,015	169
Number of BME withdrawals	180	30	407	68
Number of Quintile 1 withdrawals	85	14	97	16
Number of White withdrawals	356	59	488	81

Quantitative

As post-intervention data is still being collected across School's C and D, the initial data analysis will focus on the pre-survey responses at the University of Portsmouth. Data was collected from 221 first-year undergraduate students across three faculties and four schools with a mean age of 19.6 (SD Age = 3.46 years; Min Age = 18 years; Max Age = 62 years). Information regarding the gender, ethnicity and POLAR were collected via the central student records and can be found in Table 1. Participation of Local Areas (POLAR) classification (Quintile 1-5) was used as a place-based measure of educational disadvantage that classifies local areas according to the participation rate of young people in higher education (HEFCE, 2017). Ethnicity was recoded into binary variables White British and BAME British (including all other ethnic origins) respectively.

Gender	M= 127; F=89; Unknown= 5
Ethnicity	White= 124; BME= 62; International and Unknown= 35
Polar	Quintile 1= 13; Quintile 2-5= 173; International and Unknown= 35

Table 1: UoP Student demographic information

Implicit Theories of Intelligence (IToI) were measured using four items from Dweck's (1999) Theories of Intelligence Scale. Although Dweck's original scale includes eight items (four entity theory questions and four incremental theory questions), given the length of the survey and the students' involvement in a longitudinal study, Dweck (1999) recommends using the entity-only scale as these are less likely to suffer from social desirability and repetition effects.

Participants responded using a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree) for each item. IToI scores were computed by combining scores from each of the four questions, with higher scores indicating more of an entity theory of intelligence. Below shows the students IToI scores broken down into quartiles.

59.2% 4-7	31.8% 8-11	7.2% 12-15	1.8% 16-20

Growth Mindset   Fixed Mindset

Table 2: Sum of UoP students' Dweck scores broken down into quartiles

Table 2 highlights that across the pilot schools at UoP, most students hold a more growth mindset (91%) than a fixed mindset (9%). This was further confirmed by the Implicit Theory of Intelligence Scale (ITIS – El-Fattah & Yates, 2006) which showed that 95.5% of students held growth mindsets.

When the scores from Dweck's scale were broken down to focus on the project's two target populations (BME and POLAR1 students) we can see that 90.3% of BME students have a growth mindset along with 91.9% of white students (see Table 3 and Table 4). Similarly, 100% of Quintile 1 students hold a more growth mindset compared to 90.3% of students from Quintile 2-5 (see Table 5 and Table 6).

59.7 4-7	30.6% 8-11	6.5% 12-15	3.2% 16-20

Growth Mindset   Fixed Mindset

Table 3: Sum of UoP's BME students Dweck scores broken down into quartiles

56.5% 4-7	35.4% 8-11	6.5% 12-15	1.6% 16-20

Growth Mindset   Fixed Mindset

Table 4: Sum of UoP's white students Dweck scores broken down into quartiles

61.5% 4-7	38.5% 8-11	0% 12-15	2.3% 16-20

Growth Mindset   Fixed Mindset

Table 5: Sum of UoP's Quintile 1 students Dweck scores broken down into quartiles

57.7% 4-7	32.6% 8-11	7.4% 12-15	2.3% 16-20

Growth Mindset   Fixed Mindset

Table 6: Sum of UoP's Quintile 2-5 students Dweck scores broken down into quartiles

In addition, the project utilised a measure that has been implicated in the bias-reducing process, including prejudice-relevant discrepancies, and concern about discrimination in society (Devine et al., 2012). Participants responded on a slider scale from 0 (strongly disagree) to 100 (strongly agree) for twenty-six items with scores being computed to create sub-scales of creating inclusion, overcoming bias and stereotype beliefs. Correlations between the IToI, ITIS and Devine scale produced the following statistically significant findings:

- Fixed Mindset negatively correlated with creating inclusion and overcoming bias ($r = -0.257$, $n = 223$, $p = 0.000$; $r = -0.176$, $n = 223$, $p = 0.008$), however, positively correlated with stereotype beliefs ($r = 0.428$, $n = 223$, $p = 0.000$). This suggests that those who hold fixed mindsets are more likely to have stereotypical thoughts and beliefs and less likely to want to create inclusion and overcome biases
- Growth Mindset nevertheless positively correlated with creating inclusion ($r = 0.274$, $n = 223$, $p = 0.000$) and negatively correlated with stereotype beliefs ($r = -0.219$, $n = 223$, $p = 0.001$). This suggests that those who hold a growth mindset are more likely to want to create inclusion and overcome biases and less likely to have stereotypical thoughts.

UoP Staff

Pre-survey data was collected from 39 members of staff across three faculties and four schools (Male = 15, Female = 24). The staff had an average of 20 years of teaching experience with 84.4% coming from a white (home/EU) background and 15.6% being BAME (home/EU).

The staff similarly responded to the IToI, ITIS and Devine scale. Below shows the staff IToI scores broken down into quartiles.

66.7% 4-7	25.6% 8-11	5.1% 12-15	2.6% 16-20

Growth Mindset   Fixed Mindset

Table 3: Sum of UoP staff Dweck scores broken down into quartiles

Table 3 highlights that across the four pilot schools at UoP, most staff hold a more growth mindset (92.3%) than a fixed mindset (7.3%). The ITIS also confirms that most staff members hold a growth mindset (94.9%).

Looking Ahead

Plans for finishing data collection for cohort 1

With regards to staff data collection, pre- and post-survey data have been collected from all pilot schools. Plans have also been put in place to conduct individual, pair or group interviews with staff members to explore pedagogical practices and inclusivity in the classroom.

Student pre-survey data have also been collected from all schools, however, post-survey data have only been collected from Schools A and B. Post-survey data for Schools C and D are currently being collected. For all the students who completed the pre-surveys in these schools, demographic information has also been collected from student records.

The first group of students to be interviewed were selected via convenience sampling and the interviews began on the 31st of January (ten students interviewed as of 1st May). The project team constructed an interview/focus group schedule in order to measure the outcomes of the intervention and get a richer understanding of the student experience and staff practice.

Plans for refining intervention and intervention delivery for cohort 2

The scaling up of the intervention has continued throughout cohort one and has taken on various forms. For instance, the initial Changing Mindsets student intervention consisted on four one-hour workshops, however, due to a greater understanding of restrictions on students availability and timetabling issues, the workshops have been refined and scaled up to two one-hour sessions and one four-hour workshop. Similarly for staff, the initial intervention consisted of two three-hour workshops which has since been refined and scaled up to one four-hour workshop to fit the needs and availability of staff. This illustrates that the intervention, by design, is flexible and adaptable. While there are key learning outcomes, departments, schools and universities are empowered to embed the intervention in a way that fits with their needs and existing programs. This has also been evidenced by scaling up the intervention in order for it to be embedded into a core curriculum (School C) to fit the needs of specific modules and courses. A further refinement of the intervention is hoped to take the form of student leaders delivering the workshops. Research assistants and 'intervention leads' will be trained on the intervention content and are hoped to be able to deliver all Changing Mindsets sessions in cohort two.

The wider applicability of the intervention has also been recognized and addressed, evidenced by the plan to open up the workshops to student leaders, course reps and members of student societies. This will broaden the scope and accessibility of the project as well as generate interest and awareness of the project across the institution. Likewise, with regards to the staff at UoP the intervention has been opened up institutionally to all staff members in order to be widely adopted and applicable to a wide range of higher education providers (institutional staff intervention to be held on 14th September 2018).

Consideration for cohort two has also been given by School B who have incorporated the Changing Mindsets workshops into the core timetable for first-year students in 2018-2019. Similarly, School C have also requested to embed the intervention materials into their second-year undergraduate courses. Talks are ongoing with Schools A and D with regards to participation in cohort two of Changing Mindsets. Plans have also been put into place to create online video content of the student and staff interventions in order to build and establish a long-term legacy of Changing Mindsets.

UNIVERSITY OF THE ARTS LONDON

Introduction by Professor Susan Orr

University of the Arts London is delighted to be part of the Changing Mindsets Consortia and this project has aligned well with work we have been leading in relation to reducing attainment differentials.

Our Project Officer (Vikki Hill) has worked in a proactive way with staff and students across 3 colleges in UAL. Vikki has built strong and enduring positive working relations with staff and students and this has given the project strong roots that mean our current work developing sustainable approaches is proceeding well. At UAL the central critical success factor has been to locate the Changing Mindsets' approach within the creativity of our student and staff body. Vikki has contextualised concepts of implicit bias and stereotype threat - presenting these ideas in powerful visual ways that communicate their message to students and staff.

It has also been useful for Portsmouth and UAL to share approaches to gathering and sharing attainment differential data.

Vikki has worked closely with UAL colleagues whose work focuses on equality, diversity and inclusion so that the Mindset approaches offered to each College are joined up and coherent. It has also been useful to connect the work of Changing Mindsets with our curriculum focused Creative Attributes Framework. This is an area that we are keen to explore further over the coming months.

Professor Susan Orr
Dean of Learning and Teaching Enhancement

Why University of the Arts London?

University of the Arts London (UAL): *Placing equality, diversity and inclusivity for staff and students at the core of what we do.*
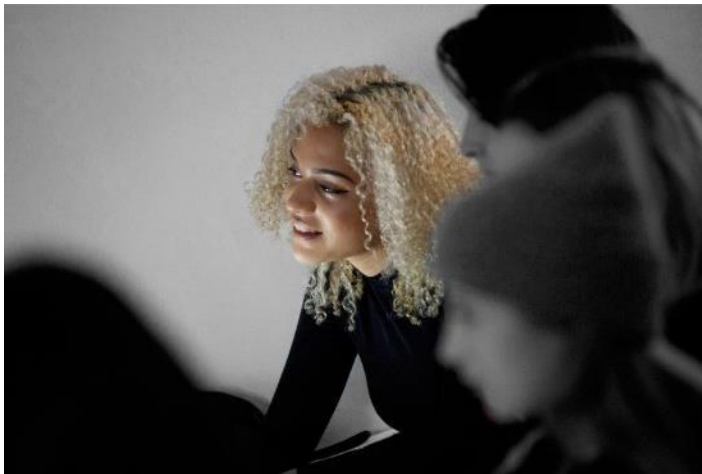
University of the Arts London is one of the world's most renowned institutions for education in arts, design, fashion and communication. UAL draws together 6 colleges; Camberwell College of Arts, Central Saint Martins, Chelsea College of Arts, London College of Communication, London College of Fashion, Wimbledon College of Arts. The diversity of staff, students and alumni reflects our active participation and leadership in a global network of creative and cultural life. To this end, UAL prioritises, in the UAL 2015-22 strategy, delivery of inclusive teaching and learning.

By 2022, we aim to narrow the differentials in participation, continuation and attainment of black, Asian and minority ethnic (BAME) students. As outlined in the UAL Equality, Diversity and Inclusion Report 2017, we recognise that there is no single reason for these gaps, so we have sponsored a range of projects and research to:

- uncover the reasons behind degree attainment gaps
- promote discussion about diversity in the curriculum
- to trial interventions at course level

As part of the UAL Teaching and Learning Exchange, the OfS Funded *Changing Mindsets* project sits within the UAL Attainment programme: Learning For All, coordinated by Professor Susan Orr, Dean of Learning, Teaching and Enhancement. The attainment framework consists of focused activity on policy and quality; curriculum; staff development; extra-curricular offer/ student engagement and stereotype threat and implicit bias (*UAL*

Changing Mindsets). UAL data dashboards are currently used at course team level to analyse attainment differentials and support curriculum developments so we welcome the opportunity that *Changing Mindsets* offers to share good practice across the consortium.

Throughout 2017, the *UAL Attainment Programme: Learning for All* has been focused on promoting race quality by joining up policy, monitoring and infrastructure to support student attainment. Some of the highlights, listed in the UAL Equality, Diversity and Inclusion Report 2017, include:

- *The creation of a new online resource that is helping staff to understand the factors causing differential outcomes for students. This draws together some of the latest research findings from the higher education sector and from UAL researchers.*
- *The introduction of a four-step process that is supporting staff to address attainment differentials in their areas of practice, through informed interventions.*
- *Increased promotion of existing diversity and inclusion training, and the introduction of two new workshops for UAL staff: Decolonising the Curriculum, by visiting fellow Dr Gurnam Singh, and Inclusive Attainment*
- *Academic and Library staff working with Arts Students' Union as part of Liberating the Curriculum.*
- *The 'Tell Us About It' archive has been digitised, through the work of Shades of Noir and Aisha Richards and is now hosted on the Shades of Noir education site.*

By working in partnership with everyone involved in teaching and learning across the university, we aim for all students to be supported to achieve their potential.

Three colleges across the university participated in *UAL Changing Mindsets* Pilot year (and will be referred to as UAL College A, UAL College B and UAL College C from here on in). This included inviting the teaching, technical, academic support, language centre and business staff alongside 525 Year 1 students across the three colleges.

UAL Changing Mindsets project has been designed to fit within the contextual frameworks of each college. The workshops include a diverse range of digital platforms to promote student and staff engagement and enhance learning and development. UAL College A, we hosted a 'Big Bang Event' for students to explore Growth Mindsets Theory and frame this within the art school context of 'the crit' – focusing on risk/failure; talent/intelligence and language/feedback whilst at UAL College B, we delivered part of the student intervention through PALS (Peer Assisted Learning Scheme).

UAL College C staff attended their first workshop where they mapped *UAL's Creative Attributes Framework* to the UAL *Changing Mindsets* Learning Objectives. The framework provides a structure to inform staff, students, and other stakeholders how students and graduates develop the wide-ranging qualities, experience and behaviours that prepare them for the future and will anchor the *UAL Changing Mindsets* attainment work within the highly regarded and familiar language developed by the Careers and Employability Team.

The project has opened an encouraging space for discussion and exploration. UAL staff and academics have also demonstrated their support in organising events, approaching the team with ideas for student led exhibitions and initiatives and by expressing interest in engaging with the work. As the staff and student workshops ran throughout the pilot year, we continue to ask how best can we situate the Changing Mindsets intervention within the context of an arts university?'

Intervention Story

In this blog post, *'From Attainment Gap to Awarding Gap'* Vikki Hill (UAL Project Officer for *Changing Mindsets*) in conversation with Dr Gurnam Singh (Principal Lecturer in Social Work at Coventry University and Visiting Fellow in Race and Education at UAL) about using the term 'Awarding Gap' and the opportunity this presents to universities for addressing differential outcomes for students. In particular, this highlights the importance of avoiding a student deficit model, an approach that we, at UAL, have embraced in the *Changing Mindsets* project and across all our attainment work.

**UAL College A**

206 students are enrolled on Year 1 on this art course.

The experience of delivering the project at UAL College A has been particularly informative due to regular meetings, continuous communication and support from senior staff and admin. In October, I met with Academic Support staff and began to consider developing the staff development session from anonymized student assessment feedback and from NSS comments. As this progressed, there was concern from the Programme Director that using current feedback might be too personal and problematic for teaching staff in this context and it was suggested to include feedback from another course. We thought that this would shift the focus away from the department so it was left out. The use of live assessment feedback to explore Growth Mindset Language could be revisited at a later point and these discussions informed the staff session at UAL College B, whereby we focused on assessment practices. There is also a clear relationship to the attainment and formative assessment workshops being run at UAL by Dr Duna Sabri. Dr Sabri is a researcher who has been carrying out UAL commissioned longitudinal research to help us understand attainment and student experience in relation to our diverse student body.

Regular planning meetings were held with key staff at College A. The focus of these meetings was to ensure that the content of the student workshops would complement the approach of UAL College A – to develop a space to critique positivist approaches, to develop and record own responses and to critique the content of the intervention (specifically time to discuss and feedback responses to the questionnaire) and to avoid binary positioning of the growth/fixed mindset. In terms of operational support for rooming, timetabling, staffing and arranging technical support, the staff listed above have been extremely proactive in ensuring the project runs smoothly. The Associate Dean and Programme Director suggested inviting the Dean to speak at the first student event and this, along with the Grayson Perry talk, helped to build buy-in and raise awareness of the project at UAL.

Staff consultation #1
In July 2017, the Project Associate and Educational Developer (Diversity & Inclusion), Lucy Panesar, presented the materials at a staff meeting. It was agreed to follow up again in September.

Staff consultation #2
13 September 2017
22 staff

LANGUAGE AFFECTS ATTAINMENT

Praise for being 'smart' suggests that innate talent is the reason for success.

Focusing on the process helps us to see how effort leads to success.

DWECK: 'The Effect of Praise on Mindsets'

FIXED MINDSET

Positive message but FIXED MINDSET

GROWTH MINDSET

SUGGEST

A student activity to identify:

Identify growth, fixed or 'positive message but fixed mindset' language in

• written feedback eg. on OAT

• verbal feedback eg. in the crit.

STAFF ACTIVITY

STUDENT ACTIVITY

The session was planned for 1 hour, but the group opted to stay to discuss for an extra 55 minutes – demonstrating engagement with the project. Although a very challenging meeting it gave a very good insight into the issues and concerns for staff at UAL College A. The lack of agreement around student attainment related to race was highlighted as a need for additional training, particularly in the intersection of both class and race. Feedback was received on context, tasks, survey and operational delivery. There were mixed views with some staff asking that the project be rejected on ethical grounds to others who wanted to explore the possibilities that the project may offer to address attainment differentials. In a follow-up meeting with key staff it was decided that the 29th November student event should be student only to maximize engagement in the workshop.

To gain a good survey completion rate, we decided to deliver the post-intervention survey as a teaching and learning exercise at the start of the workshops for both staff and students. This consultation session at UAL College A was helpful for testing this, as it exposed many delivery problems, such as ensuring there is ample time to read the information sheet and ask questions; wifi availability; access to mobile devices; ease of logging on; providing critical space to respond to the survey. For all future workshops, staff and students were emailed beforehand to inform them that they would be asked to complete a survey and to bring mobile devices; a Bit.ly link was used; the survey was framed as part of the workshop; paper copies were available for those that did not want to complete digitally; participants were encouraged to complete the questions, even if they choose not to submit so that they would understand the focus of the research.

Staff - Stereotype Threat and Implicit Bias Workshop
13th December 2017,
14 staff
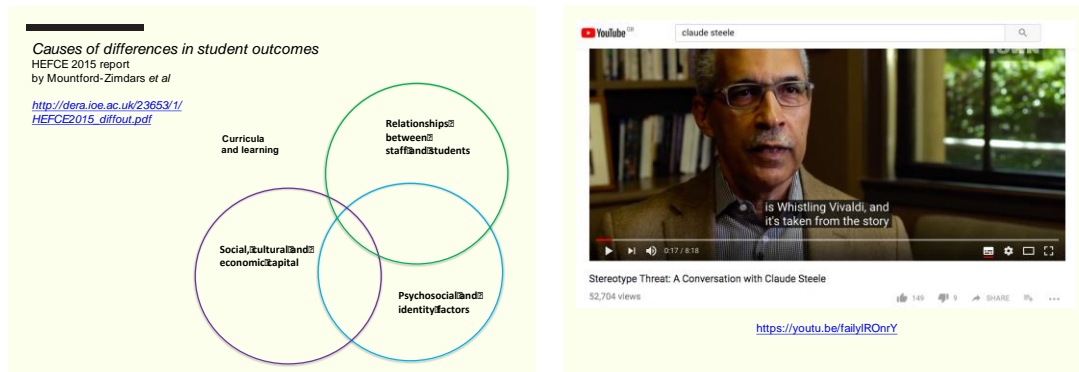
A 2-hour staff development session that explored implicit bias and stereotype threat in the context of the subject area at UAL College A. The introduction to the session was located within Mountford-Zimdars et al's HEFCE 2015 report, *Causes of differences in student outcomes,* which finds that, "*Damaging psychological effects can arise from stereotyping, particularly the negative effects on students' self-confidence if HE staff or peers project bias…"* Staff were asked to link each of the activities to 3 areas of focus. They were instructed to avoid discussion of the curricula so that more time could be invested into exploring every-day interactions, language and belonging. Participants took part in 3 activities (Snakes & Ladders, Discussion Table and Case Studies).

The aim was to design a learning environment to enable a constructive alignment approach to the session (Biggs, 2003). The game of Snakes and Ladders was inspired by the workshop *Challenging wicked problems and folk pedagogies to address the BME attainment gap in higher education* presented by Dr Liz Austen and Stella Jones-Devitt from Sheffield Hallam University at the Equality Challenge Unit Conference 2017, and by *Disparities in Student Attainment* with input from Dr Gurnam Singh.

The Project Associate approached the session as a 'facilitator' rather than teacher or expert. The rotation of tasks and groups kept the focus on the table/ task. There was mixed feedback from staff. Some found the list of biases to be an extremely helpful tool to name and describe phenomena; one staff member declined to take part in the task of identifying bias' within case studies as they felt that these kinds of bias do not occur on the course. The discussion table offered a space for staff to talk through the difficulties they were experiencing related to race, bias and stereotype at the college, particularly in terms of the production of 'offensive' art work. After the workshop, one of the participants contacted myself and key staff at the college to share their own 'testimony' of barriers to learning and difficulties around belonging in academia having come from a working-class background.

Staff used Padlet, an online learning tool, to answer prompts from each task. They demonstrated a productive, critical, engagement in the sessions. The final comment echoes the concerns of the more vocal participants.

"…what is the horizon of our agency and responsibility as academics and what are genuinely issues of structure and resources?"
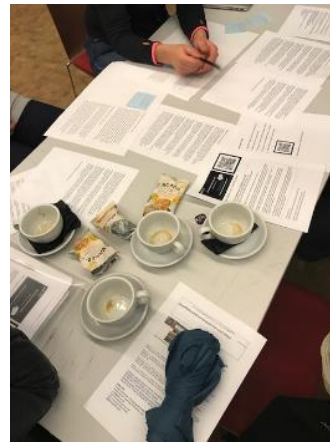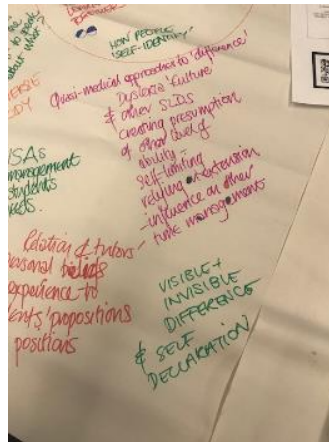
Staff member from UAL College A

"...importance of making distinction between curriculum issues and dynamic pastoral issues connected to broader culture."
Staff member from UAL College A

"Mechanistic focus on quasi neurological/ evolutionary psychology approaches displaces the political and structural aspects of provision for HE and therefore the institutions own responsibility."
Staff member from UAL College A

Student - Mindset and the Artist
29th November 2017
75 students
(Supported by 2 x student ambassadors and 6 x staff members)

In this student workshop on growth mindset the Dean at UAL College A spoke about communities and learning and challenged fixed notions of intelligence and how to create conditions for a growth mindset. Two student ambassadors, also presented their approach to Growth Mindsets in context of both academic experience and the creative industries with personal accounts that were well-received by students.

The student ambassadors had been invited by email to attend a training session run by the Project Associate in November and the 2 current students and 1 alumni that supported in the facilitation of the workshops were

paid by [UAL ArtsTemps](#) for 3 hours work for each session. This includes preparing a talk, setting up the room, working with small groups of students, presenting, assisting with resources and responding to Q&A.

The workshop had a variety of tasks designed to promote discussion and engagement, with opportunities for individual, pair and group work along with space for open questions from the students. During the workshop, students heard from the Dean, two student ambassadors, Lucy Panesar (Educational Developer), an Academic Support Lecturer and the Project Associate. This demonstrates buy-in from senior staff and lecturers. Much of the work involved in preparing the sessions was to consider how to locate the *Changing Mindsets* materials within a subject-specific context – notions of risk, perseverance, failure and learning were situated within a discourse around 'the crit' as a potential site for developing a growth mindset as an art practitioner.

The course leader was helpful in questioning students who wanted to leave (students from one pathway had a timetable clash) and encouraging them to stay when possible. Students used Padlet to answer questions. Comments demonstrate a critical engagement with the topic and a confidence to be able to express personal opinions in a safe space. The use of online learning tools allowed everyone in the lecture theatre to have a voice.

"I thought it was good to show the various opinions and bring awareness to these topics throughout the learning and various environments. It allows an insight to others and also expresses opinions and ideas without judgement, whether someone has a different education or upbringing, it allows everyone to show their opinion on stereotypes and how something can change or influence intelligence."
Student, UAL College A

"I found it difficult to distinguish between knowledge and intelligence"
Student, UAL College A

"Interesting and thought provoking, some of the questions I felt really made me think about something I'd never considered"
Student, UAL College A

"I didn't fully understand the stereotyping questions, because I'm against stereotyping but I stereotype white people all the time"
Student, UAL College A

"People like me is a very loaded phrase"
Student, UAL College A

"Maybe intelligence is spread over a wide range of topics whilst talent is a singular thing???"
Student, UAL College A

"Talent is the word given to the product of hard work and practice. However, the dictionary defines it as "natural ability" which is the worst definition I've ever seen in my life. What is "unnatural ability"? This is just an example of the limitations of language to express concepts."

Student, UAL College A

"To realise that anxiety and worrying about the challenge is the biggest obstacle of a challenge"
Student, UAL College A

Student – Stereotyping and Art
10th January 2018
25 students
(Supported by 1 x staff and 1 x student ambassador with 1 x Academic Enhancement Model Lead staff attending)

In pairs identify:

- An example of a stereotype

Lucy Panesar,
Educational Developer
(Diversity & Inclusion)
at University of the Arts London

Image: Lucy Panesar 'Fill my shelves, Transform my life', Camberwell Arts Festival 2006

"Stereotype threat is a social-psychological predicament that can arise from widely-known negative stereotypes about one's group. …

…[We] argue that it is experienced, essentially, as a self-evaluative threat. …When the allegations of the stereotype are importantly negative, this predicament may be self-threatening enough to have disruptive effects of its own."

Steele and Aronson, 1995

How it Works
Stereotype Threat

The workshop explored stereotype threat, implicit bias and de-biasing techniques through the context of subject-specific practitioners such as Basquiat, Gomez-Pena, Sheikh, Perry, and Himid. Educational Developer (Diversity & Inclusion) and performance artist Lucy Panesar and a Student Ambassador spoke about bias in their professional and artistic lives. There was a very engaging debate and discussion from students and several individuals shared their own experiences of overcoming bias. The list of 10 biases led to excellent feedback as students stated it was the first time they had seen clear definitions for different biases. One student said that the workshop was really important because '*we are learning how to get along with each other*.' Several students questioned why the workshop was not in curriculum time, one asked whether we could deliver it in the studios so everyone could take part, two students stayed behind to share their experience of bias and having to develop a growth mindset as mature students and a further student returned after the session finished to thank the team for the work and to share his own powerful story of coming from a working-class background, being admitted to a young offenders institution and to turning his life around by developing a growth mindset.

One student commented on the lack of intersectionality and this is a valid point that should be addressed in the following student workshops.

"Surprised by the lack of intersectional approach. Why does context always have to be explained?"
Student, UAL College A

Word cloud made by students:

UAL College B

148 students are enrolled on Year 1 of this design course.

The intervention at UAL College B has been of particular interest as it was the only college to embed some of the intervention content materials into the curriculum during the Critical Theory (CT) Lectures. These were delivered on a Friday and all students attend in groups of approximately 50 on a tri-weekly carousel timetable. A 1 hour session led by Peer Assisted Learning Scheme (PALS) Leaders follows the lecture and is run as student-led and facilitated seminar to discuss, reflect and critique the lecture content. This model was proposed by the Associate Dean, Head of Programme and Course Lead and was supported by key teaching staff – a dedicated Academic Support Practitioner with responsibility for PALS and the CT Coordinator, both of whom were pro-active in the design, delivery and operational support.

This model initially seemed to be the most sustainable in planning stages and the Project Associate delivered a 1.5 hour session for the PALS leaders on Growth Mindset and stereotype threat/ bias on 4th October 2017. After this session, it was agreed that the PALS leaders would be facilitating discussion based on the CT lecture and not delivering the intervention. The second phase of planning was that this could be co-delivered by the Academic Support Lecturer. As October progressed it was clear that there needed to be a distinct Growth Mindset workshop for the cohort. There was an initial opportunity for this to be scheduled within studio time in November, but was timetabled in January outside of curriculum time and although successful, drew very few numbers. For future delivery, the focus on growth mindset content needs to be confirmed at an earlier stage and timetabled to capture a larger group of students.

Regular planning meetings with key staff at UAL College B:
- Programme Director
- Course Leader

These meetings focused on staff workshops delivery and course needs.

- Academic Support Lecturer

These meetings supported training, delivery and progress of PALS leaders and sessions.

Regular communication with:
- Senior Lecturer, Critical Theory Coordinator Year 1

All email correspondence, survey link, event invitations, interview invitations have gone through the CT Coordinator.
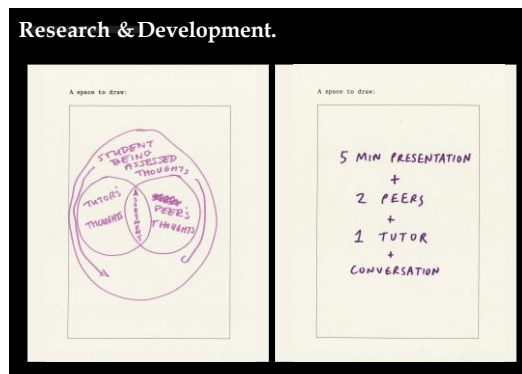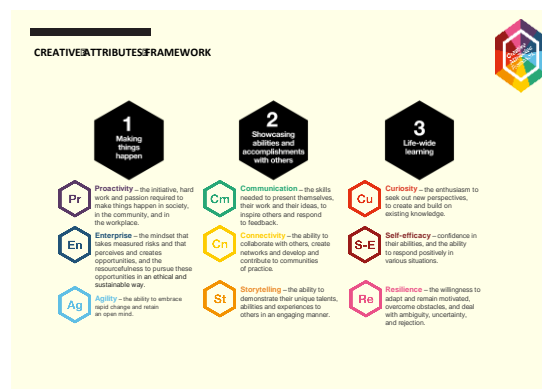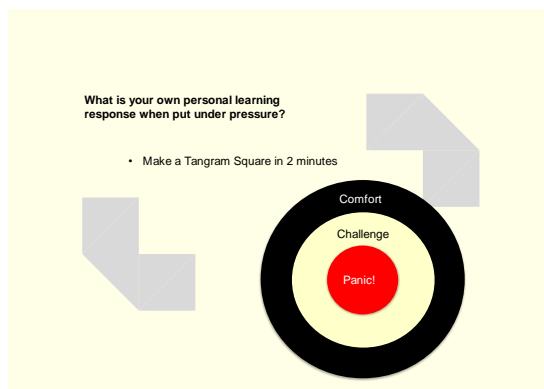
- Associate Dean: Progression Attainment and Support

Information on embedding the project and support for funding and delivery of staff development events.

Staff - Growth Mindset Workshop
18th October 2017
23 staff

The workshop was located within the attainment work at UAL College B. Staff were introduced to Dweck's Theories of Intelligence and then designed curriculum interventions that built on the UAL Creative Attributes Framework.

The team were asked to identify areas of their own practice that they had improved at over time and to consider their own personal learning styles. They designed growth mindset tool kits that innovatively utilised

digital approaches to learning and proposed spaces for reading, discussion and curriculum design. There was a good engagement from the staff and the session was well received with some participants staying behind to discuss further (3 of whom were staff from other colleges).

Tracey Waller, Course Leader, BA Graphic Design at Camberwell College of Arts delivered a presentation on the assessment methodology she is piloting. She demonstrated how, with a growth mindset, moments of risk and failure can become a space for learning, opportunity and collaboration for students and staff whilst improving attainment. This was a good opportunity to promote cross-college collaboration. One of UAL College B Lecturers agreed to share her research that explored Gender in Design and related well to the Stereotype Threat/ Implicit Bias workshops.

"*The session was very helpful, the idea of a fixed and a growth mindset is a simple idea but very effective.*"
UAL College B, Senior Lecturer

Staff - Stereotype Threat and Implicit Bias Workshop
29th November 2017
11 staff

For pre-reading, staff were emailed and asked to complete the UAL online module 'Breaking Bias'. In this workshop, I trialed the online game, http://www.Fairplay.org to make use of the almanac for bias'. There was not enough time for players to engage with this in a 2-hour session so for subsequent workshops I gave the list of bias in handout form. Staff were encouraged to use Padlet to document their ideas and feedback.
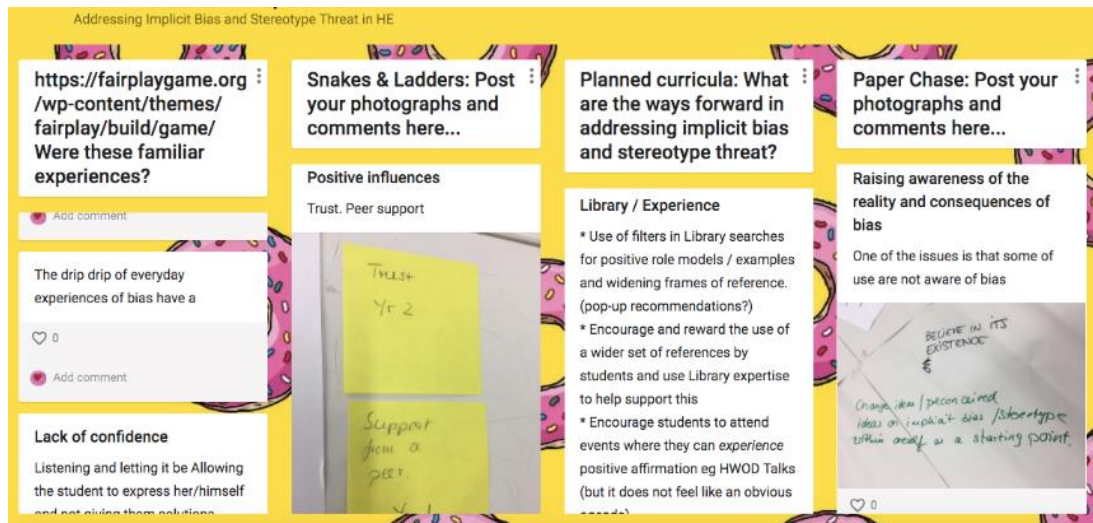
Read the UAL Changing Mindsets blog post:

'From Implicit Bias to Unconscious Non Bias' – Vikki Hill with Dr Gurnam Singh

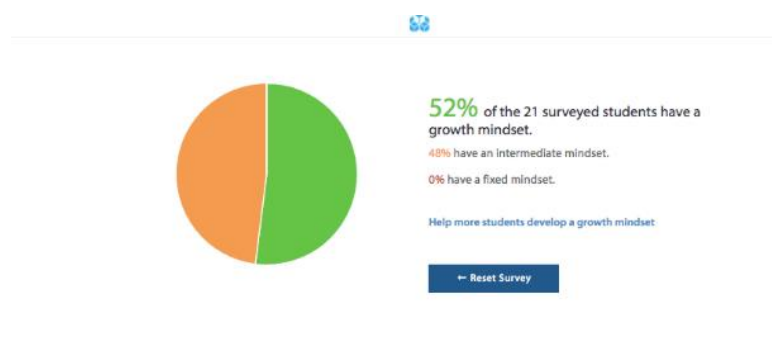**Student – Mindset and the Designer**
18th January 2018
18 students
(Supported by 2 x staff and 1 x student PALS leader)

http://s-a-d-boyz.tumblr.com/

In this student workshop on growth mindset, Educational Developer (Diversity & Inclusion) and Performance Artist, Lucy Panesar, talked about how she applied an incremental theory of intelligence to her practice and her academic life. Students explored Dweck's theories and then applied this to a design thinking task – to design a Growth Mindset Toolkit for students on this design course which was then presented back to the group. A PALS leader explained how her own attitude to Growth Mindsets had changed from the original PALS training session and expanded on the challenges she had faced leading the PALS sessions with College B students. We analysed the blogs the students had developed as part of their CTS lectures on stereotypes and bias.

Students took the PERTS survey before the session:

52% of the 21 surveyed students have a growth mindset.

48% have an intermediate mindset.

0% have a fixed mindset.

Help more students develop a growth mindset

← Reset Survey

This survey was updated in August 2016 to match the mindset categorization cutoffs (i.e. for growth, intermediate, or fixed mindset) used in the recent research paper from Claro, Paunesku, & Dweck (2016).
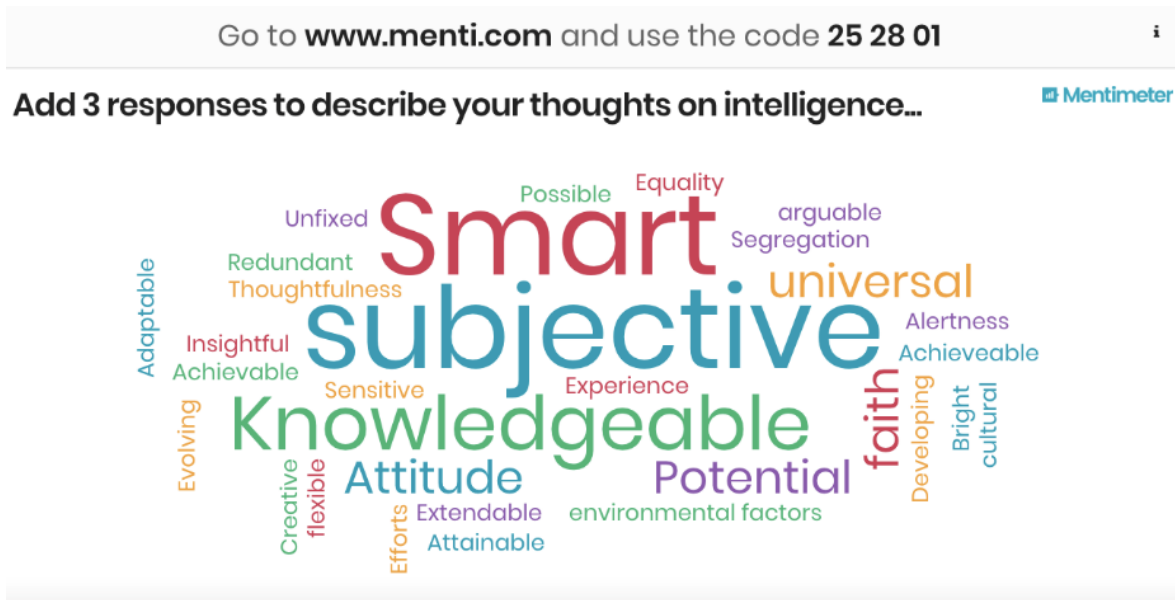
ABOUT GROWTH MINDSET

People with a "fixed mindset" think that intelligence is fixed—that they have a certain amount of it which cannot really be changed. Other people have a growth mindset. They think intelligence is "malleable"—that it can be developed and increased through hard work. Students who have a "growth mindset" tend to do better in school, especially when they encounter academic difficulties.

Change Student Mindsets

This survey was updated in August 2016 to match the mindset categorization cutoffs (i.e. for growth, intermediate, or fixed mindset) used in the recent research paper from Claro, Paunesku, & Dweck (2016). PERTS is a mindsetmeter that features on the very helpful https://www.mindsetkit.org/ website.

Student Word Cloud on Intelligence using Menti:

Students presented their designs for a Growth Mindset Toolkit using Padlet:
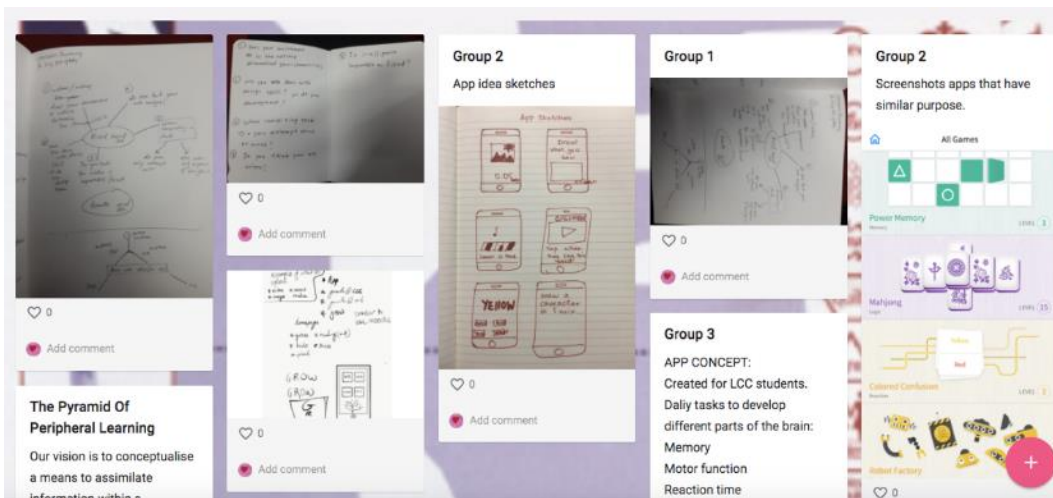
During the one to one interviews all students from UAL College B clearly articulated that they found the session useful in thinking about how they approach their design studies.

"*I really loved it. It was all about like positive thinking and about having a growth mindset, so it's not, being negative, that you're just stuck in one way and you can grow and change and be better.*"
Student, UAL College B

"*It's all about loving what you do. It comes back to just making sure you love learning and it's not about grades, because, like, no one in an interview is going to go, 'Oh, you got an A in your second term of your first year at uni.' Like, it's all about learning as much as humanly possible, and then making sure you execute.*"
Student, UAL College B

Student – PALS delivery of stereotype threat and implicit bias content in Critical Theory Sessions

These sessions are delivered in 3 week carousels of groups of 50 students and were delivered on the following dates:
Stereotype Threat: 13th October, 27th October, 10th November 2017
Implicit Bias: 26th January, 2nd February, 9 February 2018

The PALS leaders have been trained in all the content and have been leading the 1 hour sessions after the CT lectures. Students on the course have been documenting the sessions on their blogs.

Feedback from these sessions have been overwhelmingly positive in terms of exploring stereotypes in design, but the full content from the *Changing Mindsets* intervention such as an exploration of terminology and definition of implicit bias and stereotype threat along with Patricia Devine's 'Bias-Breaking Strategies' were not covered. This offers us an opportunity to consider the best way to address this next year.

"To me, it was like, thinking something was for a certain group, just intent, without really thinking about it. Which I think was, the main point of the session and challenging where they come from. I really liked that aspect of it. It's like the more personal, reflective bit of it."
Student, UAL College B

"You could also, um, have a prejudice against, let's say, like gay people, and then if (...) someone you need to be in contact with, could be gay, that will stop you, making connections into the actual work environment. So, that's a step back, isn't it?"
Student, UAL College B
"Being aware of the possibilities of a growth mindset, has helped me cope with setbacks in my PAL sessions. In the first two, everything planned seemed to go wrong in one way or another; the very first session was with a group of students that did not do the previously given assignments of reading and listening to a podcast, on which the session was mainly based. I thus had to toss out my planned exercises and change the set-up of my session on the spot. I approached it as a challenge rather than a setback and the result was very good; the students gave amazing feedback and really enjoyed themselves."
UAL PALS Leader

UAL College C

185 Year 1 students across 4 courses in one arts programme area.

In our initial planning, we had hoped to deliver the intervention to 2 programme areas at UAL College C. Although the first staff workshop was delivered to both, we were unable to secure a date to deliver the student workshops. By November we decided to postpone this until Cohort 2. There had been a recent re-structure and a new-build to contend with and this preoccupied operational resources for teaching staff and management. Across the colleges, there is inconsistency for staff development bookings and preferences. Some use the centralised ESS system, and others prefer Eventbrite. Throughout the pilot year, I attempted to work with individual college preferences so that staff could have the workshops as part of their staff development resume.

Planning meetings with key staff at UAL College C:

- Associate Dean of College

- Associate Dean of Learning, Teaching and Student Experience

Meetings to discuss the project and plan the staff development sessions.

- Undergraduate Programme Director

Meetings to discuss the student workshops and suggested guest speakers about art practice. It was in these meetings that we confirmed plans to invite Grayson Perry for an event at UAL. The Programme Director presented a section in the first student workshop locating Growth Mindset Theory within the studio context.

Staff Growth Mindset Workshop
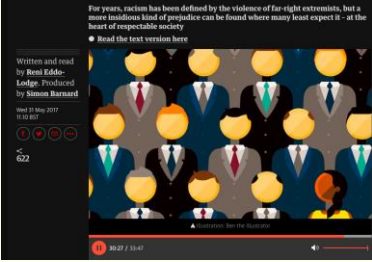19th September 2017
15 staff
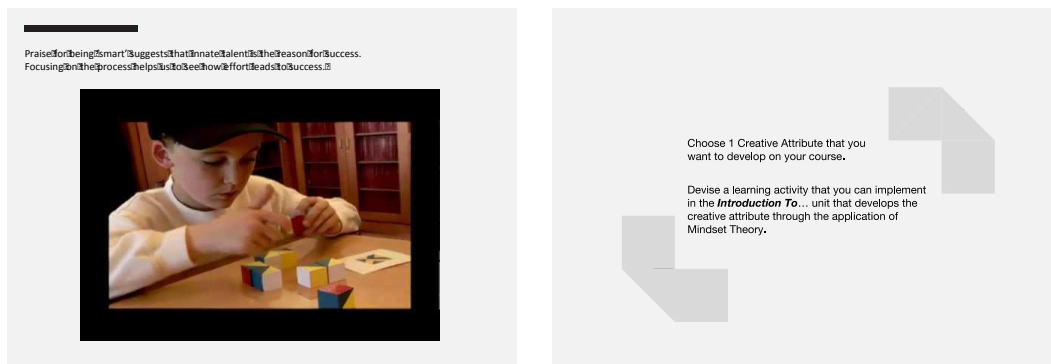
This was the first staff development session and the activities of using a Tangram Puzzle to consider personal learning approaches and applying Growth Mindset theories to *UAL's Creative Attributes Framework* (CAF) provoked engagement and response. The choice to use the CAF was to link Changing Mindsets to current UAL strategy and to build upon the already familiar and respected work that has been carried out by Careers and Employability. The introduction of research papers was too intense following the online staff survey and the feedback evidenced that staff wanted to gain practical strategies on how to apply these approaches in their teaching practice. The videos did not give enough depth to the theory or application and the staff commented on how they found the film, Honda The Power of Dreams, Failure: The Secret to Success, to be too design based and not relevant for students from other disciplines. I removed this from the workshops.

Staff - Stereotype Threat and Implicit Bias Workshop
28th February 2018
7 staff

Reni Eddo-Lodge

For years, racism has been defined by the violence of far-right extremists, but a more insidious kind of prejudice can be found where many least expect it - at the heart of respectable society

● Read the text version here

Written and read by **Reni Eddo-Lodge**. Produced by **Simon Barnard**

Wed 31 May 2017 11.10 BST

622

https://www.theguardian.com/news/audio/2017/may/31/why-im-no-longer-talking-to-white-people-about-race-podcast

28:10

Case Study Table

- Read a UAL case study
- Read the different forms of bias that occur
- Use post-it notes to identify biases to each case study

- Now read the de-biasing strategies and consider the relevance in context of each case study
- Photograph your responses and upload to Padlet with your comment

The staff workshop on stereotype threat and implicit bias was structured in a similar way to the other staff workshops but the activities were carried out at the same time to promote discussion. In response to feedback, there were two planned activities for staff – the case studies and the snakes and ladders game - and this gave them the opportunity to have more time for discussion. Once again there were some technical issues and the wifi was not working well in the lecture theatre which problematized the engagement with Padlet. In this session, I included an audio clip from the Podcast by Reni Eddo-Lodge that discussed the issues with colour-blindess in racial inequality and the pervasiveness of structural and institutional racism. It was apparent that there are varying comfort levels when talking about race. Feedback after the session suggested that more time spent on de-biasing strategies and practical interventions that can be used in teaching would improve engagement.

One member of staff stayed after the session to discuss how the Reni Eddo-Lodge content had questioned previously held assumptions and beliefs. This echoes the words of Lucy Panesar, UAL Educational Developer (Diversity & Inclusion), who wrote the March 2018 blog post for the Changing Mindsets website, *'Troublesome knowledge and conversations: Learning how to talk about race at UAL'*

There is a strong use of critical race theory at UAL and there is a stronger sociological paradigm for attainment work at UAL - this continues to be a challenge in the delivery of the project.

Student – Mindset and the Artist
9th November 2017
70 students

Students were introduced to theories of Intelligence and watched a clip of Carol Dweck's TED talk. The Programme Director talked about intelligence, talent, risk and failure and how they are situated within Fine Art Practice. There were technical issues during this session and some of the students left. This was the first time Padlet was used in the student session and students needed clearer direction in the use of it.

"It's a lot more about interest and drive than inherent ability"
Student, UAL College C
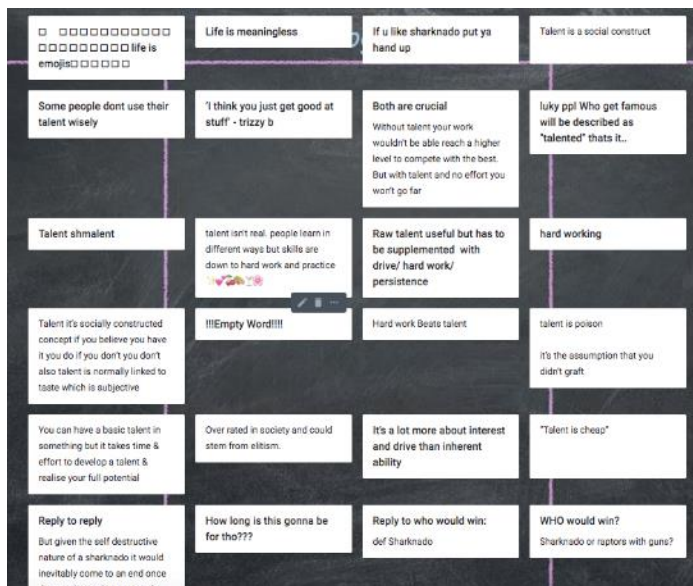
The comments demonstrated some engagement, particularly from the student who was trying to critique the session through a fictional character. The session was not structured as well as it could have been due to some of the arising issues. It was also the first student workshop delivered alone and although there were 2 members of staff and a student intern, the direction of how to co-deliver was not clear. Following this session there was always a minimum of 1 staff member and 1 student ambassador to assist in the workshops.

Following on from this session, the Graduate Intern worked with students and curated an exhibition entitled '*What is Talent? What is Failure*?'. More information about this can be found in the Events section.

Student – Stereotyping and Art
2-4pm, 9ᵗʰ December 2017
12 students
Supported by 1 x staff and 2 x student ambassadors

The workshop explored stereotype threat, implicit bias and de-biasing techniques through the context of art practitioners such as Basquiat, Gomez-Pena, Sheikh, Perry, and Himid. Educational Developer and performance artist Lucy Panesar and Student Ambassadors Jawad Galain and Callum Cound spoke about bias in their professional and artistic experiences. We played the Identity Safety Game devised by *Changing Mindsets* Project Officer Liam Greenslade @ Canterbury Christchurch University and decided we needed a more open-ended structure for our students. This elicited a very engaging debate and discussion amongst students.

The discussion on how artists have interrogated stereotype threat and bias in their practice was also documented on Padlet and offered a space to critique their role and responsibility in countering stereotype threat and implicit bias if they belonged to a majority group.

"If, for example me, like just say a white European man sort of thing who like doesn't get targeted with racism (...). I am in that way privileged because there is wrong happening around me, there are people who don't have a choice and that's mostly the case. Racism doesn't have like a choice where, "Do I want to be targeted or not?" You are going to be targeted based on what you are and it's horrible."
Student, UAL College C

"So that's where hidden racism gets formed and like prejudice and stereotypes and you subconsciously think that people are something else than what they are or it's something that nobody could ever possibly correct because if they don't pinpoint and it's very hard to pinpoint."
Student, UAL College C

Engagement

- PALS training on 4th October 2017

- Training of Student Ambassadors

- Updates sent via Moodle to all students across all colleges

- Engagement in the sessions through use of inclusive practice/ digital technology (Padlet, Mentimeter, group work, discussion, Tangrams, Play-Doh, Pledge-planes, Snakes & Ladders, Online Gaming etc). This approach has had very positive feedback from staff and students.

- Engagement by developing sessions to be relevant to curriculum
  (design a toolkit for College B students, identity how art practitioners interrogate bias, inviting academics to present)

- Engagement in the sessions by building in the work of the Student Ambassadors and PALS leaders to promote student voice

- Design of handouts to allow for ease of reference, use of QR codes and further contacts

- Added to Moodle UAL College A to track analytics

- The UAL Changing Mindsets with Grayson Perry (UAL Chancellor) on the 14th February 2018 that attracted just under 400 students and staff. Grayson delivered a talk on stereotypes, followed by a Q&A hosted by student ambassadors who used the Twitter Hashtag #ualmindsets to ask live questions from the audience. This was followed by a workshop and post-intervention survey. A review was published on the Changing Mindsets blog.
  http://mindsets.port.ac.uk/?cat=50

Photo credit: Gareth Johnson

- UAL Changing Mindsets Project Associate has written several articles for the UAL Teaching and Learning Exchange Blog and has featured in internal communications (Spotlight, The Big Picture and the HeadsUp)

- The *What is Talent? What is Failure?* exhibition curated by Graduate Intern at College C

- Interview and article with Graduate Intern published on the UAL Teaching and Learning Exchange Blog http://tle.myblog.arts.ac.uk/what-is-talent-what-is-failure-changing-mindsets-at-ual/

- The UAL Changing Mindsets Myblog Wordpress site – designed by Andreea Stan

- The UAL Changing Mindsets short film – produced by Gareth Johnson

- The UAL Online Showcase – students have been invited to submit art work and this is being co-managed by a student editorial board

- A series of interviews 'Vikki Hill in conversation with Dr Gurnam Singh' that explore the project themes

- UAL Learning and Teaching Conference, March 2018 – workshop
  Connecting the psycho-social to the subject: Changing Mindsets @ UAL
  https://teachingexchange.arts.ac.uk/latc/2018/sessions/hill/

- UAL Project Associate on Erasmus exchange to ABK Stuttgart, March 2018
  http://tle.myblog.arts.ac.uk/erasmus-report-thinking-teaching-visits-stuttgart-state-academy-of-art-and-design/

- A workshop at the HEA Attainment Symposium, May 2018 (Brighton, Portsmouth and UAL partners)

- 2 x half day workshops for Language Centre/ International Student Experience staff,
  May 2018

- 1 x full day workshop with UAL Outreach staff booked, May 2018

- Changing Mindsets film screening and website launch, Not Just A Shop, June 2018
  Drinks reception to invite senior management, staff from the Teaching and Learning Exchange and key staff/students

Initial Data Analysis

Pre-cohort Data

Course A
- 17.6% attainment gap between White and BME students
- 8% attainment gap between Quintile 1 and Quintiles 2-5 students
- 13.9% attainment gap between high and low socio-economic classification students

Course B
- 10.7% attainment gap between White and BME students
- 7.6% attainment gap between Quintile 1 and Quintiles 2-5 students
- 2% attainment gap between high and low socio-economic classification students

Course C
- 30.3% attainment gap between White and BME students
- 12.2% attainment gap between Quintile 1 and Quintiles 2-5 students
- 13.3% attainment gap between high and low socio-economic classification students

Course D
- 15.1% attainment gap between White and BME students
- 17.9% attainment gap between Quintile 1 and Quintiles 2-5 students
- 3.3% attainment gap between high and low socio-economic classification students

Course E
- 10.2% attainment gap between White and BME students
- 11.7% attainment gap between Quintile 1 and Quintiles 2-5 students
- 1.7% attainment gap between high and low socio-economic classification students

Course F
- 1.1% attainment gap between White and BME students
- 13% attainment gap between Quintile 1 and Quintiles 2-5 students
- 1.3% attainment gap between high and low socio-economic classification students

Course G
- 37.4% attainment gap between White and BME students
- No Quintile 1 students achieved good degrees
- 10.8% attainment gap between high and low socio-economic classification students

Course H
- 4.7% attainment gap between White and BME students
- 24.8% attainment gap between Quintile 1 and Quintiles 2-5 students
- 2.9% attainment gap between high and low socio-economic classification students

Course I
- 17.2% attainment gap between White and BME students
- 2.7% attainment gap between Quintile 1 and Quintiles 2-5 students
- 7.5% attainment gap between high and low socio-economic classification students

Data provided by UAL. Analysed by Juan Batley, Data Analyst Learner Analytics Specialist

University of Arts London - Achieved a good degree (1st or 2:1)						
Courses	**Course A**		**Course B**		**Course C**	
Achieved good degree group	Average five academic years 2012/13 to 2016/17					
	Overall no.	% Good	Overall no.	% Good	Overall no.	% Good
Overall	326	54.8%	554	48.8%	761	56.7%
Quintile 1	15	65.0%	35	43.4%	26	52.8%
Quintile 2,3,4,5	250	57.0%	386	51.0%	412	65.0%
Low Socio-economic classification	64	47.4%	109	52.1%	70	50.0%
High Socio-economic classification	146	61.3%	227	50.1%	257	63.3%
BME	33	40.3%	44	40.3%	101	37.2%
White	112	57.9%	166	51.0%	293	67.5%
Male	112	47.3%	216	44.0%	182	54.7%
Female	214	58.3%	338	51.5%	578	56.5%
Age <21	114	31.6%	230	23.0%	272	31.7%
Age >21	212	56.6%	324	53.1%	489	58.1%

Withdrawals	Average three academic years 2013/14 to 2015/16					
	Overall no.	% Withdrawals	Overall no.	% Withdrawals	Overall no.	% Withdrawals
Average % of withdrawals from new entrants	19	4.3%	22	3.1%	21	2.2%
BME (% of total)	5	26.3%	3	13.6%	4	19.0%
Quintile 1 (% of total)	2	10.5%	4	18.2%	0	0.0%
	Total	Average per year	Total	Average per year	Total	Average per year
Number of withdrawals each year	19	6	22	7	21	7

University of Arts London - Achieved a good degree (1st or 2:1)						
Courses	Course D		Course E		Course F	
Achieved good degree group	Average five academic years 2012/13 to 2016/17					
	Overall no.	% Good	Overall no.	% Good	Overall no.	% Good
Overall	448	73.5%	428	54.0%	281	64.9%
Quintile 1	26	59.1%	32	61.7%	17	76.0%
Quintile 2,3,4,5	329	77.0%	290	50.0%	228	63.0%
Low Socio-economic classification	100	78.2%	99	52.2%	44	62.8%
High Socio-economic classification	193	81.5%	172	53.9%	145	64.1%
BME	37	63.0%	23	45.0%	36	63.9%
White	271	78.1%	180	55.2%	238	65.0%
Male	185	70.4%	143	54.5%	102	62.4%
Female	262	76.3%	285	53.7%	179	66.3%
Age <21	177	66.1%	145	46.9%	107	46.7%
Age >21	271	73.1%	283	50.5%	174	67.8%

Withdrawals	Average three academic years 2013/14 to 2015/16					
	Overall no.	% Withdrawals	Overall no.	% Withdrawals	Overall no.	% Withdrawals
Average % of withdrawals from new entrants	18	3.2%	20	3.7%	13	3.6%
BME (% of total)	5	27.8%	3	15.0%	2	15.4%
Quintile 1 (% of total)	0	0.0%	3	15.0%	2	15.4%
	Total	Average per year	Total	Average per year	Total	Average per year
Number of withdrawals each year	18	6	20	7	13	4

University of Arts London - Achieved a good degree (1st or 2:1)						
Courses	Course G		Course H		Course I	
Achieved good degree group	Average five academic years 2012/13 to 2016/17					
	Overall no.	% Good	Overall no.	% Good	Overall no.	% Good
Overall	229	37.6%	1,925	69.0%	2,013	52.8%
Quintile 1	1		54	50.2%	57	48.3%
Quintile 2,3,4,5	99	54.0%	1,297	75.0%	1,145	51.0%
Low Socio-economic classification	30	62.1%	265	71.1%	359	46.5%
High Socio-economic classification	48	51.3%	798	71.0%	620	54.0%
BME	115	19.5%	435	55.6%	924	43.5%
White	95	56.9%	1,344	73.5%	994	60.7%
Male	102	41.3%	601	71.4%	791	50.0%
Female	127	34.7%	1,321	68.0%	1,221	54.4%
Age <21	74	16.2%	716	69.8%	818	46.9%
Age >21	155	38.1%	1,209	67.9%	1,195	53.6%

Withdrawals	Average three academic years 2013/14 to 2015/16					
	Overall no.	% Withdrawals	Overall no.	% Withdrawals	Overall no.	% Withdrawals
Average % of withdrawals from new entrants	12	4.1%	40	1.7%	108	4.1%
BME (% of total)	5	41.7%	5	12.5%	36	33.3%
Quintile 1 (% of total)	1	8.3%	1	2.5%	6	5.6%
	Total	Average per year	Total	Average per year	Total	Average per year
Number of withdrawals each year	12	4	40	13	108	36

Quantitative

UAL Students

As post-intervention data is still being collected at the institution, the initial data analysis will focus on the pre-survey responses at the University of the Arts London (UAL). Data was collected from 210 first-year undergraduate students across three colleges with a mean age of 20.45 (SD Age = 4.24 years; Min Age = 18 years; Max Age = 48). Information regarding their gender, ethnicity and POLAR was collected via the central student records and can be found in Table 1. Participation of Local Areas (POLAR) classification (Quintile 1-5) was used as a place-based measure of educational disadvantage that classifies local areas according to the participation rate of young people in higher education (HEFCE, 2017). Ethnicity was recoded into binary variables White British and BAME British (including all other ethnic origins) respectively.

Gender	M= 53; F=149; Unknown= 8
Ethnicity	White= 105; BME= 40; International and Unknown= 65
Polar	Quintile 1= 11; Quintile 2-5= 135; International and Unknown= 64

Table 1: UAL Student demographic information

Implicit Theories of Intelligence (IToI) were measured using four items from Dweck's (1999) Theories of Intelligence Scale. Although Dweck's original scale includes eight items (four entity theory questions and four incremental theory questions), given the length of the survey and the students' involvement in a longitudinal study, Dweck (1999) recommends using the entity-only scale as these are less likely to suffer from social desirability and repetition effects.

Participants responded using a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree) for each item. IToI scores were computed by combining scores from each of the four questions, with higher scores indicating more of an entity theory of intelligence. Below shows the students IToI scores broken down into quartiles.

58.6% 4-7	32.4% 8-11	9% 12-15	0% 16-20

Growth Mindset　　　　　　　　　　　　　Fixed Mindset

Table 2: Sum of UAL students' Dweck scores broken down into quartiles

Table 2 highlights that across the pilot colleges at UAL, most students hold a more growth mindset (91%) than a fixed mindset (9%). This was further confirmed by the Implicit Theory of Intelligence Scale (ITIS – El-Fattah & Yates, 2006) which showed that 93.8% of students held incremental (growth) mindsets.

When the scores from Dweck's scale were broken down to focus on the project's two target populations (BME and POLAR1 students) we can see that 95% of BME students have a growth mindset along with 93.3% of white students (see Table 3 and Table 4). Similarly, 100% of Quintile 1 students hold a more growth mindset compared to 92.6% of students from Quintile 2-5 (see Table 5 and Table 6).

65% 4-7	30% 8-11	5% 12-15	0% 16-20

Growth Mindset　　　　　　　　　　　　　Fixed Mindset

Table 3: Sum of UAL's BME students Dweck scores broken down into quartiles

62.9% 4-7	30.4% 8-11	6.7% 12-15	0% 16-20

| Growth Mindset | | Fixed Mindset | |

Table 4: Sum of UAL's white students Dweck scores broken down into quartiles

63.6% 4-7	36.4% 8-11	0% 12-15	0% 16-20

| Growth Mindset | | Fixed Mindset | |

Table 5: Sum of UAL's Quintile 1 students Dweck scores broken down into quartiles

63% 4-7	29.6% 8-11	7.4% 12-15	0% 16-20

| Growth Mindset | | Fixed Mindset | |

Table 6: Sum of UAL's Quintile 2-5 students Dweck scores broken down into quartiles

In addition, the project utilised a measure that has been implicated in the bias-reducing process, including prejudice-relevant discrepancies, and concern about discrimination in society (Devine et al., 2012). Participants responded on a slider scale from 0 (strongly disagree) to 100 (strongly agree) for twenty-six items with scores being computed to create sub-scales of creating inclusion, overcoming bias and stereotype beliefs. Correlations between the IToI, ITIS and Devine scale produced the following statistically significant findings:

- Fixed mindset negatively correlated with creating inclusion ($r = -0.301$, $n = 210$, $p = 0.000$), however, positively correlated with stereotype beliefs ($r = 0.215$, $n = 210$, $p = 0.002$). This suggests that those who hold fixed mindsets at UAL are more likely to have stereotypical thoughts and beliefs and less likely to want to create inclusion and overcome biases
- A growth mindset correlated positively with creating inclusion ($r = -0.227$, $n = 210$, $p = 0.001$) suggesting that those who have a more growth mindset at UAL are more likely to want to create inclusion.
- Creating inclusion also correlated positively with overcoming bias ($r = 0.386$, $n = 210$, $p = 0.000$). In addition, creating inclusion and overcoming bias subscales both negatively correlated with stereotype beliefs ($r = -0.304$, $n = 210$, $p = 0.000$; $r = -0.276$, $n = 210$, $p = 0.000$). This suggests that at UAL, those who are more likely to want to create inclusion are also more likely to want to overcome biases, and moreover, those who are more likely to want to create inclusion and overcome biases are less likely to have stereotypical thoughts.

UAL Staff

Pre-survey data was collected from 38 members of staff across the institution (Male = 16, Female = 16; Preferred not to say = 6). The majority of staff came from a white (home/EU) background (81.6%) while 7.9% were BAME (home/EU).

The staff similarly responded to the IToI, ITIS and Devine scale. Table 7 shows the UAL staff's IToI scores broken down into quartiles.

84.2% 4-7	15.8% 8-11	0% 12-15	0% 16-20
Growth Mindset		Fixed Mindset	

Table 7: Sum of UAL staff's Dweck scores broken down into quartiles

Table 7 highlights that the staff members that participated in the pilot intervention at UAL all held a more growth mindset (100%) with no staff member holding a fixed mindset. The ITIS also confirms that all staff members held a more incremental (growth) mindset (100%).

Qualitative

The qualitative data from the one hour student interviews have begun to reveal some trends.

- On the whole, the workshops were engaging, in particular the use of interactive technology and the presentations from student facilitators
- The survey was thought-provoking
- Students from College A and C called for the project to be embedded within the curriculum delivery
- Most students found that mindset theory affirmed previous knowledge and current experiences of challenge, risk and failure, particularly in context of art and design practice
- The implicit bias and stereotype threat workshops and curriculum delivery was perceived as educational and beneficial to build a sense of community
- Students made connections between the project and their art practice with ease

The initial findings from staff focus groups show that:

- In each group there was a passionate response to student attainment, the importance of it and the sense of responsibility that staff carry in relation to it
- There is an inconsistency of understanding about the attainment gap across the colleges including misrecognition about colour, class and race
- Staff from College A are interested in how to make the project more relevant to their discipline context
- Staff would like clearer strategies that they can implement in their teaching
- The workshops where staff collaborated and/or presented to staff from other colleges was seen as particularly beneficial
- A positive response was made when the workshops were aligned with other staff interests (assessment practice) and university initiatives (Creative Attributes Framework)

Looking Ahead

Plans for Cohort 1 Data Collection

As of the 1st May 2018 we had collected:

Staff pre-intervention surveys
UAL College A - 24
UAL College B - 14
UAL College C - 19

Students pre-intervention surveys
UAL College A - 136
UAL College B - 77
UAL College C - 73

Staff post-intervention surveys (at 1/5/18)
UAL College A - 5
UAL College B - 9
UAL College C – 6
Other - 2

Student post-intervention surveys (at 1/5/18)
UAL College A - 62
UAL College B - 18
UAL College C – 18
Other - 4

Student interviews – Total 14
UAL College A- 7
UAL College B - 3
UAL College C - 4

Staff focus groups - 3 (Total 9 staff)
UAL College A – 5 staff
UAL College B – 3 staff
UAL College C – 1 staff

Plans for further data collection include to finalise one more focus group to be hosted at College C.

Another round of email reminders for staff and students for post-intervention surveys.

Personalised invitations to staff to complete the surveys.

Plans for intervention delivery cohort 2

Last year, UAL appointed Academic Enhancement Model (AEM) leads who are working as a university team but embedded at college level. AEM is a framework that supports evidence based discussion to improve undergraduate student experience. For cohort 2 delivery, Changing Mindsets will become part of an offer of assessment interventions, teacher development interventions and curriculum interventions that can be selected by course teams to target specific needs.

College A
- Project Associate, AEM Lead and Associate Dean identifying course needs and beginning to timetable workshops.
- Cohort 1 course have expressed a wish to continue with student workshops.

College B
- Project Associate, AEM Lead and Associate Dean identifying course needs and beginning to timetable workshops.
- 12 x 1.5 hour induction sessions have been booked with students to be run over 2 weeks to target 23 courses. This will reach 1,300 students.
- CTS and PALS to continue delivery.
- Implicit Bias and Stereotype threat workshops to be delivered with students and staff together.

College C
- Project Associate, AEM Lead and Associate Dean identifying course needs and beginning to timetable workshops.
- Cohort 1 courses to continue and to add original programme that did not continue

College D
- Project Associate, AEM Lead and Attainment Practitioner identifying course needs and beginning to timetable workshops.
- College D, School 1: Changing Mindsets workshop booked for Staff Away Days on 12th July and 6th September

To deliver across the colleges, staff and students will be trained to facilitate workshops and embed the work within colleges and course teams. The Project Associate will advertise for participants and approach all those who have been involved in Cohort 1 and schedule training sessions in June and September.

Engagement

UAL Attainment Conference, July 2018
Workshop

ELIA biennial 'Resilience and the City: Art, Education, Urbanism'
Rotterdam, November 2018
Changing Mindsets: developing Growth Mindsets to address inequality and inclusivity in art and design higher education
http://www.elia-artschools.org/activities/biennial-conference/theme

Project Associate has submitted a bid for 2020 (an ArtsTemps initiative for 20 hours funded work by a UAL ArtTemp) to design and produce printed materials that can be used in the workshops

Online Showcase of student work (current submission rate is low), but student panel had expressed an interest in a physical exhibition

UNIVERSITY OF BRIGHTON

Introduction by Professor Gina Wisker

Being part of the OfS-funded Changing Mindsets project has been both exhilarating and enlightening, and an opportunity that we were keen to be involved in. The project has enabled us to engage staff and students right across our institution in ways that we never anticipated in the beginning. The growth mindset theme has especially engaged staff from a range of occupations within the University who have been enjoying this additional opportunity for personal and professional development. Through their engagement, we can see the beginnings of a culture change initiative emerging. Staff in a range of positions, from senior leaders, to professional services, to the Students' Union, wellbeing, and academic staff among many other groups have volunteered to attend workshops, enthusiastically spread the word, and have got their colleagues involved.

Some 485 students have directly taken part in the Changing Mindsets workshops and have actively engaged in exercises designed to stimulate reflection and discussions. Other students have indirectly experienced the project through our peer assisted learning scheme (PASS). Jenny and Catherine, the workshop facilitators here at Brighton have been amazed at the insights students have brought to the workshops and their willingness to share experiences and 'lightbulb' moments! The workshops have seen some realisations about fixed-mindsets which, at times, have been emotional for individuals to acknowledge but they have been reassured by their new understanding that there are alternative ways of thinking. Staff and students have also had the opportunity to join a one-to-one or paired interview with our dedicated Research Fellow, Jennie Jones, allowing them to explore the intervention themes in further depth through their own narrative journey.

As an institution we are deeply committed to this important work that tackles the disparity of differential outcomes for disadvantaged groups head on, disparity that is clear from the institutional data across the partner institutions. We consider our participation in the Changing Mindsets project to be the start of our journey toward a clearer understanding of the attainment gap and the systemic and structural factors that contribute to disadvantage. We are also looking forward to embedding a sustainable Changing Mindsets intervention so that we can continue to try and reduce the effect that implicit bias and stereotype threat can have upon our students' outcomes. We remain ambitious in our aim to use this project as a platform to raise awareness of how these issues can stand in the way of student success.

Professor Gina Wisker
Professor of Contemporary Literature and Higher Education

Why University of Brighton

The Changing Mindsets project at Brighton supports the University's strategy 'Practical Wisdom' for 2016-2021. In the strategy, we set out our commitment to enhance the quality of all we do, invest in our futures, and enable the talents of our staff and students. By introducing this OfS Catalyst funded project at Brighton, we are supporting the translation of these goals into reality by encouraging our participants at the University to flourish and realise their full potential.

University of Brighton's Practical Wisdom

To this end, we have embedded the Changing Mindsets project into existing programmes to enable many staff and students to become involved. For students, we train the peer leaders on our PASS (Peer Assisted Study Sessions) scheme to deliver the Changing Mindsets workshops to first year students, as well as integrating it into existing modules where Schools do not run PASS. New academic staff have the opportunity to take the Mindsets workshop when they study the PG Cert in Learning and Teaching and Course Leader Course, and we have introduced a comprehensive programme of staff-facing workshops across the University to enable all staff access to the programme. We are excited to be delivering an intervention that not only targets students, but also emphasises the role staff can play in impacting students' attitudes to learning. This supports the University's commitment to involve everyone in the delivery of the 2016-2021 strategy, whilst still realising the desire to "put students at the heart of all we do".

By integrating Changing Mindsets into existing University structures, we have established the sustainability of the programme for the longer-term. Alongside the roll-out of the workshops, our team is working hard to raise awareness of the project across the institution. We have made connections with our Student's Union, the Equalities and Diversity Team, the Deputy Heads for Learning and Teaching, Student Support teams, Human Resources, and many others. In doing so we are further supporting Brighton's commitment that the Strategy's aims be actively inclusive. We recognise and encourage the diversity of our student body, and of our staff, and wish to enable a wide range of people to make the most out of their time with us. By running the Changing Mindsets project, we are enhancing our existing staff training that actively promotes equality and inclusivity.

We are also making use of new and innovative technologies to deliver the programme, as per Brighton's commitment to flexible modes of learning. Some students have already had the opportunity to take an online course and we are currently expanding this offering so it is available to staff, meaning everyone can

participate at a time and place convenient them. In this way, we recognise the need for people to fit the training in around existing commitments, and hope that this will enable more people to engage with the project.

Brighton is proud of its commitment to inclusivity and equality and, with Changing Mindsets, we are excited to be contributing to this key element of our strategy.

Intervention Story

Our Approach to Student and Staff Engagement

Student Workshops

Our approach to delivering the intervention to students evolved throughout the course of the first year as we adapted to overcome challenges, meet changing needs, and respond to increased interest in the scheme. We began with a fairly structured peer-mentor based system which included the majority of the Schools in the University but soon added in additional staff-led sessions to accommodate further interest from the School of Heath Sciences and the School of Applied Social Science in particular. The following outlines these contrasting approaches in more detail.

PASS

At the end of September, 2017, we launched Changing Mindsets at the University of Brighton at our PASS (Peer Assisted Study Sessions) Training Conference. This saw 91 new PASS Leaders receive an hour-long Changing Mindsets training workshop. Leaders also took part in a simulated PASS activity whereby they produced models to represent neuroplasticity. Leaders received additional guidance in their PASS workbooks (figures 1 & 2) and their PASS strategy cards (figure 3) which they could use to aid the development of growth mindset activities with their groups. This training was followed up by an hour-long online session which we developed using Nearpod. These PASS Leaders were then asked to run a one-hour Changing Mindsets session with their PASS students in Semester 1 which aimed to reach approx. 600 first-year students.
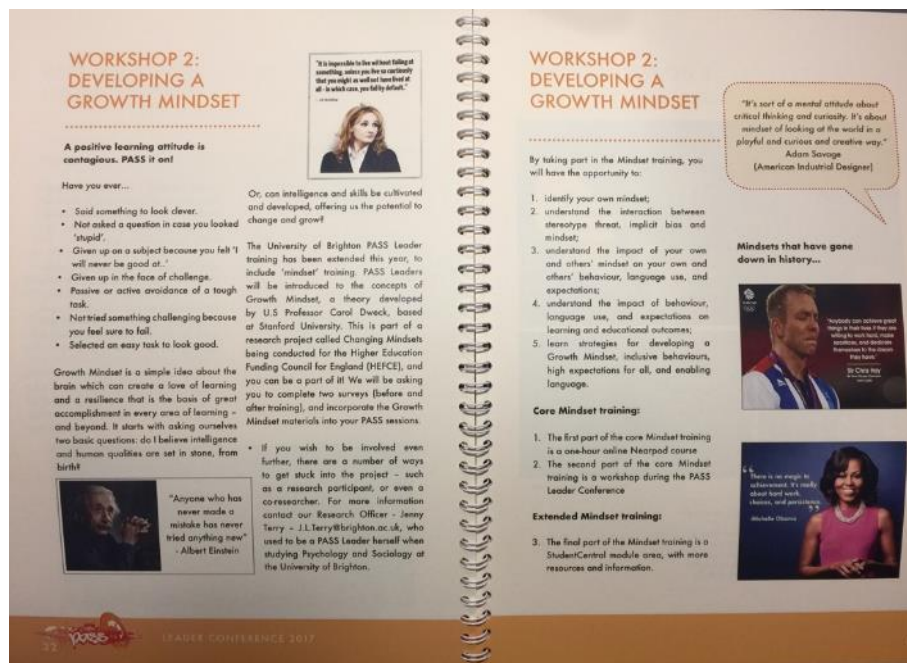
Figure 1: PASS Leader Training Workbook

The training sessions provided information on growth mindset (Dweck, 2017) theory and research before introducing them to practical tools that they could use to a) help develop growth mindsets in their students (and themselves) and b) run their own Changing Mindsets workshops. The workshop introduced them to these factors but also served as an example intervention for them so they could see what a Changing Mindsets workshop would look like. The online training refreshed the main points but also extended them by adding additional research, examples, and activities.

The practical tools we aimed to provide included an understanding of how the language they used when giving feedback and praise can motivate or demotivate students to learn optimally, how to encourage working smarter (i.e. using different strategies) not harder (i.e. repeating the same, perhaps faulty, strategies over and over), how they can be role models for students by making their own learning journeys' visible (essentially, letting them know, for example, that they too struggled to grasp a concept but got there in the end), and how, by explaining neuroplasticity, just at a simple level, students are more likely to believe that intelligence is malleable, not fixed.
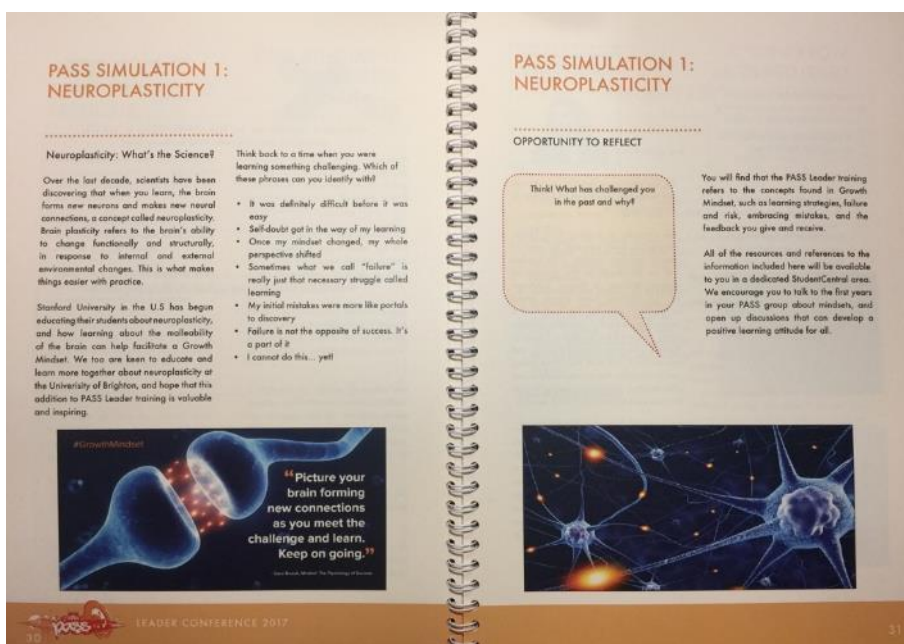
Figure 2: PASS Leader Training Workbook

We also gave practical guidance on how to organise and run the session. As one of the fundamental guidelines of PASS is that PASS Leaders do not teach but facilitate, we felt it was important that they were not responsible for delivering information about the different concepts. As such, we provided a session plan which included several short video clips followed by suggestions as to how the PASS Leaders may like to facilitate a discussion around each point. They were also encouraged to use their strategy cards (figure 3).
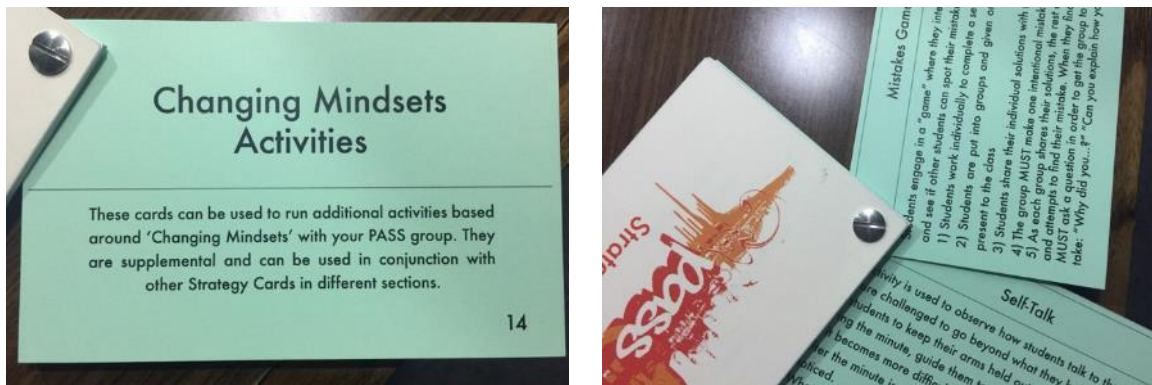
Figure 3: PASS Leader Strategy Cards

It is important to note that we decided not to ask the PASS Leaders to include anything about unconscious bias or stereotype threat in their sessions as we felt it required more specialist training that we were unfortunately not in a position to provide. This decision was also a practical one, as it meant that, with limited time to train Leaders and for them to run their sessions, we could better ensure that the students had a deeper understanding of growth mindset concepts, theorised to help overcome biases and stereotype threat, rather than a surface understanding of all elements combined.

Figure 4: Our 2017/18 PASS Leaders and Changing Mindset Mentors

Having reflected back on this system and the training provided, a number of key points to consider going forward have been identified. Overall, running Changing Mindsets on a peer-mentoring scheme in itself may work well, but for us at Brighton, it did not. The feedback from students and other stakeholders has suggested that this is because a) the scheme is very large and geographically diverse at Brighton (over 130 PASS Leaders across eight Schools on four separate campuses) which meant that gaining buy-in from and communicating with Leaders was problematic as there was little opportunity to build personal relationships or even meet many of the Leaders in person. Secondly, the PASS Leaders were already subscribed to a lot of training for their roles, both in-person and on-line, and many felt that the additional training – which, they did not know about when they first signed up – was too much. Those students that attended the training said that they found it really useful and engaging and those that did go on to run workshops with their students report that their

students reaped the same benefits. It may also be of interest to know that the highest level of engagement with the Changing Mindsets programme embedded in PASS came from students in School D.

Going forward, it is unlikely that we will try and run the programme through PASS in this way next year. There is a plan to deliver a workshop at their training conference, however, so that they can still use some of the practical tools to help develop growth mindsets in their students. We would argue that there is still a case for having 'Changing Mindset Mentors', that is, a smaller number of students that are recruited and trained especially for delivering this intervention to other students and can develop a close working relationship with a staff supervisor. This would, of course, require financial support and, at present, there are no plans to implement this at Brighton. As you will come to read, however, we are in the process of developing cost-neutral resources so that the student (and staff) interventions are sustainable.

It is also important to note that we had the opportunity to trial Changing Mindsets in PASS as the scheme is run by the same team, Student Academic Success and Partnership, in the Centre for Learning and Teaching.

Through PASS, the intervention reached 91 PASS Leaders, plus an estimated 100 first-year students attending PASS (although we cannot guarantee this figure due to some of the challenges identified previously).

School B

Jenny Terry and our Operational Lead, Catherine McConnell, put together and ran one 1.5 hour long interactive workshop, for each of the two groups (figure 5). The first was for all the psychology students (approx. 250 invited, 90 attended) and the second for all non-psychology SASS students (sociology, criminology, politics, social policy; approx. 200 invited, 80 attended). We used Nearpod to include several interactive quizzes and activities which students took part in via their smart phones.

These sessions made use of the same content and materials that had been used in the PASS Leader sessions, albeit tailored to an indifferent audience.

Figure 5: Changing Mindsets Student Workshop in School B

Running the session worked well, overall. Some students disengaged part way through but we felt that this was to be expected for an optional session late on a Friday afternoon. The majority, however, stayed throughout and many commented on how useful and interesting it was (comments such as this were common in all sessions we ran). In hindsight, however, we achieved much deeper engagement when we ran this with smaller student groups. To speculate, this could be because in smaller groups students were more likely to 'speak up' and discuss their own mindsets etc. which, in turn, encourages the kind of discussions that elicit a richer appreciation of the topics. Whilst this did occur to some degree in these large group sessions, conversation was certainly more stifled.

School E

In School E their Deputy Head for Learning and Teaching has been on board and championed the project since we launched it at our Annual Teaching and Learning Conference in July 2017. She was keen to run both staff and student workshops through the School and helped put us in touch with the right people to make this happen.

As a result, we have been able to run an additional series of workshops, engaging students across all year groups on a variety of courses. We also had the opportunity to run a series of slightly shorter sessions with smaller groups at the Interprofessional Education Conferences which are run for level 5 and 6 students to gain interdisciplinary insights into professional practice. Whilst the small group sizes may not have given us the reach we aimed for initially, we argue that this was a favourable trade-off with increased engagement and the opportunity to offer more personal, tailored workshops.

The content of the workshops was the same as the previous ones, with two exceptions. First, we focussed the sessions on areas of interest to the students' courses. For example, we asked questions about stereotypes and

biases in their specific professions. Second, we also decided that, for these smaller groups we would introduce the stereotype threat and implicit bias training as well. This was partly due to having the time and opportunity to have a full discussion, and therefore, debrief, about it with students but also because they were being run by trained staff.

In total, 124 students from School E attended one of the workshops.

We delivered Changing Mindsets to an additional cohort of 9 postgraduate students who aimed to take this learning into the clinical work setting.

We have also been asked by School E to run three further staff-facing sessions in 2018

Figure 6: School E student workshop

School G

The Deputy Head for Learning and Teaching in School G approached us, having attended a Changing Mindsets staff mini-workshop at the Widening Participation Action Team briefing in September 2017. The request was for us to deliver a 1.5 hour workshop to level 6 (final year) students on two courses within the School. There was a recognised need that the students from one course could benefit from the Changing Mindsets intervention in the context of their modules, specifically to encourage confidence in presenting their work to future employers. Students from the other course received the workshop in the context of their final major project briefings, as it had been recognised by the Course Leader that they were experiencing a level of anxiety that might be reassured through the opportunity to talk about mindsets and to reflect on their learning.

Both workshops were delivered in partnership by a member of the Changing Mindsets team, and the Wellbeing Development Curriculum Manager based in Student Services. The content extended the Changing Mindsets materials to include the topics of 'resilience' and 'time management planning'.

School I

A module leader who is also part of the PGCLTHE approached us to deliver a workshop with level 5 students studying. The idea was to integrate Changing Mindsets into their preparatory module before they embarked on a 12-week work placement. We delivered a 1.5 hour workshop to 17 students, bringing in some employability themes and basing some of the activities around reflection on starting new projects, meeting new people, and feelings of stereotype threat when in new situations. The students engaged well and offered positive feedback within the session. We plan to hand-over the Changing Mindsets materials to the module leader, who observed our session, in order that she can deliver this as part of the core curriculum in future.

Wellbeing Workshops

Another early-adopter and champion of the Changing Mindsets project at Brighton is our Wellbeing Development Curriculum Manager (WDCM). Whilst we are not counting this towards our intervention targets, we feel it prudent to highlight that, having helped run our PASS Leader training the WDCM, after consultation with us, added in approximately 15-20 minutes' worth of growth mindset materials into their student wellbeing workshops. These workshops are run by the WDCM upon invitation from the Schools and have the potential to reach thousands of students.

Staff Workshops

Not dissimilar to the approach we took with students, the staff workshops have been run in both a structured and an ad-hoc opt-in approach in order that we could evaluate both approaches. The intervention has been embedded onto our Postgraduate Certificate in Learning and Teaching in Higher Education (PGCLTHE) and on our Course Leaders Course and we have run a series of workshops which were advertised broadly and attracted a wide audience.

The staff workshops were designed to last for 2.5 hours in total (some very slightly shorter so discussion time was reduced) and were broken down into two parts. The first had a focus on the theory and research. There was an emphasis on growth mindsets elements but, unlike the early student workshops, also included some of the theory and research on implicit bias and stereotype threat and showed how they are theorised to interlink. The second part of our workshops were developed to give staff practical tools that they could use with students to help encourage growth mindsets. These tools included: reframing / creating a safe space for mistakes, feedback and praise, role modelling, and encouraging the use of a range over strategies over effort alone, many of which were demonstrated during the session. For example, we asked staff to complete a 'KWL' (Know, Want to Know, Learned) wall (figure 7), whereby, at the beginning of session they filled in post-it notes telling us what they already knew about mindset theory (Know) and what they wanted to find out about it in the session (What). At the end of the workshop, they completed a final post-it note with details of what they had learned (Learned). This demonstrated a quick activity that can help students to make their progress salient with the aim of developing and reinforcing growth mindsets.
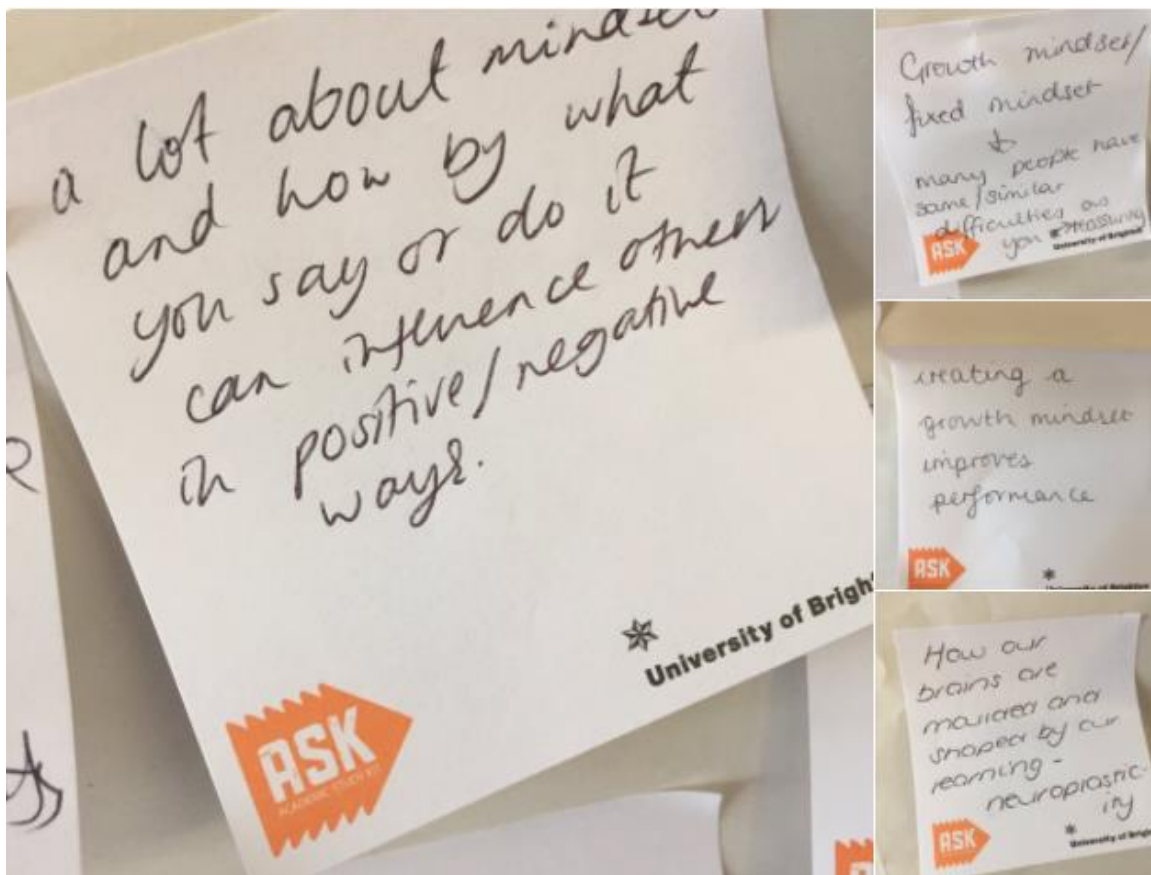
Figure 7: KWL Wall

Anecdotal feedback from these sessions was overwhelmingly positive, with the majority of staff openly engaging with the concepts and discussing how they will implement some of these solutions in their practice. We saw this as the most crucial element of our staff intervention – leaving attendees with simple but impactful strategies that they would be likely to take forward – but it also transpired to be something that many staff commented they were hoping they'd be able to take away from the sessions, when asked at the beginning.

PGCert Learning and Teaching & Course Leaders Course

26 staff attended the first of our Changing Mindsets staff workshops in October 2017 as part of their PGCLTHE and 15 attended a session as part of our Course Leaders Course in November 2017 (although, 11 of these were recruited through an open invitation – see Open Workshops section below).

Again, our ability to embed staff workshops onto these courses stemmed from existing relationships with the course leaders. It is again worth highlighting that the Changing Mindsets project at Brighton has benefited from being housed in a central team that runs staff training. Whilst this isn't essential, it has enhanced the ease and speed with which we have been able to introduce it.

Open Workshops

We also ran three series of opt-in workshops, each series with one workshop at each of our Falmer, Moulsecoomb, and Eastbourne campuses. We aimed to run these at different times in the academic calendar (i.e. some during term time and others during the breaks) to try and accommodate as many staff as possible. These were advertised centrally using our staff intranet and were also picked up and advertised by our central communications team. However, many of the staff who attended reported that they had been recommended

the workshops by management, suggesting that senior-level buy-in is fundamental to the success of these kinds of interventions.

110 staff signed up to these workshops and 63 attended.

Specialist Workshops

A small workshop was also run for six members of School B that teach research methods and statistics. The session included all of the main elements of the regular staff workshops but they were tailored to emphasise how growth mindsets may benefits students learning this topic. For example, the importance of overcoming statistics anxiety was discussed and staff shown how some of the growth mindset tools may help alleviate some of that anxiety. Whilst difficult to do on a large scale for practical reasons (it takes time and subject knowledge to successfully adapt every session), it is worth noting that where we have been able to do this, anecdotal feedback from the workshops highlight that staff appreciate us making some of the connections for them and showing how it can benefit their specific students. Going forward, we are looking to implement a 'train the trainer' programme whereby staff will be able to adapt the materials for their discipline, although primarily for use with their students.

"I'm just not a statistics person."

- Statistics anxiety arises from belief they can't do it & most UG students say they're just not a 'statistics person'.
  (Onwuegbuzie & Wilson, 2003)
- Mathematics has historically utilised a talent-driven approach.
  (Good, Rattan, & Dweck, 2012)
- A stereotype exists that males are more capable than females.
  (Dweck, 2008; Good et al., 2012)
- Are you a 'statistics person'? Is there such a thing?
- This kind of binary thinking reinforces fixed mindsets beliefs.

@MindsetsProject

Figure 8: A slide from the Research Methods version of the Changing Mindsets workshop

Our Approach to Research & Evaluation

Student Research & Evaluation

Pre-Survey

All students were sent the pre-survey prior to attending our workshops. Where possible, this was done around a fortnight in advance to allow students time to complete the surveys and was followed up with a reminder email. Students were offered a £5 Amazon voucher as a 'thank you' for taking part.

How the survey was communicated to students varied, depending on how the workshops had been organised. Specifically, PASS Leaders received the invitation via email, PASS attendees should have received an email forwarded on to them by the PASS Supervisors in their School (but it is unclear to what extent this happened in practise), School B students were made aware via Student Central (VLE), and students in School E and other ad-hoc sessions were forwarded the invitation via course staff. None of these approaches stood out as being more successful than others.

Engagement with the pre-survey was fairly good with 164 completions.

Post-Survey

To date, there has been limited engagement with the post-survey. However, at the time of writing, we are yet to invite students that took part in our April workshops to take part. This is because we want to ensure there was an approximately equivalent lead time between the workshop and the post-surveys of at least 8 weeks. Despite this, there has been a very low response rate from those students who have already been invited (10 out of approximately 300 that have attended workshops). Students are being offered a £10 Amazon voucher to take part in the post-survey as we had hoped the higher value (compared to the pre-survey) would help compensate for attrition.

Student Interviews

At Brighton, we took a narrative approach to our student (and staff) interviews, combining the main topics with some additional questions which formed our peripheral project. The full aims, methodology, and data collection method are outlined below, along with tentative themes and conclusions, in the initial data analysis section.

Students were recruited via e-mail, sent out either by our Research Officer or Research Lead after attending a workshop and provided with a £10 Amazon voucher as a 'thank you' for taking part.

We aimed to interview a minimum of 15 students before the end of the academic year. To date, 11 student interviews have been completed.

Staff Research & Evaluation

Pre-Survey

Staff were invited to take part in the pre-survey either via their course leader (in the case of the PGCert and Course Leaders Course), upon signing up to the opt-in workshops via the Google Form, or via an email invitation sent to registered attendees following sign-up. Response rates were fairly good, with 60 staff members completing the survey.

Post-Survey

Staff were invited to take part in the post-survey via email, approximately 8 weeks after their workshops. To date, 10 staff members have completed the post-survey. As was the case with the student post-survey, response rates were low but there is another round of invites due to go out to staff that attended our April workshops as well as reminders to others.

Staff Interviews

Staff were initially invited to take part in focus groups but these proved very problematic as we couldn't get enough staff to be available on the same campus at the same time. It has since been agreed that we can instead run individual or small group interviews instead. To date, we have interviews with 4 staff members but with a plan to focus on increasing the sample after the end of term, when most staff will be free from teaching responsibility and therefore, have more time. Again, more detail on the methodological approach and data collection methods are included in the initial qualitative findings section below.

Institutional Attainment & Outcome Data

In addition to the student and staff surveys and interviews, we have also provided the Lead Institution with the attainment and outcome data for the Schools that have taken part in the intervention in cohort one. The data has been processed by the project's Learner Analytics Specialist. Table 1 provides a summary of the attainment gaps for each (anonymised) School for the five academic years (combined) prior to the beginning of this project in 2017.

Table 1: *The percentage of students in each School achieving a good (2:1 or First) degree by demographic from 2011 – 2016.*

School	Overall	Quintile 1	BME	White	Female	Male	Age <21	Age >21
A	43.6	40.8	30	51.1	42.6	44.7	63.9	16.6
B	36.8	36	28.7	51.1	32.1	38.3	56.2	19
C	39.2	43.3	26.4	46.5	39.5	37.6	50.3	24.1
D	26.9	28.2	16.5	28.5	18.4	29.8	69.3	13.9
E	31.9	27.5	14.4	33.7	27.3	32.8	52.8	27.3
F	57.2	56.4	31.8	61.3	53.7	58.9	70.7	30.7
G	63	62.2	36.5	65.8	61	64	70.5	46.6
H	50.4	52.4	39.2	56.1	46.4	53.2	66.8	29
I	46.5	46.5	24.4	49.1	45.2	47.6	59.6	27.3

Summary

At the University of Brighton, we have run workshops with 101 staff and 485 students. The number of students we have engaged is less than we had hoped due to the low uptake through the PASS scheme but we still consider the scheme a success. The project has been well-received throughout the institution and we have established a high level of support throughout many academic Schools as well as central departments. We look forward to building upon this foundation for cohort two, as we begin to embed the programme widely and sustainably.

Embedding the Intervention at UoB

Institutional Project Governance

From the beginning of the project the Operational Project Lead at Brighton has raised visibility of the intervention plan with key stakeholders across the university and the Students' Union. The institution level project governance has been taken forward within an existing cross-university group called the Widening Participation Action Team (WiPAT). This group is chaired by the Director of Education, and directly reports to

the PVC Education and Student Experience. Members of the WiPAT group include Strategic Planning and Projects, Deputy Heads for Learning and Teaching (all Schools), Students' Union President, VP Academic Experience, and VP Welfare and Campaigns, and senior representatives across all Professional Services (e.g. Student Services, Information Services, Careers, Learning Technologies, Centre for Learning and Teaching, Student Support and Guidance). This level of project prominence to influential staff has propelled the project into highly visible areas of strategic work and has contributed to the drive to address race equality and the attainment gap with a focus on institutional cultures, curriculum and pedagogy.

Additional groups which have engaged and requested information and intervention delivery are:

The Student Lifecyle Group (access, recruitment, outreach, success and progression)
The Equality and Diversity team (based with Human Resources)
The Staff Development team (based within Human Resources)
The Centre for Resilience and Social Justice (a cross-university research cluster)
The Student Engagement Group (engagement, partnership, employability)

Embedding Changing Mindsets in 2018/19

The Changing Mindsets project is becoming embedded within key strategic priorities and implementation plans, including:

The Student Retention and Success Framework
The Continuous Leadership Development Programme (e.g. all members of the Leadership team, from Executive Board, Heads of Schools and Departments, Deputy Heads of Professional Services)
The Access and Participation Plan (OfS)

Signposting

The Changing Mindsets project has inspired a number of colleagues and departments where their work resonates and aligns. We have seen many staff and students talk about mental health and resilience, and the connections that can be made with advice and guidance in this area.

To acknowledge this synergy and maximise on the potential for student and staff engagement, we co-authored a blog post with a recent graduate and a Learning Support professional on the role of mindsets and student mental health: http://mindsets.port.ac.uk/?p=1424

Opportunity over obstacles: the role of mindsets and student mental health

Authors: Catherine McConnell, Aidan Davis, and Michelle Butler – University of Brighton We've recently finished another exhilarating round of Changing Mindset workshops for staff here across the University of Brighton. Each workshop stimulating discussions on an exhaustive list of topics and connections

👤 Changing Mindsets   📅 January 30, 2018   🏷 Higher Education, Mental Health, Mindsets Theory
💬 No Comments   [Read more]

The staff within School B also utilised the mindset theories to discuss their experience of students' barriers to learning statistics. The concept of stereotype threat resonated powerfully with this group of academics, and as a result Jenny our Project Officer wrote a blog post on this topic:

Walking the Talk: Using Growth Mindset Strategies on an Introductory Statistics Module

Author: Jenny Terry, Project Officer, University of Brighton As well as our Project Officer roles on the Changing Mindsets project, many of us also teach. This means that as well as promoting the growth mindset approach with other staff, we've

👤 Changing Mindsets   📅 March 12, 2018   🏷 Mindsets Theory   💬 No Comments   [Read more]

In summary, our plans to take Changing Mindsets forward look likely to focus significant efforts on embedding this intervention within staff-facing personal and professional development. For 2018/19 we are working towards a partnership approach with departments wishing to embed the materials, such as Staff Development, Learning and Teaching, the Continuous Leadership Development Programme, and the university-wide staff mentoring scheme.

For the student-facing intervention, we are already working closely with the Wellbeing Curriculum Development Manager, based in the Counselling and Wellbeing Service within Student Services. We also are linking with the Brighton Students' Union 'PEACH' initiative, which stands for Peer Education and Advice for Campus Health, to co-deliver our PASS Leader training including mindsets alongside mental health, resilience, and wellbeing content.

Initial Data Analysis

Pre-cohort Data

School A
- The average attainment gap of a good degree between white and BME students over six years is 21.1% (six year average 51.1% to 30%).
- The average attainment gap between quintile 1 and quintile 2,3,4,5 students is 11.5% (six year average 40.8% to 52.3%).

School B
- The average attainment gap of a good degree between white and BME students over six years is 9.1% (six year average 37.8% to 28.7%).
- The average attainment gap between quintile 1 and quintile 2,3,4,5 students is 1.1% (six year average 36.0% to 37.1%).

School C
- The average attainment gap of a good degree between white and BME students over six years is 20.1% (six year average 46.5% to 26.4%).
- The average attainment gap between quintile 1 and quintile 2,3,4,5 students is 0.3% (six year average 43.3% to 43.0%).

School D
- The average attainment gap of a good degree between white and BME students over six years is 12% (six year average 28.5% to 16.5%).
- The average attainment gap between quintile 1 and quintile 2,3,4,5 students is 0.1% (six year average 28.2% to 28.1%).

School E
- The average attainment gap of a good degree between white and BME students over six years is 29.5% (six year average 61.3% to 31.8%).
- The average attainment gap between quintile 1 and quintile 2,3,4,5 students is 5.6% (six year average 27.5% to 33.1%).

School F
- The average attainment gap of a good degree between white and BME students over six years is 29.5% (six year average 61.3% to 31.8%).
- The average attainment gap between quintile 1 and quintile 2,3,4,5 students is 5.4% (six year average 56.4% to 61.8%).

School G
- The average attainment gap of a good degree between white and BME students over six years is 29.3% (six year average 65.8% to 36.5%).
- The average attainment gap between quintile 1 and quintile 2,3,4,5 students is 2.5% (six year average 62.2% to 64.7%).

School H
- The average attainment gap of a good degree between white and BME students over six years is 16.9% (six year average 56.1% to 39.2%).
- The average attainment gap between quintile 1 and quintile 2,3,4,5 students is 1.6% (six year average 52.4% to 50.8%).

School I
- The average attainment gap of a good degree between white and BME students over six years is 24.7% (six year average 49.1% to 24.4%).
- The average attainment gap between quintile 1 and quintile 2,3,4,5 students is 4% (six year average 46.5% to 50.5%).

Data provided by University of Brighton. Analysed by Juan Batley, Data Analyst Learner Analytics Specialist

University of Brighton - Achieved a good degree (1st or 2:1)						
Schools involved in Changing Mindsets Project	School A		School B		School C	
Achieved good degree group	Average six academic years 2011 to 2016					
	Overall no.	% Good	Overall no.	% Good	Overall no.	% Good
Overall	4,592	43.6%	2,435	36.8%	2,449	39.2%
Quintile 1	404	40.8%	311	36.0%	272	43.3%
Quintile 2,3,4,5	2,924	52.3%	1,981	37.1%	1,591	43.0%
BME	1,325	30.0%	358	28.7%	709	26.4%
White	2,562	51.1%	2562	51.1%	1319	46.5%
Male	2,340	42.6%	589	32.1%	2,009	39.5%
Female	2,252	44.7%	1,845	38.3%	440	37.6%
Age <21	2,615	63.9%	1,148	56.2%	1,393	50.3%
Age >21	1,977	16.6%	1,287	19.0%	1,056	24.1%

Withdrawals	Average six academic years 2011 to 2016					
Schools involved in Changing Mindsets Project	School A		School B		School C	
	Overall no.	% Withdrawals	Overall no.	% Withdrawals	Overall no.	% Withdrawals
Average % of withdrawals	2,770	16.1%	1,142	11.8%	1,918	17.2%
BME (% of total)	1,325	62.9%	192	53.6%	622	87.7%
Quintile 1 (% of total)	256	63.4%	160	51.4%	232	85.3%
	Total	Average per year	Total	Average per year	Total	Average per year
Number of withdrawals	2,770	462	1,142	190	1,918	320

University of Brighton - Achieved a good degree (1st or 2:1)						
Schools involved in Changing Mindsets Project	School D		School E		School F	
Achieved good degree group	Average six academic years 2011 to 2016					
	Overall no.	% Good	Overall no.	% Good	Overall no.	% Good
Overall	5,042	26.9%	4,740	31.9%	2,243	57.2%
Quintile 1	698	28.2%	737	27.5%	227	56.4%
Quintile 2,3,4,5	3,967	28.1%	3,674	33.1%	1,739	61.8%
BME	409	16.5%	584	14.4%	263	31.8%
White	4465	28.5%	3999	33.7%	1784	61.3%
Male	1,258	18.4%	781	27.3%	734	53.7%
Female	3,780	29.8%	3,959	32.8%	1,509	58.9%
Age <21	1,137	69.3%	844	52.8%	1,488	70.7%
Age >21	3,905	13.9%	3,896	27.3%	755	30.7%

Withdrawals	Average six academic years 2011 to 2016					
Schools involved in Changing Mindsets Project	School D		School E		School F	
	Overall no.	% Withdrawals	Overall no.	% Withdrawals	Overall no.	% Withdrawals
Average % of withdrawals	2,136	14.2%	2,543	8.8%	2,019	90.0%
BME (% of total)	249	60.9%	398	68.2%	359	136.5%
Quintile 1 (% of total)	292	41.8%	446	60.5%	203	89.4%
	Total	Average per year	Total	Average per year	Total	Average per year
Number of withdrawals	2,136	356	2,543	424	2,019	337

University of Brighton - Achieved a good degree (1st or 2:1)						
Schools involved in Changing Mindsets Project	School G		School H		School I	
Achieved good degree group	Average six academic years 2011 to 2016					
	Overall no.	% Good	Overall no.	% Good	Overall no.	% Good
Overall	1,107	63.0%	2,231	50.4%	3,627	46.5%
Quintile 1	102	62.2%	229	52.4%	295	46.5%
Quintile 2,3,4,5	870	64.7%	1,538	50.8%	2,308	50.5%
BME	109	36.5%	878	39.2%	450	24.4%
White	887	65.8%	963	56.1%	2650	49.1%
Male	474	61.0%	912	46.4%	1,458	45.2%
Female	633	64.0%	1,319	53.2%	2,169	47.6%
Age <21	749	70.5%	1,241	66.8%	2,147	59.6%
Age >21	358	46.6%	990	29.0%	1,480	27.3%

Withdrawals	Average six academic years 2011 to 2016					
Schools involved in Changing Mindsets Project	School G		School H		School I	
	Overall no.	% Withdrawals	Overall no.	% Withdrawals	Overall no.	% Withdrawals
Average % of withdrawals	355	8.5%	822	9.3%	1,248	11.5%
BME (% of total)	51	46.8%	344	39.2%	197	43.8%
Quintile 1 (% of total)	28	27.5%	97	42.4%	140	47.5%
	Total	Average per year	Total	Average per year	Total	Average per year
Number of withdrawals	355	59	822	137	1,248	208

Quantitative

UoB Students
As pre-intervention data is still being collected at the University of Brighton (UoB), the initial data analysis will focus on the pre-survey responses collected up until the 1st April 2018. Data was collected from 77 first-year undergraduate students across 14 schools with a mean age of 20.42 (SD Age = 5.54 years; Min Age = 17 years; Max Age = 52 years). Information regarding their gender, ethnicity and POLAR was collected via the central student records and can be found in Table 1. Participation of Local Areas (POLAR) classification (Quintile 1-5) was used as a place-based measure of educational disadvantage that classifies local areas according to the participation rate of young people in higher education (HEFCE, 2017). Ethnicity was recoded into binary variables White British and BAME British (including all other ethnic origins) respectively.

Gender	M= 5; F=46; Not provided= 26
Ethnicity	White= 36; BME= 15; International and Unknown= 26
Polar	Quintile 1= 10; Quintile 2-5= 36; International and Unknown = 31

Table 1: UoB Student demographic information

Implicit Theories of Intelligence (IToI) were measured using four items from Dweck's (1999) Theories of Intelligence Scale. Although Dweck's original scale includes eight items (four entity theory questions and four incremental theory questions), given the length of the survey and the students' involvement in a longitudinal study, Dweck (1999) recommends using the entity-only scale as these are less likely to suffer from social desirability and repetition effects.

Participants responded using a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree) for each item. IToI scores were computed by combining scores from each of the four questions, with higher scores indicating more of an entity theory of intelligence. Below shows the students IToI scores broken down into quartiles.

57.1% 4-7	37.7% 8-11	5.2% 12-15	0% 16-20

Growth Mindset   Fixed Mindset

Table 2: Sum of UoB students' Dweck scores broken down into quartiles

Table 2 highlights that across the pilot schools at UoB, most students hold a more growth mindset (94.8%) than a fixed mindset (5.6%). This was further confirmed by the Implicit Theory of Intelligence Scale (ITIS – El-Fattah & Yates, 2006) which showed that 97.4% of students held incremental (growth) mindsets.
When the scores from Dweck's scale were broken down to focus on the project's two target populations (BME and Quintile 1 students) we can see that 100% of BME student hold a growth mindset along with 97.2% of white students (see Table 3 and Table 4). Similarly, 90% of Quintile 1 students hold a more growth mindset in comparison to 100% of students from Quintile 2-5 (see Table 5 and Table 6).

44.4% 4-7	56.6% 8-11	0% 12-15	0% 16-20

Growth Mindset		Fixed Mindset
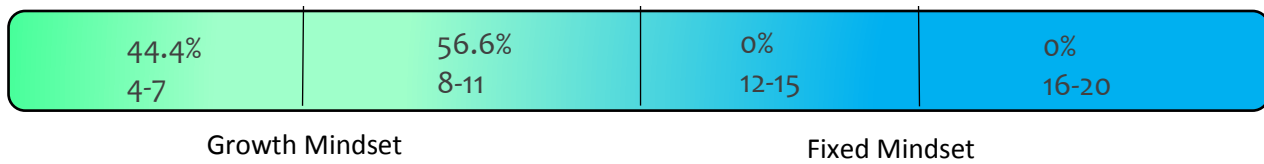
Table 3: Sum of UoB's BME students Dweck scores broken down into quartiles

66.7% 4-7	30.5% 8-11	2.8% 12-15	0% 16-20

Growth Mindset		Fixed Mindset

Table 4: Sum of UoB's white students Dweck scores broken down into quartiles

50% 4-7	40% 8-11	10% 12-15	0% 16-20

Growth Mindset		Fixed Mindset
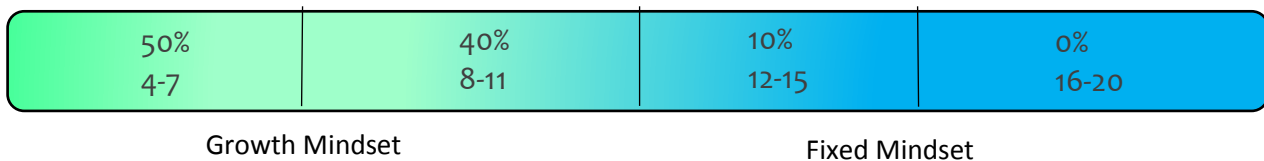
Table 5: Sum of UoB's Quintile 1 students Dweck scores broken down into quartiles

65.7% 4-7	34.3% 8-11	9% 12-15	0% 16-20

Growth Mindset		Fixed Mindset
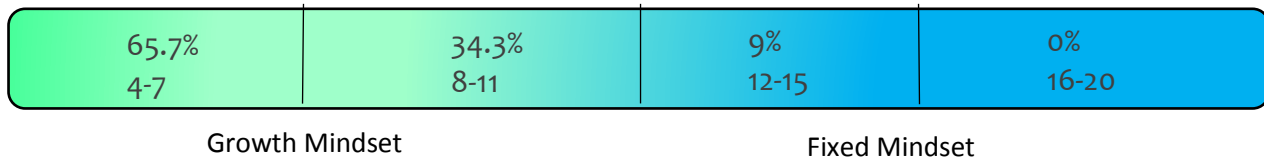
Table 6: Sum of UoB's Quintile 2-5 students Dweck scores broken down into quartiles

In addition, the project utilised a measure that has been implicated in the bias-reducing process, including prejudice-relevant discrepancies, and concern about discrimination in society (Devine et al., 2012). Participants responded on a slider scale from 0 (strongly disagree) to 100 (strongly agree) for twenty-six items with scores being computed to create sub-scales of creating inclusion, overcoming bias and stereotype beliefs. Correlations between the IToI, ITIS and Devine scale produced the following statistically significant findings: Creating inclusion correlated positively with overcoming bias ($r = 0.591$, $n = 77$, $p = 0.000$). In addition, the overcoming bias subscale negatively correlated with stereotype beliefs ($r = -0.310$, $n = 77$, $p = 0.006$). This suggests that at UoB, those who are more likely to want to create inclusion are also more likely to want to overcome biases, and moreover, those who are more likely to want to overcome biases are less likely to have stereotypical thoughts.

UoB Staff

Pre-survey data was collected from 54 members of staff across the institution (Male = 12, Female = 31; Preferred not to say= 11). The majority of staff members who responded to the survey came from a white (home/EU) background (94.3%) while 5.7% came from a BAME (home/EU) background.
The staff similarly responded to the IToI, ITIS and Devine scale. Below shows the staff IToI scores broken down into quartiles.

57.4% 4-7	29.6% 8-11	11.1% 12-15	1.9% 16-20

Growth Mindset   Fixed Mindset
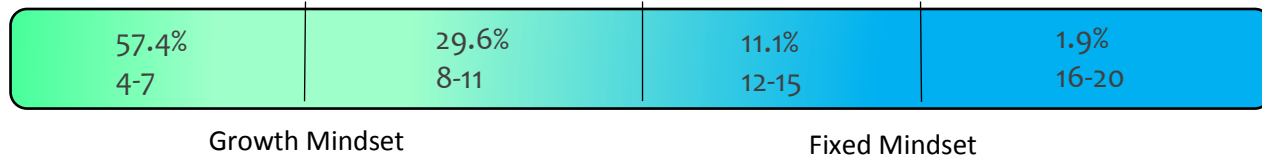
Table 7: Sum of UoB staff Dweck scores broken down into quartiles

Table 7 highlights that the staff members that participated in the pilot intervention at UoB held a more growth mindset (87%) with 13% of staff members holding a fixed mindset. The ITIS also confirms that most staff members held a growth mindset (81.5%).

Qualitative

Aims and objectives

This research explores undergraduates' and staff perceptions and experiences of:
- Changing Mindsets workshops and ways in which participating in these workshops may influence their mindset and enhance learning, teaching and support practices
- Fixed and growth mindsets and how these may influence their identity development, confidence and success

Methodology

We adopted a Narrative Inquiry methodological approach and, hence, open-ended questioning techniques and time-line prompts during in-depth individual or paired narrative interviews. In this context, "narrative knowing" is defined as "a fundamental means through which people come to understand themselves, organizing interpretations of the world in storied form (King and Horrocks 2010, p214: Bruner, 1986, 1990)". This approach enables participants to explore and reflect on their own individual perceptions and experiences of fixed and growth mindsets, including the Changing Mindsets workshop, and how this may influence their learning and teaching practices and journeys "in their own terms (Gergen, 2009, p66)".

Data Collection

We aimed to conduct 15-20 individual interviews with students and up to 3 focus groups with staff who have attended Changing Mindsets workshops between November 2017 and June 2018. Between November 2017 and May 2018 we sent email interview invitations to all staff and students who have attended workshops, and spoke to students and staff on a face to face basis, encouraging them to take part in the research. So far the UoB research team has conducted 11 narrative student interviews and 3 narrative staff interviews including one paired interview (4 staff participants overall). We anticipate that additional interviews will be conducted with staff. Interviews were conducted across university locations and campuses and lasted up to one hour. Participants received information sheets and signed consent forms prior to interviews, and were assured that their data would be kept confidentially and that their identities would remain anonymous and be protected. Because these are narrative interviews and therefore relate to participants' unique stories, researchers

reassured participants that they would send participants findings relating to their individual interviews prior to dissemination, so that participants can have the opportunity to request any changes or additions at that point.

Analysis

During final stages of analysis (by August 2018) we will have conducted both thematic and structural analysis adopting:
- Non-cross-sectional analysis of interviews and individual cases in paired interviews separately
- Cross-sectional analysis to identify themes and patterns across interviews

Preliminary findings based on student interviews

Preliminary findings are a snapshot of 4 student interviews transcribed and analysed so far. (Additional student and staff interviews still need to be transcribed and/or analysed). The 4 participants are 2nd and 3rd year undergraduate males and females from a range of disciplinary backgrounds across schools including Business, Media, and Applied Social Science. Participants are from diverse ethnic backgrounds and are all over 21 years of age. At this preliminary stage, we have conducted cross-sectional thematic analysis identifying some initial themes and patterns across interviews. By August we will also have completed non-cross sectional and structural analysis of each interview. At the later stage (August) findings will incorporate individual case-study vignettes including quotations, and at that stage, we will seek participants' permission to disseminate findings relating to their individual narratives.

Initial Themes

Participants' views on student equality
Most participants perceived that the University of Brighton (UoB) is inclusive, provides appropriate teaching and support for students from diverse backgrounds. In their own experience, most participants felt that opportunities are equal for students at this university. However, a few participants mentioned that they were aware that there is an attainment gap between different groups of students in UK HE, and hence they perceived that inequalities between students do exist in relation to undergraduate student attainment across the sector.

Influences of Changing Mindsets workshops on student participants' mindsets and learning practices

All participants described the workshop as useful and the conceptual framework of Mindsets often resonated with their experiences of life and learning. Most participants described how the workshop increased their awareness of the Mindsets concept. A few participants described the workshop as important in helping them to see life and learning, including mistakes, as an opportunity for growth rather than perceived failure, even if a situation is challenging. Some participants described how attending the workshop led them to reflect on their earlier lives and identify how fixed and growth mindset had influenced them in the past. Participants also were aware that they were now adopting a growth mindset in relation to developing learning strategies and encouraging other people to adopt a growth mindset. Most participants described how they have developed confidence and a stronger identity related to a more positive attitude to learning, life and success. In interviews all participants described clear examples of experiencing fixed mindset and developing a growth mindset in their past lives prior to attending the workshop. However, during the past, participants had not labelled their experiences with the terms, fixed and growth mindset, and they were not necessarily aware of the Mindsets terminology and concept before attending the workshop. However, a few participants were already aware of this framework prior to attending the workshops.

Influences of the Changing Mindsets workshops on students' development of learning strategies
Participants gave the following examples of how they were adopting learning strategies related to adopting a growth mindset by:

- Seeing failure as an opportunity to learn and grow
- Focusing on personal targets and personal successes rather than on external pressure to succeed
- Write lists as a way to help manage workload and relieve worry
- Managing time, for instance, by planning to do 60 things in 60 days and focusing on 1 key task to achieve each day
- Keeping fit in order to enhance learning
- Investing more time in study including reading
- Asking for more support from academic staff/tutors/peers

Influences of growth mindset on other people
Participants were aware that they were now encouraging other people to adopt a growth mindset. Participants gave examples of how their own growth mindset influenced others:

- In their role as Course Rep/Student Ambassador - enthusiastically encouraging other students
- In their role as PASS leader - sharing ideas and experiences relating to fixed and growth mindset with PASS students, so that PASS students can make positive changes in their learning attitudes and strategies
- Recommending the Mindsets concept to friends and family
- In their role as parents - encouraging children that it is OK to find learning and studying difficult, to make mistakes, face challenges, learn and succeed
- In their role as more experienced student - talking to younger or less experienced students about life and learning experiences and how it is possible to succeed even though HE study may be challenging

Participants' suggestions for enhancement of Mindsets workshops
Most participants found the workshops very helpful for reasons described above, and suggested that additional workshops would be beneficial. Suggestions of when additional workshops could be provided included:

- On a termly basis
- Across different year groups
- Regular drop-in sessions
- At the beginning of each academic year

Other ways in which participants suggested that workshops could be enhanced included:

- Including more practical and interactive activities
- Presenting the Mindsets framework with other learning models and frameworks since people have diverse learning styles and preferences
- Providing additional support for PASS leaders on how to support/train PASS students using Mindsets concepts

Participants' suggestions for enhancement of communication between staff and students
Most participants were happy with their experiences of learning, teaching and support practices and described positive and supportive working relationships with staff. Some participants, described a few examples of ways in which some staff could enhance staff/student communication. Examples are as follows:

- Reinforcing positive language, e.g. avoiding the word 'failure' and adopting constructive language instead
- Positive and constructive language should be used by all staff and should be consistently used
- Staff should actively ask students at the beginning of courses/ modules what their individual challenges are, and provide constructive advice on how to address such challenges in study

Influences of adopting a growth mindset on participants' confidence, developing identity and success
As mentioned above, most participants described and gave examples of how they had developed confidence and a stronger identity as a result of adopting a growth mindset. This developed confidence and identity was also related to participants' more positive attitude to learning, life and success in the past, present and future. In this context, the data provides evidence of participants' developing resilience. In relation to success, most participants perceived success as a holistic notion that is linked to their developing identities and confidence as people as well as to concrete academic or professional success. In the past before starting HE, and in the recent past since starting HE, participants described events or phases where they were successful related to their adopting a growth mindset. As mentioned previously, this was also linked to participants facing challenges with resilience and making life-changing decisions. Participants described examples of life-changing decisions linked to success:

- In the past as: starting a degree, studying for a chosen degree, developing professionally or returning to HE as a mature student
- In the recent past/present as: learning from failures and mistakes in assignments and responding to constructive feedback on how to improve academic work; achieving high grades and, hence, developing confidence related to current and future success; adopting learning strategies that enable success (please see examples above)
- From present to future as: remaining flexible and open minded about different opportunities when looking for a job; remaining positive and determined to develop further and succeed, e.g. applying for an internship that will lead to future professional opportunities; talking to academic staff about challenges in academic study and asking for additional help; being a good listener and learning from others on how to develop further; reflecting on past successes and being confident of capabilities

Participants' reflections on past experiences before starting HE
When reflecting on their past lives as children or adolescents, most participants perceived that their mindset used to be more fixed than growth. Most participants described how their fixed mindset at this time was often influenced by other significant people in their lives. Such people included parents and school teachers. Participants reflected on ways in which other people's influences on them that promoted a fixed mindset also led participants to experience stereotype threat and implicit bias. For instance, as children and adolescents, some participants were aware that they were academically gifted and hence believed that did not need to try hard in their studies. Other participants believed that they would not go to university in the future, as they were not encouraged to do so by parents or teachers. However, participants also often described a few key individuals who were significant in encouraging them during this period. These key individuals helped participants to develop a growth mindset by encouraging them to achieve what they wanted including going to university later on. These individuals also included parents and teachers. During and following this period, participants frequently described experiences of one or more turning points, which were very challenging. During these turning points, participants described how they had developed resilience and made positive life changing decisions. Examples of such decisions related to: starting a degree, studying for their chosen degree, developing professionally or returning to HE as a mature student. Participants were able to identify these critical points as times when they had reflected on their lives and begun to develop a growth mindset.

Participants' reflections on more recent experiences since starting HE
Most participants were aware that despite developing a growth mindset in the past, their fixed mindset remained part of them and was deeply ingrained. When reflecting on the early stages of starting HE, participants described periods of challenge in relation to academic study. Examples of challenges that participants mentioned included: not achieving high enough grades, struggling in group work, comparing themselves to students who were achieving more highly and feeling lacking in confidence about their ability to succeed. Some participants also described how their fixed mindset related to fixed learning habits, for instance, not engaging sufficiently with support from their learning community including peers, academic staff and social media contacts. However, most participants described how challenges often transformed into positive turning points. In this context, participants described how they had developed resilience and made

decisions to find solutions to address problems. Some participants described how academic staff were part of this process because they had encouraged participants to learn from their mistakes or provided constructive feedback on how to improve. Turning points were also described by some participants as relating to high achievement, which gave participants confidence that they were successful and would be successful in the future. Participants described how these turning points were central to their developing their growth mindset.

Tentative and Early Conclusions

So far evidence suggests that

1. The Changing Mindsets workshops helps student participants to develop/enhance their awareness of:
   - the concepts of growth and fixed mindset
   - life and learning as an opportunity for growth rather than perceived failure
   - the influences of fixed and growth mindset during their past lives
   - their growth mindset in relation to developing learning strategies
   - encouraging others to adopt a growth mindset
   - their increased confidence and stronger identity related to a positive attitude to learning, life and success

2. Developing a growth mindset is related to student participants' enhanced confidence, resilience, sense of identity and personal (as well as academic) success

3. Student participants often saw themselves as having more of a fixed-mindset during childhood and adolescence. Most participants' perceived that fixed mindset is strongly rooted in the past and is related to stereotype threat and implicit bias, which is influenced by teachers or parents. Most participants were aware that their fixed-mindset is still part of them and is deeply ingrained. Most participants' experiences of developing a growth mindset before starting HE is linked to facing challenges, becoming more resilient and making positive life-changing decisions. Sometimes these decisions were influenced by other individuals who included parents or teachers. These individuals encouraged participants to believe in themselves and that they could achieve what they aimed for in life.

Looking Ahead

Plans for finishing data collection for cohort 1

As we approach the end of the academic year, a final push is commencing for student data collection. A final invitation to take part in the interviews will be sent out to all students and we will be sending out post-survey invitation to those that have not yet received it as well as reminders to those that have. This will conclude our student data collection for cohort 1.

We anticipate an increase in staff engagement outside of term time, once teaching responsibilities have abated and before the peak holiday period in August. As such, we intend to send out reminders about the post-survey and the interviews in mid-late June.

Plans for intervention delivery cohort 2

At Brighton, we are still in the process of finalising the details of our plans for cohort 2. At a general level, we intend to develop and launch a programme of training and resources that will enable the Changing Mindsets intervention to become sustainable after the end of the project. Where budget allows, we would like to recruit students (that are local over the summer) to help us to prepare the materials. This will include a 'train the trainer' style guide to allow staff to deliver workshops to their students, complete with access to some of the resources (e.g. videos) and activities that we have been using so far and also links to further resources. The staff workshops will continue to be embedded upon our PGCLTHE and Course Leaders Course but we also

envisage providing an online space whereby staff not enrolled on these courses can access information, research papers, videos and other resources. This will mirror our workshop's emphasis on providing simple, practical tools that staff can easily implement in their workshops.

Launching this sustainable programme across the next academic year means that we will be able to take advantage of our dedicated staff member (Project Officer) and fully evaluate and subsequently develop the programme before the end of the project.

At a general level, there will also be a push to raise further awareness of the scheme, particularly in Schools and departments that have shown lower levels of engagement.

CANTERBURY CHRIST CHURCH UNIVERSITY

Introduction by Rayya Ghul

Canterbury Christ Church University was delighted to be invited to join the Changing Mindsets project led by the University of Portsmouth. The work of Carol Dweck was already well-known in parts of the university concerned with teacher education and academic development and as a university with a high degree of students from low participation neighbourhoods, it seemed like an excellent opportunity for our students and staff to expand awareness across the university.

From the outset there was a high level of buy-in to the project from colleagues with many programmes expressing interest in participating as an intervention site. We appointed our project officer and discussions to finalise the interventions took place with four programmes initially identified as the main sites. Student trainers were recruited and trained to deliver workshops.

One of the attractions of the project was that each institution could design their own training materials as well as make use of those provided by the lead HEI. In addition to presenting Dweck's ideas on growth and fixed mindset, the project included perspectives on stereotype threat and implicit bias, all of which are known to affect student outcomes. As well as producing some useful infographics to support the workshops, CCCU also contributed to the richness of the project by bringing in the concept of 'Identity safety'. This provides a counterpoint to stereotype threat and gave students and staff a positive direction for change.

In the first year of this project, there have been some substantial challenges. The most difficult has been the coincidence with an institutional-wide move from terms to semesters. Some programmes, though enthusiastic about the project, felt unable to commit to the workshops due to uncertainty about time in the shorter teaching period. The most successful intervention took place in a programme where the training was integrated into a module. This isn't always possible due to the different curricula. Despite setbacks, CCCU remains committed to the project and are already planning the second year interventions.

Rayya Ghul
Principle Lecturer Higher Education

Why Canterbury Christ Church University?

Founded in 1962 as a Church of England teacher training college with 70 students, Canterbury Christ Church University (CCCU) now has a student body of over 17,000 spread across three campuses in Kent and Medway. Despite this expansion the University remains true to its origins in the Anglican Communion and its core values. The ethic of service to the public good which inspired its foundation continues to inform and shape the University's vision and strategy of providing accessibility to Higher Education for some of the region's most disadvantaged communities.

As an institution CCCU has committed itself to the provision of an inclusive education which provides equal opportunities to those who have the potential to reach higher education, but may not consider higher education to be an option that is available to them. The University has strong partnership links with local schools (over 1000 formal partnerships) to enhance progression to higher education especially for those from lower socio-economic groups and first generation higher education entrants.

This commitment to accessibility and diversity is reflected directly in the student body. In 2013/14 98% of young, full-time undergraduate entrants came from state schools or colleges. 62% of the student body were drawn from POLAR quintiles 1 and 2, and 85% of students were 1st generation entrants to higher education. The University also has a high proportion of mature students (33%) and a growing number of BME students (18%). The ratio of female to male students is also high with women making up nearly two thirds of undergraduates.

With such a mix, it is inevitable that issues relating to disadvantage and exclusion will impinge on the relative success of some groups of students. Recent data from HESA indicates that both levels off attainment and retention vary noticeably for certain groups of students studying at CCCU. It is in this context that the relevance and importance of the Changing Mindsets project becomes apparent.

Carole Dweck's (2008) work on growth and fixed mindsets shows us that sometimes the biggest obstacle to academic success is not our lack of intellectual or academic abilities but rather the way we think about them and then act upon those beliefs. When this is added to the problems that many students face overcoming implicit bias and the consequences of stereotype threat, which can undermine their performance and well-being while at university, the need for an intervention like Changing Mindsets is both timely and relevant in the current context of higher education in general and at CCCU in particular.

The Changing Mindset intervention with its emphasis on intellectual development and academic success through self- and socially-aware insight and training fits well with the wider academic ethos of CCCU. It offers students and lecturers the opportunity to think and reflect on their ideas about intelligence, academic endeavour and the obstacles which can inhibit growth and act as a barrier to success in both learning and teaching. Moreover, given the particular mix of the student body at CCCU, with its high proportion of students from low participation areas, mature students, and 1st generation university entrants, it offers the possibility that the quality of their university experience can be marked by confidence and success rather than stress and disappointment.

Intervention Story

Focussed work on the project began in July 2017 with the appointment of a part time project officer. A number of priority areas were identified as follows:
1. Recruitment and engagement of participant programmes
2. Ethics approval
3. Recruitment and training of student mentors
4. Development of an appropriate framework for the intervention with students and lecturers
5. Preparation of training materials

Recruitment and engagement of participant programmes
Initial support and willingness to participate in the intervention was obtained from five schools.

Schools A, B, C, D agreed to include slots for Changing Mindsets in their programme for Student Development week in January and February 2018. School E were able to include the project as part of their formal module content.

During October a team of 7 student mentors from a variety of academic disciplines were recruited and trained in both growth mindsets and the delivery of the project materials to peers. These students have also played a vital part in the development and delivery of the materials subsequently as well as promoting the work of the project throughout the university.

Throughout the course of the intervention, the content and delivery of the project materials have been adapted and developed to reflect student and mentor feedback and the specific needs and constraints deriving from the participating programmes.

Growth Mindsets Interventions

Student Intervention

The first intervention took place with students in School A on 3rd November 2017 and training for students from School C took place on 21st & 28th November 2017, approximately 90 students attended these sessions. Elsewhere, staff training for School E took place on 16th January and for School D faculty on 26th January

Training sessions for School D took place on 22nd of January (2 students) and 23rd January (4 students), School E (13 students) on 5th February and School B on 26th February (19 students).

Details of the project and a link to the on-line survey was distributed to all students via the programme liaison in the week before the delivery with a reminder in most cases 24 hours before. In one case (School A) students did not receive the link in advance from their programme. Those students completed the survey in the session prior to beginning the intervention.

Intervention Procedure

The Changing Mindset intervention contents evolved considerably over the course of the year due to a number of factors including feedback from students and student mentors, timetabling and availability constraints, the significantly diverse nature of the programmes participating and a growing awareness of student responses to the various elements of the intervention.

Initially the intervention was designed as a 4 hour session involving a mixture of direct information delivery via PowerPoint, videos and workshop activities coordinated by student mentors. Due to timetabling constraints this was delivered in either one 4 hour session or two 2 hour sessions. For some programmes taking part in development week the length of the session was reduced to one 3 hour slot.

A variety of methods of instruction were utilised including:

- Direct instruction
- Individual activities
- Videos
- Group/workshop activities
- Group discussion

Direct Instruction

Students were given specific information about the project, the work of Carol Dweck, Claude Steele and Patricia Devine.

The concepts of fixed and growth mindsets, implicit bias, and stereotype threat were explained and illustrated and the scientific evidence supporting these ideas was also presented.
The concept of 'neuroplasticity' and the role of the brain in learning were also introduced and the importance of errors and mistakes in the learning process was also discussed.

Students were also invited to consider the ways in which 'failure' can be incorporated into the process of achieving their academic goals. A variety of mini-case studies of famous failures were presented for discussion and debate.

Students were then asked to consider both the commonalities and differences between these individuals and consider strategies based on growth mindsets that they could adopt to turn failure into success.

Building on the concepts of neuroplasticity, the idea of the 'brain as a muscle' was introduced and it was explained to students how they could 'train their brain' to help them overcome academic problems.

In the second part of the session, the ideas and scientific evidence supporting stereotype threat and implicit bias were presented:

Following on from feedback given to student mentors by participants, it was recognised that these two concepts presented some students with difficulties and were a possible source of tension between the various groups making up the students attending. It was therefore decided to re-contextualise their presentation in later sessions by locating them within a general framework referred to as 'identity safety'. This took the focus off the experiences of specific ethnic or socio-economic groups and more towards the experiences of all students participating in the intervention.

The idea of identity safety was then incorporated into a number of activities discussed below which could then be used to address the issues raised by implicit bias and stereotype threat in a more emotionally neutral context.

Videos

A number of videos were utilised as part of the Changing Mindsets delivery. We viewed a considerable number of video resources in preparing the project materials and assessed them for content, length and impact. In the end 3 were chosen as most appropriate for the needs of the project and the nature of the audience:

Robert Winston on neuroplasticity (https://www.teachertube.com/video/how-we-learn-the-brains-neural-pathways-392241)

Claude Steel on stereotype threat (https://youtu.be/W2bAlUKtvMk)

The Royal Society animated video on unconscious bias (https://www.youtube.com/watch?v=dVp9Z5k0dEE) Each video was used as a means of stimulating group discussion in which students were invited to ask questions, offer their comments, and share experiences around the topic dealt with in the video.

Activities
Individual and group activities formed a significant part of the project delivery.

Dweck 3 item Scale
At the start of each session students were invited to answer Dweck's the 3 item growth mindset scale (https://survey.perts.net/take/toi) as a basis for discussing the project, their individual and collective attitudes to intelligence, and their views on the relationship between intelligence, mindset and academic success.

Anagram Activity
Building from their responses to the Dweck scale, student were presented with a number of simple anagrams based on scrabble tiles which they had to solve individually in 30 seconds. The final one was impossible to complete.

They were then questioned about the point at which they gave up the task and a general discussion of how their giving up related to their response to the Dweck Growth Mindset scale.

Flex your mental muscles

F₄ I₁ L₁ R₁ U₁

▶ How did failing to complete the anagram make you feel?
▶ At what point did you give up?
  ▶ Before the time was up?
  ▶ When the time was up?
  ▶ Carried on after the time was up

Academic Problem Activity

The students were also presented with a practical academic problem in the following scenario:

Imagine you are taking a module in an area that is new to you. The topic is a difficult one and you have an important written assessment to complete in order to pass the module. The lecturer isn't very helpful. S/he just assumes that every student has the same level of interest, commitment and background knowledge that s/he does. How would you respond in this situation?

Students were asked to write down their responses on a handout provided. They were then randomly assigned to groups, given pens and flipchart paper, and asked as a group to discuss their individual responses and

strategies to the scenario, ultimately arriving at a collective strategy for solving the problem it presented. These were posted on the walls of the lecture theatre.
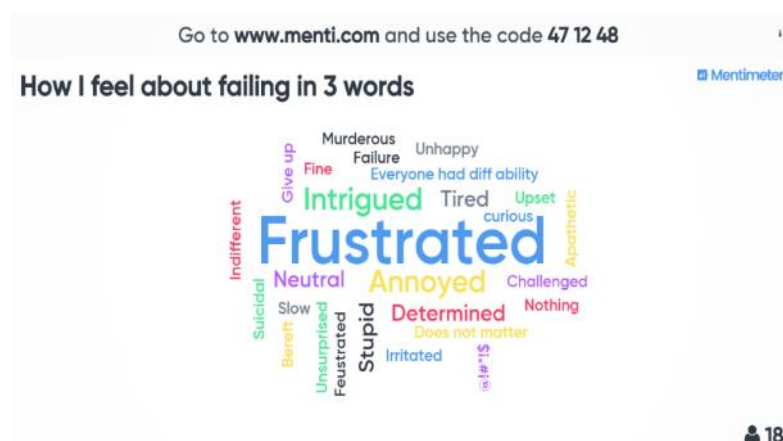
They were then presented with the core ideas of growth mindsets and each group was asked to review both their own and other groups' responses to the scenario from a growth mindset perspective, identifying particular growth mindset strategies using post-it notes or writing directly on the sheet
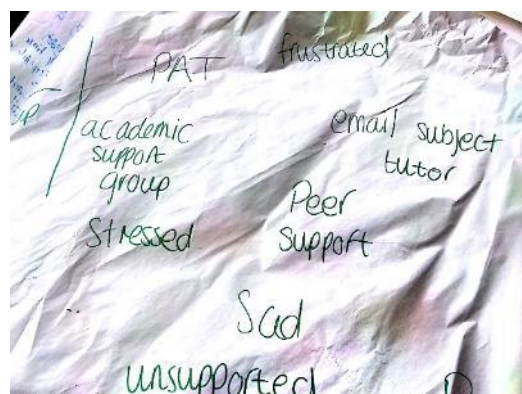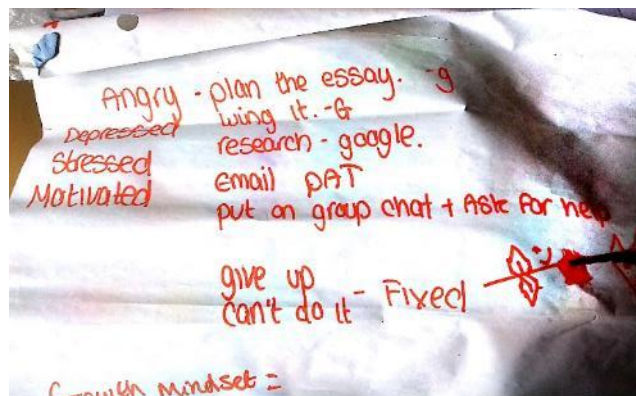
Students respond to the Academic

Problem Activity
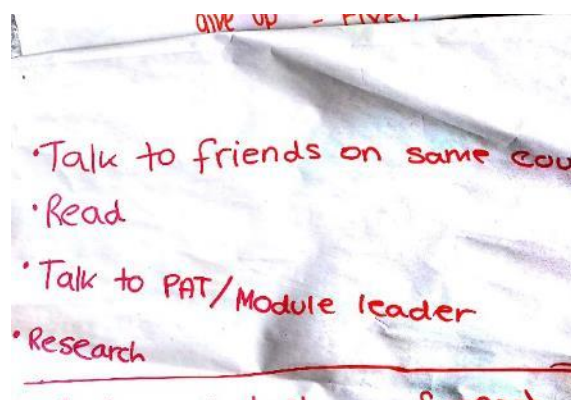
Mentimeter

Activities involving Mentimeter (www.mentimeter.com) formed a significant feature of our delivery both as a means of obtaining instant feedback and as a method by which students could reveal their feelings anonymously and without embarrassment. They could also use it to assess the extent to which their views and perspectives were representative of the group as a whole.

We used Mentimeter to assess feelings about failure, identity safety and their knowledge and understanding of what they were learning.   It also seemed to enhance the students' sense of engagement with the learning process.

Identity safety activities

As a result of the possible sensitivities and tensions linked to the areas of stereotype threat and implicit bias, it was decided that the approach taken would be 'gamified' focus on identity safety when it came to group interactions and activities. It was felt that such an approach would facilitate student engagement and overcome any inherent resistance within groups that we might encounter.

Apart from providing extrinsic motivation (e.g. competition and/or prizes) games also create a 'safe' context in which to explore sensitive issues. Moreover, many of the qualities that are stressed in the Changing Mindsets approach can emerge organically from merely playing the game: persistence, risk-taking, attention to detail, problem-solving, and being prepared to fail one or more times

Two activities were developed:
- The 'safe or sorry' game

and
- The identity safety game

Safe or sorry?

The first of these was developed to encourage students to think about their life at university and some of the issues that might have arisen without necessarily revealing in public those issues and feelings. The second to facilitate their thinking in the areas of microaggression, bias and stereotyping.

In the 'safe or sorry' game, students were requested to think about experiences at university which made them feel reassured about their decision to come to university and those experiences which made them doubt that decision and consider leaving.

Each student was given a number of blank post-it notes and instructed to place a one on one or both of each flipchart sheets labelled either 'Safe' or 'Sorry' on the lecture theatre wall. Each note posted was to represent an instance of a positive or negative experience while at university – they were not asked to describe or otherwise discuss their thoughts and feelings. When every student had completed the process, the number of notes placed on each sheet were counted.

As predicted from prior use of this game in other contexts, the numbers posted on both safe and sorry sheets were approximately equal. This numeric equality was used to start a group discussion about the nature of student life and the things which make students feel at home or alienated from their learning environment. Once it was clear from the discussion that students were relaxed about raising issues connected with ethnicity or class or gender, the materials on stereotype threat and implicit bias was introduced and the second phase of activity was begun.

The identity safety game

This game was based on the work of Patricia Devine and developed from the University of Wisconsin game 'Fair Play' (https://fairplaygame.org/). It focusses on the occurrence of microaggressive behaviours in student life and provides students with information both about the behaviours and various means of resolving or addressing them.

Participants are divided into groups in a pseudo-random method ('pseudo' in order that each group reflects the range of diversity within the participating programme, without the participants themselves being made aware of this intention).

Each group is assigned a mentor and given a set of materials: 2 sets of cards and 8 photographs. One member reads the instructions to the other members of the group and the game begins. Each photograph represents an instance of a microaggressive behaviour and the first task is for the group to agree which of the red 'problem' cards in their possession should be attached to which photograph. Under the guidance of the mentor they decide which card should be attached to which photograph.

They then begin the second phase which involves attaching an equivalent purple 'solution' card to the each photograph. The task is deliberately ambiguous and unresolvable: not all the photographs correspond to the problem and solution cards provided.

The student mentors were trained to facilitate discussion around these areas of ambiguity and encourage students to share ideas and strategies to resolve the problem in keeping with the growth mindset approach. At the end of this phase, the groups then share their decisions with the rest of the class. Differences in their conclusions then form the basis of a guided group discussion in which participants.

This 'gamified' approach had a very positive impact on the students who participated. It enabled them to address highly emotive and sensitive topics in a way which was at the same time distanced from their actual experience and situation. The mentors facilitating the groups noted the way in which some students experienced 'light-bulb' moments when reflecting on their own or the behaviour of others.

It is intended to develop the Identity Safety game further for use by trainers and staff as part of inclusive curriculum development occurring at Canterbury. It has also been suggested that an on-line version of the game might be a useful component of the improved VLE resources currently being compiled.
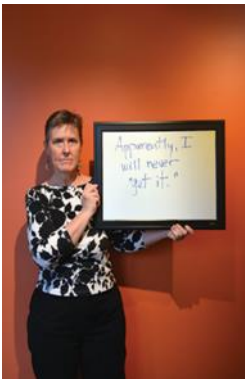
Students taking part in the identity safety game

Supporting materials

In addition to the training element of the project, a number of informational resources were prepared and distributed to both student and faculty members immediately after the delivery of the training. These include a series of infographics and training packs based on the work of Carol Dweck, Claude Steel, and Patricia Devine.

HOW TO DEVELOP A GROWTH MINDSET

RECOGNISE THAT YOUR INTELLIGENCE IS NOT FIXED

Believing that your intelligence can grow and change over the life course is an important step in developing a growth mindset. If you believe that you can't change, then the chances are you probably won't.

EMBRACE MISTAKES & LEARN TO 'FAIL BETTER'

When you make a mistake or fall short of a goal, you haven't failed; you've learned. That learning can point you towards new strategies for success, like asking for help or putting in more effort.

TRAIN YOUR BRAIN

Think of your brain a muscle, not a container. Muscles develop by being used and stretched. Just like an athlete who trains hard to improve, you need to do the same with your brain. The brain isn't fixed; the mind shouldn't be either. The more effort you make the more intelligent you will become.

SEEK CHALLENGES

A challenge may look like an opportunity to fail but it can also be an opportunity to learn on the way to success. Recognising and embracing a challenge can give you purpose, focus and the motivation to improve.

VALUE THE PROCESS

Learning doesn't stop when the module ends and you've got your grade. It's an ongoing process of making connections, extending your experience, and developing your abilities.

DON'T TAKE CRITICISM PERSONALLY

Hiding from your imperfections won't help you overcome them, nor will being offended when someone points them out. Treat criticism as feedback on your work not on you. People with growth mindsets use criticism to improve their work.

TRY DIFFERENT WAYS OF LEARNING

Learning is not a 'one size fits all' matter. Different topics need different approaches and sometimes things that have worked in the past may not work in the present. Be prepared to try new learning strategies to achieve success

'It always seems impossible until it's done'
Nelson Mandela

6 FREQUENTLY ASKED QUESTIONS ABOUT

Changing Mindsets

WHERE DO OUR MINDSETS COME FROM?

All humans are born with a growth mindset - as Dweck says when it comes to human learning there is no such thing as an unmotivated baby. However our experiences growing up, in education, and with our peers can cause us to limit our approach to academic challenges, learning & success.

WHAT IF YOU DON'T WANT TO CHANGE YOUR MINDSET?

If you have taken part in the intervention, understood it and still don't see the benefits of a growth mindset, then that's fine. However, it's a proven benefit which may help you achieve academic success that you might otherwise miss out on.

DO OUR BRAINS REALLY 'GROW' WHEN WE LEARN?

Strictly speaking, no they don't. They do however form more rich and complex internal connections in the process of learning and solving problems. The more we use them the more effective they become and this can continue for most of our lives

ISN'T IT JUST ABOUT HARD WORK AND EXTRA EFFORT?

No. Although working harder and putting more into your learning is part of having a growth mindset, people with a growth mindset see effort as a necessary part of their success. Some successful people don't see effort as 'an effort'

DOES IMPLICIT BIAS MAKE ME A RACIST, A SEXIST OR A SNOB?

Not necessarily. The point about implicit biases is that they are unconscious and may often contradict the values and beliefs we hold consciously. Becoming aware of them and changing is beneficial to ourselves and others.

DOES STEREOTYPE THREAT ONLY AFFECT ETHNIC MINORITIES

No. Research shows that under the wrong circumstances any group or individual can be affected by stereotype threat. However, some groups such as women and ethnic minorities, are more often affected because stereotypes about them are more common in society generally.

FOR FURTHER INFORMATION AND RESOURCES REGISTER FOR THE CHANGING MINDSETS STUDENT BLACKBOARD MODULE

Changing Mindsets

The project also has Blackboard pages for students, faculty, and peer mentors containing supporting materials, academic papers and links to on-line resources related to the project.

This unfortunately has not had as much usage as hoped for, but we are currently developing plans for it to be much more integrated into the materials used by both staff and students in future iterations of the project.

Feedback

Feedback was collected from student sessions after November 2017 using a short 7 item rating survey administered for voluntary completion at the end of each session. On the whole these results were highly positive. Nearly 80 percent of students found the training and the general growth mindsets approach helpful to them.
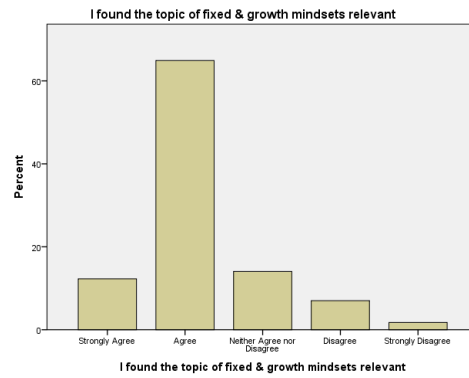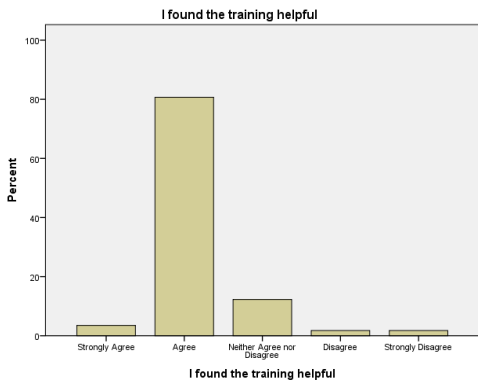
They also found the topic of identity safety relevant (80 per cent) and appeared to regard the activities positively (63 percent):
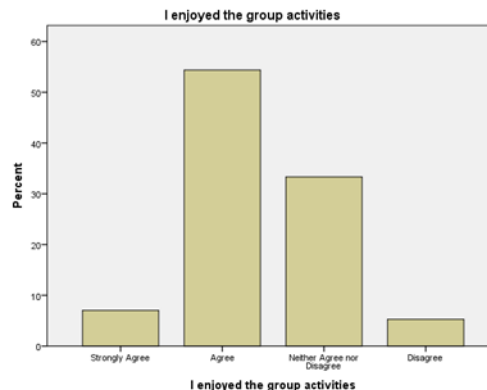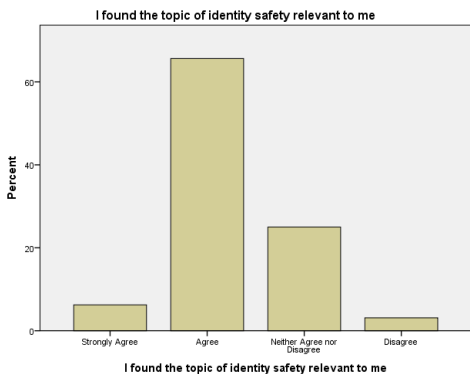
Their responses to stereotype threat and implicit bias was, while by no means negative, slightly more ambivalent. This may be explained by the make-up of the groups which comprised relatively few BME students and many students for whom the topic might not be obvious:

I found the topic of stereotype threat relevant to me

I found the topic of implicit bias relevant to me
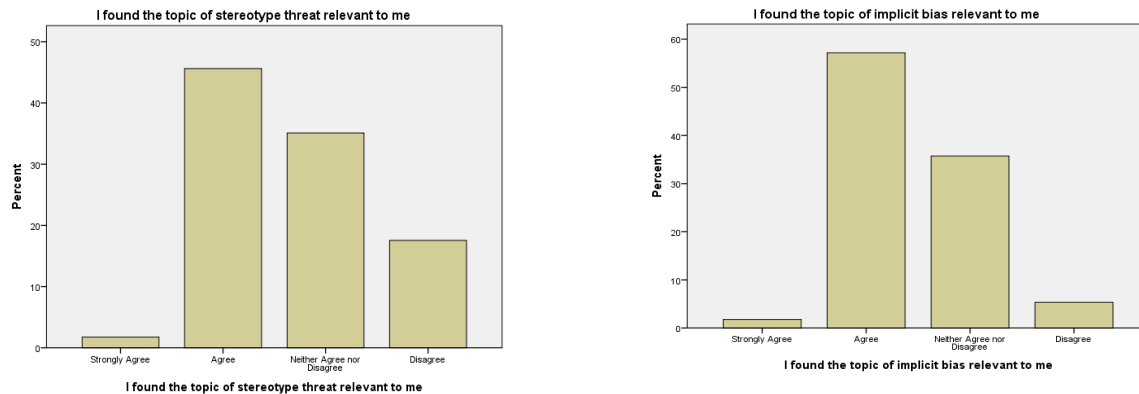
In fact, the only element that produced a negative evaluation was the length of the session which 65 percent of students thought was too long. This point of view seemed to be general whether they had experienced one 4 or 3 hour or two 2 hour versions of the delivery. This is a matter we intend to explore further in the second year of the project by developing short burst approaches and evaluating the impact over and against the lengthier delivery.

Challenges

Structural Changes at Canterbury
A significant challenge that the project encountered in the first phase of implementation derived from the re-structuring of the academic year from a term-based to a semesterd system which necessitated wholesale re-validation of many programmes that might have been willing to participate. A significant number of programmes that initially expressed an interest in participation found themselves unable to plan for the incorporation of the intervention into newly semesterised modules or were unwilling to sacrifice aspects of their module content for the project unless content of the intervention could replace or be directly mapped onto the validated elements of the given module.

At the same time, the restructuring of a number of key supporting areas of the university's administrative structure. A number of the project's supporters within the university found themselves re-deployed to other areas or lost their jobs altogether and were thus not able to provide the direct support which had been promised during the project's development period.

Programme withdrawal
The project suffered a number of significant problems during its initial implementation arising from the withdrawal of two programmes from the intervention during September. The two programmes would have accounted for almost two thirds of the total number of students taking part in the project. Their withdrawal necessitated entering into negotiations with other programmes after term had started in order to obtain sufficient numbers of students to meet the requirements of the research element.

Timing
A knock-on effect of this was that it was not possible for some programmes to embed the project training into their respective module timetables. As a consequence, there was no direct obligation for students to attend the training when it was eventually offered during Student Development week.

For example, sessions with School D went ahead, but student attendance was very poor. Only 4 students from a possible 70 attended one session and 2 students from 140 attended the other session. The position with School is still subject to further discussion but it is anticipated that the training will take place in the second round of the intervention in 2018/19.

In the case of School C, it was possible by slight changes of emphasis to link the delivery of the intervention to cover elements of the module (such as bias and stereotyping) that the students would have covered within the normal course of the studies. Similarly, in the case of School E, it was relatively simple to adopt the mindset training and other elements of the intervention to match aspects of the curriculum. Both of these programmes were then able to give time in their normal lecture programme.

We are currently in discussion with a number of potential partners for further implementation of the project and we are hoping that this will enable us to embed the project properly into the lecture cycle in future years.

Duration of training
Another challenge encountered related to the amount of training it was expected would be delivered. In the initial formulation it was envisaged that students would receive approximately 4 hours of training and staff between 2 and 4 hours. Many potential partners in the intervention were put off by the necessity of allocating possibly 10 percent or more of their academic content delivery time to the Changing Mindsets project. They were particularly concerned that this might lead to complaints from students regarding the intrusion of the intervention into their lecturing time. A review of the relevant academic literature was undertaken in light of these objections in order to identify effective short-burst methods of delivering the content and/or training tutors to embed or incorporate the Changing Mindsets approach into their own teaching for future implementations.

We are currently preparing training materials which can be offered using a 'short-burst''/ long repeated/ exposure methodology. These include animated videos, infographics, and segmented training materials which can be incorporated into the Blackboard pages of participating programmes and adapted easily to the needs of specific modules and programmes.

Student Engagement
From the start of the project it was intended that students would play an active part in the development and implementation of the Changing Mindsets project. To this end, students were recruited to act as mentors on the project in both phases. Contact was also made with the various individuals responsible for student equality, disability and education issues as well as those with an explicit role in student engagement across the university. Despite these activities and the amount of expressed support the project obtained, buy in to the actual activities of the project was disappointing.

In parallel with this, student participation in the research element of the project has been disappointing. Although the response rate to the pre-training survey was reasonable at around 60%, it has proved almost impossible to obtain further consent from students to take part in the interview phase of the study. Of the handful of students who agreed to be contacted for post-training interviews, none had actually attended the training session for their project. It should be noted that financial inducement did not play a significant role in this lack of interest. Despite repeated reminders, of the 70 students who completed an on-line survey, only 8 have actually collected their reward vouchers which have been available since the end of March.

However, the role of the student mentors who participated in the delivery of the training was very successful. They have played an active role in critiquing and developing the project materials, participated in the delivery of workshops and acted superbly as ambassadors for the project across the university. Their work with the project officer was unstinting, effective and committed and it would not have been possible to develop the project to its current level without them.

Interestingly enough, although students have been reticent to volunteer for interviews, there has been considerable interest in acting as mentors going forwards amongst those who responded to the initial voucher reminders.

Faculty buy-in
One significant challenge which the project faced was obtaining the commitment of teaching staff to some elements of the project. Programme leaders who took part in the intervention were largely unstinting in their support for our work and did their best to encourage their colleagues to participate in both training and the survey and qualitative research elements of the project. However, their willingness to attend faculty training was not matched by either their willingness to participate in the research process. Only 5 faculty members completed the survey and there have been a minimal number of volunteers to participate in staff focus groups from those who undertook the training.

Dissemination
The project has its own Blackboard page containing resources for students, staff and mentors. In addition all students and staff who participated in the first wave of training received a training pack containing information about the development of growth mindsets.

Apart from presentations to programme level partners which occurred over the course of the past year, the Project Officer was also invited by the Sociology Programme to participate in an 'awayday' organized for faculty members in the School of Psychology Politics and Sociology around the theme of 'Decolonizing the Curriculum'.

The project was also invited to participate the university's first Student Engagement Conference in March 2018 where a poster presentation on the work of the project was displayed and student mentors were on hand to provide further information.

Changing Mindsets Poster Presentation

The project officer will also be presenting papers derived from the work carried out at Christ Church for the following conferences in the coming months:

'What may be thought against our thought: Changing Mindsets and the decolonised curriculum' Paper for SOAS Learning and Teaching Summer 2018 Conference: Motivating and transforming learning throughout the student journey June 8th 2018

'Don't tell me how smart I am, show me how to get smarter: Building growth mindsets through academic feedback' Paper for Inclusive Practice in Higher Education Conference, Canterbury Christ Church University, June 27th 2018

Awareness of the Changing Mindsets project within the university has been greatly facilitated by the project officer's inclusion on a number of University working groups, most notably the Inclusive Curriculum Working Group and the Student Welcome Working Group. The latter is currently assessing some of the project's activities with the intention of including them in the student welcome. The project officer is also awaiting an invitation from the working group coordinating individual schools' induction week activities to discuss the opportunities for including the project. It is hoped that all of these with be a source of future opportunities for extending the project's scope and impact across the university.

Future developments

One of the significant issues identified by partners in a number of programmes was the situation regarding Foundation Year students. In some areas of the university, retention and progression rates are as low as 60 percent for some programmes. We have begun developing an intervention package for specific use with these programmes which will be embedded in the delivery of modules from September onwards.

The packages will be based on best practice identified from recent research evidence on growth mindsets and will include the use of short animated videos which will be shown before and after lectures and in breaks between sessions providing students with continuous exposure to project materials. Baseline measure will be taken from all students regarding mindsets and impact measures will be based on mid-semester and end of semester outcomes.

This will run in parallel to a delivery of training to incoming 1st year undergraduates and staff in selected programmes from September 2018.

In addition, considerable interest has been shown in the Changing Mindsets project by both colleagues in Learning & Teaching Enhancement and in Academic Learning Development. It is intended to provide training to colleagues in both areas based on project materials in order that they can enhance the support they provide for both students and staff on a day to day basis. A trial session was held recently with learners on the University's PGCAP programme on providing feedback from a growth mindset perspective which was very positively received. It is hoped that these partnerships will enhance the long-term impact of the changing mindset approach across the University.

Initial Data Analysis

Pre-cohort Data

Course A
- The average attainment gap of a good degree between white and BME students over five years is 20.1% (five year average 82.6% to 62.5%).
- The average attainment gap between all students and low participation students is 2.6% (five year average 80.0% to 77.4%).

Course B
- The average attainment gap of a good degree between white and BME students over five years is 0.5% (five year average 64.2% to 64.7%).
- The average attainment gap between all students and low participation students is 7.2% (five year average 63.9% to 56.7%).

Course C
- The average attainment gap of a good degree between white and BME students over three years is 35% (five year average 68.9% to 33.9%).
- The average attainment gap between all students and low participation students is 2.4% (three year average 63.5% to 61.1%).

Course D
- The average attainment gap of a good degree between white and BME students over five years is not reportable due to no BME students (five year average 58.3% to n/a%).
- The average attainment gap between all students and low participation students is 2.5% (five year average 17.5% to 15.0%).

Data provided by Canterbury Christ Church University. Analysed by Juan Batley, Data Analyst Learner Analytics Specialist

Canterbury Christ Church University - Achieved a good degree (1st or 2:1)				
Courses	Course A		Course B	
Achieved good degree group	Average three academic years 2011/12 to 2015/16			
	Overall no.	% Good	Overall no.	% Good
Overall	140	80.0%	169	63.9%
Low participation Area **	53	77.4%	60	56.7%
BME	[16]	[62.5%]	[17]	[64.7%]
White	121	82.6%	148	64.2%
Male	41	[65.9%]	68	61.8%
Female	99	85.9%	101	65.3%
Age <21	129	79.1%	150	62.7%
Age >21	11	[90.9%]	19	[73.7%]

Withdrawals	Average three academic years 2011/12 to 2015/16			
Courses	Course A		Course B	
	Total	Average per year	Total	Average per year
Total number of withdrawals	24	5	20	7
Number of BME withdrawals	6	2	1	1
Number of low participation withdrawals	9	2	4	2
Number of white withdrawals	15	4	18	4

Key
[ ] Statistically not significant number of students
(n/a) course started in 2014/15 and no students have graduated
** Low and high participation data provided and not quintiles 1,2,3,4 and 5

Canterbury Christ Church University - Achieved a good degree (1st or 2:1)						
Courses	**Course C**		**Course D**		**Course E**	
Achieved good degree group	Average three academic years 2011/12 to 2015/16					
	Overall no.	% Good	Overall no.	% Good	Overall no.	% Good
Overall	362	63.5%	40	17.5%	66	(n/a)
Low participation Area **	144	61.1%	20	15.0%	34	(n/a)
BME	[56]	[33.9%]	[28]	[0%]	[10]	(n/a)
White	302	68.9%	12	58.3%	56	(n/a)
Male	[16]	[81.3%]	[4]	[0%]	55	(n/a)
Female	346	62.7%	36	[19.4%]	11	(n/a)
Age <21	291	61.9%	25	16.0%	57	(n/a)
Age >21	71	70.4%	15	[20%]	9	(n/a)

Withdrawals	Average three academic years 2011/12 to 2015/16					
Courses	**Course C**		**Course D**		**Course E**	
	Total	Average per year	Total	Average per year	Total	Average per year
Total number of withdrawals	34	7	9	2	7	4
Number of BME withdrawals	13	3	8	2	1	1
Number of low participation withdrawals	13	3	4	1	3	3
Number of white withdrawals	20	4	1	1	6	1

Key

[ ] Statistically not significant number of students

(n/a) course started in 2014/15 and no students have graduated

** Low and high participation data provided and not quintiles 1,2,3,4 and 5

Quantitative

CCCU Students

As post-intervention data is still being collected at Canterbury Christ Church University (CCCU), the initial data analysis will focus on the pre-survey responses only. Data was collected from 69 first-year undergraduate students across seven schools. Demographic information regarding their gender, ethnicity and POLAR is still being collected via the central student records and so analysis using demographic data has not yet been possible.

Implicit Theories of Intelligence (IToI) were measured using four items from Dweck's (1999) Theories of Intelligence Scale. Although Dweck's original scale includes eight items (four entity theory questions and four incremental theory questions), given the length of the survey and the students' involvement in a longitudinal study, Dweck (1999) recommends using the entity-only scale as these are less likely to suffer from social desirability and repetition effects.

Participants responded using a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree) for each item. IToI scores were computed by combining scores from each of the four questions, with higher scores indicating more of an entity theory of intelligence. Below shows the students IToI scores broken down into quartiles.

63.8%	26.1%	8.7%	1.4%
4-7	8-11	12-15	16-20

Growth Mindset	Fixed Mindset

Table 2: Sum of CCCU students' Dweck scores broken down into quartiles

Table 2 highlights that across the pilot schools at CCCU, most students hold a more growth mindset (89.9%) than a fixed mindset (10.1%). This was further confirmed by the Implicit Theory of Intelligence Scale (ITIS – El-Fattah & Yates, 2006) which showed that 98.6% of students held growth mindsets.

In addition, the project utilised a measure that has been implicated in the bias-reducing process, including prejudice-relevant discrepancies, and concern about discrimination in society (Devine et al., 2012). Participants responded on a slider scale from 0 (strongly disagree) to 100 (strongly agree) for twenty-six items with scores being computed to create sub-scales of creating inclusion, overcoming bias and stereotype beliefs. Correlations between the IToI, ITIS and Devine scale produced the following statistically significant findings:

- Fixed Mindset negatively correlated with creating inclusion and overcoming bias ($r = -0.248$, $n = 69$, $p = 0.040$; $r = -0.359$, $n = 69$, $p = 0.002$), yet positively correlated with stereotype beliefs ($r = -0.260$, $n = 69$, $p = 0.031$). This suggests that those who hold fixed mindsets are more likely to have stereotypical thoughts and beliefs and less likely to want to create inclusion and overcome biases
- Creating inclusion correlated positively with overcoming bias ($r = 0.596$, $n = 69$, $p = 0.000$). Creating inclusion and overcoming bias subscales both negatively correlated with stereotype beliefs ($r = -0.336$, $n = 69$, $p = 0.005$; $r = -0.345$, $n = 69$, $p = 0.004$). This suggests that at CCCU, those who are more likely to want to create inclusion are also more likely to want to overcome biases, and moreover, those who are more likely to want to create inclusion and overcome biases are less likely to have stereotypical thoughts.

CCCU Staff

Only five pre-survey responses were collected from the staff members at CCCU. As such, analysis specific to this institution's staff participants is not feasible. However, initial analysis of staff across the partnership is explored earlier in this report.

Looking Ahead

Plans for finishing data collection for cohort 1

As it has become clear that financial inducements are not sufficient to motivate students to participate in the project's research activities, we are currently trying to develop a strategy that will enable us to obtain some data for comparison. It is intended to circulate the post-training survey to all students who participated in the first round as soon as a strategy which will produce effective participation is finalised with the cooperation of participating programmes.

Plans for intervention delivery cohort 2

Plans for the implementation of the second phase are currently under discussion with a variety of interested parties including schools, student bodies and individual programmes. In view of the impending retirement of the current Project Leader these will be finalised as soon as future day to day management of the project is in place.

UNIVERSITY OF WINCHESTER

Introduction by Dr Nicola Barden

This project began and continues in a spirit of enthusiasm and optimism, as a positive investigation into addressing the serious concerns about attainment gaps across the HE sector. Winchester, as you will discover on reading the report, is a University built on values that support recognition of the individual as valuable in their own right. This approach sees Higher Education as a place in which each student has an opportunity to grow and develop as a whole person, and in which gaining academic knowledge also requires questioning and considering purpose, meaning and value in life as a whole. Our motto is 'wisdom and lar', an Old English word that can be read as 'wisdom and learning'; a learning that goes below the surface and contributes, over time, to a more personal wisdom.

It is painful, then, to know that the progress of some students may impacted by unidentified biases and ways of learning and teaching that could unintentionally reinforce negative messages. It was, equally, an easy decision to want to be part of a project testing out a way to address this, through the theory of changing mindsets. Winchester is no stranger to theories of learning; like others, we run teacher education programmes and substantial research programmes, as well as having excellent teaching staff. This project enabled the testing of one particular approach, to see its impact on staff as they engaged with the project and with students as both 'teachers' of a changing mindset approach and as those being taught about it. There was no hesitation in engaging with the opportunity, and providing the appropriate resources from within the University to support it.

It was the Student Services department with its responsibility for student equalities that engaged in the process of the bid on the University's behalf, and continued as the project lead. The department is home to several layers of student academic support - specialist tutoring, English academic language teaching, generic and specialist academic skills teaching – as well as the more usual wellbeing and guidance areas. We had for several years developed peer learning schemes, and together with the Academic Quality and Development Department run the Peer Assisted Learning programme that became such an excellent conduit for delivering the Changing Mindsets intervention. Having a professional service working closely with academic departments has proved a good model in terms of bringing a holistic view of the student into the picture, bringing together both an educative and pastoral perspective on students' academic journeys.

What follows is an account of the journey to date, both highs and lows. The point is to enable learning from the experience of the project and so we have tried to present a real account, anticipating that our struggles will be as useful to the reader as our achievements. It has been a fantastic experience to work with the other Universities, broadening all of our knowledge, and the whole has certainly been greater than the sum of the parts.

Dr Nicola Barden,
Director of Student Services

Why University of Winchester?

The University of Winchester has since 1840 delivered values-driven higher education. Our institutional values are Compassion, Individuals Matter and Spirituality, all of which we find are mirrored in the aims and approaches of the Changing Mindsets project. The University's approach is manifested in its institutional strategic priorities: 'It is implicit in our Mission that we should seek to ensure that all who can benefit from a Winchester education will have the opportunity to do so, regardless of their background, and that we should do this with particular regard for marginalised groups'. The institution's Learning and Teaching strategy aims are to 'broaden students' personal as well as intellectual experience, and to embrace inclusivity.' The clarity and consistency of our overall ethos demonstrates the University's existing commitment to facilitating learning for all students and these ideas align closely with the ethos of the Changing Mindsets project. It is the mission of both to seek to close the attainment gap for all groups and to work to ensure that all students can equally benefit from Higher Education, in this instance with a particular focus on Black, Asian and Minority Ethnic (BAME) and Low Participation Background (LPB) students.

By being part of a wider, cooperative project the University, like all the project partners, helps to create a representative sample of the wider Higher Education sector for the project and its analysis. As a campus based, small to medium sized, post-1992 institution with a strong educational and liberal arts tradition Winchester offers a slightly different but complementary profile to others in the project group. Our particular course portfolio and student population helps to diversify the contexts of the trial interventions, and combined with the other project partners to give a fairer representation of the sector.

We share with most other HEIs an attainment gap for BAME and LPB students at the University of Winchester, and we are hoping that this project will help us and others explore ways of closing this gap. Within the University of Winchester we have been working with 5 programmes, one (and in one case two) programme(s) from each of our four faculties. These five programmes were invited to take part as they reflected the diversity of the student population at Winchester, and have comparatively sizable populations of Low Participation Background and BAME students on the basis of their past attainment and progression data. A note of caution throughout is that the overall BAME population at the University is comparatively low and spread across many programmes, which makes the findings relating to BAME students from each programme on its own difficult to draw conclusions from. This contrasts for example with our above-benchmark recruitment from state schools and from those in receipt of DSA.

The University of Winchester is therefore taking part in this project as it will help further embed our institutional values in the Winchester learning experience and assist in addressing the attainment gap. Just as importantly, it will contribute to the sector's understanding of the issue and development of strategies to combat it. At the University of Winchester we are excited to be part of this project, as we believe it has the capacity to help each and every student to fulfil their potential.

Intervention Story

1. Our intervention story

At the University of Winchester the Changing Mindsets project has contributed to a number of productive conversations and learning points about how to frame a mindset intervention in higher education, how to facilitate and accommodate peer lead interventions, and how to build and maintain staff engagement with the project. Over the next few pages we will explore these points with you, and we will tell our intervention story, what we did, why we did it, and how, as well as what we have learned. We have certainly learned that some things are more predictable than others; the plan you start out with might not be what you end up with; and flexibility is needed to accommodate the interventions. We have also had confirmed that there is a real strength in peer-led interventions, with the double benefit to the leaders as well as the 'led'. As you read the intervention story you will be able to understand what has contributed to the data, seeing it in the round, and what has framed the conclusions drawn from the project so far.
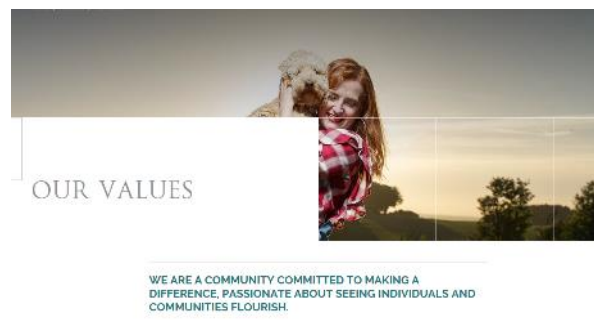
2. The beginning of the journey

The journey began some time ago with the University's commitment to addressing achievement gaps in its student population, where these existed. Becoming a partner in the bid was the easy part of the journey; it offered opportunities to address the issue in a way we would not be able to achieve alone, and allowed an intervention to be tested and evidence gathered prior to a longer term commitment to its implementation. The bid received unhesitating support from the Senior Management Team. Following the excitement of the confirmation of the HEFCE (now OfS) grant, the partner Universities met together and began to work out the way forward. The most important first step was to recruit a Project Officer and they, together with the Institutional Project Lead, worked to build good relationships with the identified intervention programmes. The Project Officer set to work to adapt the interventions to fit the Winchester context and to facilitate the data collection for the evaluation of this project. Much of this activity is detailed below, and indeed it is still ongoing at the time of writing – a lot has been learnt, and there is more learning to come.

3. The Winchester approach to Changing Mindsets

As stated, for Winchester the Changing Mindsets project and its values seemed to be an extension of our institutional values: *Compassion*, *Individuals Matter* and *Spirituality*. Consequently, our approach to Changing Mindsets was to see this as a tool for us to manifest our values and for us to work for a more equal learning environment. As a University we also have a commitment to seeing students as partners in learning, and provide many opportunities for students to learn from each other as well as from staff, for example:

- The Student Fellows Scheme, where students are recruited and trained to work singly or together alongside academic and professional staff on targeted educational development projects on subjects of concern and interest to them

- The Winchester Research Apprenticeship Programme (WRAP) offers opportunities for students to work alongside an academic in a live research project

- The Peer Assisted Learning scheme which allows more experienced students to work with first year students to help them engage with their learning, using tailored and prepared group sessions

- The Peer Mentors (or 'Smart Buddies) programme, which facilitates individual mentoring of first year students by more experienced students

For this and other reasons discussed later, including a potentially better relatability between participants and intervention leaders, we kept closely to the original brief of making this a student-led intervention, accepting with it all of the challenges as well as successes of this approach.

OUR VALUES

WE ARE A COMMUNITY COMMITTED TO MAKING A DIFFERENCE, PASSIONATE ABOUT SEEING INDIVIDUALS AND COMMUNITIES FLOURISH.

work and study. Staff and students are supported to flourish, encouraged to help others and empowered to make a difference in the world. We seek to challenge and nurture in all staff and students a love and value for all life and the planet. Staff and students are empowered to change the world for the better, challenge convention with compassion and stand up for what they believe to be true.

INDIVIDUALS MATTER

We are passionate about seeing individuals flourish here. The dignity and wellbeing of individuals is important as are their opinions and views. We are committed to working globally to ensure equality and justice for all. Everyone is welcome here. Staff and students will learn to value and appreciate others, whoever they are and whatever their background. Together, we will be supported and challenged to reach our full potential. Our staff and students are nurtured to embrace equality, diversity and inclusivity to the full. Staff and students are supported to fight for integrity and justice in a world of compromises and prejudice.

4. Governance of the project

To ensure that the project was delivered and managed in accordance with its mandate and aims, we established an internal governing structure on two levels. Firstly an operational group consisting of the Institutional Project Lead and the Research Officer who together ensure the day to day running of the project, with the Research Officer reporting to the Institutional Lead every 3 weeks, and more when necessary. This ensured a regular structure for the project, made sure that the operational and strategic requirements worked together, and made sure that any problems were caught at an early stage, before becoming a crisis. Additional meetings were useful for unforeseen challenges or when further guidance was needed from the Institutional Lead.

Above the operational level sits an institutional project group which consists of academic representatives of the 5 programmes taking part in the project, the Student Union, the Student Peer Leaders, the Widening Participation department, Registry, Planning, Student Services and Academic Quality & Development department. The institutional project group's mandate is to oversee the project, and to guide the work of the operational group; they have met once every 2-3 months to have regular oversight of the project and its development. They have provided a space for the different programmes involved to hear from each other and this has led to creative ideas around shared problems such as attendance. It also created increased engagement amongst the various stakeholder as they grew to see the value of the project and contributed to it.

Combined, these two levels of governance follow the outlines set by the Overall Project governance and provide the Winchester team with a solid and engaged governance structure.

5. What did we keep, what did we change, who did we offer it to and why?

In the project bid Winchester aimed to offer and deliver Changing Mindsets interventions to 275 students and 40 staff. The bid proposed that these interventions should be peer led, and that a two pronged approach – targeting students and staff - would have best impact on the overall cultural change that it was hoped would follow from the interventions, and thus have the greatest impact on attainment and retention. We wanted to test this out within our own student body.

When we started out we wanted to keep out work as closely linked as possible to the proposal for the project which stated, 'For teachers there is a one day or a half day interactive workshop. For students there is a compact version consisting of two, two-hour sessions or a full version of six, three hour sessions. The student workshops can be teacher or peer led. For the current project they will be peer led.' On the basis of this we planned to offer half day workshops to all academic departments involved, and to Student Services staff who

were likely to come in contact with students partaking in this project. We also aimed to provide the students with an average of 10-16 hours of intervention workshop time, depending on their timetable availability.

Once we had established the target for students and staff, we had to identify the departments that could most benefit and that would allow testing of the intervention with relevant cohorts. To achieve this we had two guiding principles:

1) We wished to have programmes from across all the four faculties at Winchester, so that the student cohorts would be reflect a broad flavour of the academic offer
2) It had to be programmes that had a sizable per cent of students from low participation backgrounds and/or BAME students.

We used the recruitment numbers from 2016-17 to indicate if the programmes would, combined, reach our targets for overall student and staff numbers. Staff were perhaps less concerning as we knew we could open our staff interventions to members of wider departments as well as those directly involved in teaching the intervention cohorts. What we settled on was 5 programmes from subject areas across the University of Winchester, who combined were expected to recruit 290 students between them and would bring 41 academic staff to our workshops.

The key regulator for our interventions was timetable and space requirements, which crucially influenced the development of our interventions. As for many HEIs, space is at a premium at Winchester and its availability can be a driver for the shape of many projects. We wanted the interventions to be timetabled – i.e. shown as integral to the students' general timetable rather than a thing apart. We believed this would facilitate best attendance; there are many competing demands on students' time, and it was important to engage with the fact that the Changing Mindsets intervention would appear to them as one of many competing priorities. Making it as easy as possible, and as much a part of their ordinary academic day as possible was therefore a positive strategy for success.

However, due to the time commitment required in the original proposal it was agreed with the departments that the sessions would need to be predominantly extra-curricular; staff too are understandably possessive of the teaching rime available to them for a usually packed curriculum.

For UoW **Programme A** we initially wanted to run 12 sessions of 1 hour to ensure equity with the other interventions, but it was agreed with the academic team that we would keep to 10 sessions. These were scheduled as 1 hour peer-led sessions across two semesters as part of a skills and development series of additional sessions.

UoW **Programme B** was offered a plan of 4 x 3 hour workshops, but it was agreed that due to the assessment schedule and working pattern of the programme the sessions would take place outside normal teaching times. This resulted in a plan for two full day workshops, one per semester. Consequently the interventions were aiming to be 12 hours input for this programme.

UoW **Programme C** and **Programme D** had a clear idea of what they wanted to do with their interventions, and the programme had a strong and useful hand in shaping their intervention schedule. The interventions were offered as part of bi-weekly skills sessions with an aim to offer 12 x 1 hour sessions across the two semesters.

With UoW **Programme E** it was agreed that the project would offer four 4 hour long peer-led sessions. For this programme, it later transpired that it would have been better to reduce the length of the interventions to 2 hours.

Overall, we offered our five collaboration programmes interventions that aimed to be true to our initial plan and proposal while adapting to the envisaged timescale and time commitments of the interventions. We aimed to keep the delivery method for the interventions peer-led for students for the reasons above, and also for the potential career enhancement opportunities it gave the leaders.

6. The plan about what we were going to do

Taking our approach forward from the theoretical application stage, the Winchester Changing Mindsets team had a clear plan about their approach to the project. We aimed to offer peer led workshop interventions to 5 programmes. To achieve this we needed to set up a peer leader scheme and recruit and train suitable peer leaders. Based on the recruitment numbers for our 5 programmes it was deemed reasonable to have 1 peer leader for each 10-15 students, meaning for 275 students we aimed to recruit 24 peer leaders, a fairly high student-leader ratio. Using these peer leaders we aimed for a greater impact of the interventions via more interaction being possible between the participants and the peer leaders.

For the staff interventions our aim was to deliver short 2 hour intensive workshops delivered by the Research Officer before the beginning of the peer led interventions. As such we planned to deliver all the staff interventions in the weeks before the beginning of semester 1, so that all academic staff would have gone through the intervention before meeting the intervention cohorts. The student interventions would begin soon after in weeks 2 and 3 of semester 1. After this, the remaining interventions would take place every 2-4 weeks until the end of semester 2.

This meant an intervention frequency of:

Programme	Intervention frequency semester 1	Intervention frequency semester 2	Length of sessions
UoW Programme A	Sessions fortnightly staring week 3	Sessions fortnightly staring week 2	1 hour
UoW Programme B	Intervention in week 6	Intervention in week 4	6 hours
UoW Programme C and D	Sessions fortnightly staring week 3	Sessions fortnightly staring week 2 until week 6	1 hour
UoW Programme E	Sessions in week 6 and 12	Sessions in week 4 and 8	4 hours

Following this schedule, the interventions for **Programme A, C** and **D** would be smaller, repeated 'drips' of interventions, whereas the interventions in **Programme B** and **E** were longer and more infrequent, as this better fit the profile of the programmes involved.

In addition to this pattern of delivery, we also structured our interventions thematically so that the sessions would flow naturally and move from one aspect of the interventions to the next. They would start with the data collection survey (in case participants had missed the opportunity to fill them in with the invitation to take part), followed by an introduction to ideas about ability and Growth Mindset; exploration of what a fixed mindset is; some strategies for developing a growth mindset; assessment and exploration of how this links with implicit bias and stereotype threat; and finally how language and behaviour might impact other

individuals' mindsets and academic engagement. This content structure formed the foundation for each session, with the shorter sessions covering one topic each with a brief recap of previous content for any participants who might have missed previous sessions.

7. How did it go? What did we actually end up doing? What did we have to surrender before the interventions were delivered?

Like many well laid plans, things ended up changing during the implementation of the interventions and some aspects of the delivery and the plan had to be amended. Among these were:
- Facilitating delivery to increased student numbers
- Revision of length and timings of the intervention sessions
- Revision of methods used to promote attendance and interaction with the sessions.

It might be useful to highlight how we promoted the sessions to participants and how we structured their content. In the next section we will also explore how the use of peer leaders for the delivery went, and the staff interventions. In this section the focus will be on the practical implementation and delivery of the student interventions.

Most of our plans regarding the target numbers were based on the hope that our five intervention programmes would recruit similar number of students to their 2016 entry, from which we took our planning data. However, during enrolment in September 2017 it became apparent that the programmes had exceeded their target by enrolling 421 students, which far exceeded our target of offering the interventions to 275 students. This meant that our 1 peer leader for every 10 to 15 student ratio got slightly skewed, and in some programmes we had ratios of 1 leader for 20-25 students. As a result we had to re-assess some of our activity plans for the interventions, both content and delivery.

To ease the student experience of the interventions the Project Operational Group worked closely with the programmes to find suitable times and spaces to accommodate the interventions in the timetables of the students. For four of the **Programmes, A, C, D** and **E**, we settled on adding the sessions to the students' timetables on days that student participants were already on campus and therefore would find it easier to attend. The operational team alongside the teaching and support staff in the programmes promoted the sessions widely to the students by going into lectures and promoting the upcoming sessions, via posters, posts on E-learning environments and similar, all with the intention that it would generate attendance and participation.

These strategies for promotion were especially important for UoW **Programme B**, where the first intervention was scheduled to take place on a Saturday and the second on a Friday afternoon. This unusual move was dictated by the large amount of structured project time required of the students during the week, making in-week scheduling particularly difficult. The programme leader suggested the Saturday and as they knew the profile of their students it was thought worth trying to see how successful it was as another potential model for delivery. As the Saturday is not normally a teaching day, it was imperative for the team to promote the sessions extensively for the students. For the first intervention we did not take any pre-bookings, which made it slightly difficult to anticipate attendance prior to the day itself. We had anticipated that we might not be able to catch all the students from Programme B in the Saturday intervention, but the result was 6 out of 40 potential students attended the session. These 6 students subsequently reported to the Research Officer and the Peer Leaders that they enjoyed the day and found it useful for their development, and that they would encourage other students to attend. In addition to including the interventions on the students University timetable, the operational project team alongside programme contacts and academic staff actively promoted the interventions and their potential to the students.

Because of these poor attendance numbers we took a number of actions to both prepare better for the sessions, and to make them more attractive. Firstly, we moved the session from a Saturday to a Friday afternoon – to a time just after one of their other lectures. In addition we distilled the session from 6 to 3 hours, and provided light refreshments for the participants to make the intervention more appealing. Secondly, we introduced a booking system to be better able to plan and track attendance for the second intervention. Students in **Programme B** were invited to book their place during a promotional talk in a lecture for the Programme. This resulted in 20 bookings, which was promising for the impact of the intervention. The students who booked a place on the intervention workshop received a number of reminders and points of engagement in the weeks and days leading up to the intervention, but on the day of the intervention only 3 students attended. Although this is not a good situation, we nevertheless learned a lot from the sessions, and the attendees present at the interventions have yielded some interesting information.

The extra-curricular nature of the delivery of the interventions might have influenced the actual attendance at the peer-led sessions; similar low attendance patterns and engagement challenges were not registered in the other programmes. In total of the 421 enrolled students 119 students attended one or more of the interventions across the four participating programmes. This number represents 28.2 per cent of the maximum possible attendance based on enrolment numbers, whilst also representing 43.2 per cent of the target of 275 students. Considering that the interventions were extra-curricular this attendance is regarded as an overall positive result, although disappointing that they did not reach more people.

For **Programmes A, C and D** the intervention delivery took place in bi-weekly sessions. For **Programme A**, these sessions took place during a skills module setting. The interventions in **Programmes C and D** were integrated into a peer learning setting, where the leaders would also help guide participants on subject knowledge as well as the Changing Mindsets interventions. This was intended to make the intervention sessions more attractive for the students, as they would get guidance on both developing a growth mindset and – framed through a growth mindset – on their assignments. These hybrid sessions proved quite popular and developed a core group of participants attending every possible session.

With **Programme E**, interventions were scheduled in week 6 and 12 of semester 1, and 4 and 8 in semester 2. Although these originally were intended to take 4 hours each, it became apparent that coordinating the peer leaders' availability with those of the participants, and the participants' timetables, could prove difficult. Thus the interventions were condensed to 4 sessions of 2 hours across the two semesters. These condensed sessions meant that each session would be more focused and targeted, but still have the longitudinal reinforcing structure to embed the ideas and learning in the participants mind. So, on a practical level we had to amend and adapt our interventions with regards to the time dedicated to the sessions and the practical facilitation of them to encourage student participation.

A key learning point from the adaptations was that shorter more condensed session are more likely to fit neatly into the students' timetables, and might also be perceived as more 'value for money' as well as practicable among participants and funders. Yet shorter, fewer and more spaced out sessions might also limit the potential impact of longitudinal reinforcement of interventions of 12-16 impact hours as the project first intended. Consequently we would recommend that if a more condensed approach is adopted the repeat sessions – if introduced – might have most impact if taking place within a comparatively short time of each other – ideally at a 2-3 week interval. A possible added benefit of this short-but-frequent intervention pattern might be that participants will more easily retain information and a sense of continuity within the programme and therefore be more invested in the learning from it.

8. Peer leaders – strengths and dreams – recruitment and reality

To maximise our impact and interaction with our participants and to ensure the benefit of small group interaction and stimulating conversations we opted, as previously mentioned, for peer-led interventions. In doing this we intended to recruit a selection of peer leaders who would be 2nd or 3rd year students from each

of the participating programmes who had excelled academically in their first years of study and were motivated to take on a challenge that would help and stimulate new students on their course to excel and grow.

It is often more possible to get a higher staff student ration in smaller groups with peer learning situations, which can lend itself to an open and curious learning environment.
Peer led interventions can make the foundation for interactive and engaging sessions where the relationship between students and leaders is more easily seen as one of peer development where both parties develop in different ways. For Changing Mindsets in particular it can be seen to embody the principles that it teaches, with the leaders developing confidence and taking themselves beyond their comfort zone.

Peer leaders in our view also help in adapting the content and delivery to each cohort as they are more familiar with the programme than the research officer, who could have taught the sessions but without bringing the advantages described above.

These peer leaders were recruited from single honours or named pathways that were taking part in the interventions. Our methods for recruiting leaders were to circulate the information about the upcoming role to all eligible students via their Virtual Learning Environments, email lists, and emails from academic tutors to students believed to be suitable for the roles, to flag the upcoming opportunity. This was followed by a circulation of the application form and information sheet about the role so that students could apply on the basis of the best information possible. Due to the time it took to secure buy-in and participation from the programmes, the recruitment process took place from the end of May to September, which at Winchester for the most part is out of the teaching period. This resulted in a situation where information about the posts was circulated while the students were not at University, and it therefore contributed to a slow recruitment process which had to be extended open until we had received sufficient qualified applications. Initially we had hoped run one main training event for all our peer leaders, but due to the nature of the recruitment process the training for some had to be arranged later in to the semester. Luckily this was only needed for student leaders from Programmes B and E, whose interventions started later in the semester, so this delay had no negative impact on the interventions. It might actually have had a positive impact on the interventions as the peer leaders received their training soon before their first intervention sessions, and therefore were well briefed on the details of their sessions at this point.

Our experience with using peer leaders for the delivery of the interventions has so far been positive and we have found this a productive experience. During the course of our interventions we learned a few key things about using peer leaders for delivering interventions:

- The training for peer leaders needs to be rigorous, and needs to focus on both the content of the interventions, and on how to deliver them and handle a group. In the second part of the training it will be beneficial to include extended roleplaying session where the peer leaders model behaviour for the interventions and try to deliver short sessions based on intervention material. This also helps them better understand the material they are working with.
- Offer compulsory de-briefs for all peer leaders as this will be the main opportunity to supervise their engagement with students and the intervention material as well as a key point to address any arising issues.
- It will be beneficial for the peer leaders that we as their supervisors run short but immersive refresher activities as part of the de-briefs as this will allow the leaders to think about how they can be supported in supporting the growth of the participants.
- Observing sessions delivered by peer leaders is a fantastic way of gauging engagement and addressing attendance and participation challenges.
- In the first session it will be beneficial if the peer leaders have prepared some ice breaking activities and ways of introducing themselves and the sessions.

- Participants might find it a bit overwhelming if there are more than 2 leaders for any group. So try to ensure that there are no more than 2 leaders in sessions under 60 participants. If there are more leaders, help them to have a clear idea about what they are all bringing to the session and encourage them to use their numbers to break the groups up and continuously engage with the participants.

Learning from these experiences we have found that if properly supported and guided peer leaders will deliver effective and interactive interventions and will be a useful tool for reaching more participants. They also provide an excellent opportunity for developing and extending your impact and interaction with participants. However, a good peer lead intervention works best when academic and support staff connected to the participating cohorts are on-board and familiar with the interventions, their content and their benefits.

9. Delivery of sessions to staff – engaging staff

Working with staff as well as students has been a key component for this project. For us this meant, as mentioned above, that we offered and delivered Changing Mindsets workshops to all staff involved in tutoring students on the participating courses. Our rational for this was twofold. Firstly, it would familiarise staff with the intervention so that they could encourage students to participate and to help them engage with the Changing Mindsets interventions, whilst also stimulating students' growth through feedback and marking that was consistent with a positive Mindset approach. Secondly, to offer an opportunity for staff to identify their existing mindset and to develop a growth mindset for themselves, as this might influence their interaction with their students. To achieve these two aims we offered each of the part taking programmes a staff intervention workshop which would be delivered at a time of their convenience. It was agreed that it would be useful for the staff to do the workshop before the beginning of the first semester in conjunction with other staff meetings or training being undertaken in preparation for the start of the new academic intake in September 2017. Due to time constraints it was agreed with the programme leaders that it would be easiest to accommodate a 2 hour workshop in either induction week or the week before, as these weeks would most likely result in a significant attendance and good engagement with the ideas and the interventions.
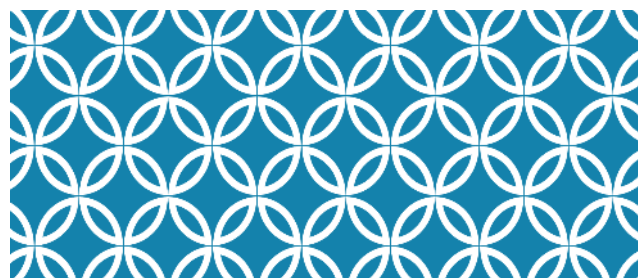
In addition to the offering the intervention to teaching and support staff in the participating programmes we also offered and ran interventions with staff from Student Services at University of Winchester. In Student Services we offered the training to two key areas, the Academic Skills team and the Disability and Wellbeing teams. The rational for offering the intervention to these teams was that they as support staff might come in contact with students participating in the student interventions, and therefore it would be useful for these teams to be familiar with the project and the content of the sessions, whilst also encourage the team members themselves to develop a growth mindset.


All our staff interventions were formatted to introduce the staff to the project, its aims, method and theoretical foundation, as well as to help staff become familiar with the intervention and for them to have the opportunity to develop a growth mindset. The sessions were divided into three. The first third focused on the project, its aims and methodology, so that staff would be familiar with the project. The second third focused on the Changing Mindsets outlook and its benefits for staff and students; this aspect contained some discussion about how staff could help facilitate students' growth through their feedback. The final third looked at implicit bias and stereotype threat in education. Although the interventions were very condensed, they proved engaging and useful and helped build buy-in from staff for the project. Following the intervention workshop a number of participants reported that they would benefit from a follow up workshop in the second semester, and more engagement with the use of feedback in the process of developing a growth mindset and how they could use this in their marking to stimulate growth among their students and staff. On the basis of these workshop we have the following recommendations for anyone delivering staff interventions as part of their intervention strategy for embedding change:

- It might be useful to deliver staff interventions before delivering student interventions, as they may be a useful allies of the intervention and its impact.
- Flexibility will be useful when scheduling the interventions with staff. It may prove useful to offer a follow up session at a later date to both offer a refresher for participants in the first session and to offer an opportunity for those that were unable to attend the first one.
- If possible it might be useful to offer staff a toolkit to help their implementation of the intervention ideas, especially if it is envisaged that they implement it in their learning and teaching delivery.

10. Student sessions delivery – strengths and learning points – engaging students in learning.

Intervening with students and helping them to grow and achieve, and through that closing the attainment gap, is the key aim for this project. At the core of this impact is the student interventions which, as highlighted above, were scheduled and delivered in practical contexts fitted around the preference of the programme. Consequently our student interventions were delivered in slightly different formats to fit with the context of the delivery.
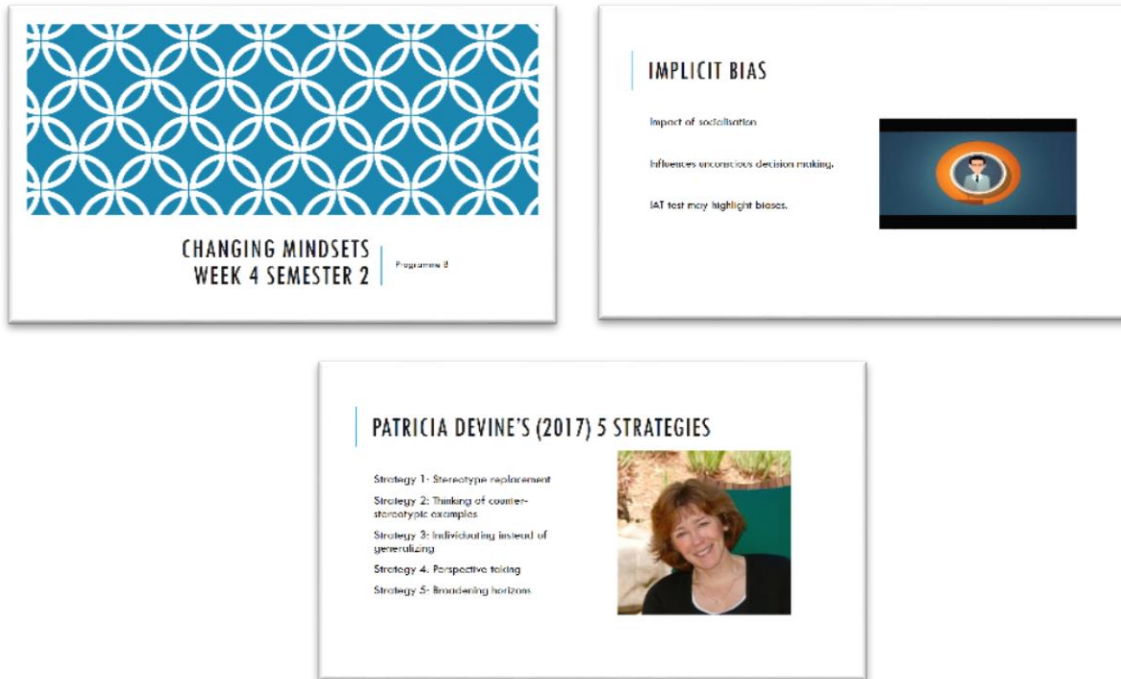
Structure and content
The core principle for the content structure was to ensure that participants would continuously build on their understanding of the material throughout the interventions, and that there was always something new to learn from each session. We envisaged from the outset that students would not attend every session so we needed a short 5 minute recap at the beginning of each intervention so that everyone would be familiar with the same information. These principles were taken forward in the formatting of the session and we used the following baseline for facilitating progression of understanding and growth throughout our sessions:

Session/section	Topic
Session/section 1	Intelligence and Ability
Session/section 2	Growth and Fixed Mindset: What this means
Session/section 3	Strategies to develop a Growth Mindset
Session/section 4	Using Feedback: identifying and responding to feedback to develop a Growth Mindset
Session/section 5	Implicit Bias and Strategies to deal with biases
Session/section 6	Stereotype threat and overcoming stereotypes
Session/section 7/8	Recap and Strategies for Growth

Within each of these sessions we structured the content along the following core principle:

Time/length	Content
5 Minutes	Introduction of session and leader
5 Minutes	Re-cap of past topics
15 Minutes	New topic

10 Minutes	Activity
10 Minutes	More on the new topic
10 Minutes	Activity
5 Minutes	Reflection and looking forward to the next session

For longer sessions such as in UoW **Programmes B** and **E**, this core structure was either repeated to fit the 2 hours or adapted to fit longer sessions, as was the case for **Programme B**. In this structure we found that the activities became important as tools to embed ideas and strategies in participants' behaviour and mindset, and consequently we would encouraged our peer leaders to focus on the activities in their delivery as this was where our participants would be able to engage most with the material. For the sessions for **Programmes A, B** and **E** the research officer developed and adapted the core material from the project consortium to fit the contexts of the delivery, and our peer leaders were responsible for tweaking their materials to fit their personal style, delivering the material and engaging participants through the activities.
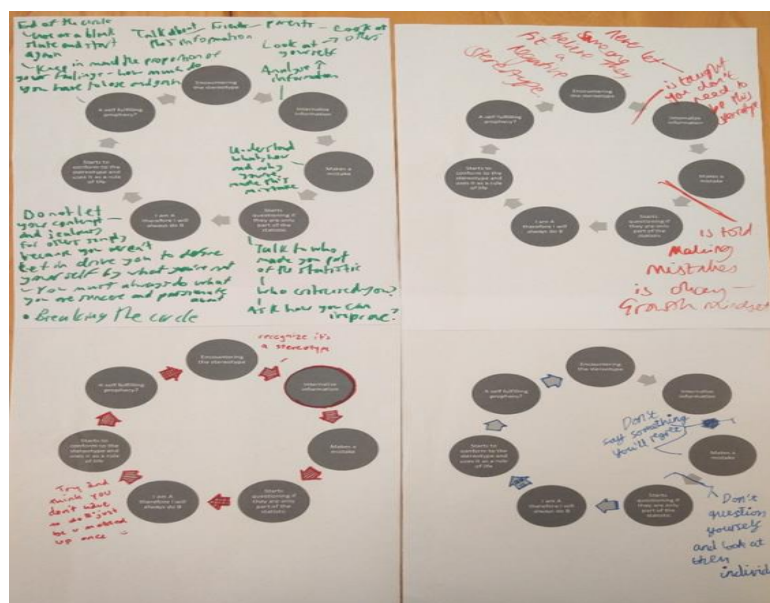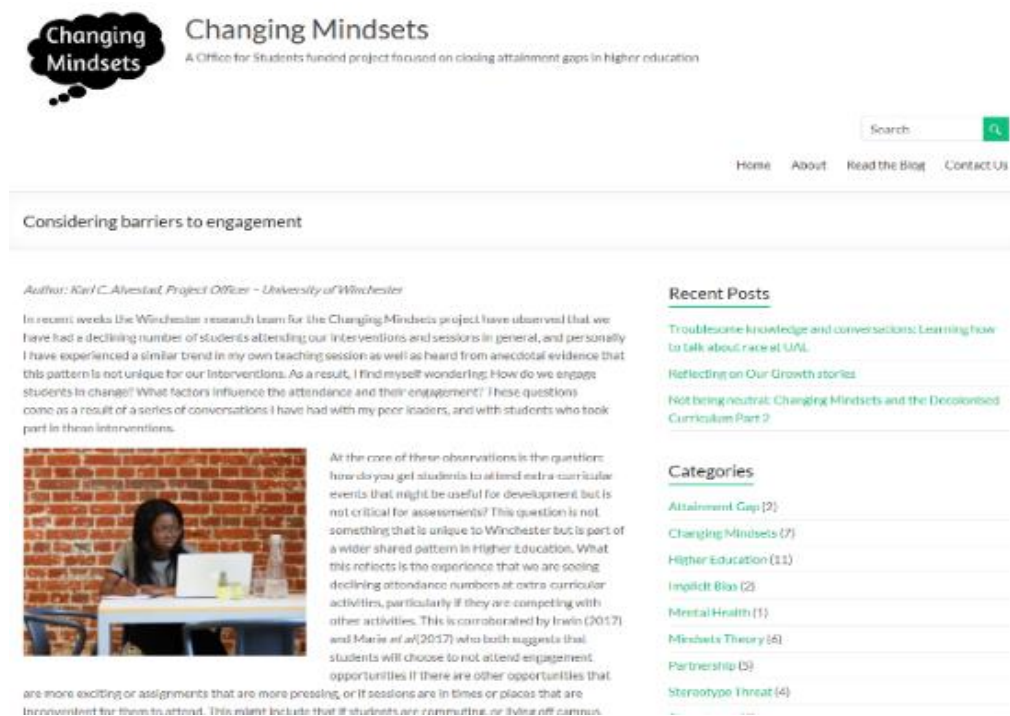

All our peer leaders, especially those from **programmes C** and **D**, were free to adapt the workshops to fit their group and personal skills. In this process the Research Officer provided them with a set of session outcomes and aims, and with activities and resources that peer leaders could use in their sessions. This approach was introduced for a number or reasons, most importantly was the acknowledgement by the research officer that the leaders would be best placed to adapt the interventions to reflect nuances and needs within the different intervention groups and programmes. In addition it was believed this adaptation would give the peer leaders a greater feeling of ownership of their own sessions and, through that, mastery of the intervention content. Whilst this would incentivise the leaders to immerse themselves in the session, this also set the stage for a more personalised delivery of the interventions within the core frameworks set by the project consortium and research officer. Although the research officer gave the leaders the option to tweak their sessions in this way, most of them only chose to do minor alterations such as changing the background on the materials. The direct impact of this was on the one hand that the peer leaders reported they felt more comfortable with the interventions; whilst on the other hand participants especially in **programmes A, B, C** and **D** reported that the minor tailoring of the intervention by the leaders helped them better understand and engage with the interventions. Following this, it is inferred that flexible formatting of the intervention material will help tailor the intervention to engage participants from different courses.
Attendance

The sessions we delivered saw 119 individual students attend one or more intervention sessions across the four programmes. Of these students 51 students attended more than one intervention session. Within these

numbers there is a general trend to higher attendance at the beginning of both semesters than at the end. This pattern also corresponds with when participants started to encounter assessments and other responsibilities that might have influenced their availability and willingness to attend extra-curricular sessions. The numbers of repeat attendees suggest to us that these sessions were useful for these students and that they actively engaged with the materials.

This also suggests to us, which will be explored in data collection interviews with participants, that peer-led session helped to create a positive and welcoming intervention environment and that the peer leaders effectively engaged their participants in change.

An additional factor that may have influenced the attendance patterns of participants is the timings of the sessions and the location of them in the timetable. To facilitate student attendance and raise awareness of the sessions we had all sessions for UoW **Programmes A**, **C, D**, and **E** timetabled, i.e. added to the students university timetable so that students would be able to find information about the sessions easily. However, due to a number of reasons we observed that if these timetabled sessions are to be successful it is beneficial if they are: 1) scheduled on days when students are already on campus; 2) at times and places that are in close proximity to other activities the students are doing that day; 3) at regular intervals so students do not forget about the benefits of the sessions; and 4) with the same peer leaders and fellow students throughout the whole academic year. If these factors can be considered we believe it will reduce many of the barriers to engagement and attendance, and that we might find a more stable attendance pattern. Looking back, the attendance patterns observed suggests that we were too ambitious, with regards to students' availability and time commitments, when we planned our intervention delivery. Although we aimed to deliver the interventions as closely as possible to the initially proposed format, in hindsight it is apparent that fewer, shorter and content heavy sessions will be more realistic in terms of time commitments for student participants as attendance pattern implies participants are looking for high impact time-efficient sessions. For this reason it may be productive for future work to factoring in these restrictions and influences when planning interventions and extra-curricular activities in Higher Education.

Successes

Although the 119 attendees only represent 43.2 per cent, and the 51 repeat attendees 18.5 per cent, of the target for attendance of 275, these numbers show that our sessions were deemed useful and interesting enough to attend among parts of the student population. Through anecdotal evidence we have encountered participants who have implemented strategies in their own work reflecting the sessions they have attended. Early indicators of findings from among other places, debriefs of the peer leaders, reports such as: "I find it so much easier to think that I can do things – I don't panic as much as before", "I don't give up as easily as before", and "It is strange how this has happened – I think I have gained more from these sessions than I expected I would" implies an impact on leaders as well as participants. These three quotes are representative of the experiences and sentiments of the peer leaders and how they reflected on their own developed of a growth mindset. Leaders also reported they had amended their approach to studying and how they used their feedback to continually grow and develop. These quotes therefore attests the personal impact our interventions had for both participants and leaders. Although these quotes are not quantitatively significant, they help us understand the benefits and successes of the interventions and the format in which they were delivered, as well as how students might identify change in their own behaviour and engagement following the interventions.

Learning points

On the basis of the delivery of the student interventions we have learned the following things, which might be useful for others who seek to facilitate or implement similar interventions.
Facilitating the interventions early in the academic year or semester is likely to bring a higher attendance as there will be fewer activities competing for student attention.
Fewer and more condensed sessions might be easier to accommodate in the academic calendar and to maintain repeat attendance than many longer sessions.
By scheduling interventions when students are already on campus, it is more likely to result in a better attendance.

11. Data collection and evaluation journey.

To evaluate and assess the impact of these interventions we have closely followed the project guidelines and evaluation plans to the best of our ability. As part of this we circulated surveys to our intervention participants both before and after their interventions, and invited student and staff participants to take part in evaluation interviews. Via these data collection initiatives we have assembled a collection of statements from both students and staff that gives good insight into the effect and usefulness of the interventions. So far we have 8 participant interviews and 5 staff interviews, and we are continuously working on collecting more data to give a fuller evaluation of the project.

12. Concluding remarks about Opportunities, Challenges and Triumphs

As of May 2018, we are over half way through the project and we are currently looking at completing the analysis following the first intervention cohort. Over the next few weeks and months, we will complete our data collection and finalise our plans for cohort two. So far in the project, we have had a number of opportunities that have helped shape the project and raise its profile institutionally:
- working closely with the Academic Skills and Peer Mentoring team to seek ways of integrating the interventions into other support activates offered at the University
- hosting a Learning Lunch where all internal staff are invited, to raise the profile of the project and its work in advance of the Stakeholder conference on the 28th June 2018
- with the help of UoW **Programme A** and the Research Officer has trialled lecture-led sessions in their own teaching programme. As an alternative method of delivery this brings the advantage of

consistency and between the content of the intervention and the process of teaching, feedback and assessment. Further learning on this has already been discussed by other project partners who have used this approach more extensively.

Over the course of the work with cohort one, we have also encountered a number of challenges which we have overcome. At the core lies a shared challenge: time. It has at times been challenging for the Institutional Project Team to reach the milestones of securing programme and staff buy-in and to establish a peer learning scheme from scratch in time for semester 1, whilst also training the Research Officer from scratch on the interventions, their content, and the theoretical foundations in time for the beginning of semester 1. We have since found that from the Research Officer's point of view it would probably have been useful to delay the staff interventions and the start of the student interventions slightly to allow for better preparations for the interventions and establishing better links with the programmes. Regardless of these challenges, the project team feel very pleased that through excellent cooperation with the Academic Skills and Peer Mentoring team we have a clear plan for cohort two through PAL integration. We are confident in this plan as it gives a good structure for upscaling and for making the interventions part of the normal delivery of student support at the University of Winchester.

Going forward we can on the basis of cohort one tackle any upcoming challenges and predict the future needs of this project in its growth and development.

Initial Data Analysis

Pre-cohort Data

Course A
- The average attainment gap of a good degree between white and BME students over five years is 24.6% (five year average 61.5% to 36.9%).
- The average attainment gap between all students and quintile 1 students is 9% (five year average 52.1% to 61.1%).

Course B
- The average attainment gap of a good degree between white and BME students over five years is 1% (five year average 91% to 90%).
- The average attainment gap between all students and quintile 1 students is 4.1% (five year average 91.2% to 95.3%).

Course C
- The average attainment gap of a good degree between white and BME students over five years is 27% (five year average 77% to 50%).
- The average attainment gap between all students and quintile 1 students is 0.7% (five year average 75.1% to 74.4%).

Course D
- The average attainment gap of a good degree between white and BME students over five years is 0.9% (five year average 74.1% to 75%).
- The average attainment gap between all students and quintile 1 students is 0.4% (five year average 73.7% to 73.3%).

Course E
- The average attainment gap of a good degree between white and BME students over three years is 36.5% (five year average 70% to 33.5%).
- The average attainment gap between all students and quintile 1 students is 4.6% (five year average 65.6% to 70.2%).

Data provided by University of Winchester. Analysed by Juan Batley, Data Analyst Learner Analytics Specialist

University of Winchester- Achieved a good degree (1st or 2:1)				
Courses	Course A		Course B	
Achieved good degree group	Average five academic years 2012/13 to 2016/17			
	Overall no.	% Good	Overall no.	% Good
Overall	231	52.1%	239	91.2%
Quintile 1	[32]	[61.1%]	[34]	[95.3%]
BME	[87]	[36.9%]	[12]	[90%]
White	140	61.5%	224	91.0%
Male	127	46.6%	69	91.4%
Female	104	58.8%	170	91.5%
Age <21	216	50.9%	227	90.7%
Age >21	[15]	[60%]	[12]	[91.7%]

Withdrawals	Average five academic years 2012/13 to 2016/17			
	Total	Average per year	Total	Average per year
Number of withdrawals each year	87	17	49	10

Key
[ ] Statistically not significant number of students

University of Winchester- Achieved a good degree (1st or 2:1)						
Courses	Course C		Course D		Course E	
Achieved good degree group	Average five academic years 2012/13 to 2016/17					
	Overall no.	% Good	Overall no.	% Good	Overall no.	% Good
Overall	225	75.1%	134	73.7%	362	65.6%
Quintile 1	[22]	[74.4%]	[21]	[73.3%]	[48]	[70.2%]
BME	[16]	[50%]	[12]	[75%]	[43]	[33.5%]
White	206	77.0%	122	74.1%	310	70.0%
Male	51	72.9%	[6]	N/A	70	[52.4%]
Female	174	75.9%	128	73.8%	292	68.5%
Age <21	188	75.5%	112	71.4%	336	66.4%
Age >21	37	67.6%	[22]	[81.8%]	[27]	[51.9%]

Withdrawals	Average five academic years 2012/13 to 2016/17					
	Total	Average per year	Total	Average per year	Total	Average per year
Number of withdrawals each year	73	15	37	7	107	21

Key
[ ] Statistically not significant number of
students

Quantitative

UoW Students

As post-intervention data is still being collected at University of Winchester (UoW), the initial data analysis will focus on the pre-survey responses only. Data was collected from 82 first-year undergraduate students across four schools with a mean age of 21.16 (SD Age = 5.68 years; Min Age = 18 years; Max Age = 46). Information regarding their gender, ethnicity and quintile was collected via the central student records and can be found in Table 1. Participation of Local Areas (POLAR) classification (Quintile 1-5) was used as a place-based measure of educational disadvantage that classifies local areas according to the participation rate of young people in higher education (HEFCE, 2017). Ethnicity was recoded into binary variables White British and BAME British (including all other ethnic origins) respectively.

Gender	M= 19; F=60; Not provided= 3
Ethnicity	White= 71; BME= 8; International and Unknown= 3
Quintile	Quintile 1= 4; Quintile 2-5= 66; Not provided= 12

Table 1: UoW Student demographic information

Implicit Theories of Intelligence (IToI) were measured using four items from Dweck's (1999) Theories of Intelligence Scale. Although Dweck's original scale includes eight items (four entity theory questions and four incremental theory questions), given the length of the survey and the students' involvement in a longitudinal study, Dweck (1999) recommends using the entity-only scale as these are less likely to suffer from social desirability and repetition effects.

Participants responded using a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree) for each item. IToI scores were computed by combining scores from each of the four questions, with higher scores indicating more of an entity theory of intelligence. Below shows the students IToI scores broken down into quartiles.

51.2% 4-7	41.5% 8-11	7.3% 12-15	0% 16-20

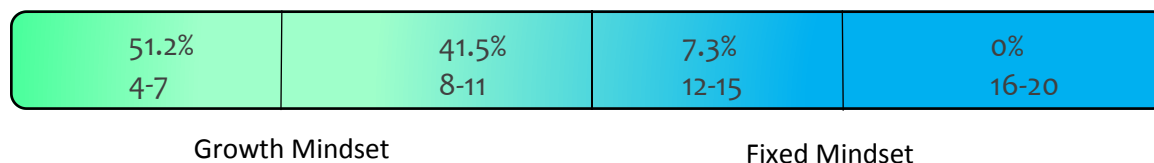Growth Mindset　　　　　　　　　　　Fixed Mindset

Table 2: Sum of UoW students' Dweck scores broken down into quartiles

Table 2 highlights that across the pilot schools at UoW, most students hold a more growth mindset (92.7%) than a fixed mindset (7.3%). This was further confirmed by the Implicit Theory of Intelligence Scale (ITIS – El-Fattah & Yates, 2006) which showed that 95.1% of students held an incremental (growth) mindset.

When the scores from Dweck's scale were broken down to focus on the project's two target populations (BME and QUINTILE1 students) we can see that 87.5% of BME student have a growth mindset compared to 93% of white students (see Table 3 and Table 4). As only 4 respondents were from QUINTILE1, analysis specific to this institutions' students POLAR was not feasible.
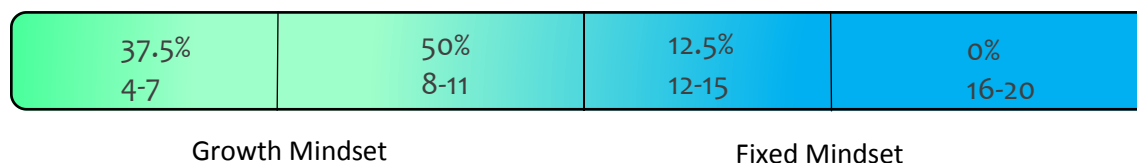
37.5% 4-7	50% 8-11	12.5% 12-15	0% 16-20

Growth Mindset　　　　　　　　　　　Fixed Mindset

Table 3: Sum of UoW's BME students Dweck scores broken down into quartiles

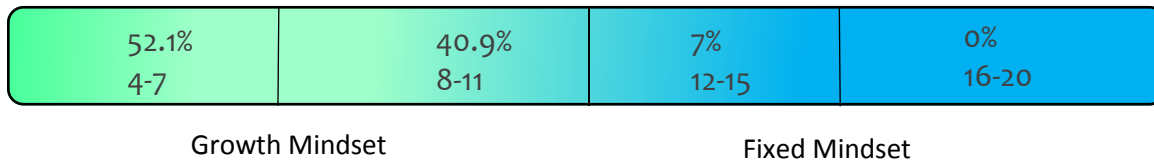| 52.1% 4-7	40.9% 8-11	7% 12-15	0% 16-20

Growth Mindset   Fixed Mindset

Table 4: Sum of UoW's white students Dweck scores broken down into quartiles

In addition, the project utilised a measure that has been implicated in the bias-reducing process, including prejudice-relevant discrepancies, and concern about discrimination in society (Devine et al., 2012). Participants responded on a slider scale from 0 (strongly disagree) to 100 (strongly agree) for twenty-six items with scores being computed to create sub-scales of creating inclusion, overcoming bias and stereotype beliefs. Correlations between the IToI, ITIS and Devine scale produced the following statistically significant findings:

- Fixed mindset positively correlated with stereotype beliefs ($r = 0.307$, $n = 82$, $p = 0.005$). This suggests that those who hold fixed mindsets at UoW are more likely to have stereotypical thoughts and beliefs.
- A growth mindset correlated negatively with stereotype beliefs ($r = -0.229$, $n = 82$, $p = 0.039$) suggesting that those who have a more growth mindset at UoW are less likely to have stereotypical thoughts and beliefs.
- Creating inclusion correlated positively with overcoming bias ($r = 0.546$, $n = 82$, $p = 0.000$). In addition, creating inclusion and overcoming bias subscales both negatively correlated with stereotype beliefs ($r = -0.398$, $n = 82$, $p = 0.000$; $r = -0.310$, $n = 82$, $p = 0.005$). This suggests that at UoW, those who are more likely to want to create inclusion are also more likely to want to overcome biases, and moreover, those who are more likely to want to create inclusion and overcome biases are less likely to have stereotypical thoughts.

UoW Staff

An unfortunate miscommunication resulted in no pre-survey data being collected for the staff members at the University of Winchester. Post-survey data has been collected and analysis and findings will be available upon the completion of the project. To ensure two points of data collection is enabled, additional data of six to twelve month follow-up data will be collected.

Looking Ahead

Plans for finishing data collection for cohort 1

The data collection for our first interventions began as soon as the delivery of our interventions was completed. Due to the subject-led structure of the intervention delivery, some of the intervention cohorts completed their interventions in week 4 of semester 2 (week commencing 5th February 2018), whereas other programmes had their last intervention session on the 6th April 2018. In response to these subject differences we staggered our data collection to take place soon after student participants completed their interventions. As a consequence of this staggering our data collection of the student or staff experiences of the interventions are not yet complete at the time of writing.

Our strategy for completing the data collection is threefold. Firstly, we circulate a post-intervention survey to all participants in our interventions, so that they are reminded to complete it. For this completion students are eligible to receive a £5 voucher for their time. Secondly, students completing the survey are invited to also take part in an interview, for this participation they will be awarded with a £20 voucher. So far we have had 7 interviews with students, and we are hoping to secure another 8-13. In the hope that it will yield more interviews, we will re-contact all our participants to take part in an interview during their exam/assessment

period 8-25 May 2018. We will close the data collection window for students from cohort 1 on 1st June to ensure sufficient time for analysis. Thirdly, to gather views on the staff experience of the interventions we are arranging short 30-45 minute meetings with key individuals in the participating departments to explore the project, its content and implementation from their perspective. This is to ensure that we get a balanced foundation for analysis. We will also invite all other academic staff who completed the staff interventions and indicated in their post intervention survey that they would be willing, to take part in a short interview about the project. This primary data collection is due to completed by 1st June 2018, which would give us enough time for data analysis.

Plans for intervention delivery cohort 2

Following the experiences of cohort 1 in 2017-18, the Winchester project group is planning to continue and grow the Changing Mindsets interventions in part by integrating them into other schemes and in part by supporting them as stand-alone activities.

1) UoW **programme B, C, D** and **E** will from September 2018 take part in the University of Winchester Peer Assisted Learning (PAL) schemes. The interventions have been incorporated into the existing training for PAL leaders for 2018-19, remaining consistent with the value of peer-assisted learning at the core of the existing delivery. To support this, we will work alongside the wider PAL project team to develop activities and tools PAL leaders can use in their sessions to stimulate and encourage mindset growth. In addition to **programmes B, C, D** and **E**, PAL is taking place in five other programmes and Changing Mindsets will be included in these as well, reaching a predicted 400 additional students.

2) We are also developing resources for integration into standard teaching or seminar activities – so that interested programmes can actively integrate the changing mindsets materials into their day to day delivery. This is particularly relevant for UoW **Programme A**, which is the only Cohort 1 course that will not be taking part in PAL in the next academic year, due to external constraints. These resources will also make it possible for interested tutors to integrate the interventions into contexts where peer-led sessions might not be feasible for practical reasons. They are currently being trialled by the research officer in cooperation with other staff at the institution.

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