'Do you identify as under-represented?'
A wellness focused exploration of co-designing a reverse mentoring scheme in partnership with under-represented students

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'Do you identify as under-represented? Would you like to support research seeking to improve under-represented students' experiences and amplify their voices?' Students from a Russell Group university were invited to apply to join a student consultation team to design a reverse mentoring project if they answered yes to these two questions and were in their first or second year of undergraduate study. This paper critically reflects on the first phase of this ongoing, ethically approved project from the students' perspectives, focusing on a 10-week period during which the author and 15 undergraduate students who self-identify as under-represented co-designed a staff/student reverse mentoring scheme to be used to make proposals to develop institutional approaches to academic personal tutoring. Reverse mentoring is a relatively under-researched area in higher education (HE) although one which is growing in interest (O'Connor, 2022; Cain et al, 2022; Petersen and Ramsay, 2021; Raymond et al, 2021). It seeks to purposefully disrupt traditional power dynamics as students use their lived experiences to mentor staff and influence their practice, potentially catalysing institutional change. The co-designed reverse mentoring phase of this project is currently underway and will be reported in future work, including its implications for academic personal tutoring.

The co-design phase of this project addresses a gap in reverse mentoring literature around whose voices are included in design processes and the impact of being involved in reverse mentoring design as a potential benefit of the future project from a wellness perspective. This is relevant to the design and impact of diversity and inclusion interventions beyond reverse mentoring. This paper presents findings using self-determination theory (SDT) (Deci

and Ryan, 2000) as a framework for thematic analysis of recorded conversations the student consultation team (n=14) had with one another at the end of the research period. This paper therefore contributes uniquely to co-design and students as partners (SaP) literature (Mercer-Mapstone et al, 2017), dominated by curriculum co-design, through its intersectional focus on co-design of diversity and inclusion initiatives and student wellness. Although SaP work is increasingly extending beyond those 'original boundaries' (Smith et al, 2021, p 48), there remains limited discussion around the emotional and wellbeing implications of staff/student partnerships (Healey and France, 2022; Hill et al, 2021; Walkington and Ommering, 2022), which this piece seeks to address. This focus is critical given the wellbeing crisis in HE (Student Minds, 2022; WonkHE, 2022). This work also furthers students as change agents work, a sub-field of SaP, given its diversity and inclusion focus (Healey et al, 2014; Knight et al, 2022; Gamote et al, 2022), as well as literature around online learning communities and belonging (prior to and during the COVID-19 pandemic) as the co-design process was conducted entirely online (Bickle et al, 2019; Phirangee and Malec, 2019; Carrillo and Assunção Flores, 2020; Carozza et al 2022).

Design and methodology

This project builds on the author's pilot study, one of the first to explore student mentor experiences of staff/student reverse mentoring (O'Connor, 2022). The pilot saw international undergraduate law students mentoring Law School staff. It was primarily designed by the author although included due diligence-style staff and student focus groups before the project began and semi-structured interviews and reflective diaries with participants throughout (pp 103-106). This exposed the author to student ideas about how the concept could be developed. It became clear that diverse student voices should be involved in design and that a co-design approach, building on the author's existing evidence base and working with students as research partners, could take the potentially transformative experience of reverse mentoring to new levels.

The importance of diversity of voices in co-design cannot be understated but is challenging to achieve (Higgins et al, 2019, p 1156), risking favouring those who are already engaged

(Bovill, 2020). As seen in the opening questions in this paper, for this project, 'under-representation' was the qualifying attribute for students. As a former first-generation student and now academic from a working-class background, the author identifies as under-represented within academia. Authenticity is critical to SaP (Healey and Healey, 2019, pp 4 and 9) and reverse mentoring (O'Connor, 2022, pp 108- 109), so the author shared their identity and experiences with students during recruitment and throughout the project to facilitate shared group identity and connection. Under-representation was therefore chosen both as a term the author identifies with and one which avoids putting an onus on students for the challenges they may face owing to the hierarchical and archaic nature of HE, unlike terms such as 'minority' or 'hard to reach'.

Self-identification was also key to avoid boxing students into categories. This project sought to be the antithesis to such approaches which clump students together for administrative convenience. By not defining qualifying criteria more specifically, the student consultation team had greater potential to be truly diverse. It also meant students who may not find themselves on university 'attribute lists' would not be excluded from applying. For example, within the team, two students - an ex-offender and a working-class student with a North-Eastern accent – may not have identified with HE 'labels' like 'LPN' or 'POLAR 4 quintiles' (Office for Students, 2022). How students described their sense of under-representation at the start of the project correlated with a deficit approach, invoking negative connotations and making the assessment of wellness through the co-design experience crucial.

Over 50 applications were received from students across disciplines. Over two-thirds were interviewed by the author and a student research assistant. Final decisions were based on motivations, discipline and sense of under-representation to create as diverse a team as possible. The 15 students represented 12 disciplines and each described their sense of under-representation differently, albeit with some shared terminology including working-class, person of colour and disabled. After an initial group training session, students were split into five sub-teams of three to conduct three hours of online project design work per week. This sub-team structure created micro-communities within our wider community of 16 under-represented individuals, including the author. The concept of creating micro-communities of under-representation has been explored in other work (O'Connor, 2023).

Each week had its own task to design a different part of the reverse mentoring project (Appendix 1). Sub-teams tackled tasks simultaneously with opportunities for piloting concepts across sub-teams, regularly serving as critical friends to one another between sub-teams. PebblePad was used to record reflections and findings each week. As PebblePad is used at this institution for other student-facing purposes, there was some familiarity with its functionality. It provides a useful reflective space, akin to a diary. Reflective opportunities were vital in supporting students to recognise what they were gaining from the project (Appendix 2), as advocated for in SaP literature (Healey and France, 2022, pp 12-13). The key message was that decisions about project design should be based primarily on students' lived experiences of under-representation, putting themselves in the shoes of a student mentor whilst also being considerate of staff mentee experiences to the best of their abilities (something reverse mentoring itself supports: O'Connor, 2022, pp 114-115). Students received Sodexo retail vouchers (£10 per hour) for time committed. These were chosen on the basis they can be used in most major supermarkets and for things like taxi and takeaway providers, thereby supporting students with funding for basics in currently challenging economic times.

At the end of the research period, students were given the opportunity to become research participants and have a conversation with another team member about their project experiences, without the author present. This was inspired by Heron's (2020) listening rooms methodology in which friendship pairs have a recorded conversation based on discussion prompts (Mottershaw et al, 2022). In this project, a different approach was adopted. Students were paired with a fellow student researcher who was not in their direct sub-team to encourage honest responses. For example, in case they wanted to talk about the impact of a sub-team member not attending meetings. Furthermore, they were given questions to discuss, rather than words or phrases (Appendix 3). This is juxtaposed with 'traditional' listening rooms which focus on giving participants freer reign over discussions, guided by prompt words or phrases. Whilst this is counter to suggestions in the aforementioned listening rooms' literature, it suited this project because the questions for discussion were similar to the reflective cycles students had been going through for the previous 10 weeks in their PebblePad workbooks. Further, providing questions better

enabled comparable analysis, given this was not a preliminary or scoping study (Mottershaw et al, 2022).

This was therefore a hybrid approach between listening rooms and an interview as it did not require pre-existing friendship, only being a member of the student consultation team, and pairs were exploring questions mutually (each adopting the role of interviewer and interviewee simultaneously), rather than words or phrases. Given their prior role as co-designers, it was important that the students had control over this closing reflection. This approach felt more authentic compared with the author becoming interviewer, given the extent of the author's 'alongsider' status within the community of under-representation (Lewthwaite and Nind, 2018, pp 401-402). To suddenly be perceived as an 'outsider' researcher may have damaged the partnership power dynamic and influenced students to be overtly positive. Given the confidence and shared perspective the students had built together over 10 weeks, it was not felt that a facilitator or moderator was needed to ensure equal participation (Prosser et al, 2022, pp 5-6).

The remainder of this paper focuses on these reflective conversations, using the basic psychological needs of SDT as organising themes to analyse students' conversations and the question:

> *Did students who self-identify as under-represented experience feelings of wellness (evidenced via autonomy, competence and relatedness) through contributing to co-design of a project seeking to improve experiences of under-represented students?*

Conversations were recorded via Microsoft Teams and transcription checked by both the author and a student intern who also self-identifies as under-represented. Both also conducted an initial thematic analysis as a peer debriefing mechanism and to draw out understandings from the reflections that the author alone may not have emphasised, given the student intern's dual status as researcher and fellow under-represented student (Nowell et al, 2017, p.10). Following this broad thematic analysis (explored in other and future work: O'Connor and Pountney, 2022), the data was deductively analysed according to pre-determined codes: autonomy, relatedness and competence in order to test SDT (Linneberg

and Korsgaard, 2019, p 264), essentially a second round of thematic analysis (Braun and Clarke, 2006, p 80). The 14 participants have unique identifiers (S1-S14) to protect anonymity and demonstrate range and/or similarity of responses (Nowell et al, 2017, p 11).

SDT has been applied across a range of disciplines including education and specifically, HE (Liu et al, 2016; Walkington and Ommering, 2022). It proposes that the optimal conditions for intrinsic motivation, leading to 'psychological growth, integrity and wellbeing' are: autonomy, competence and relatedness (Deci and Ryan, 2000, p 229). Conversely, frustration of these needs may damage wellness, the 'dark side' of SDT (Trigueros et al, 2019). In everyday university life, these basic needs may become damaged for those who identify as under-represented through 'othering' (or 'double othering' for students with intersectional identities: Zewolde, 2021). The same is true when engaging in co-design work. Negative experiences where students feel their contributions do not really matter may have longer term wellbeing effects such as mistrust and reluctance to engage in future opportunities. Acknowledging that students who self-identify as under-represented are at greatest risk of feeling unheard, this project sought to provide psychological safe spaces (on this and diversity: De Leersnyder et al, 2021) and often, 'brave spaces' (Arao and Clemens, 2013) for students to unite as a community and contribute authentically to something bigger than, but intimately entwined with, their sense of self.

SDT 'focuses both on the individual and ... environment ... to understand how intrinsic motivation can be supported' (Arvanitis and Kalliris, 2017, p 767). It thereby supports the dual scope of this project, analysing the co-design experience (environment) and its impact on students involved (individuals). It focuses on satisfaction of needs as a predictor of wellbeing outcomes from pursuing goals (Deci and Ryan, 2000, p 227). Whilst the reverse mentoring scheme was the goal or output pursued, the experience of the students was equally important: the satisfaction of their needs. Theories focused purely on goals and motivations rather than needs and wellness outcomes may not provide as suitable a framework (Deci and Ryan, 2000, p 263). Consequently, this piece focuses on the 'meta-theory' of SDT, rather than its six mini-theories (Liu et al, 2016, p 3).

Findings through an SDT lens

Autonomy

SDT presents autonomy as equivalent to 'volition – the organismic desire to self-organize experience and behavior and to have activity be concordant with one's integrated sense of self' (Deci and Ryan, 2000, p 231). In a co-design context, this paper positions autonomy as being about freedom of choice (for students to have options about what they do and how) and integration of project values (for the goals of the project and students' contributions and personal values to align and complement one another).

The co-design structure sought to facilitate this via its relatively loose framework. Whilst the team were given a weekly framework (Appendix 1), they were free to explore whatever they wanted, however creatively they wanted, knowing that the project was centred on their shared sense of under-representation. The whole project was about them – the key challenge was for students to integrate that into their own psyches and understand why (alignment). Students had regular catch-ups and feedback opportunities with the author, as a whole team and within sub-teams, but crucially, the work was led by their priorities. Catch-ups sought to support and further ideas, rather than controlling or micromanaging. As S10 put it: '*it's really nice that we came up with everything … it's designed with how we felt about what needed to be changed*'

As students developed relationships with one another and learned about under-representation beyond their own, many had eye-opening realisations about their own lived experiences and those of their peers. This sense of having personal perspectives stretched and challenged, bred autonomy through uncovering new thought processes and challenging past views and behaviours. S3 summarises this by describing the experience as '*so different to the norm and what I have grown up knowing'*. Similarly, S9 felt their existing knowledge had been challenged. S5 discussed: '*growing up, I hadn't really met anyone from the LGBTQ community'*. Working with a non-binary student on this project exposed S5 to new perspectives and changed their approach to pronoun use and most critically, their understanding of *why*. Students were integrating new understandings of others into their

thought processes and becoming more inclusive themselves through these peer learning opportunities.

Freedom to be creative in addressing the research each week also supported autonomy, as opposed to studying on courses focused on '*numbers and correct answers*' (S1 describing S4's degree). As S2 reflected:

> '*in an academic environment you can get swamped in the use of language and ways of thinking … this project really gave us that sense of creativity, so we could be more fluid and open*'

Many students saw benefits from the intellectual challenges of creative freedom, echoing ideas about the importance of experiencing 'unease' to impactful SaP work (Cameron and Campbell, 2021, p 125). For example, S8:

> '*learnt to be a bit more comfortable with not knowing what I'm doing … feeling a bit unsure of yourself and … unclear about what something means can actually be quite freeing to make you … more creative and … confident*'.

This also supports the argument that 'novelty' could be a fourth vital component of basic psychological needs (Ferriz et al, 2016). However, the fact that five students wanted clearer instructions each week as they often started out unsure where to begin, challenges this view and suggests that novelty may breed anxiety if not accompanied by appropriate support. This is important as an assumption was made that students would understand how to use their lived experiences to contribute towards research seeking to improve experiences of students who share similar or comparable experiences. However, this is a skill to be learned. Arguably, autonomy is an individual feeling and is not satisfied in the same way for everyone. For some, it may require complete freedom of choice. For others, it may be satisfied through the ability to choose from options, guided more closely by the project facilitator. Experiences of creative freedom and its intersection with autonomy may also depend on prior experiences (or lack thereof) of the opportunity to be creative. This

differed amongst the students given the diversity of their degree programmes, including medicine, computing, criminology and many more.

Openness to provide support from the facilitator will likely prove crucial either way, echoing Micari and Calkins (2021): '*[she] was always supportive … I could always approach her, and she didn't mind helping me*' (S4). S5 reflected on how regular catch-ups with the project facilitator and other sub-teams '*were reassuring that we were doing the right thing. I think it's strengthened our group work*'. Reassurance may be particularly vital to students who identify as under-represented as they may not receive it in other spaces. Such reassurance does not have to negate autonomy but instead, has the capacity to nourish it. S2 valued the project facilitator's presence in: '*making me feel like I was valid … to have somebody encouraging me constantly … when I doubted myself … made me feel like I could keep going.*' These reflections highlight the critical need for a supportive staff figure within co-design in order for students to fully embrace and experience autonomy.

However, support can morph into micromanagement if staff are resistant to being proven wrong, changing their minds or listening openly. Vulnerability across the team is vital to effective SaP work (Healey and France, 2022, pp 3-4), as well as adopting a 'power to empower' mentality, rather than a 'power over' mentality (Higgins et al, 2019, pp 1158-1159). A key driver for the positive staff/student relationships in this project allowing autonomy to flourish appears to be mutual respect, engendered from the outset during interviews, as S3 noted. S7 echoed this: '*I don't ever feel like [she] is imposing an opinion or position on us. It's always like, how do you feel? What do you think?*' S6 was confident that the project facilitator: '*doesn't think of our opinions as any less, just because we're students*' and S8 felt: '*what I was saying mattered'*. These findings suggest many students may have previously experienced imposition of opinions on them by those in positions of power or been made to feel that their opinions do not matter. Such feelings are challenging to change. Spaces separate from mainstream academia such as projects like this may begin to undo past experiences of control or diminution, unlocking new potential for autonomous power to be unleashed in future opportunities. This links closely to building connections (relatedness) and feelings of self-worth (competence), explored below.

There were challenges with building supportive yet autonomous staff/student relationships. For example, S11 experienced issues with time management and engagement. Subsequently, they reflected on feeling '*guilty*' and that the project facilitator wanted them '*to get their act together*'. Such feelings may damage autonomy if students think they are being judged (by staff or peers) or letting others down. Collectively agreeing clearer ground rules at the outset around what to do if challenges are faced with commitment may have helped S11 (and also one student who withdrew from the project, see below) feel more autonomous when running into difficulties with participation. Autonomy is not just a feeling to be prioritised in co-design when things are going well but also when faced with obstacles. Some of these issues were also caused by time differences and the location of students during non-teaching periods of the project which should also be considered in advance to ensure full accessibility (and autonomy) for all team members.

Relatedness

SDT defines relatedness as 'desire to feel connected to others – to love and care, and to be loved and cared for' (Deci and Ryan, 2000, p 231). Reciprocal care and connection should be vital components of any work with students and were central to this project. Students used these words directly in their conversations. S12 referred to the team as being '*very caring about each other*' and S2 talked about the impact of this:

> '*I really did feel connected with the wider group … which made me feel like I was a part of something bigger. It did help my confidence … I always think quite negatively … hearing other people and talking to them made me feel like I was really a part of something … I felt really happy*'

Others used phrases like '*we really had each other's back*' (S3), a 'good*/special/unique bond*' (S7; S10), '*camaraderie', 'shared reactions*', '*mutual understanding*', '*the same kind of wavelength*' (S1), being with people you can discuss taboo subjects with (S10), feeling '*like a little community*' (S8) instead of '*feeling invisible*' (S10), going beyond normal boundaries and becoming friends (S5; S6). These all suggest a strong connection within the sub-teams and broader team on a more intimate level than students had experienced with peers before. Several students compared this to their prior exposure to academic group work and

noted stark contrasts. S3 compared the relationships to those with friends although recognised how this was still different because it involved discussing sensitive issues that they may not even explore with friends. The scaffolded opportunity to delve into lived experiences facilitated a deep connection without students having to take the first step of putting vulnerable topics on the table themselves, as they may have to with friends. The risk of rejection or judgement likely felt much lower given the project's ethos and focus, embedded within that first e-mail advertisement.

Relationships went beyond getting on because they had to. Students reported feelings of catharsis (S1), having a '*support group*' (S10), relating to one another and belonging better (S7). S12 likened group sessions to '*therapy because I had to be very, very open about some experiences that I have been uncomfortable with*'. Similarly, S13 likened discussions to counselling: '*talking through things that have happened, relating it to other people. Realising that you're not alone with all of this and being able to process that.*' This shared group identity enabled students to develop more intimate connections despite being 'different'. S1 was '*blown away*' by how well matched the team were. S4 described the team as '*made for each other*', alluding to a fated or spiritually deeper connection through their shared sense of under-representation. The strength of these novel relationships created trust. This supported autonomy through willingness to be vulnerable and to be changed by new perspectives, and also competency as students supported one another in achievement of their goals, discussed below.

However, five students wanted more in-person and social opportunities during the project, recognising that relatedness is not just about psychological feelings but may be significantly impacted by physical presence (or lack thereof). This feeling may have been heightened given the timing of the project (early 2022) with return to physical campuses rendering a wholly online project too closely tied to potential trauma associated with 'lockdown University'. The online structure also meant students could not develop what they saw as 'in-person' skills including public speaking which may have supported an increased layer of competence. Whilst an online-only approach was chosen to facilitate accessibility for those still shielding from public spaces and for those who may be in another country for parts of the research period, insufficient attention was paid to the needs of those who craved

physical meetings for their own wellbeing and in hindsight, a hybrid approach may have been a better solution in order to fully realise the relational benefits of this work.

Competence

Within SDT, competence is the 'propensity to have an effect on the environment as well as to attain valued outcomes within it' (Deci and Ryan, 2000, p 231). For the purposes of this paper, competence is positioned as a feeling of having created something impactful which has the potential to instigate positive change for others. It also relates to achievement of goals or skills as an individual, including academic and life skills.

The project design supported students in seeing the value in sharing their lived experiences as humans in the role of researcher, recognising those experiences as expertise, rather than viewing themselves as 'impostors' or lesser than others whose voices are heard more often in HE mainstreams. The centralisation of being our authentic selves was vital. Despite S1 feeling they did the least 'work' in their sub-team, they reflected positively on providing:

> '*the perspective of a disabled student. I didn't meet anyone else that I felt had my specific kind of underrepresentation … It can help people learn about accessibility … things that you might not necessarily come across or understand if you haven't had or … listened to the experience of someone like me.*'

Supporting students to feel competent and expert as under-represented individuals was facilitated through regular opportunities to share ideas across sub-teams and with the project facilitator in order to receive constructive feedback and develop ideas, as discussed above (autonomy).

The stretching of perspectives and creative freedom noted above also contributed to students feeling competent in their ability to do difficult things. S4 said: '*the most challenging part for me was … to think outside of the box … I've never done this [before] … I overcame that because I did find very good solutions*'. This recognition reflects feeling competent as compared to previous experiences where facing challenges might have been perceived as weakness or failure. S8 also reflected on challenges overcome when one

student in their sub-team withdrew and the sub-team continued as a pair: '*[we] overcame it … it felt like we were getting on with it … we could keep going … I felt quite proud that despite that we were still … coming up with good ideas [as a two]*'. S4 and S10 talked about future opportunities they felt confident to go for (student ambassador and internships respectively) due to what they discovered about their capabilities. S10 was inspired to do more in the future:

> *'I'm more capable of things than I initially thought … I'm really surprised and happy with myself that I've been able to manage … [the project] along with other stress in my personal life'*

Overcoming challenges and achieving positive outcomes may be particularly impactful for students who may not feel they often have the chance to try again and succeed, for example, after failed assessments or interview rejections. This can increase feelings of othering and damage wellbeing (see above). By contrast, the repeated weekly group work and reflections over a 10-week period fostered feelings of resilience and determination to succeed, culminating in competency within this alternative academic space.

However, 10 students discussed finding weekly reflections challenging. As with discussions above about clear instructions around using lived experiences in research, it should not be assumed that students know how to reflect on their contributions. How time consuming students found reflecting was also an issue, particularly neurodiverse students. Some students would have found it easier to just be able to write freely, rather than have specific reflective questions to answer. Others may have preferred to just talk to the project facilitator and not have to do any writing at all, especially when already feeling overwhelmed with writing in other areas such as essays. In hindsight, the author should have piloted the PebblePad workbook with students before the project to understand the time involved. This would have helped the author see the reflective exercise from the students' perspective, rather than from their own as an experienced reflective practitioner. Although highlighted in training, more time should have been spent on reflective skills so that this element of the project could have further contributed to a sense of competence. For students who found reflecting more natural or had prior experience, they felt the

structure supported them to become more organised with time and thought processes (S2), recognising what they were learning about under-representation beyond their own experiences (S7).

Impact is also crucial to competency. S5 and S3 agreed they could '*see with this [project] that what we say is actually making a difference'*, unlike other projects where there was no follow-up. This echoes issues around closing feedback loops with students in teaching contexts (Watson, 2003; Blair and Valdez-Noel, 2014; for criticisms of the feedback loop, see Young and Jerome, 2020) and was a mistake the author made in the pilot project which led to the much clearer focus and outcomes of this project. S13 was optimistic about the project's long-term impact, having '*high hopes that it should be able to change things within the university'*. S9 described feeling good about '*doing something … proactive for the university and like directly giving back'*, suggesting that satisfaction of altruistic motives fuelled S9's sense of competence. Having generally not felt part of the university community, through this experience, S14 felt '*I've put my mark on something'* and reflected on how the experience would impact their future actions: '*… if something doesn't look right … I [now] don't feel scared to say something … if I speak up about it, it will help everyone.'* S7 discussed similar desires to no longer be held back by feelings of societal marginalisation, noting that if they voice their opinions, '*good things can come from that.'* Feelings of impact and activist motivations demonstrate how the co-design process empowered students who, at the start, talked in deficit terms about their identities, as they had been socialised to do. This also echoes findings from the author's reverse mentoring pilot through which students recognised the power of using their voices to help others (O'Connor, 2022, pp 112-113), further demonstrating the importance of analysing the impact on individuals of being involved in the design of diversity and inclusion initiatives. Existing in alternative spaces like this project where under-representation was not just celebrated but was a vital component of the project's success, facilitated feelings of influence, power and competency as individuals and a team (linking to relatedness). Sense of a wider impact also influences autonomy as students led the creative processes involved in the project's co-design.

SDT discussion

The reverse mentoring co-design process sought to improve under-represented students' experiences and provide a platform for their voices to be heard and influence change, shown to be strongly associated with wellbeing through a focus on 'intrinsic aspirations' (Deci and Ryan, 2000, pp 244-245). The above discussion explored whether wellbeing was impacted, through deductive analysis of reflective conversations, using SDT as a framework. There are a multitude of examples from the students' conversations to suggest they achieved the three basic psychological needs posited by SDT, supporting all but one of them (see below), to remain engaged for the entirety of the project and, for many, beyond the project, indicating wellness.

Having perspectives about under-representation stretched supported internalisation of the project's aims, and having creative space to do things beyond more traditional academic activities supported autonomy. However, the need for supportive structures, mutual respect and back-up plans in the event of conflicts came across strongly as autonomy prerequisites. Students reported a deep sense of relatedness to one another, bonding through their shared sense of under-representation and motives, suggesting a connection greater than most had experienced with other peers. Recent studies suggest peer connections are paramount to student belonging and tackling the HE wellbeing crisis (WonkHE, 2022) and this project provides an example of how deep relatedness can be facilitated. Many students acknowledged the therapeutic nature of the co-design experience which enabled them to share themselves on new levels. However, many missed the opportunity for physical connectedness, creating questions around whether relatedness in online settings has limits.

Competency was developed through deeper understanding of self, leading to recognition of the value student voices bring to universities' diversity and inclusion goals. Students felt empowered in overcoming challenges, including creative thinking and losing team members. However, reflection requirements were a source of frustration. The most critical display of competence is evidenced in the way students described what they co-designed and the impact they perceived it would have. This contributed to a strong sense of mattering which arguably underpins all three needs within SDT. Students likened the project

to their 'child' (S6) and 'baby' (S1), with such familial comparisons depicting their loyalty and connection to the project. This may be rare for students existing in pressured spaces where they are constantly being assessed and put through processes to become 'work ready', rather than taking opportunities centred around developing their sense of self.

Presence of intrinsic motivations and therefore positive wellbeing outcomes from being involved in this project may seem obvious, given the call was for students who self-identify as under-represented to work on a project designed to improve experiences for other under-represented students. The inference is that we should care about work that affects others who are like us. However, this should not be taken for granted and consequently, an analysis of the wellness implications of this work was vital. Further, the existence of pressured academic spaces can impinge on the ability to engage in co-design. In addition to difficulties noted above, one of the 15 students withdrew from the project after three weeks as they were not able to keep up the commitment alongside their studies. This student withdrew silently and did not respond to the author for several weeks, suggesting a lack of authentic connection to the team and project, despite an extremely impressive and heartfelt application and interview. For this student, co-design was not an indicator of wellness but instead an additional and unattainable stressor of university life. This may be because this student had not yet internalised the values of the project in a way that others quickly did – this student may not have achieved self-concordance (Deci and Ryan, 2000, p 239). However, it is not possible to know the exact reasons for this student's withdrawal as the author was not able to discuss this further with them, missing a valuable learning opportunity as co-design facilitator. This really emphasised the need to have coherent follow-up structures in place should students withdraw so that any wellbeing needs can be identified and acted upon.

Overall, this project carved out space for students to find autonomy, relatedness and competence within their own contexts because every aspect of the research was about their experiences, from recruitment to closing reflective conversations. Intrinsic motivations and, consequently, wellbeing had the potential to flourish in this environment and, as the analysis suggests, did flourish. However, there were challenges, most of which relate to the staff facilitator's role and factors extrinsic to the project, including workload pressures,

creating important lessons for future co-design initiatives. Something the author has consequently reflected closely on is the ability to do this work alone. Facilitating and co-designing with a research team of 15 students independently was a significant challenge, albeit an extremely rewarding one. Had there been other staff involved, it may be that some of the issues identified in this piece would have been avoided or better handled. The author continues to progress this work as the scheme the team designed is currently being carried out with staff and students (n=38) across campus, representing over 20 different disciplines. The outcomes of this second phase of the project will be reported on in later work.

Reflections and limitations

A key driver of this project was to tackle deficit lenses of under-representation through co-design, supporting students to see themselves and one another differently, shifting from the deficit perspective of under-representation they began with. This paper argues that this should be a key goal in any co-design or SaP initiatives, although acknowledges there is no one-size-fits-all approach to partnership work (Healey and Healey, 2018). Co-design must not be solely about including students' voices and views to develop an output that is valuable for future projects and/or future students, but should have a primary focus on how students involved in co-design feel and change as a result. Otherwise, we risk creating projects which do not encourage and support autonomy, relatedness and competence and consequently, may damage wellness, not just during the project, but also in the longer term.

However, co-design is not 'the answer' to students achieving sustained wellness. It is not a magic wand which solves the challenges of being a student who identifies as under-represented. Positive work done in one space can be undermined by negative or passive treatment in another, through micro-managing behaviours (lack of autonomy), no space to be our authentic selves with others we perceive as 'like' us (lack of relatedness) or feedback which deflates students (lack of competence). Where co-design environments deliberately focus on students' basic psychological needs, there is scope for such work to have wider impact on the lives and identities of students, their future actions and motivations. Co-design and partnership experiences can provide a source of 'nourishment' for students (Deci

and Ryan, 2000, p 229), particularly in a diversity and inclusion context and are therefore a catalyst towards becoming more confident in their sense of self, promoting feelings of wellness. Recent studies support this connection, suggesting diversity and inclusion initiatives and wellbeing and mental health initiatives in HE should be approached together to support student belonging, rather than being viewed as separate aims (WonkHE, 2022). A focus on engaging as many students as possible in initiatives that nourish their wellness through ability to be their authentic selves and in turn, impact university diversity and inclusion work, is ever more critical in the 'post-pandemic' landscape.

We should be explicit about the wellness benefits students may experience when advertising co-design or partnership opportunities. To attain basic need satisfactions, we must be aware of the need for them in the first place (Deci and Ryan, 2000, p 252). Promoting such benefits should not substitute vouchers or payment. Whilst acknowledging the potentially negative impact of financial rewards on intrinsic motivations (pp 233-234), the diversity and inclusion space is specific, particularly in a cost of living crisis, and when engaging students in potentially emotional labour, payment or reward for time and input is not just warranted but necessary. Under-represented students in particular may be more likely to work alongside their studies or face financial challenges during their time at university. If we seek diversity in co-design, we must acknowledge these extrinsic barriers. The extrinsic force of financial rewards can be countered by focusing on the integration of project values with students' sense of self from the outset, increasing the likelihood of participation remaining 'fully volitional' (pp 236-237). Achievement of wellness should be treated as an explicit positive benefit to motivate participation. This may support recruitment of a more diverse range of individuals in co-design work, alongside appropriate financial rewards which may also incentivise more diverse participation.

This paper argues that the need to exist in spaces where autonomy, relatedness and competence can be fulfilled may be stronger for students who self-identify as under-represented and are more likely to have had these needs thwarted, either at university or prior (Deci and Ryan, 2000, p 232). Consequently, the impact may be stronger for such students and therefore more likely to influence future behaviours and motivations. The 'why' of pursuing goals is important to wellbeing in educational contexts (p 240). However,

students may not know 'why' they should engage in co-design of diversity and inclusion initiatives or, as noted, the 'why' initially may be something extrinsic such as being paid. Consequently, it is important that through co-design processes, students are given space to reflect (individually and with one another, with appropriate support, see above). Regularly thinking about their 'why' in the co-design context may influence their future 'why' in other contexts, the lasting impact of being part of supportive structures which 'promote or strengthen aspirations or life goals that ongoingly provide satisfaction of the basic needs.' (Deci and Ryan, 2000, p 263).

Self-determination may be experienced differently in different cultures, depending on the extent to which individuals internalise cultural norms in the relevant context (Deci and Ryan, 2000, pp 246-247). In adopting a project culture as broad as 'under-representation', students had an opportunity to experience different levels and understandings of autonomy, relatedness and competence, in terms of their individual identity and their inclusion in a group identity centred on under-representation. This freedom may not be possible in areas where students are grouped according to just one criteria, such as mature students or students with disabilities, where other intersectional aspects of identities may feel excluded. Findings in this paper argue against the separation of students by labels which do not permit exploration of intersectional experiences. This project demonstrates the potential for change occurring through communities and micro-communities of under-representation, to be explored further in future work.

In terms of limitations, this project is relatively small-scale (n=15). However, the conversational methodology and range of disciplines and senses of under-representation captured allows for a broad yet insightful look into co-design experiences for under-represented students. Furthermore, the co-designed reverse mentoring project is currently running (n=38), producing a snowball effect. This is not a psychology or laboratory study like many of those cited in SDT literature. It uses SDT as a framework to draw out indicators of wellness experienced through co-design, as opposed to demonstrating a causal link between the project and the fulfilment of psychological needs for which other wellbeing measures may be more suitable. SDT is just one theory through which wellness can be assessed. The author is not suggesting it is the only, or most suitable, theory for co-design

work. However, it provided a clear and accessible framework for the deductive analysis undertaken and remains one of the leading theories in the psychology field.

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Appendix 1 – overview summary of framework given to student consultation team

WEEK 1 – designing strategy for recruiting participants (staff and students) and the pairing of recruits (staff and student pairs)

WEEK 2 – determining what training and support should be provided to participants at the start of and during the reverse mentoring project

WEEK 3 - determining the format and themes of the reverse mentoring meetings between staff and student participants

WEEK 4 - piloting ideas from week 3 through practice reverse mentoring conversations with another sub-team

WEEK 5 – what 'action research' should participants be tasked with in order for the project to develop proposals for improving academic personal tutoring institutionally?

WEEK 6 - piloting ideas from week 4 with another sub-team

WEEK 7 – determining what methods should be used to gather data and feedback from staff and student participants throughout the reverse mentoring process and/or after the process

WEEK 8 - piloting ideas from week 7 with another sub-team

Appendix 2 – summary of reflective prompts in student consultation team's weekly PebblePad workbook space

Adapted from Gibb's reflective cycle (1988) and Barbara Bassot, *The Reflective Journal* (2013)

Description and feelings

What was I trying to achieve this week? What did I contribute? How did it make me feel? Why did I do what I did? What assumptions did I make? What were the consequences (for me and others)? How did I/others feel?

Evaluation

What went well? What didn't go so well? Why?

Conclusion

How has the work this week contributed to my knowledge? Contributed to the project? What have I learned that I can apply to similar/different situations?

Action

What will I try to do better next week? What will I consider next time? What strategies could I adopt to move forward? How will I put my learning into action?

Appendix 3 – question prompts for student reflective conversations

Please find below the questions to run through in your pair's reflective exercise. Please take it in turns to pose a question to one another e.g. P1 asks P2 question 1. P2 answers and then P1 shares their answer. Next, P2 asks P1 question 2, P1 answers and then P2 also shares their answer (and so on). You should aim to spend around 5 minutes on each question but please don't worry if you under/over run.

1.   What 3 words or phrases would you use to describe your time spent working on Phase 1 of the project? Why?

2.   What did you enjoy most about your time on the student consultation team?

3.   What did you find the most challenging (if anything)? Do you feel you overcame those challenges during the project?

4.   What did you hope to get out of working on the project at the start? Have you achieved that?

5.   How would you describe your relationship with: (i) your fellow sub-team members, (ii) the wider student consultation team; and (iii) [the project facilitator]?

6.   What do you think was your most significant contribution as a student consultation team member?

7.   What skills do you think you have developed from working on Phase 1? (these can be any sorts of skills – personal, academic, professional etc.)

8.   Have you learned anything about yourself during this project? How do you feel about your sense of under-representation now?

9.   How do you think Phase 1 could have been improved?

10.   Would you get involved in research like this again? Why/why not?

11.   What are your overall thoughts and feelings about the Phase 2 project you designed with your sub-team?

12.   At this stage, would you like to continue into Phase 2 and be a reverse mentor? Why/why not? [note this does not have to be your final decision]

13.   Is there anything else you would like to add/reflect on about your experiences as a member of the student consultation team?