New Model Institute for Technology and Engineering (NMITE)

Access and participation plan

2022-23 to 2026-27

Introduction

The New Model Institute for Technology and Engineering (NMITE) is a new higher education provider which welcomed its first cohort of students in September 2021. As such, NMITE's widening participation, outreach and recruitment programmes are still in their infancy with little or no relevant performance data currently available for evaluation. Nevertheless, NMITE has at its heart the belief that all students, irrespective of their background, should be supported to access and succeed in higher education if they have the ability and the desire.

In the absence of our own data, this Plan identifies areas where inequalities exist in the opportunities afforded to people, primarily in Herefordshire but also nationally, to benefit from access to higher education. Our assessment is based upon currently available, public domain data and particularly the OfS access and participation dataset. References to data are provided at the end of the document. What has become apparent through our analysis is the under-representation in HE of students from a Free School Meal (FSM) and/or low participation background within Herefordshire. Geographically the data shows tremendous variability in the number of students entering HE even within the city of Hereford, which highlights a need for future NMITE outreach and recruitment activities to be effectively targeted. Data relating to gender and ethnicity specifically within engineering education, together with the public awareness of both the role engineering plays within society and the opportunities for studying engineering at a HE level, are also considered.

A note on the Covid pandemic

The educational impact of COVID on students is likely to persist for several years, with students entering HE in 2022 likely to have experienced significant educational disruption in Y11 and Y12. As UCAS note[1], disadvantaged students (using the POLAR4 measure) were more likely to be at the lower end of the attainment spectrum and this, coupled with a capacity squeeze on HE provision due to rising numbers of 18 year olds, risks intensifying disadvantage and underrepresentation.

Data sources: UCAS, OfS, HESA. The latest possible data sources were used.

1. Assessment of performance

1.1 Higher education participation

Access by POLAR4

The gap in participation of students from areas of low HE participation (POLAR4 measure) is a national concern. In 2019-20, the sector average gap between students from POLAR4 Quintile 1 (most undrerrepresented) and POLAR4 Quintile 5 (most represented) backgrounds was 17.4%[2]. Whilst this gap has been steadily reducing over time, there is still work to do in improving this measure and it has been flagged as a national Key Performance Measure (KPM) by the OfS.

[1] UCAS (2020) *What happened to the COVID cohort*, Cheltenham: UCAS. https://www.ucas.com/file/411836/download?token=51eovdPq
[2] OfS Access and Participation Dataset https://www.officeforstudents.org.uk/data-and-analysis/access-and-participation-data-dashboard/

Whilst specific data is too small to report for data protection reasons, we note that in our (very small) first cohort of students (2021-22 academic year) that this gap in participation between POLAR4 Q1 and Q5 students is also evident, at 18.5% (internal data).

Engineering UK note that almost half of 11-19 year olds report knowing nothing about what engineers do, suggesting significant concerns about the pipeline for all students entering engineering at HE level, a situation likely to be exacerbated for students from backgrounds with a limited experience of HE, degree-level engineering careers or 'STEM capital' .[3] Engineering UK also note that 62% of 16-17 students felt that Science and Maths courses were harder than non-STEM courses. They note that of the 11% of students studying engineering and technology degrees, students from low participation neighbourhoods are even more under-represented than in HE generally (13%).

Given the national priority in access for this target group, and our local context which provides us opportunity to work into areas of high under-representation, this area will be a focus under this Plan.

However, we note the difference in the nature of the gap between POLAR4 and IMD (see below). This suggests that the use of postcode-based measures may not always be reliable indicators of the kinds of disadvantage that lead to access gaps. We propose to consider both measures and further explore this disparity in the context of our own student body, with a particular focus on which measure provides the most effective targeting measure.

Access by Index of Multiple Deprivation (IMD)

In 2019-20, the sector average gap between students from IMD Quintile 1 (most deprived) and IMD Quintile 5 (least deprived) backgrounds was -1.5%[4], meaning that a higher proportion of Quintile 1 learners are accessing higher education than those from Quintile 5. Similarly, in our initial 2021-22 intake, the gap in participation between IMD Q1 and Q5 is also positive, at -7.4% (internal data). Whilst we will keep montoring this data as it emerges, this area is therefore not a concern at this time.

Success – Continuation and Attainment by POLAR4 and IMD

Latest data from across the sector highlights gaps in continuation and attainment for students from under-represented and deprived backgrounds.

Table 2: *OfS Access and Participation Data (2018-19) Proportion of students from highest and lowest quintiles retained in HE.*

POLAR4 Q1	**POLAR4 Q5**	**POLAR4 Gap**
89.6%	94.4%	4.8%
IMD Q1	**IMD Q5**	**IMD Gap**
85.9%	93.9%	8%

Table 3: *OfS Access and Participation Data (2019-20) Proportion of students from highest and lowest quintiles being awarded 1st/2.1 degree outcomes.*

POLAR4 Q1	**POLAR4 Q5**	**POLAR4 Gap**
80%	88.7%	8.7%
IMD Q1	**IMD Q5**	**IMD Gap**
74.2%	89.4%	15.2%

Research has suggested a range of issues that can negatively impact on retention, including concern about picking the right subject (Archer 2005[5]), which is relevant in the context of the lack of experienced family information, advice and guidance, as well as sense of fit, belonging and the development of social networks (Thomas 2012[6]). The latter aspects can be particularly pressing for students from areas or families without a

[3] Engineering UK (2020), Educational Pathways into Engineering. Available at https://www.engineeringuk.com/media/232298/engineering-uk-report-2020.pdf
[4] OfS Access and Participation Dataset https://www.officeforstudents.org.uk/data-and-analysis/access-and-participation-data-dashboard/
[5] Archer, L. (2005). The 'value' of higher education. In *Higher education and social class* (pp. 131-148). Routledge.
[6] Thomas, L. (2012). Building student engagement and belonging in Higher Education at a time of change. *Paul Hamlyn Foundation*, *100*, 1-99.

history of HE (e.g. Reay et al 2010[7]). Research also suggests that students from an area or family without a history of HE can struggle with adapting to the requirements and expectations of degree level study and can face additional challenges in negotiating the 'hidden curriculum' (e.g. Semper and Biasco 2018[8]) and that this can exacerbate attainment outcomes. In developing our thinking in this area and developing our institutional response, we are drawing on recognised literature and thinking, such as Mountford-Zimdars et al 2015 and Hockings 2010[9])

Through NMITE's approach to education, teaching and learning (see Section 3), we hope to avoid such disparities in continuation and attainment rates amongst our diverse cohorts; for example, we expect our approach to assessment which replaces annual assessments with a portfolio approach to result in smaller continuation and outcomes gaps than those which characterise the sector. However, we will closely monitor our data over time as our first and subsequent intakes progress through their studies.

Progression by POLAR4 and IMD

Again, the latest progression outcomes across the sector for these target groups show gaps between the highest and lowest quintiles for both POLAR4 and IMD. Research (e.g. Okay-Somerville et al 2020[10]) suggests that social-economic background can impact on STEM career outcomes through a range of different impacts, with socio-economically disadvantaged students having differing career expectation, and different forms of social and cultural capital than more advantaged peers.

Whilst it will be 4-5 years before NMITE is able to track progression data for our students, we will monitor data as it becomes available and seek to set targets in future iterations of this Plan. Given our employability-integrated curriculum, we also expect to track student career aspirations and readiness through study to support successful progression outcomes early in the student lifecycle.

Table 4: *OfS Access and Participation Data (2016-17) Proportion of students from highest and lowest socio-economic quintiles progressing into highly skilled or higher-level study.*

POLAR4 Q1	**POLAR4 Q5**	**POLAR4 Gap**
68.8%	74.8%	6%
IMD Q1	**IMD Q5**	**IMD Gap**
69.1%	76.1%	7%

1.2 Black, Asian and minority ethnic students

Access

Participation in higher education across the sector by ethnic background is varied, with white students comprising the highest proportion of entrants. However, the relationship between ethnicity and access to HE is complex, with an overall over-representation (relative to the population) of BAME students in HE masking disparities in access rates for students from different ethnic backgrounds, and in terms of the type of institution into which they progress, with lower rates of BAME students progressing into the most selective institutions.

[7] Reay, D., Crozier, G., & Clayton, J. (2010). 'Fitting in' or 'standing out': Working-class students in UK higher education. *British educational research journal*, *36*(1), 107-124

[8] Semper, J. V. O., & Blasco, M. (2018). Revealing the hidden curriculum in higher education. *Studies in Philosophy and Education*, *37*(5), 481-498.

[9] Mountford-Zimdars, A. K., Sanders, J., Jones, S., Sabri, D., & Moore, J. (2015). Causes of differences in student outcomes, Higher Education Funding Council for England; Hockings, C. (2010). Inclusive learning and teaching in higher education: a synthesis of research. *York: Higher Education Academy*.

[10] Okay-Somerville, B., Allison, I., Luchinskaya, D., & Scholarios, D. (2020). Disentangling the impact of social disadvantage on 'becoming employable': evidence from STEM student university-to-work transitions. *Studies in Higher Education*, 1-15.

Table 5: *OfS Access and Participation Data (2019-20) Proportion of students from different ethnicity identities enrolling in HE.*

Ethnic Identity	% of Entrants (2019-20)
White	67.4%
Asian	14.7%
Black	10.5%
Mixed	5.1%
Other	2.4%

Within our specific subject area of Engineering and Technology, we note a similar trend to all other subjects in terms of enrolments by ethnicity, except for Asian enrolments which is higher (+3.5%); and white enrolments which is lower (-3.8%)[11]. However, the UCAS End of Cycle report (2019) highlights that applications in Engineering and Technology are still dominated by white students, although there is a decreasing trend since 2007. Applications from the Black, Asian, Mixed and Other groups all increased over the same period with the biggest increase seen for Asian applicants, resulting in a larger increase in acceptances for this group.

Table 6: *Student population by subject area coding and ethnicity (HESA 2018-19)*

Subject area	White %	Black %	Asian %	Mixed %	Other %
Engineering and Technology	71.4%	7.0%	15.1%	4.0%	2.6%
All subjects	75.2%	7.4%	11.6%	4.2%	1.6%

Again, whilst specific data is too small to report, we note in our first intake that 18.5% of students are from Black, Asian, Mixed and Other (non-white) ethnicities (internal data). Whilst we do not propose setting a target for this area under this Plan given the data in this performance assessment, we commit to monitoring our intake by ethnicity and will seek to set targets should gaps emerge (considering our emerging context). Given our local area of Herefordshire has only 1.8% population not white (2011 Census, table KS201), we will pay particular attention to our emerging student data and diversity of our applications.

Success – Continuation and Attainment by ethnicity

NMITE notes the gaps across the sector in respect of retention and attainment between students from different ethnic backgrounds. In particular, we are cognisant of the OfS national KPM which has concern for the gap in attainment (1st and 2:1 Degree outcomes) between white and Black students. In terms of continuation, white students perform best; Black students are also the group least retained.

Research suggests that maintaining a sense of 'fit' or belonging within an HE institution can be crucial to retention (e.g. Thomas 2011). This can be particularly problematic for ethnic minority students in institutions that are predominantly white (Stevenson 2012[12]).

Table 7: *OfS Access and Participation Data (2018-19) Proportion of students from different ethnicities continuing in HE*

Ethnicity	Continuation rate	Continuation Gap Relative to White Students
White	91.1%	-
Asian	90.2%	0.9%
Black	84.9%	6.2%
Mixed	89.1%	2%
Other	87.4%	3.7%

[11] HESA data 2018-19

[12] Stevenson, J. (2012). Black and minority ethnic student degree retention and attainment. *Higher Education Academy*. Available at https://www.advance-he.ac.uk/knowledge-hub/black-and-minority-ethnic-student-degree-retention-and-attainment

When exploring attainment, the gap in outcomes between white and Black students is significantly worse (18.4%) than other groups, with 'Other' ethnicities also experiencing a large gap of 10%[13].

Table 8: *OfS Access and Participation Data (2019-20) Proportion of students from different ethnicities being awarded 1st/ 2:1 Degree outcomes*

Ethnic Identity	Attainment rate	Gap Relative to White Students
White	86.6%	-
Asian	78.8%	7.8%
Black	68.2%	18.4%
Mixed	83.0%	3.6%
Other	76.6%	10.0%

Although people from ethnic minority backgrounds were slightly over-represented in engineering and technology degree-level study, compared to the general population, there continues to be a troubling degree outcome gap relative to White students. It will be at least three years before we can begin to analyse data from our own context, but we will monitor academic progress rates to identify any indication that attainment gaps are opening up, prior to this.

Progression by ethnic background

Gaps persist into progression outcomes for the same ethnic backgrounds. The latest progression outcomes for the sector show gaps for Black, Other and Asian ethnicities when compared to their white counterparts. Whilst these gaps have been decreasing over time and are smaller than those observed for continuation and attainment outcomes, we will nevertheless remain cognisant of these broader trends as our progression data emerges over time.

Table 9: *OfS Access and Participation Data (2016-17) Proportion of students from different ethnicities progressing into highly skilled employment or higher-level study.*

Ethnic Identity	% of Population	Gap Relative to White Students
White	74%	-
Asian	70.2%	3.8%
Black	69.3%	4.7%
Mixed	71.1%	2.9%
Other	70.2%	3.9%

In considering our emerging data, we will remain particularly conscious of the Engineering' UK's (2018) State of Engineering Report, which highlights gaps in destinations between white and BAME graduates in 2015-16, where the proportion of white engineering graduates entering full time employment was 65.6%, compared to 48.6% for BAME graduates. The Report also noted that the engineering sector has only 8.1% ethnic minority workforce, compared to the overall UK workforce at 12.2%.

1.3 Mature students

Access by mature students

In the 2020 End of Cycle report, UCAS note a significant growth in acceptance rates of mature students and suggested this may be partially down to a response to economic uncertainty. We anticipate that this

[13] OfS Access and Participation Dataset https://www.officeforstudents.org.uk/data-and-analysis/access-and-participation-data-dashboard/

economic context may continue for the first few years of the life of this agreement. Across the sector, the current (2019-20) average participation rate for mature learners is 30.2%[14].

However, in the 2019 End of Cycle report UCAS note that in Engineering subjects the number of applications from mature students has declined since 2015, to only 16% in 2018. The number of acceptances for mature students also declined slightly in 2019, having previously fluctuated.

In our first intake, we note 44.4% are mature learners (internal data). This is therefore not a focus area under this Plan.

Success – Continuation and Attainment by mature learners

We are conscious of the gap in continuation outcomes for mature learners which is seen across the sector. The latest data highlights an 8% continuation gap in outcomes between young (92.4% continuation) and mature (84.4% continuation) learners[15]. Mature students are more vulnerable to dropping out of their studies. The OfS Topic Briefing[16] suggests that retention for this group can be impacted by lowered academic confidence, due to time away from studies, and that they may have additional familial and caring responsibilities compared to younger students. They may also be more likely to be commuter students which can negatively impact on feelings of belonging in the institution.

Similarly, a gap is noted for attainment outcomes (achievement of a 1st or 2:1 Degree outcome), where 75.6% of mature learners across the sector achieve this outcome compared to 85.2% of young students. This represents a 9.6% attainment gap[17].

Again, we will remain cognisant of these gaps in outcomes as our own data emerges over time, and will seek to set targets in the future should gaps emerge for our cohorts.

Progression by mature learners

In respect of progression outcomes, the sector data shows a positive picture for mature learners, who tend to perform better than their young counterparts, at 75.7% progression compared to 72.3% (young progression). This represents a positive gap of -3.4%[18]. This is possibly due to having previous career experience and the rationale for study which often includes career progression or change objectives. Given the Engineering and vocational focus of our provision, we expect our career progression outcomes to be above sector averages for both groups. We will monitor our emerging data as it becomes available over time.

1.4 Disabled students

Access by Disabled students

Participation in higher education by disabled students across the sector is average 16.6% (2019-20)[19]. In the 2020 End of Cycle report, UCAS note a significant increase in the number of students declaring disabilities, mental health and specific learning difficulties along with an increase in acceptances. Increases in the disclosure of mental health conditions is likely to be exacerbated by the additional challenges posed by the Covid-19 pandemic. As UCAS notes, mental health declarations are more likely to be declared by mature students (aged 21-24) and from students in POLAR4 Q1. UCAS also note that mental health declarations tend

[14] OfS Access and Participation Data (2018-19)
[15] OfS Access and Participation Dataset https://www.officeforstudents.org.uk/data-and-analysis/access-and-participation-data-dashboard/
[16] https://www.officeforstudents.org.uk/advice-and-guidance/promoting-equal-opportunities/effective-practice/mature-students/advice/
[17] Ibid, 2019-20
[18] Ibid, 2016-17
[19] Ibid, 2019-20

to be lowest in certain subjects including Engineering. This suggests that a proactive approach may be needed to ensure our students are seeking help they may require.

Again, whilst specific data is too small to report, we note that the percentage of students declaring a disability in our first 2021-22 cohort is very small (<5%) (internal data). We will continue to monitor our intake data over time and work towards increasing the proportion of disabled students that we enrol. However, given our internal data is extremely limited and we note a significant proportion of disabled learners in HE across the sector (close to population parity at 16.6% and 18%[20] respectively), with an increasing rate of applications from disabled learners, we do not propose to set a target in this first iteration of this Plan. We commit to ensuring a proactive and safe environment for declaring disability and help-seeking.

Success – Continuation and Attainment by Disability

Across the sector, disabled learners continue in higher education at a relatively similar rates to non-disabled learners (89.3% and 90.2%, respectively)[21]. In relation to attainment outcomes (achievement of a 1st or 2:1 Degree outcome) the average sector performance highlights a small 1.8% gap for disabled learners (81.5% attainment) compared to their non-disabled (83.3% attainment) counterparts[22]. We note the increasing number of students declaring a mental health condition and consider the impact that this may have on student engagement and academic outcomes.

Both retention and attainment outcomes for students with disabilities can be impacted by the inclusivity of the campus and its learning and teaching provision. The relatively small intake of new students (compared with large HEIs) can enable greater agility and responsiveness when it comes to the needs of individual students. At the same time, we are aware of the importance of taking a universal design approach to the development of our resources and environment. Again, NMITE commits to monitoring our data as it emerges in respect of this target group, and to seeking to set targets should we observe gaps emerging over time.

Progression by Disability

Again, across the sector small gaps persist into progression outcomes for Disabled learners, who progress at 71.5% compared to their non-disabled counterparts at 73.3%[23]. This represents a small gap in outcomes at 1.8%. We will remain cognisant of sector data as our progression data emerges over time, and will explore setting targets in the future should gaps emerge.

1.5 Care leavers

Access by care leavers

We note the particularly small percentage of care leavers in higher education, and the relatively small proportion of the care leaver population accessing higher education compared to other school students, at 13% and 43% respectively (2018-19)[24].

Going forward under his Plan, we commit to ensuring we capture this data along with other student data and monitor our performance. Should any gaps emerge, we will seek to set targets through subsequent Plans.

Success and Progression by care leavers

[20] Employers' Forum on Disability
[21] OfS Access and Participation Data (2018-19)
[22] Ibid, 2019-20
[23] Ibid, 2016-17
[24] In 2018-19, 13 per cent of children looked after for more than a year were in higher education by age 19, as against 43 per cent for all other school students. https://www.officeforstudents.org.uk/publications/consistency-needed-care-experienced-students-and-higher-education/

In 2017-18, the continuation rate for care experienced students was 5.6% lower than that of non-care students. There is also a gap observed in the attainment rate (achievement of a 1st or 2:1 Degree outcome) of care experienced students compared to their non-care counterparts, where in 2018-19 this gap was 12.1%. In respect of progression into highly skilled employment or further study, the gap is significantly lower with non-care students having only a slightly higher rate by 0.4%[25].

We have considered sector research highlighting that the disadvantage care leavers experience often impacts their life chances. We note that reasons for attrition are often multi-faceted, including complex mental health concerns (Harrison, 2017). Due to care leavers also often experiencing disrupted schooling, we are aware that attainment levels for this group are also generally lower (Flynn, Tessier and Coulombe, 2013). We hope that our contextualised admission approach will help to mitigate this disadvantage. Our practical, industry and employment integrated curriculum makes us well-placed to enable care leaver students to develop the skills, experience, and confidence they need to be successful in their studies and progress into successful careers. We will monitor this data as it emerges, and seek to set further targets in future should gaps present.

1.6 Intersections of disadvantage

Given we currently have limited data upon which to draw, we do not propose to provide further specific analysis here nor set targets at this time.

However, intersectional aspects are likely to be most significant for NMITE in the access area where different identity categories (particularly ethnicity, socio-economic and under-represented contexts) intersect with gender. The scale of the under-representation of females in Engineering is of a significantly larger scale than either of these other target groups. Therefore, an intersectional approach that considers gender as well will support a more complex and nuanced approach, which aligns with our holistic approach to considering student applications.

We will consider this data as our institutional data emerges over time.

Table 10: *HESA Subject by Gender (2019/20)*

Subject Area	Female	%	Male	%	Total
Engineering and technology	34,210	20%	138,945	80%	173,155
Total Population	1,440,810	57%	1,087,705	43%	2,528,515

1.7 Other groups who experience barriers in higher education

Given our recent launch and limited data, we do not consider we are able to explore additional groups at this time. NMITE will explore opportunities to collect and analyse a range of additional data as this Plan is implemented, from the 2024-25 academic year.

2. Strategic aims and objectives

NMITE is committed to ensuring equality of opportunity to participate and succeed in higher education for all learners, regardless of background. We will contribute to the national effort to close gaps in participation and success for under-represented learners, offering a different approach to Engineering at higher education.

In our offer we are conscious of the current challenge in the Engineering industry, noted by Engineering UK's 2020 report, which highlights a shortage of socially aware, skilled engineers. This will have ongoing negative impact on global challenges for example relating to energy, climate change and sustainability. Contributing to a diverse, skilled graduate pipeline is key to NMITE's mission. Our teaching and learning approach which draws on multiple disciplines reflects the needs of the industry and prepares our graduates for the future

[25] OfS Differences in Student Outcomes: Further Characteristics (2020)

workforce. We are committed to ensuring our outreach activity reaches young talent and provides the necessary information and aspiration for young learners to make informed choices in relation to engineering as a career pathway.

As such our mission is to become a centre of excellence for learner-centred engineering education. We will maximise our impact on industry and society through the development of societally-conscious engineers with advanced employability skills and professional capabilities. We will achieve this through a sustained focus on widening participation, an integrated curriculum that draws on multiple intellectual traditions, a responsive student experience, and sustained and productive collaborations with external partners.

2.1 Target groups

Given the location, size, focus and new status of NMITE, coupled with the insights we have gained from our analysis of sector data, we have decided to target our approach in the access area. We do not consider we can meaningfully set targets in success and progression at this stage, given we do not have any institutional data. We will however closely monitor our emerging data in relation to all OfS target groups, and seek to set targets during the life of this Plan should gaps emerge. Our focus will be on access for target under-represented (POLAR4 Q1) students. As part of our remit to diversify the engineering population we will also consider mechanisms to encourage gender balance although we do not set targets for gender under this Plan. Through our context-driven admissions process we also encourage access for mature students, particularly ex-military personnel and those considering a change in career using RPL and RPEL recognition.

Over the life of this Plan, NMITE will remain cognisant of, and will continue to monitor, national priorities in relation to access and participation, while testing our data against relevant sector priorities. This will help to ensure that equality of opportunity is maintained, and further gaps do not emerge across the whole lifecycle. We consider this particularly important as our on data is emerging and requires building over time.

As our data emerges and builds over the longer term, we will also develop our analyses to include disaggregated analysis of target groups, such as disability types, various age groups in the mature learner target group, and students from different ethnicities. However, given our very small and limited data at this point we do not expect to be able to conduct such analyses and draw meaningful conclusions until at earliest 2023-24.

Based on the performance assessment of sector data and our context, NMITE targets are in the following areas:

Target group	Access	Success (continuation)	Success (attainment)	Progression
POLAR4 Q1	X			

Whilst we have not set targets in success and progression areas, NMITE remains committed to a whole of life-cycle approach to access, success and progression, and continued monitoring of access, success and progression areas will be in place.

2.2 Aims and objectives

NMITE seeks to recruit students from an unusually varied pool. This includes applicants via standard routes with science and mathematics A-levels, although these A-levels are not a mandatory entry requirement. NMITE does however recruit based on aptitude for engineering, specifically around evidence of creativity, problem-solving and tenacity. In this way NMITE is open to school leavers with non-technical A-levels, career changers and others with alternative qualifications and experience. Furthermore, we place fair access and participation of under-represented groups central to our ethos, pedagogical design and development and admissions process.

Given that we only just enrolled our first cohort of students in 2021-22, we will focus on setting access targets in this Plan. Whilst the performance assessment highlights average sector gaps in a range of areas related to success and progression as well, individual provider data can deviate significantly (between very poor and excellent performance), and we consider it logical to monitor our own emerging data in success and progression for target groups before setting any targets. If gaps start to emerge as our data is collected over the next 3 years, we will seek to set additional targets.

In respect of our access targets, we have considered the sector performance and our own initial cohort of students (although this data is extremely small), and acknowledge the access gaps that exist for learners from low participation areas.

In setting this target, we are cognisant that students from low participation neighbourhoods are likely to be impacted by both inhibited horizons for expectation and lower subject relevant support (Rizzica 2020; Sutton Trust 2018)[26]. It is therefore NMITE's ambition to focus on those students, locally and regionally to help to ensure opportunities and aspirations are realised.

NMITE is already forging strong links in Herefordshire with schools currently located in POLAR4 Q1 and Q2 groups, providing mentoring, curriculum guidance, outreach support and aspirational awareness in a county previous without a technical higher education presence. This work is still in its infancy, due to NMITE's position as a new provider, however we are committed to developing and expanding these activities over the coming years.

Given the performance assessment did not highlight gaps in access for BAME students, we do not propose to set a target in this area at this time; although we have committed to monitoring our own emerging data and will seek to set targets should gaps emerge over the next 3 years. We also note the that applications and acceptances from disabled learners is increasing across the sector, and current sector average is inline with the percentage population of disabled people (18% of working age population). Whilst we do not propose to set a target for disabled learner access at this time, we have considered the research that suggests proactive approaches to encouraging and providing a safe space for students to declare a disability (De Cesarei Grimes et al 2019; Thompson-Ebanks and Jarman 2018)[27] may be particularly necessary due to lover declarations in Engineering (UCAS).

Into the future, NMITE will actively monitor performance in terms of access, success, and progression of disadvantaged students using a range of data. Following the enrolment of our first two cohorts (post September 2023) we will assess our access and success performance records, identifying areas for improvement and developing an appropriate action plan to rectify and mitigate weaknesses, which may include seeking a variation to the Plan and additional target setting.

Strategic aims and objectives

Our strategic aim is to attract a diverse intake of learners, from under-represented and disadvantaged backgrounds to Engineering and provide them the environment to thrive and continue into successful and creative careers in the Engineering industry.

Our broad objectives over and beyond the life of this Plan are to:

[26] Rizzica, L. (2020). Raising Aspirations and Higher Education: Evidence from the United Kingdom's Widening Participation Policy. *Journal of Labor Economics*, *38*(1), 183–214; Sutton Trust (2018) Access to advantage: The influence of schools and place on admissions to top universities (London, Sutton Trust)

[27] De Cesarei, A. (2015). Psychological Factors That Foster or Deter the Disclosure of Disability by University Students. *Psychological Reports*, *116*(3), 665–673;
Grimes, S., Southgate, E., Scevak, J., & Buchanan, R. (2019). University student perspectives on institutional non-disclosure of disability and learning challenges: reasons for staying invisible. *International Journal of Inclusive Education*, *23*(6), 639–655;
Thompson-Ebanks, V., & Jarman, M. (2018). Undergraduate Students with Nonapparent Disabilities Identify Factors that Contribute to Disclosure Decisions. *International Journal of Disability, Development, and Education*, *65*(3), 286–303.

- Raise the profile of Engineering and our programme offer, stimulating interest and aspiration amongst potential learners from disadvantaged and under-represented backgrounds. This work is in progress and will continue over the life of this Plan and beyond. By academic year 2023-24, we hope to have significantly increased our relationships and work with schools and colleges and receive higher proportions of enquiries and applications from these target groups. This is however a continuous endeavour, beyond the life of this Plan.

- Ensure NMITE is accessible and enrols an increasing proportion of students from under-represented backgrounds. Our Targets (see below) provide the initial focus and timeframes for specific commitments in this objective. We will however renew these commitments inline with emerging data (reflecting annually). Our focus in this Plan is to ensure that students from low participation neighbourhoods (POLAR4) are enrolling at increasingly similar rates to those from higher participation neighbourhoods.

- Support all students, regardless of ethnicity, gender, or socio-economic background, to achieve their full potential and succeed within the MEng degree. This is a continuous endeavour, and will be evidenced through emerging data on outcomes as our fist cohorts of students progress through their studies.

- Provide all students, regardless of ethnicity, gender, or socio-economic background, with equal opportunities for progression beyond higher education, into the Engineering industry and broader industry areas. This is a continuous endeavour, and will be evidenced through emerging data on progression outcomes as our fist cohorts of students graduate and realise their next steps.

Within ten years, we want to sustain or exceed these overarching objectives, ensuring we are setting further targets where we identify gaps remain or emerge. Our Targets are set in respect of these broad ambitions, whilst our Strategic Measures provide detail on how we will strive to achieve them.

Targets

Access Targets

As determined by the performance assessment based on sector data and our NMITE context, our targets are:

1. **Aim:** To close the gap in the proportion of undergraduate students who are from lowest participation neighbourhoods, compared to those from the highest. **Objective:** decrease the gap in participation between POLAR4 Quintile 1 and POLAR4 Quintile 5 young (under 21) entrants, using the sector average as a baseline 17.4 percentage points (2019-20), to 8 percentage points (2026-27).

Sector Baseline 2019-20	2022-23	2023-24	2024-25	2025-26	2026-27
17.4	16.5	15	13	11	8

   In setting this target, we have due regard for the OfS national key performance measure (KPM) to reduce the gap in participation between students from the lowest, compared to the highest, participation neighbourhoods. The overall gap between the groups of students who are most and least likely to take up higher education has reduced steadily in recent years, however, there remains significant work to do to close this gap further; and in respect of students 18-30, there is a greater need given the current gap using this group is higher than that of the gap for young (under 21) learners, at 28.9% (2019-20). Considering this KPM, we consider this target particularly appropriate to contribute to the national picture for access and participation and to ensuring social mobility outcomes.

Success and Progression Targets

We do not propose to set any targets in the success or progression area at this time, given we have no current data upon which to draw. We commit to monitoring our emerging data as our first and subsequent cohorts progress through their study, and to seeking to set targets with the OfS should gaps emerge over the life of this Plan. This monitoring will consider graduate outcomes relating to both highly skilled employment, and employment more broadly, as our data emerges over time.

3. Strategic measures

3.1 Whole provider strategic approach

NMITE is a new and distinct higher education provider, committed to embedding access and participation across all our activities as it is a pillar of our approach and integral to our values. Within our flagship and currently only programme, an integrated Masters in Integrated Engineering (MEng), modules focussed on engineering challenges also integrate and explore implications of other disciplines and the interactions between technical and non-technical considerations. This approach responds to two key changes facing engineering; the blurring of boundaries between traditional disciplines, and the increasingly interwoven nature of society's challenges. Both require engineers who are able to range across disciplines and to synthesize knowledge of different types and work effectively in teams. This approach ensures our graduates make successful transitions into the employment market.

The MEng degree has been developed to appeal to a much more diverse intake than many other degrees by taking several distinctive approaches. Importantly, A-level mathematics is not an entry requirement which immediately makes our degree open to a much wider range of students. It also ensures that the degree is available to those who wish to change careers but who lack a formal mathematics qualification. The degree is also taught as a continuous programme rather than with extensive breaks as in most universities so that an MEng is completed in three years. This makes the degree much more accessible to those looking to change career but not wishing to devote four years of time and resource. Finally, teaching is not solely via lectures and exams, making the degree attractive to those who find such educational methods unappealing. Taken together, these distinctive aspects mean the degree is a unique opportunity for those who have creativity, imagination, and a desire to solve society's technical challenges (i.e. ideal engineers) but who find existing degrees either closed or unappealing.

As NMITE matures further as an organisation it is anticipated that other programmes will be added to our offer. It is anticipated that a more diverse intake will be sought using several of the approaches currently taken within the MEng degree.

NMITE will deliver a range of work across the lifecycle to make progress in relation to our access targets and to ensure gaps in continuation, attainment and progress do not emerge over time. Given our small student numbers and limited resources, we will concentrate effort and investment where it can be most effective, with the focus being weighted towards supporting student access, reflecting the areas identified through our assessment of performance.

Engagement with target learners in the access area is proposed via the development of our outreach activity, as we start to work with schools, colleges and community to reach our target learners. Internally, we will ensure our success and progression activity is in place to support our cohorts as we grow. We will ensure our data collection and analysis is designed such that any issues can be identified early as our students progress through their studies. We hope that this will help us to avoid some of the continuation and attainment gap

challenges we have identified across the sector. Given access and participation work is in an early development stage, we commit to institution-wide awareness raising and capacity-building to facilitate engagement and an embedded approach to our access and participation agenda. To facilitate continuous improvement, we will also work towards an increasingly evidence-based, data-driven approach.

Our key strategic measures are set in our Theory of Change (ToC) model, which sets our framework for achieving our stated aims, objectives and targets:

INPUTS (Strategic Measures)	CHANGE	IMPACT
Outreach and Transition to HE • A local and national outreach strategy and programme fostering awareness, inspiration and aspiration • Local to national strategic partnerships to promote Engineering and facilitate access • Inclusive, welcoming and contextual admissions process, predicated on enabling students to demonstrate dispositions in curiosity, passion, resilience, and creativity • Engaged and welcoming transition-in	• Develops awareness, confidence and interest in HE. Supports aspiration to consider and follow HE pathways. • Relevant partnerships improve effectiveness and activities. Increases key influencer engagement • Minimises / removes barriers to enrolment; promotes student achievement and confidence, and sense of belonging in HE. Supports successful and positive transition-in.	Students are equipped to progress to HE and successfully apply and enrol. The reach and scale of outreach work is increased, and target groups are supported to apply to HE by a range of key influencers. Target students are offered places and successfully and positively enrol.
Inclusive and supportive curriculum and pedagogy, supporting transition to employment • An inclusive approach to curriculum, teaching and learning development • Varied assessment methods that promote achievement • Curriculum integrated industry challenges and experiences, with real world projects	• An inclusive curriculum appeals to more diverse student groups. It supports ongoing success and participation of all students, who are more likely to be retained, engage and achieve higher degree and satisfaction outcomes. Integrated industry challenges ensure students consider career options early and make successful transitions to relevant employment.	Student continuation, attainment and progression outcomes for all target groups are inline with their peers
Personalised student support and development • Wellbeing support and positive communities • Financial support: monetary assistance and advice	• Students are supported holistically throughout their study across academic, personal, professional and financial wellbeing. Students needs are addressed and managed to promote success and a positive HE experience	

The evidence base for our ToC includes:

- The benefit of a sustained outreach programme (Zacharias and Mitchell 2020; Formby et al 2020; Harrison and Waller 2017; Pickering 2021; Shaheen 2019)[28]
- The benefits of contextual admissions (Mountford-Zimdars and Moore 2020; Mountford-Zimdars et al 20;21; Boliver et al 2017)[29]
- The importance of effective transition into HE (Thomas 2013; Gale and Parker 2014; Farenga 2018)[30]

[28] Zacharias, N., & Mitchell, G. (2020). The Importance of Highly Engaged School-University Partnerships in Widening Participation Outreach. *Student Success*, *11*(1), 35–45;
Formby, A., Woodhouse, A., & Basham, J. (2020). Reframing widening participation towards the community: a realist evaluation. *Widening Participation and Lifelong Learning*, *22*(2), 184–204;
Harrison, N., & Waller, R. (2017). Success and impact in widening participation policy. *Higher Education Policy*, *30*(2), 141–160;
Pickering, N. (2021). Enabling equality of access in higher education for underrepresented groups: a realist 'small step' approach to evaluating widening participation. *Research in Post-Compulsory Education*, *26*(1), 111–130;
Barkat, S. (2019). Evaluating the impact of the Academic Enrichment Programme on widening access to selective universities: Application of the Theory of Change framework. *British Educational Research Journal*, *45*(6), 1160–1185

[29] Mountford-Zimdars, A., & Moore, J. (2020). Identifying merit and potential beyond grades: opportunities and challenges in using contextual data in undergraduate admissions at nine highly selective English universities. *Oxford Review of Education*, *46*(6), 752–769;
Mountford-Zimdars, A., Moore, J., & Higham, L. (2021). What is the current state of debate around the use of contextualised admissions for undergraduate admissions? A review of the current stakehoder perspective. *Perspectives: Policy and Practice in Higher Education: Equity and Access*, *25*(1), 14–18;
Boliver, V. and Crawford, C. and Powell, M. and Craige, W. (2017) 'Admissions in context: the use of contextual information by leading universities.', Project Report. London: Sutton Trust,

[30] Thomas, L. (2013). What works? Facilitating an effective transition into higher education. *Widening Participation and Lifelong Learning*, *14*(1), 4–24;

- The importance of an inclusive curriculum approach (Hockings 2010; Dinmore and Stokes 2015; Mountford-Zimdars et al 2015; Thomas 2016; Lawrie et al 2017)[31]
- Inclusive Assessment (Morris et al 2019; Nieminen 2022; Tai et al 2021)[32]
- The importance of integrating real world projects in the curriculum (Baaken et al 2015; Mebert et al 2020; Guo et al 2020)[33]
- The impact of personalised support and well-being (Maymon et al 2019; Chadha et al 2021; Jacklin and Robinson 2007; McFarlane 2016)[34]
- The importance of fit and belonging to student success (Gravett et al 2021; Rayle and Chung 2007; Carruthers Thomas 2018; Meehan and Howells 2019)[35]
- The impact of financial support and advice (Kaye 2021; Hordosy and Clark 2019; Lee and Cushing 2015; Harrison and McCaig 2017; Schmidtke et al 2020; Mazhari and Atherton 2021)[36]

Gale, T., & Parker, S. (2014). Navigating change: a typology of student transition in higher education. *Studies in Higher Education (Dorchester-on-Thames)*, *39*(5), 734–753;

Farenga, S. A. (2018). Early struggles, peer groups and eventual success: an artful inquiry into unpacking transitions into university of widening participation students. *Widening Participation and Lifelong Learning*, *20*(1), 60–78.

[31] Hockings, C. (2010). Inclusive learning and teaching in higher education: A synthesis of research. *York: Higher Education Academy*;

Dinmore, S., & Stokes, J. (2015). Creating inclusive university curriculum: Implementing universal design for learning in an enabling program. *Widening Participation and Lifelong Learning*, *17*(4), 4–19;

Mountford-Zimdars, A., Sabri, D., Moore, J., Sanders, J., Jones, S., & Higham, L. (2015). Causes of differences in student outcomes (HEFCE)

Thomas, L. (2016). Developing inclusive learning to im;prove the engagement, belonging, retention, and success of students from diverse groups. In *Widening higher education participation* (pp. 135-159). Chandos Publishing;

Lawrie, G., Marquis, E., Fuller, E., Newman, T., Qiu, M., Nomikoudis, M., Roelofs, F. and Van Dam, L. (2017). Moving towards inclusive learning and teaching: A synthesis of recent literature. *Teaching and Learning Inquiry*, *5*(1).

[32] Ceri Morris, Emmajane Milton, & Ross Goldstone. (2019). Case study: suggesting choice: inclusive assessment processes. *Higher Education Pedagogies*, *4*(1), 435–447;

Nieminen, J. H. (2022). Assessment for Inclusion: rethinking inclusive assessment in higher education. *Teaching in Higher Education*;

Tai, J., Ajjawi, R., & Umarova, A. (2021). How do students experience inclusive assessment? A critical review of contemporary literature. *International Journal of Inclusive Education*, 1–18.

[33] Baaken, T., Kiel, B., & Kliewe, T. (2015). Real World Projects with Companies Supporting Competence Development in Higher Education. *International Journal of Higher Education*, *4*(3);

Laura Mebert, Roy Barnes, Jacqueline Dalley, Leszek Gawarecki, Farnaz Ghazi-Nezami, Gregory Shafer, Jill Slater and Erin Yezbick. (2020). Fostering student engagement through a real-world, collaborative project across disciplines and institutions. *Higher Education Pedagogies*, *5*(1), 30–51;

Guo, P., Saab, N., Post, L. S., & Admiraal, W. (2020). A review of project-based learning in higher education: Student outcomes and measures. *International Journal of Educational Research*, *102*, 10158

[34] Maymon, R., Hall, N. C., & Harley, J. M. (2019). Supporting first-year students during the transition to higher education: The importance of quality and source of received support for student well-being. *Student Success*, *10*(3), 64–75;

Chadha, D., Kogelbauer, A., Campbell, J., Hellgardt, K., Maraj, M., Shah, U., … Hale, C. (2021). Are the kids alright? Exploring students' experiences of support mechanisms to enhance wellbeing on an engineering programme in the UK. *European Journal of Engineering Education*, *46*(5), 662–677;

Jacklin, A., & Robinson, C. (2007). What is meant by 'support' in higher education? Towards a model of academic and welfare support. *Journal of Research in Special Educational Needs*, *7*(2), 114–123;

McFarlane, K. J. (2016). Tutoring the tutors: Supporting effective personal tutoring. *Active Learning in Higher Education*, *17*(1), 77–88

[35] Gravett, K., Taylor, C. A., & Fairchild, N. (2021). Pedagogies of mattering: re-conceptualising relational pedagogies in higher education. *Teaching in Higher Education*, 1–16;

Rayle, A. D., & Chung, K.-Y. (2007). Revisiting First-Year College Students' Mattering: Social Support, Academic Stress, and the Mattering Experience. *Journal of College Student Retention : Research, Theory & Practice*, *9*(1), 21–37;

Thomas, K. C. (2018). *Rethinking Student Belonging in Higher Education : From Bourdieu to Borderlands.* Milton: Routledge;

Meehan, C., & Howells, K. (2019). In search of the feeling of 'belonging' in higher education: undergraduate students transition into higher education. *Journal of Further and Higher Education*, *43*(10), 1376–1390

[36] Kaye, N. (2021). Evaluating the role of bursaries in widening participation in higher education: a review of the literature and evidence. *Educational Review (Birmingham)*, *73*(6), 775–797;

Hordósy, R., & Clark, T. (2019). Student budgets and widening participation: Comparative experiences of finance in low and higher income undergraduates at a northern red brick university. *Social Policy & Administration*, *53*(5), 761–775;

Byrne, L., & Cushing, S. (2015). The Impact of Structured Financial Support on Student Retention Case Study: Buckinghamshire New University. *Widening Participation and Lifelong Learning*, *17*(3), 47–59;

Harrison, N., & McCaig, C. (2017). Examining the epistemology of impact and success of educational interventions using a reflective case study of university bursaries. *British Educational Research Journal*, *43*(2), 290–309;

Schmidtke, K. A., Elliott, A., Patel, K., King, D., & Vlaev, I. (2020). A randomized controlled trial to evaluate interventions designed to improve university students' subjective financial wellness in the united kingdom. *Journal of Financial Counseling and Planning, 31*(2), 296-312;

Mazhari, T., & Atherton, G. (2021). Students' financial concerns in higher education. *Higher Education Quarterly*, *75*(1), 6–21.

Alignment with other strategies

Equality, Diversity, and Inclusivity (EDI), Learning & Teaching, and Outreach strategies are critical to the cultural success of NMITE and, together with the Widening Participation Strategy, demonstrate our commitment to engagement, access, enhancement, success, and progression. At an institutional level we are committed to developing and supporting students from areas currently under-represented in HE and those from the most disadvantaged backgrounds (i.e. students from areas of lower HE participation rates (POLAR4 Quintile 1 & 2 areas) and low household income and/or socio-economic status). Figure 8 demonstrates the integration of the Access and Participation strategic aims and those of Widening Participation, EDI, Learning & Teaching, Outreach, and Personal Tutoring. Clear is the cross-function coverage of the Access and Participation strategic aims across other organisational strategies and thereby, institutionally.

	ACCESS AND PARTICIPATION STRATEGIC AIMS:		
	Attract a diverse intake of learners from under-represented and disadvantaged backgrounds.	Provide target students with the environment to thrive throughout their studies	Ensure target students continue into successful and creative careers in the Engineering industry
WIDENING PARTICIPATION OBJECTIVES:			
Raise the profile of Engineering and our programme offer, stimulating interest and aspiration amongst potential learners from disadvantaged and under-represented backgrounds.	✓		
Ensure NMITE is accessible and enrols an increasing proportion of students from under-represented backgrounds.	✓		
Support all students, regardless of ethnicity, gender, or socio-economic background, to achieve their full potential and succeed within the MEng degree.		✓	
Provide all students, regardless of ethnicity, gender, or socio-economic background, with equal opportunities for progression beyond higher education, into the Engineering industry and broader industry areas.		✓	✓
EDI STRATEGIC GOALS:			
Promote dignity, respect and understanding within NMITE and the wider community	✓	✓	✓
Create an environment that encourages and supports all staff and students to actively engage with NMITE and realise their full potential free from barriers of prejudice and discrimination		✓	
Attract and select a diverse range of talented people to work and study at NMITE	✓		
Ensure inclusive and accessible physical spaces and virtual environments and policy infrastructure reflects the diverse needs of the NMITE community		✓	
Create an environment that encourages and supports all staff and students to actively contribute to NMITE		✓	
Ensure that policy and infrastructure formulation reflect the diverse needs of the NMITE community	✓	✓	✓
TEACHING & LEARNING STRATEGY STATEMENT GOALS:			
For NMITE to be a globally significant centre for innovation, mould-breaking engineering education		✓	
To provide teaching and learning that recognises and explores the ways in which engineering is deeply connected with other disciplines and society		✓	✓
To provide teaching and learning that is of long-term value within a rapidly changing society and engineering profession		✓	✓
To deeply integrate employers and communities in our teaching and learning		✓	✓

OUTREACH STATEMENT GOALS:			
Develop and pilot innovative and transformational schools' outreach programmes, building on NMITE's award-winning Ingenuity Studio programme	✓		
Work with community partners to develop programmes and opportunities which provide access to careers advise, skills and enterprise training	✓		✓
Offer pathways into NMITE programmes at all levels to promote a culture of life-long learning	✓		✓
Provide "Community Ambassadors" to act as role models to raise aspirations within the region and engage, inspire and promote participation in NMITE	✓		
Promote the breadth of career opportunities accessible within engineering and technology, as a means to improving social mobility	✓		✓
PERSONAL TUTORING STRATEGY AIMS:			
Provide students with an individual academic point of contact with whom they can develop a supportive, one-to-one relationship	✓	✓	✓
Ensure students are sign-posted to Student Support Services for issues related to counselling, health and careers advice as needed		✓	✓
Fulfill aspects of the duty of care NMITE has for ensuring students' well-being		✓	
Ensure that academic and non-academic matters that affect more than individual students are identified early and that effective action is taken.	✓	✓	

Figure 8: *Integration of the Access and Participation strategic aims and those of WP, EDI, Learning & Teaching, Outreach, and Personal Tutoring.*

At NMITE, EDI is part of our DNA. We embrace what sets us apart from one another, and we fundamentally believe in the strengths that these differences can bring. There are particular EDI challenges in both in education and in the engineering profession, and at NMITE we are determined that our staff and students reflect society and are able to positively make a difference. We want everyone to feel safe, comfortable, and ultimately proud of who they are. The EDI strategy therefore supports our collective ambition to build a diverse and inclusive community that actively seeks to recruit, support, and promote talented individuals from all different backgrounds and heritages. Partnerships are key to us, and we are, and will, work with our partners to realise our ambitions. EDI is the responsibility of everyone at NMITE and our vision is to be a beacon of best practice providing an inclusive community in which everyone feels values, differences are celebrated, and individuality is respected. As such, we believe that all members of the NMITE community have the right to:

- Be treated fairly, respectfully and with dignity.
- Work in an environment of openness and transparency.
- Be recognised for the contribution they make and valued for who they are and what they will become.
- Be supported within their work, study, and life throughout NMITE and the wider community.
- Be provided with fair, equal, and accessible facilities and services.
- Be provided with development opportunities wherever possible for the growth of understanding and awareness of equality, diversity, and inclusion.

Strategic measures

NMITE's strategic principles are based on evidence informed practice, well supported narratives, positive culture, introspection and dissemination, and fully integrated institutional engagement in widening participation. To achieve this, widening participation is included within NMITE's structure and culture through the following mechanisms:

- Inclusion with NMITE staff appraisal objectives.
- Inclusion within academic job descriptions (as percentage of time).
- Appointment of a designated Head of WP (seconded annually from the Academic Team) and WP Steering Group.
- Maintenance of communities of positive practice.
- Ongoing staff training and continuing support.

To make progress towards our targets, and to reduce the likelihood of gaps emerging in the success and progression areas, NMITE commits to the following measures. Some of these are already included within NMITE operations and details are provided where appropriate.

Strategic Measure 1: Outreach and Transition to HE

NMITE is committed to exploring ways to attract students from a wider range of backgrounds, particularly students from our target low participation neighbourhoods. This measure provides for targeted outreach activity to identified communities and schools in POLAR4 Quintile 1 and 2 areas, linking to our access target. It also acknowledges that target students are more likely to face barriers to application and entry, and therefore sets a commitment to ensure inclusive and contextual admissions processes.

With the MEng programme design predicated on broadening pathways into studying engineering, NMITE's admission processes also identifies those students who combine academic ability with resiliency, curiosity and passion, the capacity to develop life-long learning skills, and who value work-life experience. At the core of NMITE's curriculum design, culture and ethos is the intent to develop a high quality, safe-to-fail environment which provides students with the understanding, knowledge and experiences that will ensure that they are work-ready upon graduation. Therefore, in addition to the traditional (or alternative) academic thresholds, NMITE includes a novel approach to recruitment that assesses individual and team potential and capabilities and offers the opportunity to demonstrate the same qualities that we need in professional engineers: curiosity, passion, resilience, creativity, and insight. Our outreach programme will stimulate interest from such diverse potential applicants, who are supported to succeed.

This strategic measure has four key elements.

1. *A local and national outreach strategy and programme fostering awareness, inspiration and aspiration*

   Our outreach activity will be developed and integrated with the marketing and recruitment plans, with a full programme in place by 2023-24. We have identified opportunities to leverage our existing work to deliver outcomes in access, as well as developing additional activity. Our outreach programme includes a range of experiential, discipline-focused activity, and personalised experiences and support for target learners where a sense of belonging can be built early (Baaken et al 2015; Mebert et al 2020; Guo et al 2020[37]; Gravett et al 2021; Rayle and Chung 2007; Carruthers Thomas 2018; Meehan and Howells 2019[38]). . We will therefore build on existing work at NMITE and integrate good practice from sector outreach activity, strengthening our approach and developing new activity in response to our targeted performance gaps. Activities include engaging with target

[37] Baaken, T., Kiel, B., & Kliewe, T. (2015). Real World Projects with Companies Supporting Competence Development in Higher Education. *International Journal of Higher Education*, *4*(3);
Laura Mebert, Roy Barnes, Jacqueline Dalley, Leszek Gawarecki, Farnaz Ghazi-Nezami, Gregory Shafer, Jill Slater and Erin Yezbick. (2020). Fostering student engagement through a real-world, collaborative project across disciplines and institutions. *Higher Education Pedagogies*, *5*(1), 30–51;
Guo, P., Saab, N., Post, L. S., & Admiraal, W. (2020). A review of project-based learning in higher education: Student outcomes and measures. *International Journal of Educational Research*, *102*, 10158

[38] Gravett, K., Taylor, C. A., & Fairchild, N. (2021). Pedagogies of mattering: re-conceptualising relational pedagogies in higher education. *Teaching in Higher Education*, 1–16;
Rayle, A. D., & Chung, K.-Y. (2007). Revisiting First-Year College Students' Mattering: Social Support, Academic Stress, and the Mattering Experience. *Journal of College Student Retention : Research, Theory & Practice*, *9*(1), 21–37;
Thomas, K. C. (2018). *Rethinking Student Belonging in Higher Education : From Bourdieu to Borderlands.* Milton: Routledge;
Meehan, C., & Howells, K. (2019). In search of the feeling of 'belonging' in higher education: undergraduate students transition into higher education. *Journal of Further and Higher Education*, *43*(10), 1376–1390

students, schools, colleges, community and industry to support application and enrolment to NMITE (Formby et al 2020; Campbell et al 2019; Woodside 2018)[39], and to inspire and stimulate broader interest in Engineering specifically. Focussed outreach activities will be aimed primarily at schools within local areas of lower HE participation (POLAR4 Quintile 1 & 2 areas) and low household income and/or socio-economic status. Several events tailormade to align with school curricula have already successfully taken place, for example NMITE has engaged with schools locally and nationally to rethink curricula at a primary and secondary school level (Zacharias and Mitchell 2020; Robertson et al 2002; Skene et al 2016)[40]. Such work has already been recognised by Ofsted and has contributed to the removal of Special Measures at a local primary school. These and other activities will continue and be further expanded and developed over the life of this Plan.

It is intended that activities will include experiential, Engineering-focused activity linked to real world and industry challenges (Speirs et al 2017)[41], and career outcomes as well as aspirational and awareness raising activity that includes:

- Familiarisation with NMITE and our offer, particularly highlighting the employability-integrated curriculum
- The value of a degree and relevance of Engineering to the future of our planet (Hughes et al 2016)[42]
- Pathways to higher education
- The application process, writing applications and personal statements
- Financial support and financial literacy
- Student support, including disability, wellbeing and skills development (Maymon et al 2019; Chadha et al 2021; Jacklin and Robinson 2007; McFarlane 2016)[43]
- Career pathways and opportunities

To reach a wider audience on a national scale, we will also develop a range of online resources and sessions, and additional delivery and communications via social media. This will facilitate a national reach into target communities.

Into the future (by the start of 2023-24), as our cohort grows, we will consider a Student Ambassador scheme, which will support delivery of outreach activity and provide role modelling and authentic insights into study life and learning at NMITE (Gartland 2013; Gartland 2015; Austin and Hatt 2005)[44].

[39] Formby, A., Woodhouse, A., & Basham, J. (2020). Reframing widening participation towards the community: a realist evaluation. *Widening Participation and Lifelong Learning*, *22*(2), 184–204;
Campbell, S., Gazard, B., Woodhead, C., Harber-Aschan, L., Beards, S., Harber-Aschan, J., … Hatch, S. L. (2019). Involving young people through co-production and widening participation approaches: Reflections from school-based engagement. *Research for All.*;
Woodside, J. M. (2018). Real-world rigour. *Industry & Higher Education*, *32*(5), 285–289

[40] Zacharias, N., & Mitchell, G. (2020). The Importance of Highly Engaged School-University Partnerships in Widening Participation Outreach. *Student Success*, *11*(1), 35–45;
Robertson, C., Chance, C., Begnaud, L., Graham, J., & Davies, D. (2002). School University Partnerships: An Entry Route for Under-represented Groups. *Widening Participation and Lifelong Learning*, *4*(2), 26–38;
Skene, J., Pollard, L., & House, H. (2016). Aspire UWA : A case study of widening access in Higher Education. *Student Success*, *7*(2), 11–20

[41] Speirs, N. M., Riley, S. C., & McCabe, G. (2017). Student-Led, Individually-Created Courses: Using Structured Reflection within Experiential Learning to Enable Widening Participation Students' Transitions Through and Beyond Higher Education. *Journal of Perspectives in Applied Academic Practice*, *5*(2)

[42] Hughes, D., Mann, A., Barnes, S. A., Baldauf, B., & McKeown, R. (2016). Careers education: International literature review. *Warwick Institute for Employer Research and Education and Employers Research, Warwick*.

[43] Maymon, R., Hall, N. C., & Harley, J. M. (2019). Supporting first-year students during the transition to higher education: The importance of quality and source of received support for student well-being. *Student Success*, *10*(3), 64–75;
Chadha, D., Kogelbauer, A., Campbell, J., Hellgardt, K., Maraj, M., Shah, U., … Hale, C. (2021). Are the kids alright? Exploring students' experiences of support mechanisms to enhance wellbeing on an engineering programme in the UK. *European Journal of Engineering Education*, *46*(5), 662–677;
Jacklin, A., & Robinson, C. (2007). What is meant by 'support' in higher education? Towards a model of academic and welfare support. *Journal of Research in Special Educational Needs*, *7*(2), 114–123;
McFarlane, K. J. (2016). Tutoring the tutors: Supporting effective personal tutoring. *Active Learning in Higher Education*, *17*(1), 77–88

[44] Gartland, C. (2013). Marketing participation: Student ambassadors' contribution to widening participation in engineering and medicine at two contrasting universities. *Widening Participation and Lifelong Learning*, *14*(3), 102–119;
Gartland, C. (2015). Student ambassadors: 'role-models', learning practices and identities. *British Journal of Sociology of Education*, *36*(8), 1192–1211;
Austin, M., & Hatt, S. (2005). The Messengers are the Message: A Study of the Effects of Employing Higher Education Student Ambassadors to Work with School Students. *Widening Participation and Lifelong Learning*, *7*(1), 1–8.

They will receive training and be expected to also contribute to the ongoing development, delivery and evaluation of activity under this Plan.

We will also launch an active mentoring programme focussed on supporting young people in KS3+ from areas of lower HE participation rates (POLAR4 Quintile 1 & 2 areas) and low household income and/or socio-economic status (Clarke et al 2013; Foy and Keane 2018)[45]. It is anticipated that this activity will be orchestrated through a third-party charity with expertise and previous experience of providing a safe platform for mentoring (e.g. Brightside). A positive relationship has already been formed with Brightside who have devised a bespoke programme of activities for NMITE.

2. *Local to national strategic partnerships to promote Engineering and facilitate access*

NMITE will explore collaborations with a range of potential partners to support our outreach work and make faster progress in closing gaps in access for our target under-represented and disadvantaged groups. Potential partners will be considered and engaged in 2022-23 and development of a small number of partnerships is expected by 2023-24. These organisations can contribute to the access agenda, helping to maximise use of resources and provide equitable opportunities to access higher education (Moore et al, 2013; Reed et al 2015)[46]. As a new provider with limited current collaborations, we will develop our programme over the first two years of this Plan, seeking to work with a minimum of 5 targeted stakeholders in first instance. Key to our approach will be:

- Targeting the stakeholders with whom we would like to work
- Running a communications and engagement plan
- Identifying shared and mutual objectives, and developing relationships and trust
- Developing and delivering a programme of activities with target learners
- Establishing a review and evaluation cycle of collaboration and partnership activity

We will build resources, establish effective administration, and ensure our relationships develop through effective engagement with stakeholders. We will also improve our evidence base and knowledge of what works by drawing further on sector and industry research and evidence drawn from our partners and communities. As such we will consider how to leverage and contribute to existing community and partner activity and priorities, to ensure the collaborative work we do is well-received, valuable and impactful.

NMITE has established effective partnerships with other organisations who share our ambition of increasing access to engineering education for under-represented groups, particularly those included in the POLAR/IMD data sets outlined in this document. As Hereford is a notable HE "cold spot", the institute is working closely with Herefordshire Council and playing a leading role in the council's regional regeneration strategy (Formby et al 2020; Dunne and Lowe 2018)[47]. The strategy, titled "the Big Plan" aims to reverse deep seated social mobility issues by investing in a range of initiatives to enhance skills and employability amongst its population. The "Big Plan" includes a range of outreach, skills development and community renewal projects led by NMITE and funded by government grants. These include the Herfordshire Skills for the Future and the Town Investment Fund (Stronger Towns). The next priority is to develop a locally targeted bursary scheme to augment the arrangements

[45] Clark, R., Andrews, J., & Gorman, P. (2013). Tackling Transition: The Value of Peer Mentoring. *Widening Participation and Lifelong Learning*, *14*(1), 57–75;
Foy, C., & Keane, A. (2018). Introduction of a peer mentoring scheme within biomedical sciences education - easing the transition to university life. *Journal of Further and Higher Education*, *42*(6), 733–741

[46] Reed, R., King, A., & Whiteford, G. (2015). Re-conceptualising sustainable widening participation: evaluation, collaboration and evolution. *Higher Education Research and Development*, *34*(2), 383–396

[47] Formby, A., Woodhouse, A., & Basham, J. (2020). Reframing widening participation towards the community: a realist evaluation. *Widening Participation and Lifelong Learning*, *22*(2), 184–204;
Dunne, J., & Lowe, M. (2018). The university as an 'anchor' for economic and social regeneration: beyond schools engagement. *Widening Participation and Lifelong Learning*, *20*(2), 51–68.

included in Strategic Measure 3, item 2 funded partly by NMITE but also by local business and the council.

We will also take advantage of our existing relationship with Royal Academy of Engineering's *Connecting STEM Teachers* project, for which an NMITE academic is the county co-ordinator; this allows us to draw on state-of the-art resources and a national network in building relationships with school and providing a rich offer. Also in the county, we will leverage NMITE's existing activity with schools via 'Herefordshire Skills for the Future' programme, a European Social Fund project that – amongst other offers – facilitates work placements for school children and offers enterprise training. The existing schools relationships built within this programme provide a solid platform for moving forward with engineering- and access- focussed collaborations. At a more national level, we benefit from productive relationships with *Young Professionals* – the UK and Ireland's leading student network - which allows us to communicate with thousands of engaged young people online, and we are in discussions about more targeted events within that network. We also have a productive relationship with the Spectris Foundation, a UK charity that supports broader access into STEM education.

Our immediate next priority is to transform our current schools collaborations into more formal partnerships with target schools; this work has already begun and an outline programme of work designed to inform discussions with school leadership (Zacharias and Mitchell 2020; Robertson et al 2002; Skene et al 2016)[48]. A point of crystallisation for this outreach work will be the *Southside Skills Hub*, a multi-partner collaboration comprising NMITE, a community food growing project and a community football organisation, to develop a skills hub on the most deprived part of Hereford. Funded by the Stronger Towns government programme, the Southside Hub will provide an opportunity for a community-sited building and close partnership with community organisations and local parents, which will complement our schools-based work.

3. *Inclusive, welcoming and contextual admissions process, predicated on enabling students to demonstrate dispositions in curiosity, passion, resilience, and creativity*

Our contextual and enabling admissions process helps to facilitate success and provides targeted support in the application and admissions journey, acknowledging that our target learners are more likely to experience barriers in this phase of access to higher education (Mountford-Zimdars and Moore 2020; Mountford-Zimdars et al 20;21; Boliver et al 2017)[49]. It is key to our ambition to attract a diverse student body from non-traditional pathways, and it has therefore been developed to promote fairness and alternative assessment methods (Hossler et al 2019; Jayakumar et al 2021)[50]. For example, we focus on applicant's ability to demonstrate a range of skills and experiences including problem-solving, curiosity, passion, resilience and creativity rather than their grades. Therefore whilst we 'normally' have a minimum grade requirement, we apply a contextual process to consider applicants who do not meet threshold but demonstrate ability and aptitude.

[48] Zacharias, N., & Mitchell, G. (2020). The Importance of Highly Engaged School-University Partnerships in Widening Participation Outreach. *Student Success*, *11*(1), 35–45;
Robertson, C., Chance, C., Begnaud, L., Graham, J., & Davies, D. (2002). School University Partnerships: An Entry Route for Under-represented Groups. *Widening Participation and Lifelong Learning*, *4*(2), 26–38;
Skene, J., Pollard, L., & House, H. (2016). Aspire UWA : A case study of widening access in Higher Education. *Student Success*, *7*(2), 11–20

[49] Mountford-Zimdars, A., & Moore, J. (2020). Identifying merit and potential beyond grades: opportunities and challenges in using contextual data in undergraduate admissions at nine highly selective English universities. *Oxford Review of Education*, *46*(6), 752–769;
Mountford-Zimdars, A., Moore, J., & Higham, L. (2021). What is the current state of debate around the use of contextualised admissions for undergraduate admissions? A review of the current stakehoder perspective. *Perspectives: Policy and Practice in Higher Education: Equity and Access*, *25*(1), 14–18;
Boliver, V. and Crawford, C. and Powell, M. and Craige, W. (2017) 'Admissions in context: the use of contextual information by leading universities.', Project Report. London: Sutton Trust,

[50] Hossler, D., Chung, E., Kwon, J., Lucido, J., Bowman, N., & Bastedo, M. (2019). A Study of the Use of Nonacademic Factors in Holistic Undergraduate Admissions Reviews. *The Journal of Higher Education (Columbus)*, *90*(6), 833–859;
Jayakumar, U. M., & Page, S. E. (2021). Cultural Capital and Opportunities for Exceptionalism: Bias in University Admissions. *The Journal of Higher Education (Columbus)*, *92*(7), 1109–1139

We have already implemented some activity and this will continue, and be developed, over the life of this Plan. For example:

- Pre-application events targeted at young people from areas of lower HE participation rates (POLAR4 Quintiles 1 & 2) and low socio-economic status.
    - *The NMITE Experience:* Short engagement programmes highlighting life and learning at NMITE with example module content
    - *NMITE Preparation:* Advice and guidance on the application process with information on the selection requirements and process. NMITE Preparation has already been successful in helping to recruit students from under-represented groups. Focussed support has also been provided for RPEL applications.
- An application processes designed to allow applicants to demonstrate the skills necessary for success at NMITE, rather than simply a grade tariff approach. NMITE's application process has already been recognised as an innovative and appropriate methodology to enable students from areas of lower HE participation and disadvantage to access HE.
- Applicants are aligned with NMITE Personal Tutors at the point of offer, to provide support through the applicant journey and transition-in and help to build connection, confidence and early sense of belonging. Personal Tutors are trained in various aspects of support provision, including financial support and learning support available at NMITE (Heyman et al 2020)[51].

Further activity to be developed over the first two years of this Plan includes use of current students to support applicants and attend various events to provide authentic insights on life and learning at NMITE (Clark et al 2013; Hall et al 2020)[52]; increasing our digital provision and targeted digital communications around the application and admissions phase; and, mapping our applicant journey to determine where further support may be offered particularly to key target groups in terms of transition points, barriers and challenges, and needs they are more likely to face such as belonging and identity, alternative entry qualifications and financial hardship. Differentiated support and information for target groups will be integrated accordingly, providing for a very personalised experience. We will also monitor our contextual admissions data and its relationships to outcomes in the areas of success and progression, to ensure gaps do not arise and any necessary targeted support is provided.

4. *Engaged and welcoming transition-in*

We acknowledge the importance of the transition-in phase particularly for our target students who are more likely to face barriers and have less support / knowledge from home about the process (Thomas 2013; Gale and Parker 2014; Farenga 2018) [53]. During the first year of this Plan, NMITE will build from our current practices in enrolment and induction to create a welcoming, engaged programme of induction that recognises needs and potential barriers, and supports target learners. This will promote smooth transition in and identification (Kift, 2014) with our community, building early sense of belonging, which is particularly important for target learners (Gravett et al 2021; Rayle and Chung 2007; Carruthers Thomas 2018; Meehan and Howells 2019)[54].

[51] Rick Hayman, Andrew Coyles, Antony Mellor, & Karl Wharton. (2020). The role of personal tutoring in supporting the transition to university: experiences and views of widening participation sport students. *Journal of Learning Development in Higher Education*, (18)

[52] Clark, R., Andrews, J., & Gorman, P. (2013). Tackling Transition: The Value of Peer Mentoring. *Widening Participation and Lifelong Learning*, *14*(1), 57–75;

Hall, B., Serafin, J., & Lundgren, D. (2020). The benefits of academically oriented peer mentoring for at-risk student populations. *Teaching and Learning Inquiry*, *8*(2), 184–199

[53] Thomas, L. (2013). What works? Facilitating an effective transition into higher education. *Widening Participation and Lifelong Learning*, *14*(1), 4–24;

Gale, T., & Parker, S. (2014). Navigating change: a typology of student transition in higher education. *Studies in Higher Education (Dorchester-on-Thames)*, *39*(5), 734–753;

Farenga, S. A. (2018). Early struggles, peer groups and eventual success: an artful inquiry into unpacking transitions into university of widening participation students. *Widening Participation and Lifelong Learning*, *20*(1), 60–78.

[54] Gravett, K., Taylor, C. A., & Fairchild, N. (2021). Pedagogies of mattering: re-conceptualising relational pedagogies in higher education. *Teaching in Higher Education*, 1–16;

Our small size, adequate estate, dedicated resource and navigable national COVID-19 policy has meant that our learners have largely been taught face-to-face this year. We recognise this as critically important to our diversity of learners, our subject, and our pedagogical approach. We will continue to protect this as much as possible, because we recognise that personal interactions help facilitate successful transitions and are particularly valuable for under-represented groups who are less likely to have prior information. Our induction and welcome programme kicks off with a workshop from our President that brings students to an understanding that they each bring their own strengths and weakness with them, that NMITE recognises and celebrates these differences, and that we will support them in collaborating to draw on the best of each other. The welcome programme pays careful attention to integration in our community and the city, and NMITE learners are encouraged to actively join and participate in a wider community of learners which includes other local colleges including the Hereford College of the Arts with whom our students share residential accommodation.

New learners are given meaningful support on staying safe and staying well, and they learn about NMITE's EDI commitments as a means to help the new cohort collaborate in writing their own code of conduct. The final major element in induction is the skills diagnostic, conducted by the Head of NMITE's Academic Skills Centre. This supports later one-to-one follow-ups, and normalises the adoption of skills support before psychological barriers can emerge. In inducting new learners, we aim to make explicit many of the cultural elements of HE that can be bewildering to some students, and to provide a choice in ways that students can access support and activity. As we get a better sense of our incoming demographics, we will adapt and tailor these practices to meet specific needs.

Across all these activities, we will conduct timely analysis and respond to data collated to determine the factors responsible for raising interest, application, acceptance and enrolment rates.

<u>Strategic Measure 2: Inclusive and supportive curriculum and pedagogy, supporting transition to employment</u>

Inclusive practice contributes to building a sense of belonging and engagement with the learning experience[55], which is particularly relevant to under-represented target groups. While we do not have targets relating to success (continuation or attainment measures), we nevertheless recognise the critical importance of ensuring inclusive approaches to our curriculum and pedagogy (Hockings 2010; Dinmore and Stokes 2015; Mountford-Zimdars et al 2015; Thomas 2016; Lawrie et al 2017)[56]. Our students from our target POLAR4 Quintile 1 backgrounds are less likely to have a sense of belonging to HE (having fewer role models at home). This area will be important as our students progress in their studies, and will help to ensure that gaps in continuation and attainment for target groups do not arise. It will also have an indirect impact on future recruitment of target students as our current students become ambassadors and role models and provide insights into learning at NMITE (Gartland 2013; Gartland 2015; Austin and Hatt 2005)[57].

Rayle, A. D., & Chung, K.-Y. (2007). Revisiting First-Year College Students' Mattering: Social Support, Academic Stress, and the Mattering Experience. *Journal of College Student Retention : Research, Theory & Practice*, *9*(1), 21–37;

Thomas, K. C. (2018). *Rethinking Student Belonging in Higher Education : From Bourdieu to Borderlands.* Milton: Routledge;

Meehan, C., & Howells, K. (2019). In search of the feeling of 'belonging' in higher education: undergraduate students transition into higher education. *Journal of Further and Higher Education*, *43*(10), 1376–1390

[55] E.g. Pridham, B., Martin, D., Walker, K., Rosengren, R., & Wadley, D. (2015). Culturally Inclusive Curriculum in Higher Education.AustralianJournalofIndigenousEducation,44(1), 94-105; Zepke, N., & Leach, L. (2007). Improving student outcomes in higher education: New Zealand teachers' views on teaching students from diverse backgrounds.TeachinginHigherEducation,12(5-6), 655-668.

[56] Hockings, C. (2010). Inclusive learning and teaching in higher education: A synthesis of research. *York: Higher Education Academy*;

Dinmore, S., & Stokes, J. (2015). Creating inclusive university curriculum: Implementing universal design for learning in an enabling program. *Widening Participation and Lifelong Learning*, *17*(4), 4–19;

Mountford-Zimdars, A., Sabri, D., Moore, J., Sanders, J., Jones, S., & Higham, L. (2015). Causes of differences in student outcomes (HEFCE)

Thomas, L. (2016). Developing inclusive learning to im;prove the engagement, belonging, retention, and success of students from diverse groups. In *Widening higher education participation* (pp. 135-159). Chandos Publishing;

Lawrie, G., Marquis, E., Fuller, E., Newman, T., Qiu, M., Nomikoudis, M., Roelofs, F. and Van Dam, L. (2017). Moving towards inclusive learning and teaching: A synthesis of recent literature. *Teaching and Learning Inquiry*, *5*(1).

[57] Gartland, C. (2013). Marketing participation: Student ambassadors' contribution to widening participation in engineering and medicine at two contrasting universities. *Widening Participation and Lifelong Learning*, *14*(3), 102–119;

This strategic measure involves three core areas of work.

1. *An inclusive approach to curriculum, teaching and learning development*
   This work is aligned to our broader work in curriculum development, teaching and learning, including assessment and a focus on embedded employability measures. Our pedagogical approach is student focused, providing inclusive, supportive and tailored experiences and curriculum to meet student needs. Further development includes drawing on research and good practice in inclusive curriculum and pedagogy (for example, considering recommendations from the Disparities in Student Attainment (DiSA) research, 2014 from Wolverhampton University); enhanced monitoring[58] and implementation of enhanced assessment and feedback practices that have been shown to be effective for non-traditional students.

   Over the life of this Plan, and particularly in the first two years, we will continually develop and refine our curriculum and pedagogy via a range of activity:

   - Increasing inclusivity and access through curriculum and programme design and content, which includes flexibility of provision via online programme options, choice in assessment modes, and a range of flexible pathways.
   - Embedding and continuing to strengthen inclusive approaches to curriculum, teaching, learning and assessment. By 2023-24, NMITE will ensure integration of broad global perspectives in curriculum content (ensuring curriculum is decolonised), and relevance to a broad range of industry areas (Shahjahan et al 2022; Wane 2004)[59].
   - Exploring inclusivity and disability in teaching and learning. There is a good awareness of students with learning differences and how to support them in different contexts, however, within the first two years of this Plan we will formalise training to develop staff to provide improved support for Specific Learning Difference (SpLD) and disabled students.
   - Staff training is being furthered in respect of inclusive practices, and is expected, over the first two years of this Plan, to include Unconscious Bias, Mental Health First Aid and Supporting Disabled Students.
   - We will consider how to recognise and capitalise on the skills and experiences students come to NMITE with, reflecting these attributes in teaching and learning and appropriate assessment models which promote student outcomes via, for example, multiple assessment modes (Morris et al 2019; Nieminen 2022; Tai et al 2021)[60].
   - Provide a high number of educator contact hours with the opportunity to meet with educators individually. NMITE's pedagogical approach has been designed to provide continual embedded educator support from 9am-5pm each day throughout the module.
   - Ensure adequate periods for reflection and knowledge processing. At NMITE, students are expected to be on site from 9am-5pm Monday-Friday whilst engaged on a module. Students are not however expected to routinely participate in any additional studies outside of these hours, and thus NMITE recognises the need for sufficient periods of 'soak' and reflection of information and learning.

Gartland, C. (2015). Student ambassadors: 'role-models', learning practices and identities. *British Journal of Sociology of Education*, *36*(8), 1192–1211; Austin, M., & Hatt, S. (2005). The Messengers are the Message: A Study of the Effects of Employing Higher Education Student Ambassadors to Work with School Students. *Widening Participation and Lifelong Learning*, *7*(1), 1–8.

[58] Hockings, C. (2010) Inclusive learning and teaching in higher education: a synthesis of research, London: Higher Education Academy. Available at https://www.advance-he.ac.uk/knowledge-hub/inclusive-learning-and-teaching-higher-education-synthesis-research

[59] Shahjahan, R. A., Estera, A. L., Surla, K. L., & Edwards, K. T. (2022). "Decolonizing" Curriculum and Pedagogy: A Comparative Review Across Disciplines and Global Higher Education Contexts. *Review of Educational Research*, *92*(1), 73–113;
Wane, N., Shahjahan, R. A., & Wagner, A. (2004). Walking the talk. *Revue Canadienne D'études Du Développement*, *25*(3), 499–510

[60] Ceri Morris, Emmajane Milton, & Ross Goldstone. (2019). Case study: suggesting choice: inclusive assessment processes. *Higher Education Pedagogies*, *4*(1), 435–447;
Nieminen, J. H. (2022). Assessment for Inclusion: rethinking inclusive assessment in higher education. *Teaching in Higher Education*;
Tai, J., Ajjawi, R., & Umarova, A. (2021). How do students experience inclusive assessment? A critical review of contemporary literature. *International Journal of Inclusive Education*, 1–18.

- Avoidance of timetable confliction. NMITE operates a block approach to the curriculum structure with modules learnt in series. This enables both students and educators to focus solely on one topic for the duration of the module avoiding conventional conflicts in timetabling, learning requirements and assessments. Results from other universities which adopt a similar approach (e.g. QUEST University, Canada) have found significant benefits for students success and mental health, and particularly for those students with additional learning requirements (Ambler et al 2021)[61].
- Ensuring clear and accessible course information is provided, particularly regarding the requirements of the course, course structures and assessment practices. This is particularly important for under-represented groups, providing opportunities to prepare and setting early expectations.
- Provide supportive learning through team activities. NMITE's pedagogical approach considers successful teamwork as a crucial skill. As such, students are assigned to a small team for each module and the skills required for working in a team (leadership, followship, communication, resolution skills etc.) are explicitly taught within the programme. This helps to build an inclusive community approach to learning and peer support networks (Sweet and Michaelson 2012; De Hei et al 2016)[62].
- We will monitor and seek to increase, where necessary, staff diversity to better reflect the student body and provide diverse role models.

2. *Varied assessment methods that promote achievement*

   NMITE acknowledge the impact that assessment methods and effective feedback can have on performance, and that a diverse student body will house a multitude of learning and assessment preferences (Morris et al 2019; Nieminen 2022; Tai et al 2021)[63]. Ensuring that our students have every opportunity to demonstrate knowledge and skills is a priority, as well as providing constructive, useful feedback that supports students continued development (McCarthy 2017; Morris et al 2021)[64]. NMITE have already launched with this approach and will continue to develop these practices over the life of this Plan, particularly seeking student feedback and contribution. Activity includes:

   - Implementing authentic assessments designed to enable students to demonstrate capabilities rather than just recall. NMITE's curriculum has been designed with appropriate, multiple assessment types embedded within each module. Support is available throughout each module to aid with the successful completion of assessments (e.g. tutorials are provided to give guidance on assessment requirements and the Academic Skills Centre is an additional valuable resource) (Sokhanvar et al 2021; McArthur 2022)[65].
   - Provision of regular, constructive feedback, which is Included within each module learning plan and which provides opportunities for formative feedback as well as summative feedback following the submission of assessments.

[61] Ambler, T., Solomonides, I., & Smallridge, A. (2021). Students' experiences of a first-year block model curriculum in higher education. *Curriculum Journal (London, England)*, *32*(3), 533–558;

[62] Sweet, M., & Michaelsen, L. K. (2012). *Team-based learning in the social sciences and humanities [electronic resource] : group work that works to generate critical thinking and engagement* (1st ed.). Sterling, Va.: Stylus;

De Hei, M., Strijbos, J.-W., Sjoer, E., & Admiraal, W. (2016). Thematic review of approaches to design group learning activities in higher education: The development of a comprehensive framework. *Educational Research Review*, *18*, 33–45

[63] Ceri Morris, Emmajane Milton, & Ross Goldstone. (2019). Case study: suggesting choice: inclusive assessment processes. *Higher Education Pedagogies*, *4*(1), 435–447;

Nieminen, J. H. (2022). Assessment for Inclusion: rethinking inclusive assessment in higher education. *Teaching in Higher Education*;

Tai, J., Ajjawi, R., & Umarova, A. (2021). How do students experience inclusive assessment? A critical review of contemporary literature. *International Journal of Inclusive Education*, 1–18.

[64] McCarthy, J. (2017). Enhancing feedback in higher education: Students' attitudes towards online and in-class formative assessment feedback models. *Active Learning in Higher Education*, *18*(2), 127–141;

Morris, R., Perry, T., & Wardle, L. (2021). Formative assessment and feedback for learning in higher education: A systematic review. *Review of Education (Oxford)*, *9*(3)

[65] Sokhanvar, Z., Salehi, K., & Sokhanvar, F. (2021). Advantages of authentic assessment for improving the learning experience and employability skills of higher education students: A systematic literature review. *Studies in Educational Evaluation*, *70*, 101030;

McArthur, J. (2022). Rethinking authentic assessment: work, well-being, and society. *Higher Education*, 1–17.

3. *Curriculum integrated industry challenges and experiences, with real world projects*

Revamping engineering education "requires commanding the whole problem, not just iterative efforts that barely strike a moving target."[66] It is not enough to make gradual, minor adaptations to existing educational models; rather, the change society needs requires a wholesale shift in mindset, pedagogy, and practice. The destination—graduating work-ready engineers—may be similar to that of other engineering programmes, but the NMITE road map is completely different. It has been drawn from scratch to take students on a journey whose landmarks include not only the achievement of technical skills, but also those of personal and professional development cited by recent governmental and professional body reports as necessary to 21st century engineering work. These include incorporating creativity into engineering; broadening the diversity of students; strong emphasis on project work; industry engagement in design and delivery; experience of the workplace for students; and greater interdisciplinarity within and beyond engineering. All this is accomplished on an accelerated timetable taking students from entry to graduation in only three years. Beginning with a blank page has allowed NMITE to make these components integral to every landmark on the Master's pathway and to deeply embed them within the programme philosophy and design.

From the outset NMITE has thus been designed to deliver a world-class educational experience to students from a wide and diverse set of backgrounds, using best practices used elsewhere in schools and HE, innovatively combined to produce a unique pedagogical design, curriculum content and assessment approach. A key approach to curriculum development at NMITE is embedded real world challenges, employability and industry perspectives. This helps to address a key concern for target groups, particularly those from disadvantaged and under-represented areas, regarding the value of a degree in respect of career outcomes (Behle 2020; Gorard et al 2016). Access to industry, employers and professionals through the curriculum (as well as extracurricular activity) provides exposure and connections for target groups who are less likely to have existing professional networks (Thompson 2017; Clarke 2018). Integrated employability and industry content is particularly important for NMITE as our programme is vocationally orientate and thus we need to ensure our students build the necessary skills, practice and connections to promote successful graduate outcomes. This work will develop over the life of this Plan, and will explore and address particular concerns for target learners. For example, we will:

- build on our content to increase live employer challenges as tasks in the curriculum.
- work with key employers and industry bodies to better understand and integrate development of key attributes, competencies, and values into the curriculum (Baaken et al 2015; Mebert et al 2020; Guo et al 2020)[67].
- continue to increase the presence of industry and professional speakers into the curriculum, providing content and insight to career opportunities.

We also recognise the importance of extra curricula careers support and therefore commit to further developing our services (including careers counselling, CV and application writing workshops, industry talks and networking (both face to face and online)). We will provide tailored support for individual progression, empowering students to make informed decisions and manage and develop their career pathways. As such, we commit to providing our students:

- Access to professional skills learning and development necessary to contribute, actively and positively, within future employment opportunities. NMITE's curriculum explicitly contains

[66] Xu, M. et al., "Gigaton Problems Need Gigaton Solutions." *Environ. Sci. Technol.* 2010, 44, 11: 4037

[67] Baaken, T., Kiel, B., & Kliewe, T. (2015). Real World Projects with Companies Supporting Competence Development in Higher Education. *International Journal of Higher Education*, *4*(3);
Laura Mebert, Roy Barnes, Jacqueline Dalley, Leszek Gawarecki, Farnaz Ghazi-Nezami, Gregory Shafer, Jill Slater and Erin Yezbick. (2020). Fostering student engagement through a real-world, collaborative project across disciplines and institutions. *Higher Education Pedagogies*, *5*(1), 30–51;
Guo, P., Saab, N., Post, L. S., & Admiraal, W. (2020). A review of project-based learning in higher education: Student outcomes and measures. *International Journal of Educational Research*, *102*, 10158

learning aligned with the recognised professional skills of an engineer. These are required by the Engineering Council and embedded within all NMITE learning.

- Engagement with employers. NMITE has a positive, close relationship with several companies locally and nationally. Employer partners have had input into the MEng programme and provide the 'real-world' context for learning through each module challenge/project. As such, students at NMITE will be well versed in working with, for and on behalf of clients/companies, thereby providing valuable work readiness and experience (Basit 2015; Hodgson et al 2019)[68].
- Learning within a professional working environment. NMITE's educational day mirrors that found in the workplace, with students expected to be located within their module studio from 9am-5pm, Monday-Friday.

NMITE has also successfully secured external funding through the European Social Fund programme that sets out to improve labour market relevance and opportunity around education, skills, and training systems. Through application of our innovative pedagogy focused on real-world challenges, NMITE's ESF 'Herefordshire Skills for the Future' programme will focus on three priority areas and complements our access and participation work:

1. Helping SMEs and microbusinesses in Herefordshire to identify gaps and opportunities in their business and their employee skillsets and offer flexible advice and learning support to help them grow, diversify workforce, increase productivity, and become more resilient.

2. Engaging SMEs and microbusinesses with educators (schools, colleges, FE and HEIs) to help embed skills awareness and employability into course content and through extracurricular workshops to help individuals to gain skills relevant to the local labour market, thereby improving individual access, opportunities, career options and social mobility.

3. Developing enterprise skills, networks and events aimed at young people (16-24) to inspire a new generation of entrepreneurs (commercial and social) who can start and grow businesses that meet local business needs and provide local employment opportunities for those who acquire skills necessary to work in them.

<u>Strategic Measure 3: Personalised student support and development</u>

NMITE recognises and places priority on supporting the wellbeing of our students so that they can enjoy a positive, empowered higher education experience and achieve to their full potential. This is particularly important to our target students from low participation neighbourhoods, who are more likely to experience barriers and require support to transition in. Our learners are supported through curriculum as well as being able to access additional support.

1. *Wellbeing support and positive communities*
   NMITE will provide support and wellbeing services for all students, while providing tailored support for target learners and remaining cognisant of the barriers target learners are more likely to face, such as building a sense of belonging in transition to higher education (Kift, 2012), and being prepared for the expectations of studying[69]. We will promote a strong, cohesive and resilient community with a focus on good mental health and wellbeing, and a supportive environment that avoids the stigma often associated with help seeking (Maymon et al 2019; Chadha et al 2021; Jacklin

[68] Basit, T. N., & u.a. (2015). Higher education institutions and work-based learning in the UK. *Higher Education*, *70*(6), 1003–1015;
Hodgson, A., Spours, K., Smith, D., & Jeanes, J. (2019). Beyond employer engagement and skills supply: building conditions for partnership working and skills co-production in the English context. *Journal of Education and Work*, *32*(1), 36–51

[69] Thiele, T., Pope, D., Singleton, A., Snape, D., & Stanistreet, D. (2017). Experience of disadvantage: The influence of identity on engagement in working class students' educational trajectories to an elite university. *British Educational Research Journal*, *43*(1), 49–67; Harrison, N., & Waller, R. (2018). Challenging discourses of aspiration: The role of expectations and attainment in access to higher education. *British Educational Research Journal*, *44*(5), 914–938.

and Robinson 2007; McFarlane 2016)[70]. These support and wellbeing services will ensure students to feel that they are part of a supportive community where everyone is in the same position, fostering a sense of belonging and help seeking to ensure preparation for university life.

The Academic Skills Centre (ASC) and Student Support Team are available for additional support during NMITE opening hours. Key to scaffolding a student's educational journey, engaging with and encouraging curiosity as part of life-long learning, the ASC promotes inclusivity and addresses potential attainment and progression gaps. In addition, our students benefit from continued, frequent access to personal tutors whilst on the programme with regular monthly meetings during the first Academic Year.

2. *Financial support – monetary assistance and advice*

NMITE will offer the following bursaries to target disadvantaged students, who are more likely to be from POLAR4 Q1 backgrounds. Awards are based on eligibility relating to household income, as a proxy for disadvantage, recognising the overlap between disadvantage and low participation (POLAR4 Q1) backgrounds. This follows standard practice across the sector, and our approach draws on evidence such as Callender and Jackson 2005; Bachan 2014; Kaye 2021[71] We have considered sector evidence that shows that financial bursaries and scholarships are most effective where used to support student success (Harrison et al 2018; Kaye 2021; Hatt 2005; Hordosy and Clark 2019; Mbah et al 2018)[72]. Whilst our aims and targets in this Plan relate to access measures, these financial support provisions address a key concern for target disadvantage students regarding the affordability of higher education (Jones, S 2016; Esson and Ertle 2016; Harrison and Agnew 2016)[73]. This supports our access targets as, for students from our target backgrounds, the availability of financial support at transition-in is essential for access and initial onboarding, ensuring a higher likelihood of enrolment and then continuation in the first few months of programme. NMITE will evaluate the provision of financial support over the life of this Plan, which will provide further insights into the value of financial support to our students and the impact on target student outcomes.

NMITE is also providing a bursary for Care Leavers, acknowledging that this target group are more likely to be from lower socio-economic and low participation neighbourhoods.

Over the next 3-5 years, NMITE hopes to enhance its bursary provision through targeted fundraising campaigns with a particular emphasis on providing financial support for students from target groups living in the county. NMITE successfully raised funds to provide generous bursaries to all members

[70] Maymon, R., Hall, N. C., & Harley, J. M. (2019). Supporting first-year students during the transition to higher education: The importance of quality and source of received support for student well-being. *Student Success*, *10*(3), 64–75;
Chadha, D., Kogelbauer, A., Campbell, J., Hellgardt, K., Maraj, M., Shah, U., … Hale, C. (2021). Are the kids alright? Exploring students' experiences of support mechanisms to enhance wellbeing on an engineering programme in the UK. *European Journal of Engineering Education*, *46*(5), 662–677;
Jacklin, A., & Robinson, C. (2007). What is meant by 'support' in higher education? Towards a model of academic and welfare support. *Journal of Research in Special Educational Needs*, *7*(2), 114–123;
McFarlane, K. J. (2016). Tutoring the tutors: Supporting effective personal tutoring. *Active Learning in Higher Education*, *17*(1), 77–88

[71] Callender, C., & Jackson, J. (2005). Does the Fear of Debt Deter Students from Higher Education? *Journal of Social Policy*, *34*(4), 509–540;
Bachan, R. (2014). Students' expectations of debt in UK higher education. *Studies in Higher Education (Dorchester-on-Thames)*, *39*(5), 848–873;
Kaye, N. (2021). Evaluating the role of bursaries in widening participation in higher education: a review of the literature and evidence. *Educational Review (Birmingham)*, *73*(6), 775–797

[72] Harrison, N., Davies, S., Harris, R., & Waller, R. (2018). Access, participation and capabilities: theorising the contribution of university bursaries to students' well-being, flourishing and success. *Cambridge Journal of Education*, *48*(6), 677–695;
Hatt, S. (2005). Bursaries and student success. *Higher Education Quarterly*, *59*(2), 111–126;
Mbah, M., Eccles, S., & Frost, S. (2018). Student perceptions and institutional targets: the matches and mismatches of financial bursary support. *Widening Participation and Lifelong Learning*, *20*(4), 129–147.
Hordósy, R., & Clark, T. (2019). Student budgets and widening participation: Comparative experiences of finance in low and higher income undergraduates at a northern red brick university. *Social Policy & Administration*, *53*(5), 761–775.

[73] Jones, S. (2016). Expressions of student debt aversion and tolerance among academically able young people in low-participation English schools. *British Educational Research Journal*, *42*(2), 277–293;
Esson, J., & Ertl, H. (2016). No point worrying? Potential undergraduates, study-related debt, and the financial allure of higher education. *Studies in Higher Education (Dorchester-on-Thames)*, *41*(7), 1265–1280;
Harrison, N., & Agnew, S. (2016). Individual and social influences on students' attitudes to debt. *Higher Education Quarterly*, *70*(4), 332–353

of its Pioneer Cohort and intends to continue this fundraising operation for more targeted bursary provision for future cohorts. As any bursaries arising from fundraising cannot be confirmed before the funds are raised, they are excluded from this document at this stage.

NMITE will provide the following financial support package:

Award type	Eligibility	Amount
My NMITE Bursary	UK undergraduate students with household income £0-25,000	£1,500 p/a
Care Experienced Bursary	Students who are: • Under 25 at enrolment • Assessed as a home fee payer • Have lived in public care or as a looked-after child, including with foster carers under local authority are, in a residential children's home, or that have been adopted after being in care.	£2,000 p/a
Hardship Fund	Available by application to support students experiencing financial disadvantage. Amount is the total pot available per annum, out of which awards will be made. The maximum award will be £1,000.	£5,000

3.2 Student consultation

Student consultation is a valued and necessary part of NMITE's growth and evolution, and this is recognised and supported at a strategic level. Indeed, the institutional model was co-designed with young people in 2018-19 (the 'Design Cohort'). As NMITE is a new HE provider, we have had limited opportunity to consult with existing fee-paying students. Nevertheless, we have been able to consult with a group of students in our first cohort (our 'pioneers') in respect of this Plan. Further opportunities will be provided for students to reflect upon the NMITE approach, highlighting strengths and weaknesses, and inputting directly into future iterations. A generous bursary has been provided for our pioneer students to enable them to shape a variety of activities within NMITE.

Our students were provided the opportunity to attend an information session and focus group as part of the consultations for this Plan. We have also reflected on broader student feedback and input through debrief sessions on teaching and experience to inform this Plan. The focus group students provided useful input which led to a range of inclusions in this Plan, in summary:

- Highlighting our bursary model and ensuring information regarding the award and eligibility is clear, as the group cited the bursary as a key factor in the decision to study at NMITE.
- Ensuring ongoing attention and strengthening activity around the transition-in and induction area, as students highlighted the critical importance of support provision and enabling discussions at these times, particularly when making informed choices. Also, in enabling an inclusive community.
    - Students' suggestions regarding skills sessions and tutor drop-ins during Welcome Week have been incorporated, as well as a review of the volume of information being presented to ensure we do not overwhelm.

- Ensuring a commitment to continued personalised, contextual admissions processes where tutors are in touch with students to understand reasoning and problem solving around set tasks, rather than whether an answer is right or wrong as the basis for assessment.
- A commitment to continuing to expand and develop the industry and employer integrated approach to curriculum, which students noted as particularly valuable and suggested further development.
- Inclusion of staff training and development in respect of access and participation.

Mechanisms for meaningful student engagement and consultation during 2022-2027 will be further developed with our pioneer students from September 2021, and will include:

- Representation on NMITE strategic panels
- Representation on committees
- Consultation on an individual basis (e.g. feedback through the Personal Tutor)
- Student engagement strategy, including daily debriefs and sub-groups for feedback

These channels will include students from under-represented groups where possible (we have very small cohorts and therefore we may not have full representation) and will provide the mechanisms through which students from underrepresented groups are involved in the design, implementation, and evaluation of this Plan. They will be expected to contribute and feedback on issues raised and activity reports in respect of the commitments in this Plan. We will actively seek representation from our target groups.

NMITE's first student representatives were elected in Autumn 2021, and students will take up positions on Academic Council and the Board of Trustees from 2022. They will be mentored or informally supported by the Quality Assurance Manager, the Chief Academic Officer and the Chief Operating Officer to build their confidence in effectively contributing to formal meetings, and get any clarification or understanding they may be reluctant to explore in meetings. Training and mentorship will include access and participation, to support students to effectively engage in the design, implementation and evaluation of the Plan. Student representatives will have full director and committee responsibilities and obligations, required to input and make decisions relating to the reports provided and monitoring of this Plan.

Formal, elected representation is just one mode in our first student engagement strategy. It sits alongside a range of mechanisms that include informal daily 'round-ups', to share how the day's learning has been, formal end-of-cluster surveys, strategic project work (into which APP consultation would fit), and the range of bottom-up, student-led interest group activity that we would expect in a vibrant student body.

In the consultation for this Plan, students raised the point that staff already ask for feedback and student input, and that NMITE have already put proactive changes in place on a number of issues raised by students. Students noted that it was pleasing that, '*staff come back and you can see the changes being made as part of the feedback being provided*'. Students noted that they would like to see such engagement continue, via focus groups, surveys on modules, reps, etc. (as students noted that different students are happy to contribute in different ways). The group particularly championed implementation of a student representative system, which is has now been actioned, as described above. Ongoing focus groups, surveys and the rep system will include reflections and input on this Plan and its ongoing delivery and evaluation.

3.3 Evaluation strategy

NMITE's evaluation strategy focusses on a commitment to learning, quantitative evaluation, systematic data collection and quality research in order to provide an evidence-based approach to access and participation. Although we are at the initial stages of implementing our evaluation methodology and approach, and therefore unable to fully complete the Office for Students self-assessment toolkit, this resource has been invaluable in informing our evaluation strategy by helping us to align and link activities already considered or in development at NMITE. Accordingly, our thinking is informed by the logic and structure of this document.

We are also developing our approach in alignment and reference to the Office for Students' Access and Participation Standards of Evidence. All our activities incorporate a clear narrative to map our understanding of the relationship between what we do and the outcomes we seek. Where appropriate we will use a pre-/post- measure design to assess outcome changes across time supporting the development of empirical evidence. Ultimately our ambition is to begin building in an evaluation of causality by using our own 'evidence journey' and seeking opportunities to assess impacts against non-participating groups, perhaps through collaboration with similar institutions.

As we develop and implement our strategy, we will be guided by the following touchstones:

- Ensuring that our evaluations join up across the whole student lifecycle to enable us to build a holistic view of the journey of disadvantaged and under-represented students, from access to progression
- Ensuring a clear link between our success and impact measures and our understanding of how our interventions work (articulated through our theories of change)
- Drawing on existing evidence and good practice (to avoid 'reinventing the wheel' or pursuing strategies already demonstrated to be ineffective)
- Taking a bi-directional approach to evaluation and practice. We will ensure that evaluation outcomes and learning inform the ongoing development of what we do, whilst at the same time testing the value and relevance of our evaluation outcome data to practitioners and, where necessary, revising our evaluation methodology to produce data that meets their needs.

Strategic context

Strategic overview of the evaluation of access and participation programmes occurs through 3-monthly WP Steering Committee meetings and direct engagement with the Academic Council. Further, regular opportunities to consider evaluation within WP occur on a weekly basis through team meetings, which also allow for agile, innovative thinking utilising reflective practice. Regular dissemination of evaluation information is provided at an institutional as well as academic level with input into the Learning and Teaching Committee.

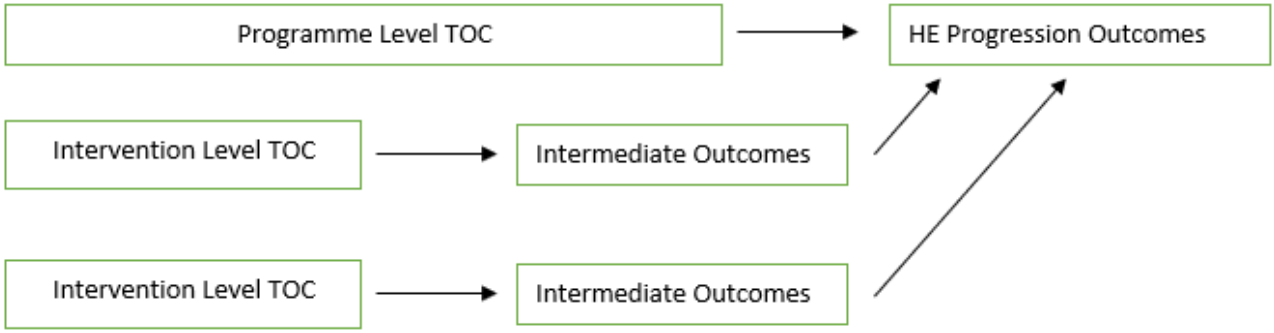
NMITE currently has only one access and participation programme and as such evaluation activities, protocols and frameworks are consistent throughout the whole institute with a synergistic relationship with the EDI, Outreach, Assessment and Learning and Teaching Strategies. As NMITE is a new provider we have not however had the opportunity to reflect on the effectiveness of our activities in any quantitative detail. Mechanisms for this are however built into NMITE, including the structure of the Academic Council and relevant strategies.

As NMITE is a new provider the commissioning of evaluation within the access and participation plan is still in its infancy. The Head of the WP Steering Committee has however significant expertise in developing and implementing access and participation plan programmes. In addition, the Head of WP is a seconded member of the Academic team with significant expertise in research, evaluation, and data handling. Members of staff engaged in WP have already taken part in several national events relating to policy and best practice, allowing for a cross-fertilisation of knowledge and approaches. Close links between NMITE's Outreach, Academic and Student Support staff will facilitate successful implementation of the access and participation programme and support a whole lifecycle and whole institution approach. Furthermore, the current size and single programme nature of NMITE provides an ideal opportunity and position from which to foster cross-organisational relationships and synergistic activities and ensure we have a whole lifecycle focus.

Programme design

We consider our structured approach to developing theories of change as an essential foundation for our evaluation process. We are developing theories of change at a range of levels from programme structure down to component interventions. This enables us to map how the impacts of individual activities represent

a small step (Harrison and Waller 2017[74]) towards the higher level outcomes mapped by the programme level TOC.



By articulating the mechanisms that give rise to the outcomes we are seeking, we have a clear foundation for building clear and coherent models of success, and therefore developing carefully calibrated measures that directly reflect the impacts we seek. This enables us to make stronger claims on the relationship between our activities and outcomes.

The access and participation programme is underpinned by the clear objective of diversifying the engineering population by supporting students from areas of lower HE participation rates and low household income and/or socio-economic status. NMITE has extensively examined the evidence for access and participation rates within HE (and specifically engineering) both locally and nationally. Quantitative research has been undertaken and the programme objectives have been designed to address these conclusions. The programme objectives are also based upon the activities undertaken both at other HEIs and by charitable organisations acting within the educational arena. Their quantitative results have been central to the proposed activities within NMITE.

We are also drawing on sector-best practice and evidence by developing our interventions and activities with reference to OfS Insight Briefings and Briefing Notes, TASO Evidence and Evaluation briefings, the UniConnect resources published by the OfS and evaluation outcome reports published by other HEIs, Third Sector bodies and other organisations. All of these sources will inform the refinement of our evaluation approach, as we develop it alongside our interventions.

It is anticipated that our access work will be evaluated using a range of pre- and post-activity evaluation tools, including surveys, focus groups and interviews. We are also conscious of our small datasets, which means that case study approaches will also feature in our evaluation measures, providing a deeper dive into student experiences. It is envisaged that evaluation will include that from participants, teachers and staff, parents/ carers and our own delivery staff and (in time) ambassadors. At this time, we do not propose to run type three evaluation. Our post-16 activity specifically will be evaluated via pre/post surveys (appropriate to the scale of the event), and with focus group feedback. Evaluation will include participant, teacher/ staff and ambassadors. We will seek to determine whether the objectives of the event have been realised (drawing on our Theory of Change models) and gain insight into the aspirations, attitudes and intended behaviours of participants. We will also seek deeper insight into the range of potential barriers faced by target learners and how they would see these overcome. These evaluation methodologies will be in place for 2022-23 academic year. Over the longer term course of this Plan (by 2024-25) we will have explored and consider possible tracking mechanisms to understand the destinations of participants we have worked with in respect of their higher education outcomes.

Although the nature of the access and participation activities is well defined, the scale of operation is yet to be determined. As NMITE develops and matures, a fuller understanding of the activities within the programme will be developed. A number of measures have been agreed and their quantifiable impact defined through the KPIs listed above. Continuation, progression, and attainment data are part of the suite

[74] Harrison, N., & Waller, R. (2017). Evaluating outreach activities: overcoming challenges through a realist 'small steps' approach. *Perspectives: Policy and Practice in Higher Education*, *21*(2-3), 81-87.

of outcomes measured at NMITE and integrated with our student data. These will be analysed in reference to a range of student context data including gender, ethnicity, disability, home POLAR and IMD status and household income.

Other success indicators used to measure the impact of our interventions will include pre / post participant satisfaction measures, self-assessed learning and attitudinal outcomes and affective responses to participation. We are aware of the limitations of participants self-report data (e.g. Harrison et al 201875), and will triangulate participant responses with a range of other data; practitioner self-reflection, teacher perspectives, the outcome from other sector-evaluations. We would like to limit the impact of evaluation data gathering on our activities and aim therefore to embed evaluation as part of the interventions themselves where possible, to minimise disruption. Gathering data at the point of intervention will help us maximise responses and collect immediate responses. We are investigating the option of using online or digital tools, such as polls and quizzes, as well as other data collection activities that can be built into activity. In future years, we would like to develop collaborative qualitative research with participants and students.

These outcome measures have been purposefully designed to provide a clear, quantitative record of the programme impact. They stem directly from the objectives and our developing Theory of Change models and are not the drivers for action. They will however enable us to monitor impact and inform success and areas for improvement. As NMITE is a new provider it is not possible at present to determine fully the growth rate and therefore scale of impact achievable within the programme, nor do we have any previous internal results with which to benchmark progress. Formative evaluation will however take place during the programme and not retrospectively. This will allow for an agile response to the activities, expanding areas of strengths and minimising areas of weaknesses as we learn more about what works.

Given the small cohort of students we will be working with in the short term (relative to large organisations), we anticipate that it will take some time to build large enough datasets to be statistically robust. To mitigate this, we will also collect qualitative data, to use alongside our quantitative analysis, through focus groups and individual interviews with participants, plus self-reflection data from practitioners leading the activity. This will help us develop an explanatory context for quantitative outcomes and help to refine our measures as we understand more about the factors relevant to the young people we work with. As we develop our evaluation approach alongside our activities, we will robustly bring together our quantitative and qualitive data in a mixed methods approach (Thiele et al 2018[76]).

Evaluation design

The evaluation mechanism adopted within NMITE will be specifically designed for and integrated with each activity and for NMITE's position within the HE sector. Furthermore, the evaluation process has been purposefully designed to meet the objectives of NMITE from both a research and operational perspective.
A logical approach, which is also informing our developing theories of change, has been implemented to determine the appropriate programme of activities outlined in this Access and Participation Plan, and research evidence has been used to develop the processes for delivering our activities. As noted above, it is NMITE's intention to consider changes resulting from intervention against a counter-factual scenarios, however, due to NMITE's position as a new provider, this work has not yet been undertaken. We are exploring the option of collaborating with other small specialist provider to share and compare outcome measures across a range of different activities. In the short term, this will enable us to gather non-participant comparative data and to make some causal inferences. It is also NMITE's intention to maintain accuracy and eventually establish stronger causality of results.

[75] Harrison, N., Vigurs, K., Crockford, J., Colin, M., Squire, R., & Clark, L. (2018). Understanding the evaluation of access and participation outreach interventions for under 16 year olds, Bristol: Office or Students. Available at https://www.officeforstudents.org.uk/media/a8ad5c94-7a33-4b53-8f09-824d0705f073/ofs2018_apevaluation.pdf

[76] Thiele, T., Pope, D., Singleton, A., & Stanistreet, D. (2018). Exploring the use of mixed methods in research and evaluation of widening participation interventions: guidance for practitioners. *Widening Participation and Lifelong Learning*, *20*(4), 7–38.

Evaluation implementation

Government and regulatory (OfS, HESA, DfE) data will be used together with that collected internally within NMITE and externally through charitable organisations. We are currently working with the local council and Diocesan Schools Office, as well as local schools, to maximise data and results. It is the intention that data will be held and analysed at an individual and group/cohort level, and that all data collection and storage aspects will be approved by NMITE's Ethical Team and aligned with the Ethics Policy. Data collection techniques are currently being developed with attention to the avoidance of biases and systematic errors.
Evaluation is an important element of the success of any access and participation programme. Without evaluation it is impossible to determine areas for improvement. Nevertheless, many of the activities within NMITE's portfolio are already proven and will require less evaluation. We will concentrate resources on those activities with a specific Engineering focus, particularly those with a focus on women, Black students, and those from a lower socio-economic group, as well as White Working Class Males, all of whom are less likely than their peers to progress onto Engineering HE or to achieve the same outcomes as more advantaged peers when they are there. As we build our student cohort, we will be able to develop our approach to evaluating student success and outcomes that is relevant to the make up of our cohort.

During the timeframe of this plan, the evaluation budget will be on the order of 10% of the WP investment plan. This budget will fund staff time, including the buy-out of academic staff time, dedicate roles, consultancy resources, as well as developing evaluation resources and infrastructure.

We will not have sufficient cohort data to employ the OfS financial support evaluation toolkit for the next few years, however, during this time we will continue to monitor the process and success of recipient students as they progress through their degree. To evaluate the impact of our financial support, we will draw on applicable parts of the OfS toolkit, such as interview questions and survey. Use of the full toolkit including statistical analysis would not be expected under the life of this Plan, given the size of our cohorts. We will also draw on existing research evidence and seek to exchange learning and outcomes with other small specialists with a view to building a sector-wide picture of the impact of financial support in our specific context.

Learning to shape improvements

Quantitative research design will be incorporated in NMITE's data analysis, however to date only limited (first cohort access) is available due to the new provider status of NMITE. When data does become available all analyses will include information on the limitation of the research. In addition, multiple perspectives will be incorporated as they are critical to data research and will help with removing biases often associated with a single data source. All analyses will utilise prior research, as in the case of the development of the access and participation programme and will be communicated throughout NMITE through primarily the WP Steering Committee, Learning and Teaching Committee and Academic Council. We will hold regular (twice yearly) reviews of our access and progression activities, drawing together formative evaluation outcomes, data and practitioner reflections to feed into the continued delivery and future design of our interventions. Outcomes and findings from these reviews will be disseminated to relevant operational leads for commitments under this Plan, along with any recommended or required actions to improve practices. As the coordinating body, our WP Steering Committee will disseminate and have discussions with operational leads, and create an action plan for changes to be incorporated into access and participation activities. Progress will be reported on at subsequent WP Steering Committee meetings, as appropriate to the action plan.

To ensure we close the feedback loop, the outcomes of each of these review sessions will also be shared with the student body, to reassure them that their voice is heard and they have an impact on how we support them and to give them an indication of future changes or developments. Although to date we have yet to collate and analyse internal data, it is NMITE's policy to actively collaborate and engage with external organisations. Therefore, once data is available, it is anticipated that NMITE will actively contribute to best practices and research dissemination at a national and international level through conferences, proceedings, and publications. Where appropriate we will draw on existing networks, IHE, Guild HE, NEON, SEER, to collaborate and engage with similar organisations. In particular, we look forward to sharing our evaluation

outcomes and our developing thinking with other small specialist institutions, and to collaboration on the development of solutions for this part of the sector.

3.4 Monitoring progress against delivery of the plan

Progress of the access and participation programme will be monitored routinely by the Head of WP and reported to the Student Recruitment and Marketing Committee every three months. This initial internal governance arrangement reflects the early focus on access but will be adapted to ensure sufficient focus on progression and success in due course. As NMITE is a new HE provider it will take several months to obtain sufficient data to make statistically based decisions. However, initial data will be used cautiously in the meantime to provide an indication of the 'evidence journey' trajectory.

The frequency of internal reporting (3-monthly) allows for early identification of areas of both strengths and weakness and the regular meetings of the WP Group (monthly) and Student Recruitment Committee (3-monthly) provides an opportunity to respond to the evaluation evidence in an agile and productive manner.

Internal reporting mechanisms will outline achievements against NMITE access and participation strategic aims, objectives, and targets. Quantitative research will form the basis of the evidence, together with input from NMITE staff and students. Continuous monitoring of progress in the 'evaluation journey' is key to the success of NMITE's widening participation and access and participation programme and thereby NMITE itself. If it is discovered that progress is worsening in any area, the Student Recruitment and Marketing Committee can determine whether to redeploy its resources to targeted improvement in specific areas, accelerating action as per the strategic measures in this Plan. The deployment of such required resources in the event of worsening performance is made as a commitment in this Plan. Additional expertise or resource may be deployed if required. The Committee will also monitor expenditure and risk in relation to the Plan.

Performance against this Plan, and associated reflection and learning will also take place within NMITE's academic governance structure. Widening Participation will be reported and scrutinised at Academic Affairs Committee, the most frontline academic committee which meets every 2 months; the Head of Widening Participation will be a member of this Committee and the monitoring of this Plan and the access and participation agenda will be a standing item on the agenda. Academic Affairs Committee reports into Academic Council (every 2 months) which is a Committee of the Board of Trustees. Academic Council will consider APP monitoring every 3 months. Thus, there is a clear sequence of reporting and accountability through to the Board of Trustees and back again. The Academic Council and Board of Trustees have student representatives, who will participate in the monitoring and any development of this Plan.

As NMITE is a small institution, these governance and reporting structures sit closely with one another and involve a number of the same staff. Both Academic Affairs Committee and the Student Recruitment and Marketing Committee are considered relevant for reporting and monitoring against this Plan, given the integration of access with recruitment and marketing; and, success and progression with academic affairs. This helps to ensure a whole institution, embedded approach. Reporting lines of both Committees go through to the Board, where the whole agenda is considered together.

4. Provision of information to students

NMITE is committed to providing clear and up-to date information relating to fees, bursaries and the costs of attending the institute. Fees information is prominently included on the website and all student recruitment marketing material.

The current, single programme nature of NMITE, means that information about course fees and any additional costs can be clearly and unambiguously presented in all marketing material and student information without the complexity of multiple fee structures and programme levels.

The website and main student prospectus ("The Guide for Applicants") includes a section outlining fees, and the website includes clear information on course fees and a dedicated page clearly describing the availability of bursary support for all students. Information on course fees is also provided to UCAS and included in all in-person events such as Open Days and online seminars.

NMITE's highly interactive admissions process ensures that each individual applicant enjoys one-to-one access to NMITE staff to discuss their application and any support needed. These sessions are used to ensure that all applicants are fully aware of and understand the course fees, living costs and financial support available.

A summary of the methods for providing clear information to students regarding financial costs is included below:

Source of information	Course fees and costs information provided	Financial support information provided	Notes
Website	Dedicated page to outline simple course fee structure.	Dedicated page to outline bursary support (available to all students annually). Information on student living costs provided in Student Life section.	A single programme and regulated fee level allows for clarity and consistency regarding course fee information.
Digital marketing	Course fees included in key information in most digital ads. All website links include course fee information.	Bursary availability for students. Included as a key message in all digital campaigning.	Availability of bursary support for all students is clearly highlighted as it is both an important incentive and financial help.
UCAS	Course fee information provided to UCAS.	References to bursaries included in course information.	Information will be updated according to UCAS scheduling.
Events and open days	All events include a scripted "costs and support" section which provides clear information. Online open days include course fee information in "Student Life" section.	Included in "costs and support" section of events.	
Prospectus	The Guide to Applicants provides information and links to detailed web pages for course fees.	The Guide to Applicants includes links to bursary information on the website.	
Application process	Application process includes one to one discussions with NMITE staff.	A bursary is widely available to students so information is included in one-to-one discussions.	
Offer letter	Course fee information is included in the offer letter.	N/A.	

5. Appendix

The OfS will append the following items from the fees and targets and investment documents when an access and participation plan is published:

1. Targets (tables 2a, 2b and 2c in the targets and investment plan)

2. Investment summary (tables 4a and 4b in the targets and investment plan)

3. Fee summary (table 4a and 4b in the fee information document)

Office for Students

Access and participation plan
Fee information 2022-23

Provider name: New Model Institute for Technology and Engineering

Provider UKPRN: 10067406

Summary of 2022-23 entrant course fees

*course type not listed

Inflationary statement:

We will not raise fees annually for 2022-23 new entrants

Table 4a - Full-time course fee levels for 2022-23 entrants

Full-time course type:	Additional information:	Course fee:
First degree	*	*
Foundation degree	*	*
Foundation year/Year 0	*	*
HNC/HND	*	*
CertHE/DipHE	*	*
Postgraduate ITT	*	*
Accelerated degree	Same course as above, but change in fee level from 2022-23 based on Approved (fee cap) registration.	£10,800
Sandwich year	*	*
Erasmus and overseas study years	*	*
Other	*	*

Table 4b - Sub-contractual full-time course fee levels for 2022-23

Sub-contractual full-time course type:	Additional information:	Course fee:
First degree	*	*
Foundation degree	*	*
Foundation year/Year 0	*	*
HNC/HND	*	*
CertHE/DipHE	*	*
Postgraduate ITT	*	*
Accelerated degree	*	*
Sandwich year	*	*
Erasmus and overseas study years	*	*
Other	*	*

Table 4c - Part-time course fee levels for 2022-23 entrants

Part-time course type:	Additional information:	Course fee:
First degree	*	*
Foundation degree	*	*
Foundation year/Year 0	*	*
HNC/HND	*	*
CertHE/DipHE	*	*
Postgraduate ITT	*	*
Accelerated degree	*	*
Sandwich year	*	*
Erasmus and overseas study years	*	*
Other	*	*

Table 4d - Sub-contractual part-time course fee levels for 2022-23

Sub-contractual part-time course type:	Additional information:	Course fee:
First degree	*	*
Foundation degree	*	*
Foundation year/Year 0	*	*
HNC/HND	*	*
CertHE/DipHE	*	*
Postgraduate ITT	*	*
Accelerated degree	*	*
Sandwich year	*	*
Erasmus and overseas study years	*	*
Other	*	*

Office for Students

Targets and investment plan 2022-23 to 2026-27

Provider name: New Model Institute for Technology and Engineering

Provider UKPRN: 10067406

Investment summary

The OfS requires providers to report on their planned investment in access, financial support and research and evaluation in their access and participation plan. The OfS does not require providers to report on investment in student success and progression in the access and participation plans and therefore investment in these areas is not recorded here.

Note about the data:
The figures in Table 4a relate to all expenditure on activities and measures that support the ambitions set out in an access and participation plan, where they relate to access to higher education. The figures in Table 4b only relate to the expenditure on activities and measures that support the ambitions set out in an access and participation plan, where they relate to access to higher education which is funded by higher fee income. The OfS does not require providers to report on investment in success and progression and therefore investment in these areas is not represented.

The figures below are not comparable to previous access and participation plans or access agreements as data published in previous years does not reflect latest provider projections on student numbers.

Table 4a - Investment summary (£)

Access and participation plan investment summary (£)	Academic year				
	2022-23	2023-24	2024-25	2025-26	2026-27
Total access activity investment (£)	£75,600.00	£77,760.00	£84,240.00	£90,720.00	£97,200.00
Access (pre-16)	£11,340.00	£11,664.00	£12,636.00	£13,608.00	£14,580.00
Access (post-16)	£52,920.00	£54,432.00	£58,968.00	£63,504.00	£68,040.00
Access (adults and the community)	£7,560.00	£7,776.00	£8,424.00	£9,072.00	£9,720.00
Access (other)	£3,780.00	£3,888.00	£4,212.00	£4,536.00	£4,860.00
Financial support (£)	£47,750.00	£76,750.00	£88,000.00	£90,000.00	£90,000.00
Research and evaluation (£)	£10,000.00	£12,000.00	£18,000.00	£19,000.00	£20,000.00

Table 4b - Investment summary (HFI%)

Access and participation plan investment summary (%HFI)	Academic year				
	2022-23	2023-24	2024-25	2025-26	2026-27
Higher fee income (£HFI)	£216,000.00	£432,000.00	£648,000.00	£648,000.00	£648,000.00
Access investment	35.0%	18.0%	13.0%	14.0%	15.0%
Financial support	22.1%	17.8%	13.6%	13.9%	13.9%
Research and evaluation	4.6%	2.8%	2.8%	2.9%	3.1%
Total investment (as %HFI)	61.7%	38.5%	29.4%	30.8%	32.0%

Office for Students

Targets and investment plan 2022-23 to 2026-27

Provider name: New Model Institute for Technology and Engineering

Provider UKPRN: 10067406

Targets

Table 2a - Access

Aim (500 characters maximum)	Reference number	Target group	Underrepresented group (optional)	Comparator group (optional)	Description (500 character	Is this target collaborative?	Data source	Baseline year	Units	Baseline data	Yearly milestones					Commentary on how milestones/targets were calculated (500 characters maximum)
											2022-23	2023-24	2024-25	2025-26	2026-27	
To close the gap in the proportion of undergraduate students who are from lowest participation neighbourhoods, compared to those from the highest.	PTA_1	Low participation neighbourhood (LPN)	POLAR quintile 1	POLAR quintile 5	Decrease the gap in participation between POLAR4 Quintile 1 and POLAR4 Quintile 5 young (under 21) entrants, using the sector average as a baseline 17.4 percentage points (2019-20), to 8 percentage points (2026-27).	No	The access and participation dataset	2019-20	Percentage points	17.4	16.5	15	13	11	8	
	PTA_2															
	PTA_3															
	PTA_4															
	PTA_5															
	PTA_6															
	PTA_7															
	PTA_8															
	PTA_9															
	PTA_10															
	PTA_11															
	PTA_12															

Table 2b - Success

Aim (500 characters maximum)	Reference number	Target group	Underrepresented group	Comparator group	Description (500 character	Is this target collaborative?	Data source	Baseline year	Units	Baseline data	Yearly milestones					Commentary on how milestones/targets were calculated (500 characters maximum)
											2022-23	2023-24	2024-25	2025-26	2026-27	
	PTS_1															
	PTS_2															
	PTS_3															
	PTS_4															
	PTS_5															
	PTS_6															
	PTS_7															
	PTS_8															
	PTS_9															
	PTS_10															
	PTS_11															
	PTS_12															

Table 2c - Progression

Aim (500 characters maximum)	Reference number	Target group	Underrepresented group (optional)	Comparator group (optional)	Description (500 character	Is this target collaborative?	Data source	Baseline year	Units	Baseline data	Yearly milestones					Commentary on how milestones/targets were calculated (500 characters maximum)
											2022-23	2023-24	2024-25	2025-26	2026-27	
	PTP_1															
	PTP_2															
	PTP_3															
	PTP_4															
	PTP_5															
	PTP_6															
	PTP_7															
	PTP_8															
	PTP_9															
	PTP_10															
	PTP_11															
	PTP_12															