TASO Transforming Access and Student Outcomes in Higher Education

Implementation and process evaluation (IPE) protocol case study

Student Mentoring Scheme (Mentees)

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Background and introduction to case study

This case study has been compiled by members of the Centre for Student and Community Engagement (CenSCE) at Nottingham Trent University (NTU). As a department, CenSCE drives the University's widening participation and social mobility agendas. We facilitate a range of evidence-based programmes that help students to develop the social and cultural capital needed to access and succeed at university and beyond.

The Research and Insights Team within CenSCE contributes to the departmental goals through quantitative and qualitative research. We have an annual cycle of evaluation for programmes across the student lifecycle, which we complete collaboratively with a range of stakeholders. The case study described below demonstrates one of the ways that we plan to incorporate the new Impact and Process Evaluation (IPE) guidance into our work. Having previously incorporated elements of IPE into our evaluations, we welcome this new guidance as a tool to enhance our practice, and that of the sector.

This case study involves an institution-wide mentoring scheme which is already embedded at NTU. The scheme comprises multiple elements, which have been evaluated to varying degrees in previous years. The implementation of the scheme across all first-year students, and thus the lack of a counterfactual, makes conducting a robust impact analysis on the scheme challenging. We have designed the IPE below to be beneficial both as a stand-alone piece and to support a broader programme of evaluation. In addition to answering our research questions, we perceive that the findings may be useful in informing future evaluations and the possibilities of generating causal evidence for the scheme, for example by identifying a natural experiment or by guiding the implementation of a small *n* evaluation. We also anticipate that the outcomes of this IPE, such as gaining a more thorough understanding of the context and the delivery of the scheme, will be beneficial for guiding other forms of future research and for identifying areas of best practice and opportunities for improvement that will inform enhancement of the scheme.

Summary

This is a worked example of an IPE Protocol for a student mentoring scheme that takes place within a Higher Education (HE) HE environment. To facilitate you in writing your own protocol we offer an explanation as to why our evaluative choices were taken.

Background

Student mentoring schemes have become increasingly prominent and popular within HE as a cost-effective way to encourage student engagement and aid first-year student retention (Christie, 2014; Warren and Luebsen, 2017; Holt and Fifer, 2018).

Aims

To increase a sense of belonging and improve the continuation rate of first year undergraduate students at NTU.

Intervention

The Student Mentoring Scheme is a multi-element programme which involves mentor and mentee participation in a number of group-based activities in addition to one-to-one mentoring sessions. This IPE concentrates on the one-to-one mentoring element, with a focus on the role of this activity in building the mentor / mentee relationship and understanding how the relationship may have a positive outcome for the mentees.

Design

The mentoring programme is a university-wide scheme that has been running for several years. It is facilitated by a central team within NTU, who recruit and train the student mentors and manage their payment. The scheme is designed to have extensive academic school involvement in how the scheme is delivered, therefore there may be different uses of the scheme across the university.

Outcome measures

The core impact measure is first year continuation rate. The core Theory of Change highlights belonging, mattering and a heightened sense of autonomy as outcomes of the mentoring activity. This IPE will be used to understand the active ingredients in the mentoring relationship that may inform continuation rates of first year undergraduate students.

Analyses

The IPE utilises a range of qualitative and quantitative methods which are triangulated in explanatory sequential design. Thematic analysis is used for the coding approach of qualitative data.

Section One

1. Introduction

Project Title	Student Mentoring Scheme (Mentees)
Project Lead	The Centre for Student and Community Engagement (CenSCE)
Organisation/Institution	NTU
Key people involved	Collaborative Engagement & Retention Team (CERT) Research and Insights Team (RIT)

Studies have found that first-year students who have been mentored are less likely to consider dropping out of university (Collings et al., 2014) as mentored students may feel more integrated and connected to the university community through increased feelings of engagement, which is an important determinant of academic persistence and success (Yomtov et al., 2017). Student mentoring has also been found to have a positive impact on a sense of belonging (Thomas, 2012). Tinto's (1993) work suggests that students who have successfully integrated in both the social and academic sphere of university are more likely to stay at university. This was also found in work conducted at NTU as part of the HERE Project (Foster et al., 2012).

At NTU, each first-year undergraduate student is assigned a student mentor to help them settle into university life. Student mentors are current second-year, final-year or postgraduate students who study on the same course. The scheme runs across the whole University. Mentors are recruited and trained by a central team but used in different ways by different academic schools. In addition to taking part in one-to-one mentoring activities, academic schools use mentors as facilitators in a range of additional activities that support the scheme objectives, including:

-Welcome workshops

-Goal setting workshops

-Community building events

-Mentor in class support

Due to a consideration of resource constraints, these additional activities are not part of this IPE. Equally, whilst participation in student mentoring schemes is positively correlated with student retention and attainment for both mentors and mentees (Kerrigan and Manktelow, 2021), this IPE focuses only on the intended aims of the scheme relevant to mentees. A separate ToC and IPE process is necessary to understand mentor benefit as different causal mechanisms and outcomes are at play. Note that whilst mentees are the focus, it is important to collect data from the mentors as they are delivering the mentoring aspect of the programme, and as such will have valuable insights.

In general terms, the aim of the programme is to enable immersion in the environment whilst acknowledging barriers and finding ways to overcome them. At least to some degree, the role of the mentor is to challenge (negative) perceptions about place before they become self-reinforcing (early adoption is critical), facilitate connections and to provide a network of support. Underpinning this, is a core assumption that there is an effective mentor / mentee relationship.

2. Intervention Definition

Table One: Outline of mentoring scheme

Section name	Information to include
Name	Student Mentoring Scheme (Mentees)
Why is the intervention being run?	To increase a sense of belonging and improve the continuation rate for first year students.
Who is the intervention for?	First-year undergraduate students
What is the intervention?	This IPE is related to only the one-to-one mentoring element of the Student Mentoring Scheme.
Who is delivering the intervention?	The scheme is coordinated by staff within CERT. Student mentors deliver the mentoring aspect of the programme. Mentors presently receive the following training prior to interacting with mentees:

	- a online module for 1 hour, then - a 1 day workshop (covering soft skills, listening, being non-judgemental, understanding people from different backgrounds), then a - 3 hour school based training programme (how mentoring works within the school).
How is the intervention delivered?	The one-to-one mentoring sessions take place either face to face or over MS Teams depending on mentee / mentor preferences.
Where is the intervention delivered?	The intervention takes place on the NTU campus (unless the online option is agreed between mentor and mentee).
How many times will the intervention be delivered? Over how long?	This is variable dependent upon student need and academic school preferences.
Will the intervention be optimised?	Yes
How will implementation be optimised?	Implementation is context sensitive. The balance between mentoring and other programme elements are determined by specific academic schools.

Section Two

IPE Framework

1. Research questions

The scheme has been running for some time and was developed through a sound examination of the evidence base (TASO, 2024). We have developed a core Theory of Change (ToC) and the scheme has undergone process-related evaluation in the past, which has supported us in constructing our research questions. Questions are based on our knowledge gaps and what we consider central elements of our ToC.

After formulating our research questions, the IPE dimensions and guidance helped to identify particular and possible areas for research and analysis. We used the dimensions to help us focus our research attention.

We have taken a proportional approach. We have tried to balance the relative importance of the scheme, the extent of our existing evidence base, and the resources available to conduct the IPE.

The research question and sub-questions for the IPE are as follows:

1. What does the mentoring relationship look like in practice?
    a. How is mentoring delivered across the academic schools?
    b. Are the assumptions and mechanisms underpinning the ToC correct?

2. IPE Framework

To address the research focus of unpicking the student mentor and mentee relationship we selected the following dimensions informed by the TASO IPE guidance.

Adherence: By design, a first-year mentee should be mapped to a mentor from a higher year of study who is enrolled on the same course. For this dimension we will explore adherence to the mapping process across the academic schools.

Exposure: The number and length of sessions each mentee attended can be used as an indicator of engagement with the mentoring scheme. This data will also help to triangulate with a possible impact evaluation further down the line to understand if the scale of impact is correlated with exposure of the scheme.

Reach: The scheme is for all first-year undergraduates, but it is important to understand what proportion of students is taking part. For this dimension we will calculate the

percentage of first-year students who participated in the scheme and compare the reach of the mentoring scheme across academic schools and demographic groups.

Context: The mentoring scheme we know can be used differently across academic schools, thus the context is important. We will explore the context within each school that facilitates and hinders the delivery of the mentoring scheme and the formation of the mentor / mentee relationship.

Quality: As this is a scheme that runs annually, we need to understand to what extent the training provided enables the mentors to engage their mentees. For this dimension we will explore mentor perspectives of the quality of the training to guide potential changes to future training and to ensure we are maximising the benefits of the scheme.

Stakeholder perspective: The experiences of mentees, mentors and key academic staff in the respective school are key to understanding the mechanisms of the mentoring relationship, what influences the level of engagement, and how much the mentoring scheme is valued. Stakeholder voice is also an important determinant in establishing context and differences in context, if any, between the respective schools.

Programme Differentiation: We know there is variation in how the scheme operates and how the mentors are used across the university, which we suspect will impact the mentor-mentee relationship. However, we don't know the extent of this variation or its impact on the scheme's outcomes. For this dimension we capture the programme differentiation in the mentoring scheme across the NTU's academic schools. Whilst the guidance refers to differentiation within a mentor scheme by benchmarking against other institutions, we are concerned here with what we could term, 'internal differentiation'.

Table Two: IPE Framework for the Student Mentoring Scheme (Mentees)

IPE dimension	Data collection tool	Source of data	Data analysis method
Adherence	University systems	Administrative data (mentor / mentee mapping information, course details for mentors and mentees)	Quantitative (output) data is visualised through Power Bi - We will examine the proportion of mentees matched to an appropriate mentor.

			-We will examine variation between schools.
Exposure	Activity Log via MS Forms Timesheet via UNITEMPs *(The mentor must report who with and how long the interaction was. If there is no match with the UNITEMPs timesheet the mentor does not get paid)*	Administrative data	Quantitative (output) data is visualised through Power Bi -We will capture the number and length of one-to-one mentoring sessions, and calculate time spent -We will examine variation between schools and variation between different student demographics
Reach	Activity Log via MS Forms	Administrative data	Quantitative (output) data is visualised through Power Bi -We will calculate the proportion of students who attended mentoring sessions relative to school and demographics
Context	Focus Groups (FG) Activity Log via MS Forms School activity logs	- Mentor / mentees - Programme coordinators - Respective school contact leads - Administrative data (number and take up of other activities relative to school)	Qualitative data is facilitated through the use of NVivo and subsequent thematic analysis (Braun and Clarke, 2006) Quantitative (output) data is visualised through Power Bi -We will examine proportion of mentor time spent on 'activities'

			relative to one-to-one mentoring (per school)
Quality	Mentor survey *(immediately post training and after term one)* Focus Groups at scheme end	Mentors	Qualitative data is facilitated through the use of NVivo and subsequent thematic analysis (Braun and Clarke, 2006) -We will examine variation in survey responses to consider how effective the training was
Stakeholder Perspective	Focus Groups Interviews (Int) Mentor reflective logs Student Transition Survey (STS) Mentee surveys at end of term one, ran parallel with mentor survey. Triangulation with STS	Mentees and mentors (FG) Scheme coordinators (Int) School contacts (Int)	Qualitative data is facilitated through the use of NVivo and subsequent thematic analysis (Braun and Clarke, 2006) Percentage of 1st year UGs who reported that their mentor had a positive impact on their university experience (STS)
Programme Differentiation	Focus Groups Interviews	Mentees and mentors (FG) Scheme coordinators (Int) School contacts (Int) CERT Coordinators (Int)	Qualitative data is facilitated through the use of NVivo and subsequent thematic analysis (Braun and Clarke, 2006)

3. Methodology

In methodological terms, an explanatory sequential design will be adopted. We expect to follow-up the mentee survey with focus groups in relation to stakeholder voice and to consider focus groups after pre and post surveys in the quality dimension with mentors. The qualitative phase is therefore informed by the quantitative findings. Following guidance, we will also utilise a mixed method approach to support triangulation in findings.

One way of determining focus after the quantitative stage is to workshop potential approaches in the qualitative stage with interested stakeholders, as opposed to simply relying on the determination of the lead investigator.

4. Sampling strategy

The mentor / mentee scheme is one of the largest student support interventions the institution runs. In 2023/24, 740 mentoring roles were offered to second and third year students. The sampling pool is quite large.

A central consideration with the whole approach is ascertaining school level differentiation. It is assumed, in effect, that the scheme constitutes several different schemes, centrally facilitated. The sampling strategy therefore reflects this – there will be more or less data relative to the size of school.

In survey terms, if the response rate is low (under 5%) for any of our academic schools then we will consider direct marketing to any underrepresented area. Interviews and focus groups will take place either face to face, on campus, or over MS Teams.

Table three: Sampling

Data collection tool	Intended sample
University systems	Adherence: All mentors and mentees
Focus groups	Context, Stakeholder Perspective & Programme Differentiation: At least one per school and possibly up to three for some of the larger academic schools Quality: Three focus groups
Interviews	Stakeholder Perspective & Programme Differentiation: All lead contacts within respective schools and CERT coordinators

Surveys	Quality – survey sent to all mentors (small incentive to complete) Stakeholder Perspective – survey (through JISC) sent to all mentees
Activity Log via MS Forms & Timesheets	All mentor submissions
Mentor Reflective logs	All mentor submissions (submitted after each interaction)

5. Data collection tools

We will use a range of data collection tools, some quantitative and some qualitative in nature. Surveys will be incentivised (minimally), and mentors will also be informed that there is an expectation of completion as part of their employment. Interviews will be conducted by social science researchers within the RIT team and student focus groups will be conducted by our student panel, who have been trained in relevant procedures and method. A description of the research methods, and their strengths and weaknesses, can be found in the IPE guidance document. The research will receive ethical clearance and a detailed data management plan, which utilises the benefits of using DMPonline.

6. Procedure

Table four: Timeframe

Timeframe	Action
3 months before scheme start	• Submit for ethics approval
Immediately post mentor training Deliver training	• Survey mentors pre and post training
Scheme start (Term one)	• Begin collecting administrative data
After term one	• Survey mentors • Survey mentees

Start of term two	• Focus groups with mentors and mentees.
End of scheme	• Focus groups and interviews with stakeholders

7. Analytical strategy

Qualitative data analysis will be facilitated using NVivo. The data will be thematically analysed (Braun and Clarke, 2006). One individual will undertake the coding, periodically and randomly checked by a colleague to ensure validity. Whilst using surveys in relation to context and stakeholder perspective, much of this data will still be qualitative in nature. Quantitative data in the forms of timesheets and logs will be visualised using PowerBI.

8. Ethical considerations

Any exercise involving the collection of data from participants will undergo an ethical review process. This pays particular attention to issues involving informed consent, anonymity, confidentiality, and data security. We have local agreements in place for five-year extensions and the use of our appropriately trained student panel to conduct some of the data collection exercises, particularly the focus groups.

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Appendix A: Theory of change

Situation	Issues with sense of belonging and continuation rates amongst first year undergraduates.				
Aims	Support for first-year students to enhance a sense of belonging and settle into university life				
Inputs	**Activities**	**Outputs**	**Outcomes**	**Impact**	
Process			Impact		
NTU CenSCE CERT Coordination Student Mentors Respective academic school liaison support	-1 to 1 Mentor/Mentee sessions -Welcome Workshops -Goal setting workshops -Community building events -Mentor in class support	Number of activities % of mentoring hours each year per academic school (the hours they worked in relation to the hours they could have worked)	To improve a sense of belonging Increased sense of autonomy Increase in connectedness (social capital) Increased sense of mattering Increase in knowledge.	To contribute to an improvement in the continuation rate	
Rationale & Assumption	We are assuming that there is an effective Mentor – Mentee student relationship to induce engagement and that in combination with a range of other social capital building events, a sense of belonging will be induced.				

Appendix B: Risk register

Risk register Outline all major risks (should include at minimum any red risks and include any amber risks you consider significant).		
Risk	**RAG Rating**	**Commentary** *Summarise reasons for any change, mitigations completed/ outstanding.*
Low survey response rate		Small incentive, clear expectations
Data Breach		DMP, data storage on NTU's secure data store facility
Quality of student led FG's		Random session checks for quality control