



STUDENTS DESIGNING FOR STUDENTS: A PEER MENTORSHIP TOOLKIT FOR A CROSS- CAMPUS, EDI, ENGINEERING TRANSITION SCHEME (SHORT)

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Conference Key Areas: Mentorship and Tutorship, Co-creation with Students

Keywords: *peer mentorship, transition, EDI, students-as-partners, mentor training*

ABSTRACT

The smooth transition of students from secondary education to university study is seen as a factor of student retention and achievement. This is especially important in the case of students from non-traditional backgrounds who may lack the social capital that could help ease their transition. Peer transition mentoring is one of the

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tools universities use to enhance the experience of new students. This study examines how the transition mentoring scheme of a highly selective institution (UCL) could be modified to cater for the students of a new EQF level 3 engineering preparatory programme (Foundation Engineering) which is aimed exclusively at students from under-represented groups. The transition mentoring scheme needs to address two practical obstacles: the lack of peer mentors with knowledge of the needs of the non-traditional student demographic and the physical distance between the main campus, where the peer mentors are located, and the off-campus location of the preparatory programme. A Students as Partners approach is implemented to examine the transition mentors' perceptions of their role. Semi-structured interviews with 16 current and former transition mentors were conducted to investigate the experiences of peer mentors and to establish their training needs. The paper concludes with practical guidance on best practice for organising and managing training for students mentoring peers from non-traditional backgrounds.

1 INTRODUCTION

1.1 Background

Peer mentoring transition schemes are used in higher education to help new students transition from secondary education to university life. It has been shown [1] that transition support is beneficial to students from underrepresented groups in STEM education, such as first-generation students, women and ethnic minorities, who would otherwise find it difficult to adapt to university life due to disengagement or the lack of social capital that would enable them to navigate successfully the early steps into higher education.

The authors' institution, a research-intensive, highly selective, large, multidisciplinary university, has in place a peer mentoring transition scheme. Paid "transition buddies" are assigned to every new student. The features of the scheme are given in Fig. 1. In recent years the scheme has been delivered online only, due to COVID-19.

Training	Structure	Resources
<ul style="list-style-type: none">• One day training• Awareness of the role• Emphasis on boundaries and how to avoid problems	<ul style="list-style-type: none">• 10 mentees per mentor• The scheme runs for the first term• Weekly meetings with the group at a time and place arranged by the university• Schedule of topics to be covered at the meetings	<ul style="list-style-type: none">• Moodle page where all mentoring materials are stored• Booklet with addresses etc.• Q&A with Senior Mentors halfway through the scheme.

Figure 1: Features of the current transition mentoring scheme

UCL will offer an Engineering Foundation Year Programme (EFY) from the 2023-24 academic year. This is a one-year preparatory programme at level 3 of the European Qualifications Framework for students from underrepresented groups who have not achieved the normal entry requirements for an engineering degree. Its aim is to prepare students for study by improving their academic skills and subject knowledge. Although Foundation programmes are offered by many universities in the UK, this is the first time UCL is offering it in any discipline. Admission is based on socio-economic criteria such as family income, personal circumstances etc. The current peer mentorship programme does not consider the needs of the specific cohort nor does it reflect the way the EFY will be realised: There is an opportunity to redesign the peer mentoring scheme to better serve EFY students.

In existing literature the emphasis is on the mentees and the benefits of transition mentorship. There is less discussion of the experience of the peer mentors, raising the question of how peer mentors experience their role and how this could inform the redesign of the mentorship scheme.

2 METHODOLOGY

A students-as-partners (SaP) approach was employed [2]. Student and staff partnership for co-inquiry, co-creation and co-design is a pedagogical approach that has gained traction in recent years. It was chosen because it can give voice to the concerns and needs of student mentors and can lead to the design of processes that will address those concerns and needs [3]. The team comprised three undergraduate students who had previously worked as peer mentors and one postgraduate student carrying out research in engineering education. Two academic staff members acted as coordinators and advisors. Administrative and support staff were also consulted as necessary.

A case study approach was used for data collection. Sixteen semi-structured interviews with current peer mentors were carried out by the student-partners. This helped narrow the gap between interviewer and interviewed and enabled the participants to be open and critical of their experience. The aim of the interviews was to understand the participants' experience of peer mentoring, their thoughts on the training they received and their awareness of the EFY demographic. A thematic analysis helped identify areas for improvement.

3 RESULTS

The results of the study are somewhat limited due to the relatively small number of participants and the fact that the mentor experiences relate to a different demographic than the one expected at the EFY. Despite these limitations there are some strong themes emerging:

- *Participation*: Mentee participation was low, exacerbated by the online format. *"A lot of the mentees [are] so caught up with their university experience, they don't actually like to come to sessions". "The good thing about online meetings was it was so flexible". "Because it's online they don't open the camera and microphone. It's just like I am talking with my computer"*.
- *Topics discussed*: Mentees were possibly discouraged by the group setting to discuss personal issues. *"Most commonly the sort of stuff I would hear would be very admin related not so much about their background [...] but sometimes we would have one on one conversations and that's where I really got to hear [...] their story"*.
- *Format and content relevance*: Most mentors believed that the format was too rigid *"UCL had prepared all those leaflets for us but they didn't match my mentees' needs, for instance, I had to talk about London in so many meetings [...] and all the mentees I had were from London.[...] I could go a bit faster, but still the mentees lost interest."* *"It would have been really nice if we had discussed more about the actual course more things about that". "I didn't like that plan that much because I don't think it would be a good way to [address] mentees needs, like, it's quite kind of a one way instruction"*.
- *What content should be like*: *"I prefer listening to previous transition mentor's experiences, I would like to look into personal experiences, rather than"*

general instructions". "[I would prefer] instructions for us to develop our approach ourselves rather than telling us".

- **Support:** More input from experienced mentors and from each other was expected. *"I think maybe we could [talk] with past mentors every week". "I didn't have a senior mentor myself, to be honest, I didn't have someone to go to, one person. I knew there were some senior mentors in general, but not a specific person". "It would be nice to have some activities with other mentors regularly, to get to know each other and exchange ideas"*.
- **Boundaries:** There were mixed feelings although friendship was seen as a positive benefit of mentoring. *"The boundary between mentors and friends is hard to control". "It's a quite good experience 'cause we can make friends with [the mentees]"*.
- **Knowledge of non-traditional students:** There was no awareness of DEI issues in higher education. Only one mentor considered mentee background: *"I wish I had more demographic information about my mentees"*.

Based on these themes, the recommendations for the scheme are given in (Fig. 2). The main features are:

- **Attendance:** Personal or one-to-two mentors. Embed mentoring activities to the teaching timetable. Start with face to face and let participants make their own further arrangements.
- **Match mentors to mentees:** The literature [5] indicates that mentoring schemes are more effective when mentors and mentees have similar backgrounds. This may not always be the case, so additional training needs to be offered to mentors.
- **Flexible content:** Guide mentors to adapt the mentorship content to the needs of their mentees.
- **Support and community building:** Ensure staff/ senior mentors are available for ongoing support. Organise events where mentors can meet other mentors informally and exchange ideas.

Training	Structure	Resources
<ul style="list-style-type: none"> • Two or more days training • Awareness of underrepresented demographics • Being non-judgemental • How to nurture friendships • Setting boundaries and avoiding problems • Social events with other mentors 	<ul style="list-style-type: none"> • One- two mentees per mentor • Run scheme for the whole year • Weekly meetings scheduled in teaching timetable on first term • Guidelines on topics to be covered, but flexibility to adapt • Social events for mentors and mentees • Allocated senior mentor 	<ul style="list-style-type: none"> • Moodle page where all mentoring materials are stored • Booklet with addresses etc. • Training handbook • Staff check-ins with mentees to ensure support and smooth running

Figure 2: Features of the proposed transition mentoring scheme

4 CONCLUSIONS

Student-partners helped shape the future peer mentorship programme of the Faculty. The outcomes of the research will be implemented in the new Foundation



programme and will help train new peer mentors, helping them better understand the importance of their role and supporting in the formation of long-term partnerships with the mentees, that could go beyond the mandated mentorship activities [4].

By implementing a students-as-partners approach the academic team were able to understand the student experience better. The approach also helped foster commitment, a sense of belonging and shared responsibility of the future of the scheme. At the same time, the practitioners underwent a personal journey of acceptance of the partnership as a power-sharing process with uncertain outcomes as opposed to a guided experience with known outcomes [5].

Further work needs to be carried out to assess the effectiveness of the peer mentorships once the scheme is implemented in the EFY cohort. The experiences of peer mentors and mentees of the old and new programme will also need to be compared to those from other universities with peer mentoring schemes, with a view to further refining the scheme.

ACKNOWLEDGEMENTS

The authors would like to thank S. Waring, J. Braime, A. Lourenco and Dr L. Allman for helping define the research question.

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