Using student data: Student-staff collaborative development of compassionate pedagogic interventions based on learning analytics and mentoring.

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Abstract

UK Universities are increasingly being 'encouraged' to focus on student engagement, retention and performance, with learning analytics becoming commonplace. Based on inter-related student-staff partnerships, this study adopted a human and compassionate approach to the use of student data and subsequent interventions. Analysis of focus group and interview data from 86 student participants explored key themes: peer-mentoring increasing engagement with the communal-habitus; increased confidence and engagement; and the demystification and humanisation of the university environment. Findings highlight the importance of emphasising human and compassionate support for students within rapidly developing learning analytics approaches, with subject-specific peer-mentoring found here to be beneficial.

Keywords

Learning analytics; mentoring; student data; partnership.

1. Introduction

The high cost of participation in Higher Education (HE) (Thomas, 2012), combined with the impact that undergraduate non-completion and continuation has on institutional income and reputation for the Teaching Excellence Framework (TEF), has resulted in UK Universities being 'encouraged' to focus

on issues of student engagement, retention and performance. Within the context of increasing 'biofinancialisation' (that is the increased financialisation of everything that people do) in HE (Lilley and Papadopoulos, 2014, p. 972), it is therefore no surprise that there has been great interest in the potential of learning analytics (LA) to assist universities in achieving their institutional goals (Dollinger and Lodge, 2018). Whilst it is accepted that there is no precise, accepted definition of LA (Viberg et al., 2018), the Society for Learning Analytics Research (2018) has suggested LA is the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs. Invariably, this involves viewing attendance in particular as an indicator of student engagement and subsequent attainment (see Alija, 2013; Tindell, 2016). Consequently, the value of HE as a voluntary process to develop criticality – a way of 'being, knowing and acting' (Lea, 2016, p. 114) rather than simply enacting 'presenteeism' (MacFarlane, 2017, p. 81) – becomes overshadowed.

In many quarters it is still argued that university education is 'an end in itself' and not 'a product, weighed out and measured, valuable only in individualistic, economic terms' (Newman, 2008 [1852], p. 138). Redressing the balance of power within the neoliberal sector is a daunting challenge (Hursh and Hall, 2008), but one that offers (transformative) hope, that is, 'a mode of hoping against the evidence' (Webb, 2013, p. 408), that HE does not have to be increasingly based on the consumer-value for money nexus. Increasing neoliberalism has radically changed the roles and relationships of managers, academics and students and impacted HE through a move to individualism, managerialism, measurement and accountability (Mutch and Tatebe, 2017) rather than co-operative relationships and partnership. However, this could be changed. For instance, the National Union of Students' (NUS) Manifesto for Partnership called for 'a meaningful dispersal of power' (NUS, 2012, p. 8) and provided 'a statement of the folly of trying to sell HE to students when we can unleash the power of working *with* students to transform HE' (Peters, 2018, p. 182). Furthermore, there are many within the sector that believe it is the human side of HE that comes first – finding friends, feeling confident and above all, feeling a part of your course of study and the institution – that is the necessary starting point for academic success (Thomas, 2017). We have proposed elsewhere (Parkes

et al., *forthcoming*) that the continually evolving technologies and related practices (such as LA) must therefore be governed by the values underpinning HE, including democratic engagement, recognition of diverse and individual experience, processes of 'becoming', and student-staff partnerships. It is through this partnership and collaboration with students – through human interaction – that we can 'hop[e] against the evidence' (Webb, 2013, p. 408). If LA deals in numbers and percentages; then the responses to those numbers must deal in people. In other words, following the analysis of student engagement data, what is arguably most important is what happens next; so whether that be an intervention (Sclater, 2017), a 'nudge' (Chande et al., 2015), involvement with specific tutors (Lodge, 2012) or an alternative response, students are supported in a more human and compassionate manner. Therefore, this study explored the experiences of students involved in 'what happened next', as following the use of LA, students and staff worked in partnership on peer-mentoring interventions to support fellow students.

Here, we reject both the concept of student as consumer or 'product' of HE, as well as the liberal tradition of students as apprentice academics in search of knowledge for its own sake (Fanghanel, 2011). In their place, we argue for a transformational conceptualisation that is founded on the values of democratic engagement, meaningful dialogue and co-operative working to support personal growth, human flourishing and positive contributions to the world around us. As Viberg et al.'s (2018) review of LA related research suggested, the goals of analytics appear to focus on supporting institutional, operational and financial decision-making processes, and the main stakeholders in analytics (and the study of analytics) are institutions and researchers, not learners (students). Furthermore, the overviews of LA studies from Ferguson (2012), Ferguson and Clow (2017) and Viberg et al. (2018) appear to reflect that student voice and active student involvement in studies is either often absent or is not been valued or explicitly disseminated. Instead the picture painted is a focus on what machine learning *can do*, not necessarily what it *should do* (Viberg et al., 2018). Also, existing literature suggests that analytics could be slowly moving HE away from democratic engagement and dialogue with learners, as the potential for efficiencies from analytics might not value or account for the 'messy' contextual issues or power relations of students in HE (Dollinger and

Hodge, 2018), or the ethical issues related to LA (Viberg et al., 2018). Thus it is argued here that there is an appreciation required in LA research and practice that students should be centrally involved and their voices heard, through respectful, personal dialogue. By responding compassionately to students through democratic engagement, the purpose and value of HE can stay connected to a commitment to human flourishing and growth – to remain human.

1.1 Using Student Engagement Data

A key time period (or transition) in terms of student engagement (or lack of) is the period either side of initial level four enrolment (Bridges, 2003; Reason et al., 2007). Therefore, this project sought to use student engagement activity data to drive pedagogic innovation for first year students. Hence, whilst much other LA work has primarily focused on developing the gathering of the data, this project was also concerned with how that data might be used to inform pedagogic innovation in support of student success, whilst being compassionate and more human in its approach. Being more compassionate might include being 'sensitive to the ongoing changes, transformations, and the back-and-forward movements experienced by many people' (Gale and Parker, 2014, p. 744). Engagement data might 'flag-up' a potential issue but the response to that issue – the intervention – needs to be on a human level, not automated that suits the efficiency of the institutional system. At the most basic level, instead of a faceless, automated 'nudge' via email or app notification, warning a student that they are 'at risk', any response to the data could come from a known individual – a recognisable name and face.

Alongside institutional work to ensure clean and usable student engagement data was available to key staff, student-staff partnership projects were conducted across various phases - in a collaborative, collegiate fashion - across three subject areas (Sport and Health, Youth and Community Work, and English) and also within the health based social enterprise Evolve (who deliver health related HE courses on campus, validated by the University). Each subject area and Evolve utilised Newman's student-staff partnership project framework to consult on, design, deploy and evaluate innovations

(via exploring student experiences) within their respective undergraduate programmes through a number of phases. For context, the overall objectives for the broader project were as follows:

A) Implement a contextualised and enhanced case management system to provide accessible and usable data on student engagement and progress.

B) Collaboratively develop pedagogic approaches through four student partnership projects across a range of subject areas (Student-staff projects - Phase One).

C) Implement pedagogic approaches through four student partnership projects, based on student engagement data and peer-mentoring interventions (Student-staff projects - Phase Two).

D) Evaluate these peer-mentoring approaches through further student partnership projects (Student-staff projects - Phase Three).

E) Support improvements in student retention on the participating programmes.

F) Develop and disseminate four student produced case studies of pedagogic approaches (peer-mentoring projects) to enhance student progression on the basis of student engagement data.

The four phase one student-staff partnership projects gathered student views on what would constitute appropriate pedagogic interventions following the implementation of LA to support students in their subject areas. Training and development was provided by academic support staff (from student services) and the university's Tutor for Transition and Retention to support these and further iterations of the projects. At phase two, the proposed interventions were implemented across these four groups. Finally, in phase three, all four areas ran student-staff evaluation projects. We therefore ran twelve student-staff partnership projects, in addition to an initial student-led pilot project that gathered students' perspectives on using engagement data in order to inform the early stages of the broader project. The pilot phase data provided student-focused guidance on both the use of LA and also any subsequent interventions, namely that: a) it is important we react when data indicates non-activity; b) transparency and communication is needed between students and staff on how data is used; c) data should be used in combination with local knowledge to provide an holistic view of the student; d) personal contact provided by someone with knowledge of the student or experience of their programme of study; and then also that all interventions should e) comprise tutor and peer-led

activities; f) enable effective communication between staff/students and peers; g) be part of a wider mechanism for support; h) promote autonomy not dependence; and i) be supportive not punitive. Following analysis of phase one data and subsequent collaborative workshops, each student-staff partnership (one member of staff working alongside one, two or three students) designed their project intervention, which as discussed in the following section involved subject-specific student-to-student mentoring (or peer mentoring).

1.2 Subject-Specific Peer-Mentoring

There are a range of potential interventions seeking to support students' learning and engagement (often first year students) that are employed across the HE landscape, with mentoring demonstrating positive results in comparison to other options (Sneyers and De Witte, 2018). Despite (peer) mentoring becoming increasingly popular within UK HE (Crisp et al., 2017), there remains relatively limited evaluative research (Collings et al., 2016). Following early consideration by the project groups, it was decided separately that each subject partnership would have subject-specific peer-mentoring interventions. The exact nature, structure and approach of mentoring can differ, especially in different contexts (Power et al., 2011). Therefore, it is important to distinguish the approach adopted and underpinning conceptual model (Holt and Fifer, 2018). Specifically here, the student-staff partnerships were informed by the pedagogies of partnership (Peters, 2018) that include democratic engagement, meaningful dialogue and co-operative working. To develop the partnerships, members of staff asked students within their area if they would like to be involved in a project based around LA and the use of student data. Students expressed an interest in the paid roles and once the application and selection process had been undertaken the students and staff started to work together to form peer mentoring systems. This included meeting together in workshops and whole away days booked off-campus to facilitate the time and space for genuine partnership. Whilst some of the implementation details of the mentoring differed slightly across the subject groups, broadly speaking the approaches were very similar and the partnerships soon began meeting and working together regularly in both the planning (phase one) and active (phase two) parts of the projects in order to compare and contrast experiences. Given the multiple potential challenges that face contemporary

students, especially within the widening participation context (Quinn, 2004; Webb et al., 2017), academic and support service staff trained and supported student mentors prior to starting their new role, whilst also highlighting that their experiences and insight as students were vital (Cornelius et al., 2016). When the LA data suggested a first year student might require some form of support, a subject-specific mentor (i.e., a second or third year student from their subject) would engage with them through a variety of human methods, including meeting them in informal social spaces, offer advice based on their own learning experiences, encouragement, reassurance, as well as practical measures such as strategies for time management and organisation. This human interaction is in stark contrast to the automatically generated messages that some students can receive in other LA systems (Viberg et al., 2018). Following the implementation phase, the project moved into phase three, which was the evaluation of the projects, the methodology and methods of which shall be discussed in the next section. All three phases (plus the initial pilot phase) spanned across two and a half academic years.

2. Methodology

Student withdrawal and conversely retention is acknowledged as forming part of a complex cultural and social picture (Quinn, 2004). It is thus clear that establishing a causal relationship between participation in an intervention or exposure to a particular pedagogic approach and student decision making regarding persistence would, as Longden (2006, p. 176) has suggested, '…present formidable methodological difficulties'. Underpinning this project then is an overarching view that everything organic and social exists as a result of chance, and of necessity which is uncertain and therefore, unpredictable. Reality is thus multifaceted, socially constructed, indeterminate and not-fully-knowable but nonetheless, is grounded in the relational. In order to appreciate this complexity, this study was underpinned by the philosophical assumptions of a relativist ontology (assumes numerous subjective realities) and a constructionist epistemology (our understanding is based on appreciating multiple social constructions of knowledge) (Sparkes and Smith, 2014), as the study sought to make sense of the socio-cultural contexts and structural conditions that influenced the participants' lived experiences (Braun and Clarke, 2006). It therefore followed that methods for data collection were required that explored those lived experiences.

The broader evaluation project is conceived as a staged participant action research study to develop, deploy and evaluate data-informed pedagogic approaches. This is based on preliminary institutional work on developing appropriate systems for providing usable data on student engagement and progression, and subsequent data-informed approaches. However, throughout the various phases, evaluation was undertaken in order to explore the lived experiences of those involved, to inform the subsequent stages and also to inform practice more broadly. These evaluative elements are the focus of this paper. A qualitative approach was required in order to capture rich, in-depth data (Flick, 2014) regarding the students' experiences (mentees and mentors), and allow the scope and flexibility for them to express a variety of views, opinions and reflections. As interviews and focus groups are generally considered the most suitable approach for this type of data collection (Jones et al., 2013), this study collected data predominantly via focus groups, as the interactive nature was perceived to be useful as students were able to discuss their shared/differing experiences in terms of their engagement, remind each other of specific moments or experiences (e.g., during the enrolment process at the start of the course) and potentially generate ideas or suggestions together on how student engagement and experience could be improved moving forwards. It was the consensus of the research team that a one-to-one interview context might be less conducive to generating ideas or reflections, as the participant could feel under pressure to come up with ideas or recall enrolment processes without prompts from fellow students. However, some one-to-one semi-structured interviews were undertaken for participants who were unable to attend focus groups due to practicalities, in line with the democratic engagement approach.

Given the structure of the broader project, the participants were purposively sampled (Jones et al., 2013), as they were all university students who had been involved in the design and/or implementation of the mentoring interventions across the different subjects, either as a mentor or a mentee. There was no other inclusion or exclusion criteria required. Institutional ethical clearance was gained, and all participants were given a participant information sheet, and subsequently provided written informed consent. In total there were 86 participants (Initial pilot phase N=12; Phases One, Two and Three N=74). Overall, data was collected from 79 participants during focus groups (size of

groups ranged between three and nine participants), and seven one-to-one interviews were conducted. In terms of the constitution across the subject areas following the initial pilot phase, participants from phases one, two and three were from Sport (19), Evolve (27), English (15) and Youth and Community Work (13).

This study adopted a relatively straightforward approach to conducting qualitative data collection and analysis. The approach is in line with an Interpretative Phenomenological Analysis (IPA), which is a phenomenological, hermeneutic method for analysing qualitative data (Smith et al., 2009). This approach is concerned with understanding people's experiences of the world and of themselves. It aims to thematically analyse data to articulate and elucidate the reflections of participants on their lived experiences or 'lifeworld(s)' (Smith et al., 2009), which is very much in line with the aims of this project, which centred on exploring and learning from the lived experiences of the students. However, it is acknowledged that IPA is most commonly utilised for semi-structured interview data, as opposed to focus groups, and that adopting an IPA approach with focus group data can pose some theoretical and epistemological questions (Tomkins and Eatough, 2010), not least whether individuals can theoretically share parts of their life world. Using the theoretical basis of Pierre Bourdieu's notion of habitus (1978; 1984; 1993), it can be considered that people do share (many) elements of their understanding, experiences and 'maps' of how their social world 'works' (which is their habitus). Therefore, adopting such an approach, with relatively straightforward data gathered from relatively homogenous participants, is deemed to be in line with the ethos and central tenets of the IPA approach, and of phenomenology more broadly. This is supported by the work of Palmer et al., (2010) and Mercer (2012) who have benefitted from adopting an IPA approach to analysing focus group data. Data were transcribed and thematic analysis undertaken (Smith et al., 2009), with superordinate themes developed within subject area projects. The data was then combined across the different subject areas and further analysis led to more specific subordinate themes being developed in order to provide an understanding of the lived experiences of those involved in mentoring.

3. Findings

Table 1. provides an overview of the superordinate and subordinate themes that were considered to be key within the analysis. These themes were, broadly speaking, consistent across the Sport, English, Youth and Community, and Evolve partnership projects, however, for the purpose of this paper the findings (and quotations included) are specifically from the Sport mentors and mentees.

Superordinate Themes	Subordinate Themes
1. Communal-Habitus	1.1 Help from (relatively) experienced student to learn 'how university works'. 1.2 Shared knowledge that 'everyone else seems to know'. 1.3 Subject specific nuances initially hard to grasp, mentors helped facilitate this development.
2. Confidence	2.1 More comfortable asking questions of a fellow subject-specific student than staff. 2.2 Scared/lacking confidence to ask staff for help. 2.3 Felt like a big 'step-up' to HE, but gained confidence from hearing that mentors/others doing the same subject had felt the same previously. 2.4 More confident communicating or asking for help in different/less traditional ways (e.g., WhatsApp).
3. Engagement	3.1 Early stages (induction) vital, but overwhelming. 3.2 Mentors giving advice based on their experiences beneficial to engagement (e.g., organisation, part-time work). 3.3 Reassuring having a mentor who you know is there for you ('even if you don't actually contact them'), rather than just generic support.
4. Demystification/Humanisation	4.1 Remove the 'unknowns' of the university. 4.2 Visible mentor-lecturer relationship helps other students to see lecturer 'as a person'. 4.3 Breaking down power dynamics within classroom. 4.4 Mentoring facilitated 'vertical' interaction between student cohorts, increased feeling of subject specific community.

Table 1. Overview of superordinate and subordinate themes following data analysis.

Communal-habitus:

Reported across the focus groups was the feeling that for first year students it was challenging making the transition from school or college, especially in terms of 'how university works'. One specific element for sport students in particular was the expectation of HE being about taking responsibility

for your own learning, rather than "just doing what the teacher tells you to in college" (Participant 7). So the participants felt that the student mentors helped transition them into this new way of thinking and behaving, that can be quite foreign to some students: "You know, when information comes from a teacher or someone, it's kind of 'Oh, we're being told what to do again'. I think coming from a student, it's probably - due to being more on their level - we're more likely to listen to that, as advice rather than seeing it like instructions" (Participant 12). Participants often felt that it seemed like 'everyone else knows what to do', and they found it useful to ask their mentor for help as they were perceived to be 'less formal' than asking staff in a class setting. It could be considered that the less formal approach of mentoring compliments the more formal learning and teaching, as mentors can provide a different avenue to access the ways of seeing, acting and thinking (Bourdieu, 1984) in HE. As a mentor suggested: "Generally, the student mentoring has really been useful. I think it's less formal for our mentees to maybe ask a student. They always ask me 'What is your perspective on things? How did you find this?' So it's really about relating to them through your experiences, and being on their level to help them with things" (Participant 9).

Confidence:

As well as participants reporting that they felt more confident asking fellow students (mentors) for help rather than members of staff, the data also demonstrated that mentees were more confident asking for help in less traditional ways, for example, through social media, which was encouraged by the mentors. As one of the mentors outlined, communicating and demonstrating vulnerability was sometimes more acceptable in smaller groups outside of the classroom environment:

> WhatsApp was really useful. [Mentees] were saying that they felt the small WhatsApp messaging groups were more beneficial because having a massive one would have put people off from asking questions, it felt like they were stupid for asking the question. They asked about small but important things like lesson times or… one guy asked where to put references and got replies to kind of say 'Read this, this is useful. Look on this website'. I think that was a really good tool for them. (Participant 13)

There was also the issue for first year students of the step-up to HE that impacted their confidence in their new environment. However, during the focus groups it was discussed that it was helpful for mentees to hear about the mentors' experiences, and how they had similar feelings of "anxiety" (Participant 4) or "feeling like I wasn't good enough to be here" (Participant 3) when they themselves started university on the same course. Hearing that people on the same course had the same feelings just a year or two ago, and that they were able to get through the challenging transition appeared to provide mentees with confidence, and without the subject specific mentoring intervention they perhaps would not have had those reassuring conversations.

Engagement:

The human, informal approach of the mentoring appeared to bridge a gap between the mentees and the workings of the subject area(s). This was most evident in the data in terms of practical advice that subsequently improved engagement, as Participant 6 reported:

> I can see now that I didn't 'get it' at the start, and I was working too much. [My mentor] said to me that I needed to consider making a change to do not so many hours at work or I should get myself organised, get a diary and juggle it all a bit better. That's what I did, I got more organised and got back into uni work much more… that was a wake-up call I needed.

Knowing that there is a specific person to go to if help is required was important and reassuring, as Participant 2 suggested: "This [university] isn't that big, but you know how it's a big community – it kind of feels like you're lost in it. I think, if you've got that one person that you can go to with questions, it's really useful for that". It was reported during the focus groups that there might be times for mentees that the mentor is a 'lifeline' that keeps them engaged with university rather than feeling isolated or adrift and losing contact with their course, as a Participant 9 stated:

> All of my mentees say that it's been really helpful just to have someone there, regardless of whether they use it. One of them said it was reassuring that someone is there if you do have a question. I try to be as flexible as possible, and try to say, 'You can email me if you've got any questions, and I'll try to help you'. They'll say, 'Where

do I go for this?'. You help them with advice and say 'this is what I used to do and it helped me'. I think it's been really beneficial for them to know that, whatever happens, they can speak to somebody who knows our sport courses.

Demystification/Humanisation

The mentoring intervention facilitated 'vertical' interaction between student cohorts (first years getting to know their second or third year mentors), which data suggested increased feelings of being part of a subject specific community, and also improved the social support networks of students. The most obvious benefit here is to the first year mentee, but there was also the benefit for the mentor, as Participant 9 outlined:

> My mentee came back the other day and he was like 'I'm so grateful you told me all that! Moving forward, in semester two, I'm going to apply it all. Hopefully it will pay off'. For me, it's been beneficial. You see, from seeing them again, how far they've come in that time is great. Each meeting I've been like, 'What's good, what can you learn from it, what can you take forward?' For them as well, I suppose, it's like reflecting and thinking how they can progress forward from that. It's good to see that journey for them.

It would appear that despite the extensive induction processes and support sessions, there are still many unknowns for new students, and having a more experienced mentor was beneficial for these mentees to help remove some of the 'unknowns of the university'. Many of these challenges were considered in the focus groups to be relatively straightforward to overcome or understand, but it took the person centred approach of mentoring to help mentees get to grips with the challenges, which is neatly encapsulated by Participant 8: "I can see now looking back that it was maybe not that hard, the stuff I was confused about, but [my mentor] was patient and helped me put the pieces together… I think I could now help new students next year 'cuz I know what the problems can be and that you can sort them out with someone helping like [my mentor] did".

4. Discussion

This study found that using student engagement data to inform proactive peer and tutor-led subject-specific mentoring can assist in supporting the student transition into and through level four studies. Qualitative data from this project suggest this approach enables staff-student and student-student relationships to develop, reducing a feeling of isolation and thus promoting a sense of belonging in new HE students. The internal institutional quantitative analysis suggests that this has supported an increase in assessment submission rates and a marked reduction in withdrawals and suspension at level four, amongst participating subject disciplines, although this paper has placed value on the students' experiences of the mentoring. To make data-informed mentoring a success, it should be part of wider mechanisms of support from the University. For example, operating as part of an integrated mentoring system available to everyone, not just those identified from engagement data (for instance, linked in to student support services or personal tutoring system). Furthermore, a 'one size fits all' approach is not appropriate in establishing such pedagogic innovation following the use of LA (which could be mentoring or a different intervention) across all disciplines and student groups. Flexibility and informality in the organisation of such activity needs to be implicit in the design from the outset to allow for adaption to cohort, discipline and need.

From qualitative data collected, student mentees have said that this has helped in feeling more able to cope with the transition into HE; build their confidence and understand how the university 'worked'. Even though not the focus of this project, the subject-specific knowledge generated (or co-creation, Dollinger and Hodge, 2018) between staff and students, and between mentor and mentee, has led to increasing engagement via discussion of modules and specific assessments. This has produced further discussion between mentor/mentee about modules/courses/lecturers, which can be very positive, i.e., the mentor sharing their (relative) wealth of experience with the mentees, as well as with staff. This in turn highlights the importance of the subject-specific nature of the mentoring: if students were not on the same/similar courses, it would be difficult to have any sort of meeting that moved beyond superficial levels and signposting.

Bourdieu's (1984) concept of habitus can be informative here. Habitus for Bourdieu was a "system of dispositions… of being, seeing, acting and thinking, or a system of long-lasting schemes or schemata or structure of perception, conception and action" (1984: p. 27). These elements are inextricably linked to the context (field) and often specific place, in this instance, a specific university, entry into which is often a considerable change or 'step-up' for first year students. The habitus is the partly unconscious 'taking in' of social rules, values and attitudinal and bodily dispositions which develop networks and systems of organisation, or as Bourdieu called them 'schemes of perception' (Bourdieu, 1993). As the habitus is a partly unconscious 'taking in' of schemes of perception, it is "beyond the reach of introspective scrutiny or control by the will" because it functions "below the level of consciousness and language" (Bourdieu 1984: p. 466). Through their habitus, individuals can discern how to behave in certain cultural fields and what types/amounts of capital are valued within that field. According to Giulianotti (2015), Bourdieu viewed the power relations within a field as a kind of 'game', where social agents take up positions according to their habitus and capital endowment. For incoming students, if they do not know the rules of the 'game' (they are not guided by their habitus), they do not even know how to act, see and be(come) in higher education, or what their capital can enable them to do; which seemingly can lead to a lack of confidence, isolation and decreasing engagement. Once LA data has identified a student who potentially has some barriers to engagement or needs support in getting to grips with the ways of acting, seeing and being, the peer mentoring can help to break down the power relations within the 'field', as the power dynamics that students experience (or perceive initially) might preclude them from fully engaging with HE staff or asking questions. However, engaging with a peer mentor that also has (relatively) high levels of sub-cultural capital can help them with the engagement and familiarity within the communal habitus. Eventually, this can help students to not just be a part of the existing cultural milieu (their course/university) but also to develop the levels of sub-cultural capital to be able to take an active role in (re)producing or changing the communal habitus for themselves.

When considering the broader, institutional level communal habitus (especially in relatively smaller HEIs) we would particularly commend the adoption of ways of working that promote partnership

working (Peters, 2018) between students, professional and support staff, and academics from a range of disciplines. This entails funding, trusting and listening to student partners and working in ways which break down traditional power relationships. Fundamental to the successful use of engagement data to drive pedagogic interventions is the human relationship at the sharp end of addressing student need. While the use of big data can help target support where it may be needed most, it is the compassionate human contact that matters most to student progression and success. It would seem highly appropriate for the UK's new Office for Students to promote such approaches as a means of strengthening the student voice and experience in higher education.

5. Conclusion

In terms of practical implications of this research, our experience of working in student/staff partnerships from the outset to design, deliver and deploy pedagogic interventions fosters closer and meaningful relationships between student-partners and staff that result in reciprocal understanding of each other's circumstances and responsibilities. Moreover, working across the University, the project has enabled multi-disciplinary relationship-building that in turn has generated inter-disciplinary knowledge between different staff and student groups, prompting personal and professional development of student-partners, including improvements in their university assessments. Furthermore, the data collected, and relationships built between students and staff, directly informed the writing and implementation of a new institutional policy on using student engagement data at the University, which is a manifestation of the values of partnership, student empowerment and democratic engagement. This strong foundation has enabled a further 'roll-out' of LA and mentoring initiatives being introduced in other subjects across the institution. As we hope this project has demonstrated, relatively small scale externally funded innovation projects can have significant institution-wide impact. As a negative, the project has also confirmed that projects involving the innovative deployment of IT are always more complex, time consuming and fraught with delays than anticipated. It would therefore be worth considering the adoption of similar small-scale innovation project funding in future, but over a slightly longer time period.

With regard to the academic implications of this research, through finding that using student engagement data to inform proactive peer led subject-specific mentoring can assist in supporting the student transition into and through level four studies we have contributed to, and combined, a number of different bodies of literature. These include literature relating to engagement of students (e.g., Alija, 2013; Ayala and Manzano, 2018; Zepke, 2018), metrics and student data (e.g., Drengenberg and Bain, 2017), success and transitions (e.g., MacFarlene, 2018; Vizoso et al., 2018), and the limited but growing evidence base for subject-specific peer-mentoring. However, the take-home message remains the importance of combining the rapidly developing LA approaches with more human and compassionate support for students.

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