

Enhanced Theory of Change: Widening participation placement programme support

August 2023

Nottingham Trent University

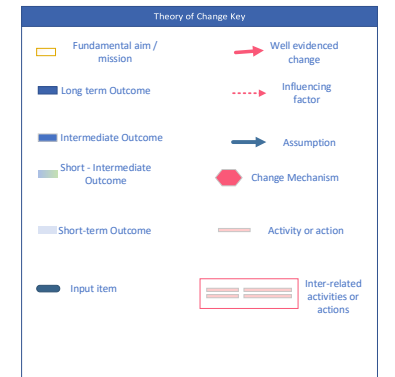
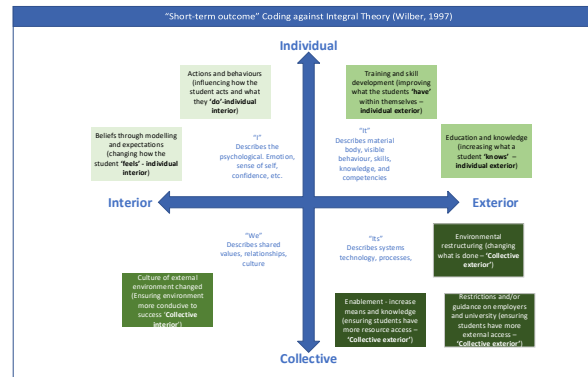
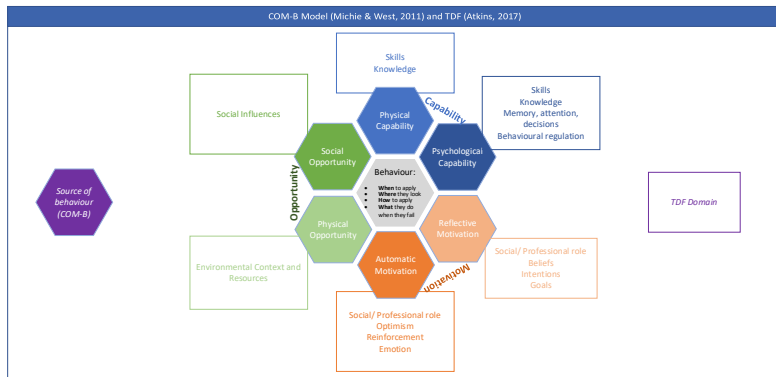
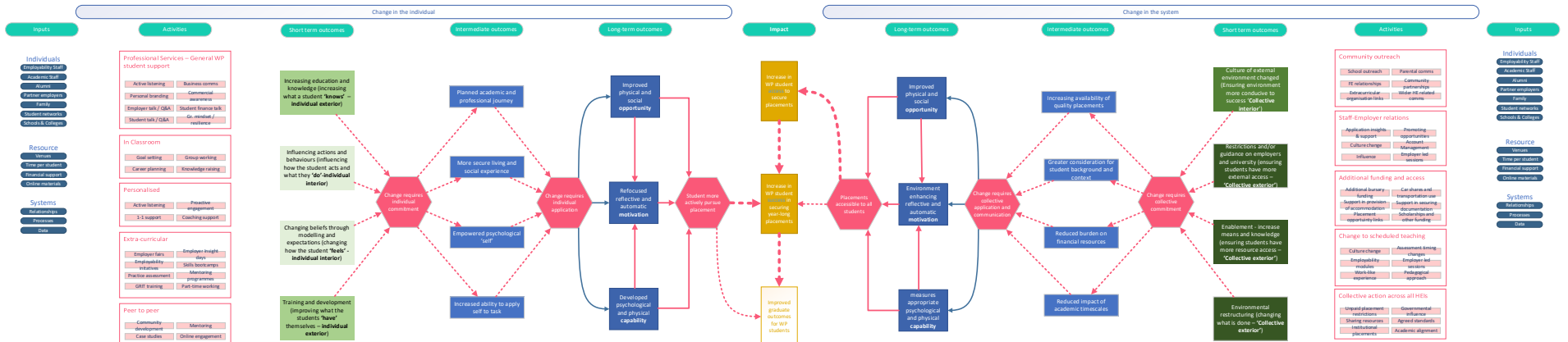
Author: Pete Crowson

Contributing authors: Mike Kerrigan, Bec Aeddi, and Zsanett Bicsak

Contents

1. Enhanced Theory of Change diagram.....	3
2. Why is the intervention being run?	4
3. Who is the intervention for?	5
4. What is this intervention?	5
4.1 Inputs	5
4.2 Activities.....	6
5. What is this intervention expected to achieve?	9
5.1 Outcomes	9
5.2 Impacts	13
6. Who is delivering the intervention?.....	14
7. How is this intervention delivered?	14
8. Where is the intervention delivered?	14
9. How many times will the intervention be delivered? Over how long?.....	14
10. How will intervention be tailored?	15
11. How will intervention be optimised?.....	15
12. Assumptions / Change Mechanisms.....	15
12.1 Assumptions	15
12.2 Change Mechanisms	16
13. What are the key risks to delivery?	17
14. What are the causal pathways?.....	18
15. Data collection opportunities.....	29

1. Enhanced Theory of Change diagram



2. Why is the intervention being run?

Previous UK research cited in a [briefing note](#) published by TASO demonstrates that students from widening participation (WP) backgrounds are less likely to undertake sandwich courses, even though the evidence suggests that they will particularly benefit from them. There are clear barriers to some students in terms of accessing these placements. However, further scrutiny of our internal longitudinal data suggests that communications and messaging may only be a relatively small part of the overall problem.

Table 1 below, which focuses on the 2016-17 entrant cohort¹ at NTU, shows that there was a relatively small gap in terms of intentions to undertake a sandwich placement between WP students and non-WP students. This was similarly the case for ethnicity (Black, Asian and minority ethnic (BAME)) and disability status. For example, we see that in 2016-17, 27% of UK domiciled year one WP undergraduate students were enrolled on four-year courses with an embedded sandwich placement, which was only three percentage points smaller than the equivalent percentage of non-WP students. In 2017-18, the percentage of WP students enrolled on sandwich placements fell slightly to 24%, and in 2018-19, only 14% of WP students were recorded as having taken a placement. Effectively, only around half of the WP students who had intended to undertake a sandwich placement, did so. This ‘successful conversion’ rate was considerably higher for non-WP students.

We see even more stark figures when we look at ethnicity, where the ‘successful conversion’ rate was considerably higher for White students than their Asian and Black counterparts.

Table 1: Analysis of 2016/17 entrant cohort progression, by demographic detail:

Characteristic	2016-17 Percentage enrolled on SW course yr 1 UG (intend)	2017-18 Percentage enrolled on SW course yr 2 UG (intend)	2018-19 Percentage gaining a SW placement
WP (IMD)	27%	24%	14%
Non-WP (IMD)	30%	29%	23%
Gap	3 percentage points	5 percentage points	9 percentage points

¹ NB this cohort is used because it was not affected by various Covid-related lockdowns. Subsequent data show similar patterns, albeit with more limited placement availability across the board due to Covid-19 restrictions.

Asian	37%	33%	17%
Black	29%	24%	12%
White	28%	28%	22%
A / W Gap	-9 percentage points	-5 percentage points	5 percentage points
B / W Gap	-1 percentage points	4 percentage points	10 percentage points
Disabled	28%	25%	14%
Not disabled	29%	28%	22%
Gap	1 percentage point	3 percentage points	8 percentage points

We have replicated the analysis shown for the 2017-18 year two cohort with the 2021-22 year two cohort who were ‘intending’ to progress to a sandwich placement in 2022-23. Again, we see relatively small gaps in the intentions of WP (26%) and non-WP students (29%) to take placements.

3. Who is the intervention for?

The placement support outlined in this Theory of Change has been developed primarily as a reflection of the experiences of students at Nottingham Trent University. However, interviews with staff members from other Higher Education Providers (HEPs) and a comparison with wider literature suggests that this approach to improving access to, and success on, sandwich placements can be applied to HEPs across the UK.

4. What is this intervention?

The placement support is designed for the complex and numerous factors that students, and WP students in particular, face in the process of securing a year-long sandwich placement. For the most effective delivery of this placement support, HEPs across the sector must take a collaborative and collective approach to embedding change, with a strengthening of relationships between the HEPs and their employer partners.

4.1 Inputs

For this placement support to be delivered successfully, several resources (inputs) are required, including finances and personnel, with input from external employers and partners. There are also several non-tangible resources, such as time, effort, and skill of the individuals involved.

Funding is critical to the success of this intervention, both in terms of staffing and resources, and direct funding towards the students. Delivery materials, including venues

to support sessions as well as physical and online information is necessary. Funding may also be needed to enhance systems and processes. For example, the requirement for a significant increase in complex data to analyse the issue will require funding for a learning analytics or data system that can store and process this data (**assumption 1**).

Finally, personnel and staffing are required. This ranges from employability and academic staff, through to external employers, alumni, schools and colleges, and community networks around the student. University staff need to be equipped with human resources such as knowledge, expertise, and experience in developing student behaviour.

4.2 Activities

Activities within this intervention are grouped by delivery methodology (for example, 'extra-curricular' or 'in-classroom') rather than by who is delivering them. This is intentional and for two reasons; to avoid limiting the input of a wider range of individuals into a particular activity and to emphasise the collective responsibility for delivery of each activity.

Activities must be informed by insights from existing evidence and institutional data, where possible. Each HEP individually and collectively are responsible for identifying target groups at each institution, to understand which students, require targeting for the intervention (**assumption 2**). This may be considered an 'activity' in itself, as our research suggests this is lacking across this sector. Targeting of students is required both through a data-driven understanding of student outcomes, but also in understanding skills gaps, views and values, temperaments and attitudes of these individuals and the cohorts to which they belong.

University staff are the main facilitators of change in the majority of student facing activities, although they are not the sole delivery personnel. Staff, in collaboration with employers, alumni, community partners, and student peers (for example mentors) deliver a programme of activities that include information advice and guidance (IAG), skill development, action planning, goal setting, as well as psychological development (for example, resilience training) and challenging beliefs (**assumption 3**). Additional one-to-one sessions are delivered by staff and mentors and include a mixture of practical support (for example, CV checking, interview techniques, or application support) and coaching (**assumption 4**). These student facing activities are complemented with communication campaigns delivered by university staff to engage students at key points prior to, and throughout, the students' entire journey through university (**assumption 5**). This communication is also key in facilitating supportive student community groups and engages academic areas within an institution to reinforce messaging around placement processes.

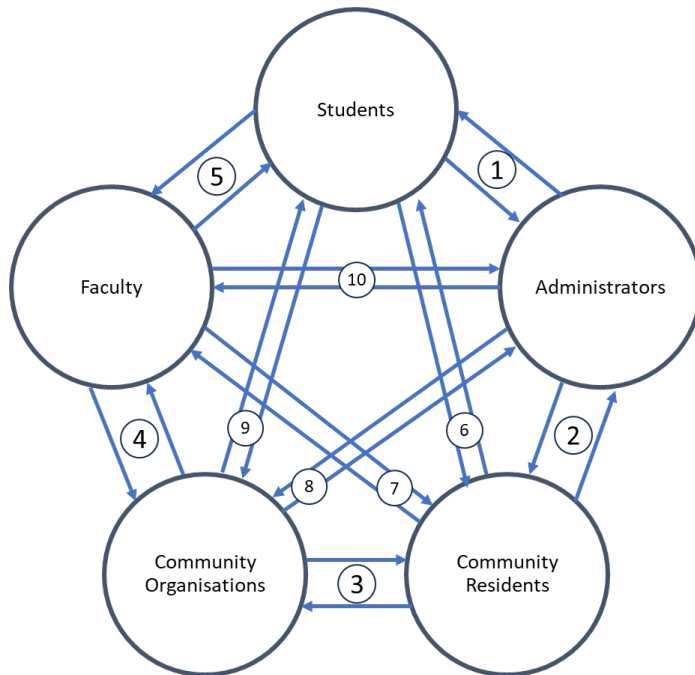
A significant amount of activity also takes place outside the purview of the student body, and here we discuss activities that result in systemic (including cultural) change, that indirectly, rather than directly, impacts the student. This addresses the key issue of rebalancing student disadvantage from the very start of the journey. This involves the delivery of sessions to communities, schools and colleges, and families of young people who are in the processes of considering higher education as part of their educational journey in the near future (**assumption 5**).

Similarly, a key group of activities is designed towards developing HEP-employer relationships. With the longer-term aim to change practice in external organisations (in this case, employers in the professional sector that takes on placement students) as well as internally to the university, a transformational, rather than transactional,² relationship is required (**assumption 6**). Applying models derived to explore the relationships between HEPs and civic organisations to the context of the placement relationship may provide a starting point as to the actors involved in structural change. The SOFAR framework (see Figure 1 below), identifies five key constituencies associated with civic engagement and impacting the nature of the relationships: students, organisations in the community, academic faculty, HEP administrators, and community residents. Applying this to professional engagement, this can be reframed to replace ‘community organisation’ with ‘professional organisation’ or ‘employer’, and ‘community resident’ with ‘professional staff’ or ‘sector staff’.

Establishing strong transformational relationships between organisations will facilitate the establishment of shared policy and guidance, that can subsequently benefit WP students who may be currently negatively impacted by structural issues beyond their control.

² Clayton, P. H., Bringle, R. G., Senor, B., Huq, J., & Morrison, M. (2010). Differentiating and assessing relationships in service-learning and civic engagement: Exploitative, transactional, or transformational. *Michigan Journal of Community Service Learning*, 16(2), 5-21.

Figure 1: The SOFAR framework:



In addition to relationships between HEP and employer, a developed relationship between HEPs is required. In establishing collective aims with agreed approaches across the sector, HEPs have significantly more leverage to impose restrictions and guidance on the placement programmes delivered by employers. This work is already being delivered, with examples of best practice appearing between specific institutions across the sector, and collective organisations and associations, such as [ASET](#). However, these relationships may be limited in number, and collective organisations and associations require significantly more promotion across the sector, with buy-in from all HEPs, to establish a collective power to affect change.

In addition to changes external to the institution in question (**assumption 7**), activities also include changes internal to the institution. These include adapting scheduled teaching to include employability skills across all courses, a consideration for changes to assessment deadlines and adjusting academic pressures against the external recruitment cycle for placements, embedding additional employer and alumni-led sessions, and making full use of the ‘work-like experience’ modules that insert professional work practice into the course from the beginning.

Finally, an activity is to provide funding to specific WP students. This requires institutions to analyse and understand ‘need’ at an individual level, and to be able to secure additional funding external to the institution on behalf of students. This activity will be most effective when the barriers to access for the student are reduced; for example, by ensuring any additional funding opportunities are clearly promoted to students and has a simple and efficient application process associated with its access.

5. What is this intervention expected to achieve?

5.1 Outcomes

This programme of interventions aims to achieve several short, intermediate, and long-term outcomes. The long-term outcomes can be discussed collectively, however as we move to intermediate outcomes and short-term outcomes, these can be grouped by outcomes for the individual student, and outcomes for the system (from individual HEP, to sector, to employer practices). While this dualistic approach is perhaps unique, the researchers believe it to be fundamental to addressing this complex issue. Considering the long-term outcomes, ultimately this links back to an impact on the group (WP student) through changing its overall behaviour (actively pursuing placements – **change mechanism 1**) and for the system to accommodate this behaviour (placements are more accessible to these students – **change mechanism 2**). In both cases, the goal is to influence a process of behaviours.

Conceptualising placement engagement as a process of behaviours oriented toward making career decisions^{3 4} creates space for a theoretical framework within which to consider how macro, institutional, and interactional factors intersect to form conditions in which individual actors engage differently with sandwich years. The **Capability, Opportunity, and Motivation Behaviour (COM-B)**⁵ model postulates that any behaviour at a given moment depends on the actor having both the capability and opportunity to engage in it and be motivated to do so more than all other available competing behaviours. Capability is defined as the ‘physical’ combination of knowledge and skills, along with the psychological capacity “to engage in the necessary thought process, comprehension, and reasoning”⁶ relative to performing the task. These resources are directly and indirectly mediated by reflective and automatic motivation, the “brain processes that energise and direct behaviour, not just goals and conscious decision-making”. Motivation is an additional mediator to opportunity – the factors in an individual’s physical and social environment that support engagement in the behaviour.

³ Ramirez, N., Smith, S., Smith, C., Berg, T., Strubel, B., Ohland, M., & Main, J. (2016). From Interest to Decision: A Comparative Exploration of Student Attitudes and Pathways to Co-op Programs in the United States and the United Kingdom. *International Journal of Engineering Education*, 32(5A), 1867–1878.

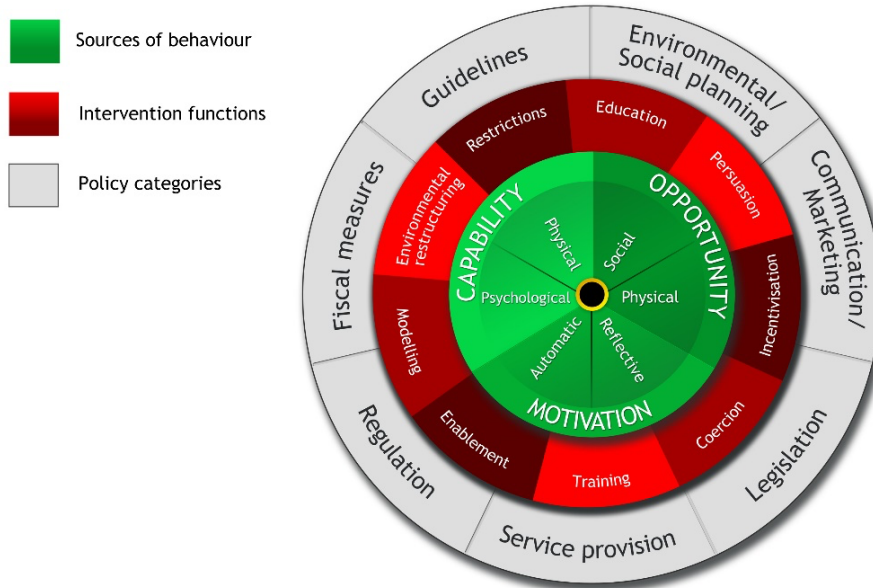
⁴ Greenbank, P. (2011). “I’d rather talk to someone i know than somebody who knows” - the role of networks in undergraduate career decision-making. *Research in Post-Compulsory Education*, 16(1), 31–45. <https://doi.org/10.1080/13596748.2011.549726>

⁵ Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, 6(1). <https://doi.org/10.1186/1748-5908-6-42>

⁶ Willmott, T. J., Pang, B., & Rundle-Thiele, S. (2021). Capability, opportunity, and motivation: an across contexts empirical examination of the COM-B model. *BMC Public Health*, 21(1). <https://doi.org/10.1186/s12889-021-11019-w>

Altogether, the components of the COM-B model constitute the Behaviour Change Wheel (BCW) (see Figure 2 below).

Figure 2: The Behaviour Change Wheel (BCW)



The behaviour change wheel not only identifies the ‘sources’ of behaviour (i.e., capability, opportunity, and motivation), but the intervention functions. These intervention functions, rather than describe an ‘activity’ that leads to an outcome, relates more closely to the ‘methodology’ of the activity. In essence, to change behaviour, the BCW defines what the source of the behaviour is, and how one may go about affecting it.

Enhancing this model, the Theoretical Domains Framework (TDF)⁷ can be mapped to further categorise the constituents of the BCW. The TDF, an integrated theoretical framework, is a synthesis of 128 theoretical constructs derived from 33 theories, which were selected for their relevance to implementation queries.⁸ Each TDF domain can be elaborated by a myriad of interrelated and occasionally overlapping constructs, including perceived competence, self-confidence (beliefs about capabilities), stability of intentions (intentions), and perceived risk/threat (beliefs about consequences).

⁷ Cane, J., O’connor, D., & Michie, S. (2012). *Validation of the theoretical domains framework for use in behaviour change and implementation research*. <http://www.implementationscience.com/content/7/1/37>

⁸ Atkins, L., Francis, J., Islam, R., O’Connor, D., Patey, A., Ivers, N., Foy, R., Duncan, E. M., Colquhoun, H., Grimshaw, J. M., Lawton, R., & Michie, S. (2017). A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems. *Implementation Science*, 12(1). <https://doi.org/10.1186/s13012-017-0605-9>

The concepts within these models have been applied to the problem of low placement engagement. For example, low academic performance (known to affect WP students more on average than their more advantaged counterparts) can lower confidence, and with it the likelihood that a student will apply for a placement.⁹ Academic performance¹⁰¹¹ as well as class-based inequalities in access to capital¹² can influence the ‘desirability’ of certain students to placement employers, thereby affecting the opportunities available to them.

This theoretical background ultimately demonstrates two key points. Firstly, the reason behind the use of the COM-B model as a framework for long-term outcomes, and secondly, to illustrate how factors such as academic performance can influence all three of these long-term outcomes in various ways. The eight factors for securing placements found in the exploratory research project we conducted on this issue have been reframed in the Theory of Change model, as ‘intermediate outcomes’. Short-term outcomes are framed in part in terms used within the BCW and TDF, and coded with against an ‘Integral Theory’¹³ framework that considers both the interior/ exterior and individual/ collective of outcomes, which compliments the dual-approach of this Theory of Change. Ultimately, the outcome of a reduced impact of these factors, is predicted to lead to the long-term outcomes previously discussed. In reframing these factors as ‘intermediate outcomes’, for some, addressing them requires change within the individual student, while others are outside of the control of the student, and therefore addressing them requires change within the system itself.

Outcomes for students

Through work conducted by the HEP, both as part of the curriculum and extra-curricular, students will ultimately have developed a **planned academic and professional journey** by their second year and the start of the placement application process. This is to mitigate issues found relating to intentions and changing pathways. It is understood that skill development itself is not sufficient without a consideration for

⁹ McCann, M., & Hewitt, M. (2023). Academic Performance and Work Placements: Does Academic Performance influence the Decision to Complete a Work Placement? *Higher Education, Skills and Work-Based Learning*, 13(1), 97–112.

¹⁰ Jones, C. M., Green, J. P., & Higson, H. E. (2017). Do work placements improve final year academic performance or do high-calibre students choose to do work placements? *Studies in Higher Education*, 42(6), 976–992. <https://doi.org/10.1080/03075079.2015.1073249>

¹¹ Brooks, R., & Youngson, P. L. (n.d.). *Undergraduate work placements: an analysis of the effects on career progression* *Studies in Higher Education*.

¹² Allen, K., Quinn, J., Hollingworth, S., & Rose, A. (2013). Becoming employable students and “ideal” creative workers: Exclusion and inequality in higher education work placements. *British Journal of Sociology of Education*, 34(3), 431–452.

¹³ Wilber, K. (1997). An integral theory of consciousness. *Journal of consciousness studies*, 4(1), 71-92.

future planning,¹⁴ making this issue as critical to capacity building as skill development itself. Actions in the medium term are hoped to also address issues around accommodation and social life, ensuring that students have a **more secure living and social experience** as a result. An intermediate objective is also to **empower a students' 'psychological self'**, to address issues found around confidence and resilience. Finally, for the WP student cohort, an intermediate outcome is for an **increased in the ability to apply self to a task**; in essence, students have the tools, such as increased skills and drive, for pursuing a placement opportunity throughout the application process.

These four intermediate outcomes ultimately link to students' opportunity, motivation, and capability to secure a placement opportunity (**change mechanism 3**) once they have been measurably increased throughout the WP cohort.

The short-term outcomes for students are achieved as a direct result of interactions with the various activities previously described. This falls under the four main immediate outcomes. Students who participate in the programme of support should have a direct **increase in education and knowledge**, a measurable difference on the **actions and behaviours** of the student, a developing **change in the beliefs through modelling and expectations** and have increased abilities based on the **training and development** that they have participated in. These outcomes are expected as a result of participants attending the activities (**change mechanism 4**), with the number of activities attended predicted to directly impact the strength of this change.

Outcomes for systemic change

Developing HEP and employer partnerships are expected to result in the **increase in the availability of quality placements**. The emphasis here is on both increasing the number of placements as well as increasing the quality of the placements themselves. This is in response to the exploratory research highlighting issues with finding suitable placements. Similarly, changes made structurally (particularly with regards to data sharing) aim to give **greater consideration for student background and individual contexts**, with an increased understanding for issues raised for specific groups and corresponding actions to address them. A joint approach of additional funding provided to students, as well as the reduction in the requirement for 'means' to access placements, should ultimately **reduce the burden on financial resources** for the individual student. Finally, changes made must lead to a sustained **reduction in the impact of academic timescales** on the individual student in their pursuit of a placement opportunity.

¹⁴ Walmsley, A., Thomas, R., & Jameson, S. (2012). Internships in SMEs and career intentions. *Journal of Education and Work*, 25(2), 185-204.

Again, these latter four intermediate outcomes ultimately link to the long-term outcomes of increasing general opportunities, enhancing motivations to secure a placement, and considering capability issues that are outside of the students' control, while ensuring that student capability is adequately recognised and measured. Regarding the latter outcome, student 'capability', this describes how the application process should filter students based on their 'actionable' capabilities (i.e., capabilities that the student can influence, such as skills) rather than their 'non-actionable' capabilities (i.e., that the student cannot influence, such as their physical resources). These changes on a structural level must occur (**change mechanism 5**) to ensure long-term benefits for the WP cohort.

The short-term outcomes achieved as a result of the activities are firstly the introduction of **restrictions and/or guidance on employers and the university**. These must be made as a collective and as result of both a developed partnership with employers and between HEPs. In addition, actions should result in '**enablement**' which relates to an increase in means and knowledge for stakeholders, and completed **environmental restructuring** which describes a sustained change in HEP practice going forward. All these actions aim to contribute to a **culture change** around placements that promotes opportunity, motivation, and capability of stakeholders against each of the factors raised in the exploratory research. These outcomes are expected to expand and develop as the systemic change is embedded and expanded throughout subsequent academic years (**change mechanism 6**).

5.2 Impacts

The primary impact for this work is **improved graduate outcomes for WP students**. This is achieved through students securing a placement, and the benefits that a year-long placement provides. Therefore, the secondary impact to achieve the primary impact is for an **increase in WP student success in securing a year-long placement**. We also understand that the development of employability skills, in addition to other soft skills such as metacognition, confidence and resilience, and self-reflection, ultimately empower the student and their outcomes, regardless of whether the student secured a placement.¹⁵ Therefore there is a small link between the change within the student and with the primary impact, however the strongest link is via the secondary impact. Considering the secondary impact, both changes to the student and to the system will ensure a greater WP student success, however this is particularly true when changing student behaviour. Ultimately the responsibility for success falls on the student, with support from a system that facilitates success.

¹⁵ Scott, F. J., Connell, P., Thomson, L. A., & Willison, D. (2019). Empowering students by enhancing their employability skills. *Journal of Further and Higher Education*, 43(5), 692-707.

The tertiary impact is the increase in **access for WP students** in securing placements. This is primarily the result of structural change; while students are primarily responsible for success in securing placements, access to the placement in the first place remains the responsibility of those organisations who create, manage, and promote the opportunities.

6. Who is delivering the intervention?

The Theory of Change provides an overview for sector level change, however, the activities outlined should be delivered at the level of individual HEPs in collaboration with employers, the wider HE sector, and to a lesser extent, the schools, colleges and community partners.

7. How is this intervention delivered?

This intervention has a mixed methods approach to delivery. Activities directed towards students will be delivered in person and are a mixture of group and individual workshops. Sessions will also be a mixture of in-curriculum and extra-curricular sessions and will use a range of pedagogies from constructivist to collaborative, to reflective. In addition, indirect communications to students will be used, with a mixture of targeted and generalised communications conveying key messaging as developed by the university.

Regarding activities aimed towards delivering systemic change, interventions are delivered via senior staff members directed towards their HEP staff, and ultimately focus on relationship building, policy development, and strategic planning and change. Staff are responsible for establishing and working towards deliverable targets, overseen by senior management.

8. Where is the intervention delivered?

This intervention is delivered primarily on campus, either through scheduled teaching, or through extra-curricular support sessions. Additional elements will be delivered off-campus in schools, colleges, and community settings, targeting young people who are classed as 'prospective' students.

9. How many times will the intervention be delivered? Over how long?

This Theory of Change describes an ongoing programme of support for students, information delivery and relationship building outside of the university, and the delivery of systemic change through policy, restrictions, guidance, and process restructure. The support and communication elements will run on an annual cycle, delivering interventions throughout the academic year. The relationship building is an ongoing

process of building and maintaining relationships with other organisations and institutions that has no end date.

10. How will intervention be tailored?

This intervention addresses specific issues for widening participation students, and the intersectionality of various demographic groups within that. In addition, personalised support is required that considers the unique and specific needs of each student. This programme and supporting research consider the unique needs associated with each school/faculty, and the variety of professional sectors, each with their own needs, requirements, issues, and culture, requiring a specific and considered approach. For example, placements related to fashion or sport are more likely to require a focus on financial issues, and specific associated policy, due to the prevalence of unpaid placements within that sector.

11. How will intervention be optimised?

Implementation can be optimised through commitment to change from a senior management perspective, a greater access to resource for staff responsible for delivery, and the development of a trusted relationship between the university, other HEPs, and employer partners. A focus on training and development of staff who deliver support to students would also ensure support is delivered most effectively. Therefore, a clear recommendation is made to invest in staff and their skill set to optimise the delivery of the programme.

12. Assumptions / Change Mechanisms

12.1 Assumptions

1. HEP staff have adequate resources to deliver all the activities, and the structural changes that underpin them.
2. Data collection, analysis, and sharing agreements can be established in HEPs to better understand student groupings, intersectionality, and issues specific to each sub-group within the category of WP.
3. Individual facilitators (e.g., alumni, employers, etc.) can be recruited as part of the intervention.
4. Staff responsible for delivery of student-facing sessions are effective and engaging in their pedagogical approach.
5. Students access support available to them, and/or the additional support can be built into the curriculum effectively.

6. A strong relationship can be established between HEP and employer to affect substantial systemic change.
7. Change management processes are strongly developed within the HEP in question.

12.2 Change Mechanisms

1. **Students more actively pursue placements:** From a student perspective, long-term outcomes of improved opportunity, refocused motivation, and developed capability will only result in increased success in securing placements, if student behaviour changes as a result of these outcomes. At this stage, the student remains responsible for the change in behaviour, which arguably falls outside of the 'accountability ceiling' of the HEP.
2. **Placements made accessible to all students:** From a systemic perspective, long-term outcomes of improved opportunity, environmental enhancement of motivation and capability, will only result in increased student access and success in securing a placement, if the placement roles continue to be offered to students. Employers ultimately remain gatekeepers for access to placements, and therefore it is outside of the control of the HEP if placement opportunities decrease as a result of a change in priorities or practices at the employer level.
3. **Change requires individual application:** For the long-term outcomes to be reached, the students must *apply* the intermediate outcomes to the issue of securing a placement. It is ultimately the responsibility of the student for example, to use their increased skills in communication and organisation and apply it to the challenge of securing a placement.
4. **Change requires individual commitment:** The intermediate outcomes that indicate change within the student can only occur if the students themselves attend programme sessions, and more importantly, commit to embedding the immediate outcomes of these sessions into their continuing behaviours. For example, a change in behaviour is not a singular act, but a habit that needs to form over repeated acts.
5. **Change requires collective application and communication:** Converting intermediate to long-term outcomes relies on a collective application and communication of the intermediate outcome. That is to say that a significant *proportion* of institutions or organisations must achieve these outcomes (for

instance, a small number of employers alone cannot increase the number of available placements to a significant extent), and that these outcomes are subsequently *applied* and *communicated* to the target group (for instance, the improved understanding and consideration for students from specific backgrounds will have a significantly reduced impact if the *perception* of a lack of consideration remains).

6. **Change requires collective commitment:** Change will only occur here if staff and senior management are committed to the change process. The need for the change must be clearly outlined, and all parties must be *willing* as well as *able* to make systemic changes.

13. What are the key risks to delivery?

1. The delivery institution staff lack adequate funding and resources to deliver the activities, and the structural changes that underpin them.
2. The delivery institution staff lack capacity to delivery all activities.
3. Unengaged students fail to participate in all support activities available.
4. Communication and recruitment to activities fails to reach the correct audience.
5. Government and/or Department for Education policy fails to implement structural changes to the sector that HEPs collectively agree to.
6. The delivery institution and employer relations fail to reach the critical 'transformational' stage that leads to agreement in policy changes.
7. External issues that impact students worsen, exacerbating the issues (for example, an increase in cost of living)
8. Engagement with schools, colleges, and the wider community is at insufficient levels to effect change.
9. Structural changes require a change management approach that is long term in nature, rather than producing immediate results. This can result in a lack of buy-in from all parties involved.

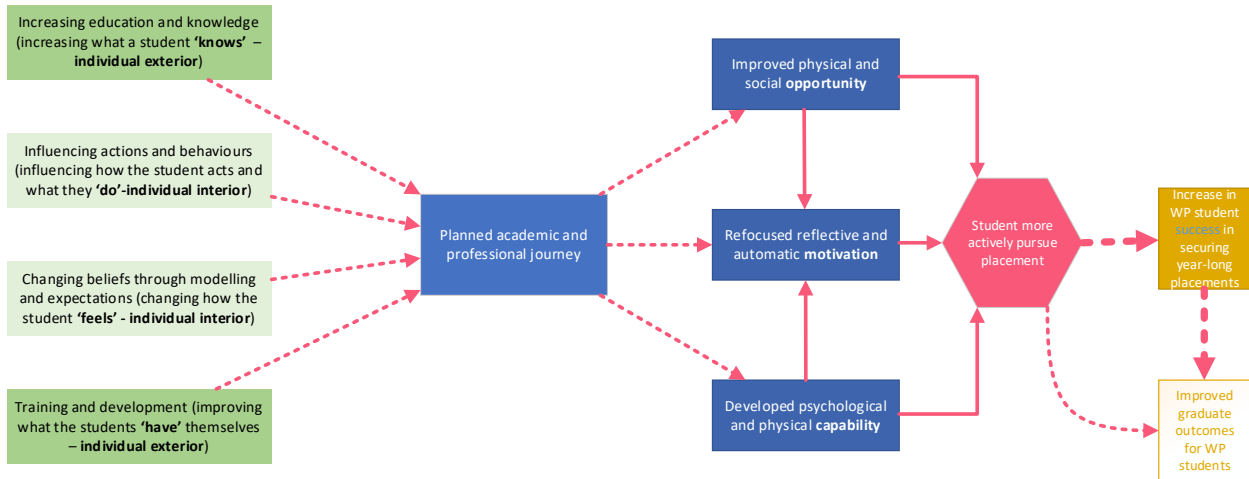
10. Challenges in a school/faculty context may provide additional barriers (for example, unpaid NHS placements stem from systemic issues within healthcare funding in comparison to other sectors).

11. Further understanding of WP specific issues and intersectionality are complex and require significant further research.

14. What are the causal pathways?

Causal pathways explain how the programme activities are expected to lead to the anticipated outcomes and impacts. This section outlines the key causal pathways reflected in this Theory of Change and presents existing evidence to support them. These causal pathways are based on the assumptions and observations made by the NTU team conducting the TASO funded research project, as well as those participating in the design and delivery of existing programmes, and on the underlying evidence base with additional frameworks. Please note, however, that the evidence presented here is not exhaustive, and additional pathways may exist through the intersectionality of the issues that students face.

14.1 Causal pathway 1 – Academic and professional journey



This causal pathway hypothesises that, through increasing knowledge about available routes and options into their professional future, influencing students in goal-setting and forward planning, changing beliefs about their individual possibilities, and encouraging training and development in career planning, students will develop a stronger academic and professional ‘plan’ going forward.

Through a developed future plan, students are expected to have improved opportunities when considering the placement, are more strongly motivated towards securing a placement in order to achieve their planning goals and are more capable in terms of knowledge when searching for an appropriate placement. A combination of increased

opportunity, motivation, and capability in turn leads to students being more active in their pursuit of a placement which will, for some, increase their likelihood of securing a placement. This also leads (to a lesser extent) to a direct outcome of improved graduate outcomes for those who do not secure a placement, as those developed skills will be applicable to the students' professional journey following graduation.

This is based on feedback gathered through the accompanying research project, and literature on this subject. For example, the resource of 'setting goals' acts as a source of motivation, if applying to placements is conceptualised as a proactive career behaviour.¹⁶ Evidence suggests that students can undertake career planning to identify opportunities for placements and future career paths, and set goals.¹⁷ Furthermore, if the career planning activity is designed to improve competence and therefore career readiness capabilities then students may feel more able to communicate and identify with their value when applying to placements.¹⁸ Capability beliefs and goal setting have also been shown to significantly predict career adaptability behaviours in adolescents.¹⁹ Career competencies, which include career control ("career-related planning and influencing learning and work processes") have been shown to be positively related to career motivation (example statement used is "I believe it is important to think about my career").²⁰

¹⁶ Doğanülkü, H. A. (2022). Life goals and proactive career behaviors: The mediating role of visions about the future and the moderating role of intolerance of uncertainty. *Current Psychology*, 1-13.

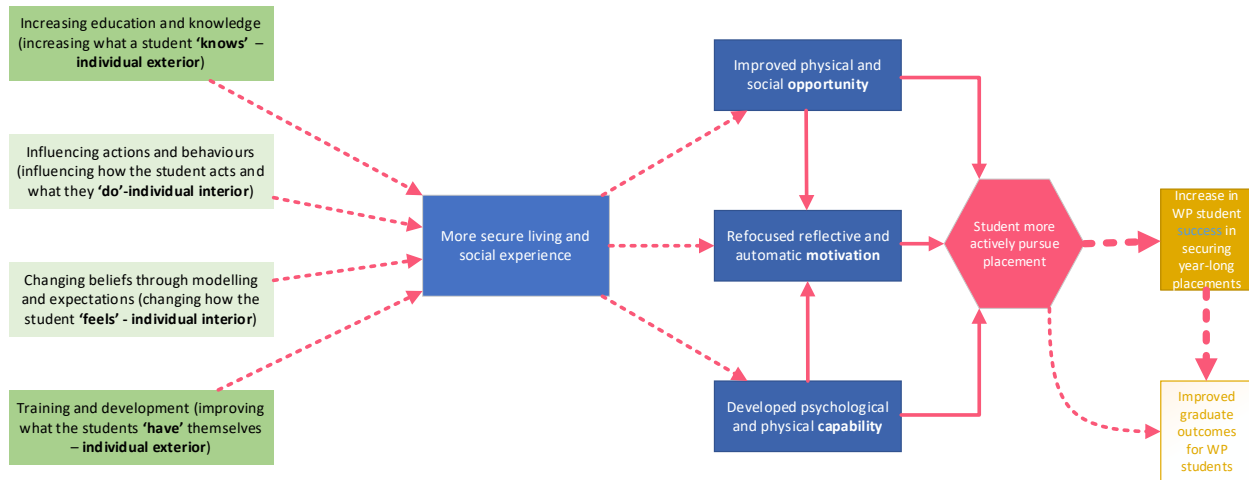
¹⁷ Barthorpe, S., & Hall, M. (2000). A collaborative approach to placement preparation and career planning for university students: a case study. *Journal of vocational Education and Training*, 52(2), 165-175.

¹⁸ Stebleton, M., et al, 2020. Examining career readiness in a liberal arts undergraduate career planning course. *Journal of Employment Counselling*, 57(1), 14-26.

¹⁹ Hirschi, A., 2012. The career resources model: an integrative framework for career counsellors. *British Journal of Guidance & Counselling*, 40(4), 369-383

²⁰ Akkermans, J., et al., 2013. Competencies for the Contemporary Career: Development and Preliminary Validation of the Career Competencies Questionnaire. *Journal of Career Development*, 40(3), 245-267.

14.2 Causal pathway 2 – Living and social factors



The second causal pathway hypothesises that, through educating students on the availability and process of securing accommodation, influencing students in widening their placement search locations, changing beliefs about requiring to secure accommodation early, and encouraging training and development in relocation, students will have a more secure living and social experience regardless of their ultimate location.

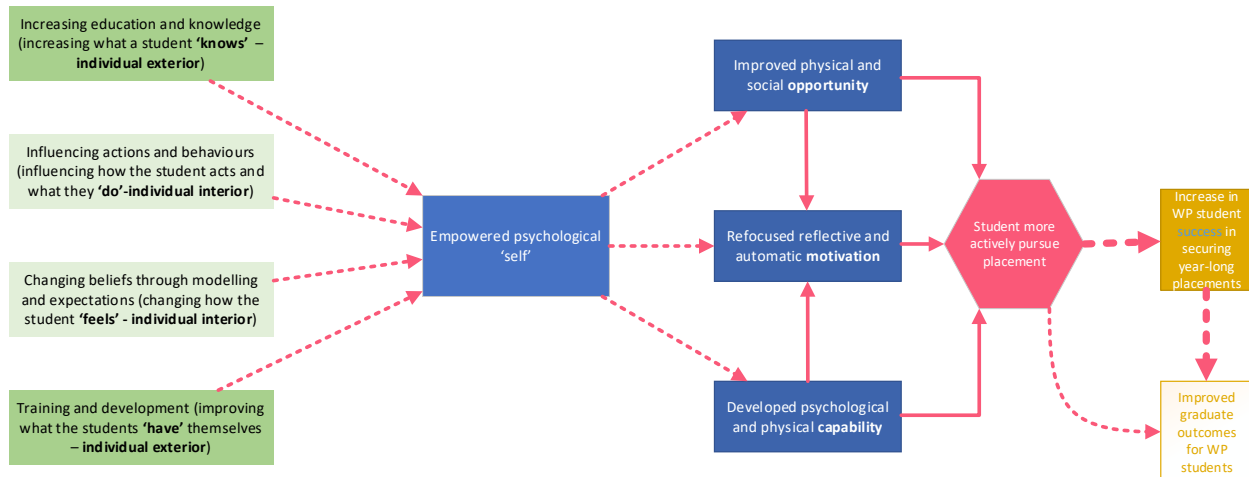
Through a more secure living and social situation, students are expected to have increased opportunities when considering the placement, are more strongly motivated towards securing a placement outside of their preferred location and are more capable in terms of ability to move to a wider range of locations and dealing with social influences. A combination of increased opportunity, motivation, and capability in turn leads to students being more active in their pursuit of a placement which will, for some, increase their likelihood of securing a placement. This also leads (to a lesser extent) to a direct outcome of improved graduate outcomes for those who do not secure a placement, as those developed skills will be applicable to the students' professional journey following graduation.

The Social Cognitive Theory of Career Development²¹ encompasses the mechanisms associated with interactional and contextual social factors and career-related decision making, of which placement engagement can be considered an aspect. According to this theory, interactions with peers and network members influence self-efficacy beliefs, an aspect of capabilities within the COM-B model. Social and environmental 'opportunity structure factors' affect work-related choice control, motivation, and outcome expectations. Other research highlighted that proximity to educational and

²¹ Lent, R., Brown, S., Hackett, G., 1994. Toward a Unifying Social Cognitive Theory of Career and Academic Interest, Choice, and Performance. *Journal of Vocational Behaviour*, 45. 79-122.

career development opportunities influences the choices that HE students make and the motivation they must persevere.²² Access to secure social networks and home environment are resources²³ which support career development and related agency by improving individuals' self-directed career management capabilities.

14.3 Causal pathway 3 – Psychological empowerment



The third causal pathway hypothesises that, through educating students on techniques to develop confidence, influencing students to focus on psychological empowerment, changing beliefs that arise as a result of rejection or disillusionment, and encouraging training and development in resilience, students will be empowered in their approach to the application process for securing a placement.

Through an empowered psychological 'self', students are expected to have increased opportunities when considering the placement due to their own self-perception of what is achievable, are more strongly motivated towards securing a placement with their strengthened sense of self-confidence and are more psychologically capable of pursuing placements overall. A combination of increased opportunity, motivation, and capability in turn leads to students being more active in their pursuit of a placement which will, for some, increase their likelihood of securing a placement. This also leads (to a lesser extent) to a direct outcome of improved graduate outcomes for those who do not secure a placement, as those developed skills will be applicable to the students' professional journey following graduation.

²² Reyes, M., et al., 2019. The "Geography of Opportunity" in Community Colleges: The Role of the Local Labor Market in Students' Decisions to Persist and Succeed. *Community College Review*, 47(1)., 31-52.

²³ Hendry, L. B., & Kloep, M. (2002). *Lifespan development: Resources, challenges and risks*. Cengage Learning EMEA.

Research relating to self-efficacy, empowerment, and placements generally focuses on placements' effect on students' conceptions of the self.^{24,25} However, placement engagement can be considered an aspect of career development or construction. Career Construction Theory (CCT)²⁶ posits that individuals need to possess psychological and cognitive resources including confidence, curiosity, a sense of control, and concern for one's future to engage in career construction, which allow the identification of opportunities and the development of goals. These resources are the conditions for career adaptability, conceptualised as "individuals' *capabilities* to prepare for predictable tasks involved in job roles and to adjust accordingly to unpredictable factors arising from changes in working conditions".²⁷ Career adaptability has been shown to be predicted by self-esteem²⁸ and subsequently, career adaptability has been defined as 'career resilience', with the suggestion that it is a key constituent of career motivation²⁹. The Self-Development Theory has also been utilised to argue that when organisations empower individuals to engage in self-determining behaviour, motivation increases³⁰.

²⁴ Mattilda., A., et al. Increasing Self-Efficacy through Role Emerging Placements: Implications for Occupational Therapy Experiential Learning. *Journal of Occupational Therapy Education* 2(3)., 1-20.

²⁵ Reddan, G. 2015. Enhancing students' self-efficacy in making positive career decisions. *Asia-Pacific Journal of Cooperative Education* 16(4). 291-300

²⁶ Savickas, M. L. (2013). Career construction theory and practice. *Career development and counseling: Putting theory and research to work*, 2, 144-180.

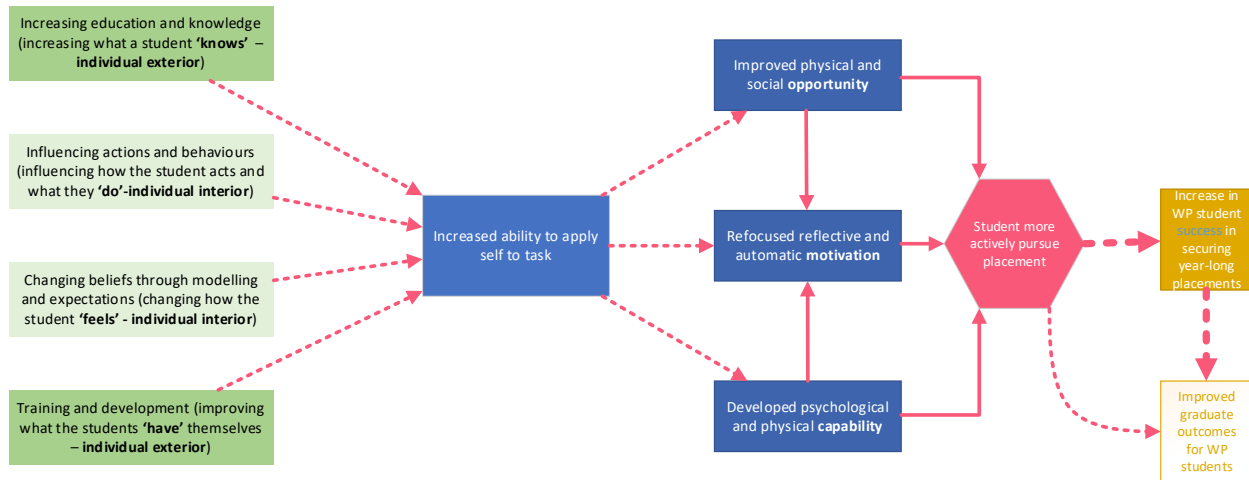
²⁷ Yang, L., Sin, K. F., & Savickas, M. L. (2023). Assessing factor structure and reliability of the career adaptability scale in students with special educational needs. *Frontiers in Psychology*, 14.

²⁸ Ataç, L. O., Dirik, D., & Tetik, H. T. (2018). Predicting career adaptability through self-esteem and social support: A research on young adults. *International Journal for Educational and Vocational Guidance*, 18, 45-61.

²⁹ London, M. (1993), Relationships between career motivation, empowerment and support for career development. *Journal of Occupational and Organizational Psychology*, 66: 55-69.

³⁰ London, M., & Smither, J. W. (1999). Empowered self-development and continuous learning. Human Resource Management: Published in Cooperation with the School of Business Administration, *The University of Michigan and in alliance with the Society of Human Resources Management*, 38(1), 3-15.

14.4 Causal pathway 4 – Personal application



The fourth causal pathway hypothesises that, through educating students on methods for securing placements, influencing students to increase their efforts and influence their approach in applying, changing beliefs through networking and connections with peers and alumni, and encouraging training and development in job applications and interviews, students will have an increased ability, effort, and skill to effectively promote themselves through the application process.

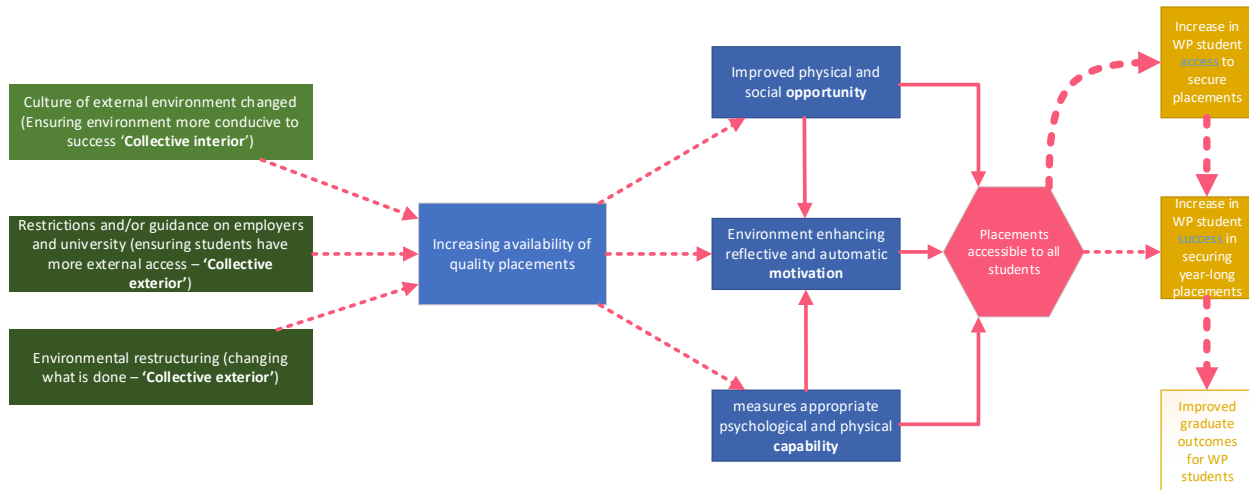
Through application and interview skill development, students are expected to have increased opportunities when considering the placement due to their ability to successfully navigate the application process, are more strongly motivated towards securing a placement due to their improved abilities and are more physically capable to pursue placements overall. A combination of increased opportunity, motivation, and capability in turn leads to students being more active in their pursuit of a placement which will, for some, increase their likelihood of securing a placement. This also leads (to a lesser extent) to a direct outcome of improved graduate outcomes for those who do not secure a placement, as those developed skills will be applicable to the students' professional journey following graduation.

Accessing work placements requires students to source and apply for competitive placement roles. Networking, or 'knowing whom' to speak to is a necessary aspect of securing employment, alongside competencies associated with 'knowing why', like reflecting on career motivations, and 'knowing how', such as opportunity identification and application capabilities.³¹ In this way, improving career competencies (the ability of an individual to apply themselves consistently to the process of securing employment) is itself the act of improving ones' employment-related opportunity, motivation, and

³¹ Akkermans, J., et al., 2013. Competencies for the Contemporary Career: Development and Preliminary Validation of the Career Competencies Questionnaire. *Journal of Career Development*, 40(3), 245-267.

capability. The concept of career competencies has not yet been extrapolated to placement engagement in the literature, however research has shown a positive association with career success and each competency area except motivation, which had a negative association.³²

14.5 Causal pathway 5 – Placement availability and suitability



The fifth causal pathway hypothesises that, through addressing the culture of placements within a course or department to promote additional possibilities, working with additional employers with guidance on embedding placements, and increasing the number of student contacts with employers through university, there will be an increase in the number and quality of placement opportunities available for students.

Through increased availability of quality placements, students enter a system with an increased number of ‘good’ opportunities, are more strongly motivated towards securing a placement due to their perceived benefits, and the structure itself facilitates student capability. A combination of enhanced opportunity, motivation, and capability in turn leads to an increase in general accessibility of placements and, for some, increase their likelihood of securing a placement itself.

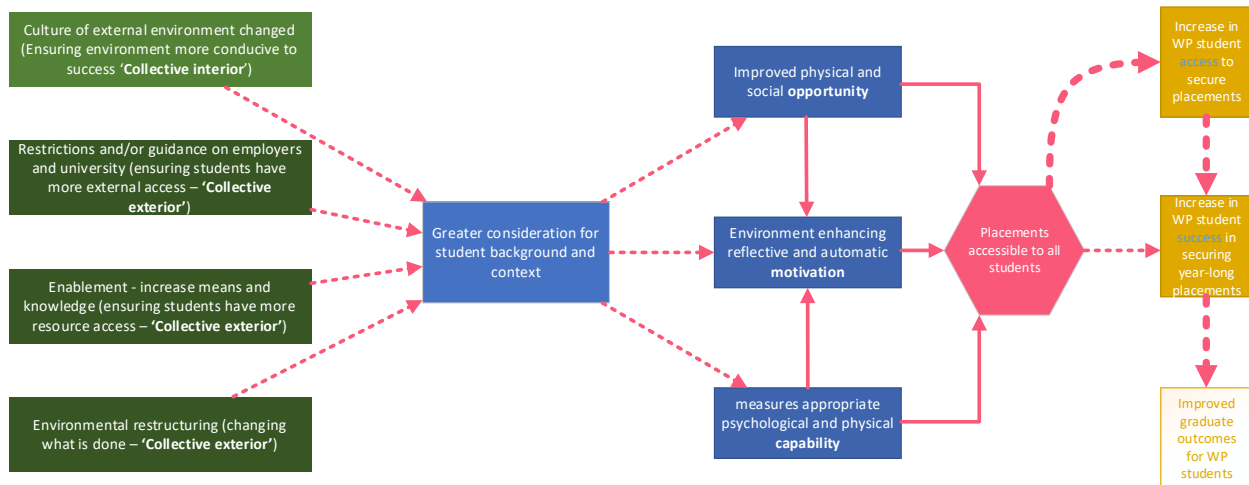
A ‘quality placement’ can be defined as opportunities that are fit for purpose, quality monitored by stakeholders, accredited, assessed, support portfolio construction, and allow space for reflection.³³ The quality of a placement can be enhanced by HEP actions such as briefing and debriefing and reflection facilitation, which relies on ‘buy-in’ from academic staff; a link to the ‘culture’ of placements. Increasing the availability of quality placements in real terms means increasing the equality of opportunity to undertake

³² Kuijpers, M., 2006. Career Competencies for Career Success. *The Career Development Quarterly*, 55(2), 98-191

³³ Blackwell, A., et al, 2001. Transforming Work Experience in Higher Education. *British Educational Research Journal*, 27(3).

them. This is antithetical to the existence of unpaid internships, hence “paid for work is... a significant enabling factor”³⁴ in placement engagement, meaning that while the quality of a placement’s perceived outcomes acts as a motivating factor, students need to be economically capable of undertaking it. This links strongly to causal pathway 7.

14.6 Causal pathway 6 – Student background



The sixth causal pathway hypothesises that, through defining and embedding a culture of equality and diversity within professional sectors, working with employers on developing guidance and restrictions on recruitment and working practices, sharing knowledge of disadvantages through data sharing (enablement), and restructuring the processes of recruitment in particular areas to promote equality and fairness, there will be a developed consideration for student background and context throughout the placement process.

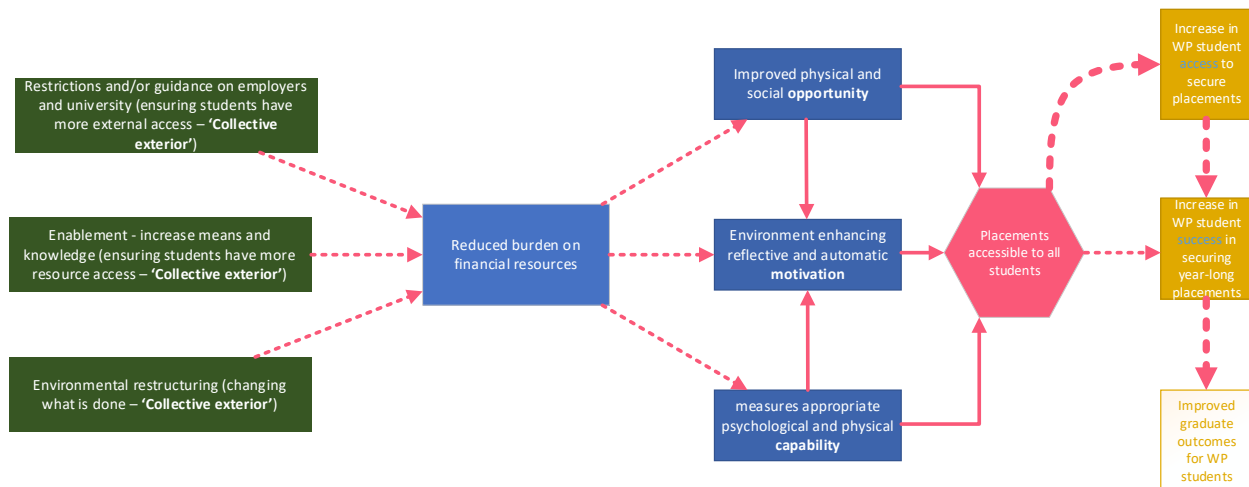
Through this developed consideration for background, students from disadvantaged backgrounds have greater opportunities, are more strongly motivated towards securing a placement in an organisation with more positive working practices and reputations, and the structure itself facilitates student capability which may be impacted without deeper consideration for background. A combination of enhanced opportunity, motivation, and capability in turn leads to an increase in general accessibility of placements and, for some, increases their likelihood of securing a placement.

WP students may for example need to prioritise paid part-time work over undertaking an unpaid placement as they may not have the same access to social and economic

³⁴ Smith, S., et al. 2015. Can pay, should pay? Exploring employer and student perceptions of paid and unpaid placements. *Active Learning in Higher Education*. 16(2), 149-164.

capital as their more advantaged peers.³⁵ They may also not be motivated to take an additional year to finish their degree due to existing debts and financial responsibility for others.³⁶ Furthermore, employers have been found in qualitative research to indirectly discriminate against student work placement applicants based on a variety of criteria largely related to socio-economic context, such as cultural capital signifiers.³⁷ Larger (though still relatively small) scale data suggests that many work experience employers recruit from alumni networks associated with highly selective institutions,³⁸ showing a selection bias towards more advantaged students.

14.7 Causal pathway 7 – Financing



The seventh causal pathway hypothesises that through developing restrictions on low or unpaid placements, students’ financial security will improve. Furthermore, making structural changes such as agreements between HEPs to create shared accommodation opportunities, facilitating remote working or shared transport through partnerships with employers, and supporting students to attend in-person interviews, there will be a developed consideration for student financial difficulties throughout the placement process.

Through this developed consideration for finances, students from disadvantaged backgrounds have more opportunities with funding support, are more strongly motivated

³⁵ Cullinane, C., & Montacute, R., 2018. Pay as you go? Internship pay, quality and access in the graduate jobs market. The Sutton Trust Report

³⁶ Balta, M. E., Coughlan, J. L., & Hobson, P. (2012). Motivations And Barriers In Undergraduate Students Decisions To Enroll In Placement Courses In The UK. *Journal of International Education Research (JIER)*, 8(4), 399-414.

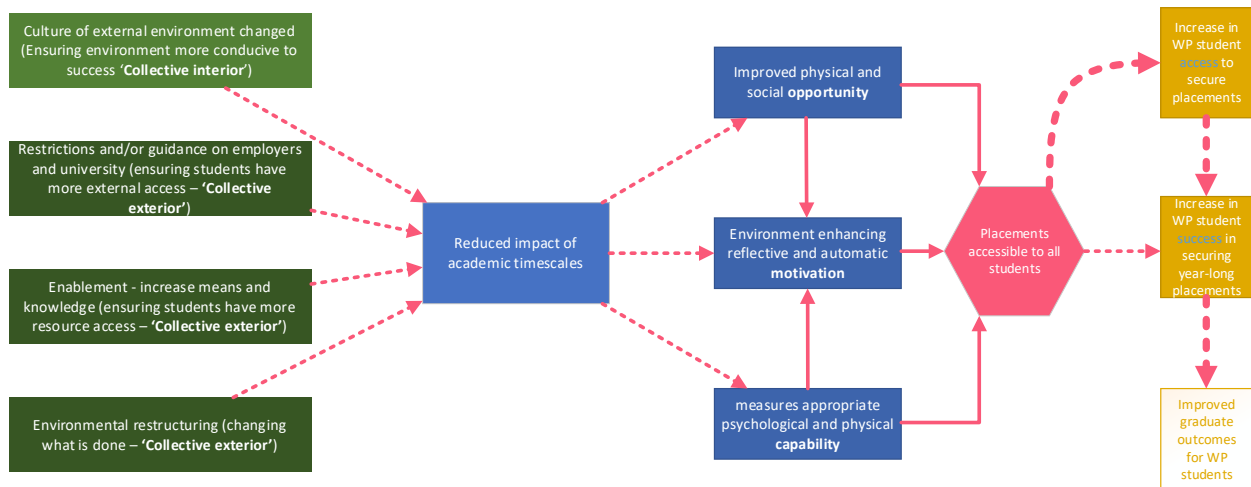
³⁷ Wilton, N., 2014. Employability is in the eye of the beholder: Employer decision-making in the recruitment of work placement students. *Higher Education, Skills and Work-based Learning* 4(3), 242-255

³⁸ Wilson, J., 2016. National Centre for Universities and Business. Work experience as a gateway to talent in the UK: Assessing business views

towards securing a placement and less motivated towards securing additional means of income, and the structure itself facilitates student capability, as ‘means’ is a reduced factor linked to capability. A combination of enhanced opportunity, motivation, and capability in turn leads to an increase in general accessibility of placements and, for some, increases their likelihood of securing a placement.

Due to limited access to social and economic capital, students may prioritise paid part-time work over unpaid placements.³⁹ Financial constraints, including existing debts and responsibilities towards others, may discourage them from extending their degree duration. Research has shown how for students on creative courses, unpaid placements are ‘industry standard’⁴⁰, and when students are paid it is generally very little. This leads students to ‘self-select how many and what kinds of placements’ they apply for ‘on the basis of their financial situation’, and to frequently attempt to work part time roles on top of their placements and course. As such, the ‘*capacity* to be enterprising’ and ‘*motivated*’ in sourcing employability by locating, competing for and undertaking placement opportunities is dependent on having access to the necessary resources. Reducing the burden of placements on students’ financial resources would therefore increase students’ capacity to see the full range of placements as viable opportunities and to be motivated to apply for them.

14.8 Causal pathway 8 – Timing



³⁹ Cullinane, C., & Montacute, R., 2018. Pay as you go? Internship pay, quality and access in the graduate jobs market. The Sutton Trust Report

⁴⁰ Allen, K., Quinn, J., Hollingworth, S., & Rose, A. (2013). Becoming employable students and “ideal” creative workers: Exclusion and inequality in higher education work placements. *British Journal of Sociology of Education*, 34(3), 431–452.

The eighth causal pathway hypothesises that, through embedding a culture of employability early in the course or even prior to enrolling, providing guidance to employers on university year-long timings, enabling students to develop employability skills as part of the curriculum, and restructuring university assessment deadlines and teaching schedules to complement recruitment ‘windows’, there will be a reduced impact on time as resource for students throughout the placement process.

Through this developed consideration for academic timelines, students who are ‘time poor’ will have more opportunities. A combination of enhanced opportunity, motivation, and capability in turn leads to an increase in general accessibility of placements and, for some, increases their likelihood of securing a placement.

Interviews with UK students indicate that the need to apply for and secure housing far before applying for placements means that students often need to ‘gamble’ on whether to choose to pursue a placement or prioritise securing housing close to their university.⁴¹ As such, students need to be confident in their capacity to obtain housing if they delay in preference for a placement. In addition, placement preparation activity may not fall at ‘opportune times’ when considered alongside course activity; students may not feel they have the opportunity to prepare for placement applications when course demands take precedence and may be less motivated to do so as a result.⁴² Ensuring that aspects of the placement application process complement or are sensitive to the competing demands of university life should afford students the opportunity to devote the necessary motivation to the application process and should mean that confidence in their capability to obtain a placement does not need to compete with maintenance of their existing resources.

15. Data collection opportunities

This section outlines the different data points currently being collected by NTU, and that can be used to assess the performance against anticipated outputs, outcomes, and impact. It also provides additional recommendations on future data collection opportunities where gaps have been identified. There may be some differences at other institutions, however this section serves to illustrate the possibility for data collection if this work is replicated at similar HE providers.

15.1 Outputs

NTU currently collects monitoring information on the various levels of support provided by the employability team (such as the RISE programme). This includes the number of

⁴¹ Bullock, K., et al., 2009. Work placement experience: should I stay or should I go? *Higher Education Research & Development*, 28(5), 481-494.

⁴² Hejmadi, M. V., Bullock, K., Gould, V., & Lock, G. D. (2012). Is choosing to go on placement a gamble? Perspectives from bioscience undergraduates. *Assessment and Evaluation in Higher Education*, 37(5), 605–618

sessions delivered, the students involved, communication with various groups, and the materials involved. From an overarching view, NTU also monitors school/faculty level data, regarding the numbers of students who access placements, and some information about placement applications as found through the In Place system. This is potentially incomplete however as students apply outside of the university systems, and so it is **recommended that further information is required, potentially through closer work with students, or increased partnerships with employers.**

Regarding delivery to young people who may subsequently enrol in sandwich courses at NTU, additional data could be used. NTU are Higher Education Access Tracker (HEAT) members, and as a result, have access to data and reporting related to longitudinal tracking of pupil participants and sessions in schools and colleges, and their subsequent progression details.

Regarding systemic changes, data would be provided through strategic planning and internal reporting.

15.2 Outcomes

NTU collects some qualitative and quantitative information to assess against anticipated outcomes. However, these would need to be refined to fully assess the impact of the intervention on the student, in terms of skill and knowledge changes, as well as behavioural and attitudinal changes. Student surveys, focus groups, and interviews remain the traditional methods of qualitative and quantitative evaluation, however exploring the use of more complex small-n methodologies (as recommended by TASO), may be more effective in providing in depth evaluation of interventions that are low in participant numbers (such as one-to-one support sessions). Ultimately, the long-term outcomes reflect the 'motivations', 'opportunities', and 'capability' of the students, as described in the BCW, enhanced by the TDF. An evaluation of the outcomes must consider the theoretical constructs within these two models, such as 'knowledge' 'skills' 'self-confidence', and narratives of how they link to the students' own motivations, opportunities, and capabilities. It is **recommended that an evaluation of student attitudes, as well as assessments of employability skill**, is required to understand the impact on the students.

In considering the evaluation of the systemic change, this can be approached in two ways. Firstly, understanding what changes occur as a result of the creation and amendments of policies, restrictions, and guidance can be measurable both through surveys and interviews with staff, students, and employers. **It is recommended that a full internal review and assessment will also be required** to understand whether these changes are cost-effective as well as impactful. These extensive systemic changes will only occur as a result of 'transformative' relationships, as described previously. Related to this research, this classification of relationship has an associated

evaluation tool, the Transforming Relationship Evaluation Scale (TRES)⁴³. NTU has already been involved in research work to use the TRES from a UK context, and this scale could also provide a method for evaluating the relationships that the university has with individual employers. Regardless of whether this specific scale is used or not, it is **recommended that a rigorous and continuous evaluation of the relationships between the HEP and employers** is fundamental to understanding the outcomes related to systemic change.

15.3 Impacts

The assessment of long-term impact is important. NTU already has some embedded ways in which it tracks student progress, through both the HEAT system and the Graduate Outcomes Survey (GOS). Further data sharing arrangements could be used in partnership between HEPs to increase this data set substantially, and through employers, where the progress of that student could be monitored over time.

More immediately, the success of students in securing a placement is tracked via the employability team, however this is based on self-reported outcomes for the student. The university, and its developed partnerships with employers could ensure that this data is maintained more accurately. A collective system that is shared across all HEPs would be a significant step in understanding the outcomes of students more widely in securing placements and would provide significant and invaluable evidence of the issues reflected in our exploratory research. Therefore, **it is recommended that a data sharing agreement and central system that collates placement data across all HEPs is required** to most effectively understand impact.

⁴³ Clayton, P. H., Bringle, R. G., Senor, B., Huq, J., & Morrison, M. (2010). Differentiating and assessing relationships in service-learning and civic engagement: Exploitative, transactional, or transformational. *Michigan Journal of Community Service Learning*, 16(2), 5-21.