*AdvanceHE

Student-led peer learning and support

Part 2 - Mapping sector wide practices: literature review

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1 Introduction

This literature review mapping sector-wide practices of peer learning and support constitutes part two of a wider compendium of evidence into student-led peer learning and support in higher education. An <u>executive summary document can be found here.</u>

One of the recommendations of the *Mapping student-led peer learning survey* (Keenan, 2014) was that the peer learning community should promote the sharing of good practice and pooling of data. As part of this report a literature review was conducted which sought to capture developments in the field which have happened since that point to add sectoral context to the survey and case study data captured directly by this report.

There was significant diversity in the papers reviewed in terms of publication type, research methods and sample size as well as diversity in the terminology, practices, institutions, student populations and academic disciplines those papers focus upon. For example, it was noted that the field of healthcare courses was particularly well represented in the literature so this thread follows through the different themes (including in relation to clinical and non-clinical support), as there appears to be significantly developed practice is in this area, though the ease of transferability to other disciplines may be variable, building upon Keenan's suggestion that no one size will fit all (2014).

Various terminology including, but not limited to, Peer Assisted Learning (PAL), Peer Assisted Study Sessions (PASS), Peer Tutoring, Supplemental Instruction (SI), Student Mentoring and Peer Coaching, were found in the literature. In this review we generally refer to these under the title of 'peer learning and support'. Where possible common terms such as peer leaders (those leading) and participants (those being led) are utilised to describe the parties involved but variations (such as peer mentors and mentees) are included on occasion where the distinction seems warranted, though the lack of sector-wide agreement on definitions is noted also. The previous Advance HE mapping report (Keenan, 2014) detailed the PASS, SI and PAL models of peer learning. This report provides a more detailed breakdown of how such models address different learning and support needs for higher education.

The review details what common themes were found in the literature, including perceived benefits of peer learning and support, as well as perceived gaps and suggestions for further research, such as the lack of papers who claim a causal impact upon improved student skills, knowledge and outcomes, according to Transforming Access and Student Outcomes in Education (TASO, 2024) detailed in section 5.8. Papers written on peer learning and support systems based outside of the United Kingdom (UK) were not included in the study but further review of these is recommended.

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2 Literature review methodology

The literature search was framed around the research question of "What is the current provision of peer learning schemes in higher education institutions in the United Kingdom?". The databases searched included: *Academic Search Premier; APA PsycInfo; CINAHL Complete; Education Research Complete; ERIC, Medline; Web of Science;* and *Scopus*. These were selected to encompass a wide range of discipline specific and multidisciplinary databases to ensure all key literature outputs could be retrieved. As the literature review is an update to the previous report, a date range of 2014 to September 2023 was applied. Additional search filters were added to limit the results to *peer reviewed academic journals* and those published in the *English language*. This is a review of primary research, and as such secondary research was not in scope, but some published literature reviews were included, if they otherwise fit the criteria, to add further context. The search strategy included the following terms, utilising truncation, phrase searching and Boolean operators as appropriate:

 + peer* (learn* OR educat* OR mentor* OR train* OR assist* OR coach* OR support* OR assess* OR tutor* OR facilitat* OR leader* OR helper* OR peer* OR study) [Title only]

OR

+ "supplement* instruction" OR "PAL" OR "PASS scheme*" OR "collaborative learning" OR "co-operative learning" OR "cooperative learning" [Title only]

AND

+ "higher education" OR universit* OR student* OR undergrad* OR postgrad* OR graduate*

AND

+ "UK" OR "United Kingdom" OR Britain OR England OR Wales OR Scotland OR Ireland [all fields]

Specific rows were limited to the title field only to achieve more targeted and relevant results. As the research was to be focused within the United Kingdom, synonyms were added, and these were searched across all fields so as not to risk missing any key papers. Across all databases there was a total of *1328* papers found with *825* unique papers once the duplicates were removed. The review team was divided into pairs of reviewers and initially screened all titles and abstracts for relevant papers. If clarification about relevancy was required, a third reviewer was utilised to provide consensus on inclusion or exclusion of a paper. The Rayyan screening tool was used to import the results from across the databases, remove duplicates and support the screening process for the review team. This was considered a more efficient process enabling collaboration across the team.

Papers were excluded if their main focus was not within the UK, they were a different level of student (school, further education, or workplace) or outcome (not directly in support of HE

experience) etc. Papers referring to "near-peer" support were included but the varying use of the term, including referring to support provided by latter year undergraduate students, PhD students and newly qualified doctors, was noted and the complexities of such variations in model and mode of delivery are considered in the review. Our review focused primarily on activities that were co- and extra-curricular. Activities that appeared to be within the curriculum were only included if they met two out of three of the following criteria:

- 1. They are student-led/autonomous
- 2. Peer leaders are trained
- 3. It is part of a structured scheme which is outside the peer leaders' curriculum of learning (even if within the participants')

From the 825 papers, 159 were identified as relevant based on title and abstract screening. The full text versions of these papers were then reviewed by pairs within the review group and a final total of 95 papers were found to meet the research question. The following themes were initially assigned to the papers based on topics highlighted: knowledge, co-creation, models, diversity and inclusion, transitions, mental health and wellbeing, recruitment, training and professional development. After further rounds of discussion on categorisation and ordering, the list of themes continued to evolve and form the structure of the review. We did not seek to replicate the themes of Keenan (2014), instead letting these naturally form from the literature, but later cross-referenced them with the previous mapping report.

The review team added a number of additional recently published papers, based on our knowledge and experience of subsequently published papers, and on occasion we reference papers that were excluded by our methodology in order to provide context. Please note, there is significant variation across these themes in terms of the number and academic rigour of the papers found for each, which is considered in the conclusions and implications for future research (section 6).

3 Models, types and modes of peer learning

Peer learning and support occurs across a variety of contexts in higher education (HE), with a range of approaches and models in existence, involving different organisational logistics, relationships and dynamics between the students and staff (Chilvers, 2024). The ways these models and approaches are designed are intrinsically linked to the purpose and benefits of these activities which are explored later.

The previous Advance HE mapping report (Keenan, 2014) focused primarily on the well established PASS/SI/PAL model of peer learning. Whilst these models continue to be a key focus of this report, this review shall explore some of the key distinguishing features of different models and approaches that have emerged in literature over the past 10 years.

This theme comprised papers across a variety of disciplines, but a significant proportion were based within healthcare courses, particularly in nursing, so different types of peer learning are classified as being clinical or non-clinical. Specific types or modes of learning were identified although a proportion of the papers were not sufficiently explicit in the process to be able to identify the type of learning.

3.1 Context and roles

The context and role of staff and students in coordinating peer learning and support has emerged through this review as a key feature - some peer activities are coordinated centrally at an institutional level across disciplines such as PASS (Spiridon et al, 2020; Chilvers, 2016), whilst others are coordinated at School or department level (Wareing et al, 2018).

Staff and students can have different levels of involvement, ranging from staff initiating and coordinating activities, through to students initiating, facilitating and directing the contents of activities, either independently or with varying levels of staff support. Staff supervision has emerged through this review as the more common approach, evidencing the important role staff play in initiating, coordinating, supervising and evaluating peer learning and support activities (e.g. Spaulding et al, 2020a, b; Duah et al, 2014). Some studies also demonstrate the value of students and staff working in partnership to co-design these peer activities to ensure they address the needs of students (Hayes et al, 2014; Chilvers, 2013).

The PASS/SI programme provides a specific model and structure, underpinned by the '21 Principles of SI' (Ody and Carey, 2009) which provide a defined purpose and values to the sessions, clear roles, expectations and boundaries between staff and students involved. The principles provide quality assurance and maintain values across institutions implementing PASS/SI. Noticeably in UK HE literature, the past 10 years has seen a growing popularity of the PAL model, which, whilst closely aligned to PASS/SI appears to be a more flexible adaptation with less adherence to all 21 principles and greater variation in approaches. With the 21 Principles originally designed in the 1990's (Arendale, 1994) it is not surprising that with the rapidly changing nature of HE and current students' needs, that adaptations are

evolving. For example, PAL is increasingly being implemented within the curriculum, and is therefore not voluntary (e.g. Schaffer et al, 2021) perhaps in response to students' increasing reliance on paid work and pressure on their time.

Research by Furmedge, Iwata and Gill (2014) highlighted the role of student PAL leaders being involved not only as facilitators, but 'tutors' within curricula sessions, and also involved in developing resources, facilitating peer assessment, engaging in educational research and evaluation of PAL and wider learning. This highlights the ongoing development of PASS/SI and PAL models and raises questions about the roles of students within peer learning and the training and support required. Driving this approach forward, theoretical literature has added to guidance on successful implementation of the PAL model (Bermingham et al, 2023). Despite the subtle differences between these formal models of PASS, SI and PAL, across each there are uniting features. Trained and supervised students plan, lead and facilitate sessions for students, to discuss a specific topic of either course material, academic skills, or an aspect of student life with other students on a module or course. Whilst staff coordinate and supervise the peer leaders offering advice and guidance, it is the students who play the vital role in promoting, designing and leading the sessions.

It is also common practice across literature for models of peer mentoring and peer coaching to include similar levels of structure, roles and boundaries. *"Coaching and mentoring are supportive, developmental, learning relationships where support and challenge are provided to achieve personal outcomes and to realise potential"* (Jones and Smith, 2022, 214). Peer coaching typically focuses on performance and achieving goals whilst peer mentoring on personal and professional development (Jones and Smith, 2022). Importantly, the relationships provide the structure to have dialogue and exchange for learning and growth. Guidance regarding the purpose of the relationships, the topics to be discussed, frequency and forms of communication, and training and supervision of more experienced students in mentor and coach roles are common practice (Spaulding et al, 2020 a, b; Thompson et al, 2018).

In most peer learning and support models, more experienced students take on a role as a leader, facilitator, tutor, buddy, mentor or coach, working individually or in pairs, and receiving training. There is a wide range of reward and recognition for these students' efforts evidenced in literature and the benefits are discussed in detail later. Some peer leaders receive financial payment whilst other institutions do not pay their leaders but focus on the wide range of professional development for volunteer peer leaders (Bermingham et al, 2022) whilst providing a cost effective enhancement to the student experience (Buell et al, 2018). Some institutions enable students to gain academic credit through accredited training and development modules or recognition and celebration for their efforts through nominations in institutional excellence awards (McConnell and Chilvers, 2014).

3.1 Relationship to the curriculum

Another significant feature emerging from the literature is the relationship of the peer learning and support activities to the curriculum, which can be either embedded within the curriculum or provided as voluntary/opt-in co-curricular or extra-curricular activities, as summarised in the Peer-to-Peer Model (Chilvers, 2024). Generally, some practices are course-curricular focused and so included in the planned curriculum or running alongside as co-curricular. Some activities are intended for developing broader academic or study skills whilst other approaches focus on enhancing students' wider social experience and wellbeing at university and are usually extra-curricular.

For the purpose of this report, the literature review focused primarily on activities that were co- and extra-curricular; for activities that appeared to be within the curriculum, these were only included if they met two out of three of the following criteria -1) involving student-led autonomy, 2) trained leaders and 3) structured activities. However, these were challenging boundaries to navigate, and at times practices were difficult to categorise. For example, whilst PASS/PAL are typically co-curricular, some projects have been implemented within the curriculum (Barnett et al, 2018). The clinical practice model of peer learning for medical, nursing and health sciences students was a significant emerging area in literature and also challenging to categorise. It is sometimes referred to as 'near-peer teaching' and involves 'near-peer' senior students acting as peer leaders re-teaching and simulating practical skills for junior students. Irvine, Williams and McKenna (2016) highlight in their systematic review, terminology across this area of literature is confusing and a barrier to the review process. In many studies, peer leaders are involved in teaching practical and technical skills in cocurricular voluntary sessions available to all (Rashid et al 2019; Burgess, McGregor and Mellis, 2014; Hayes et al, 2014), whilst in other studies peer leaders led curricular sessions (Gracie, Winter and Clarke, 2021) and others led formative OSCE assessments within the curriculum (Burgess et al, 2014).

There is not scope to examine these in depth, but a summary of examples of curriculumembedded approaches to peer learning include group work assignments (Hartley et al, 2022); peer feedback and peer assessment (Boud et al, 2014), peer led crits and reviews (Blair, Blythman and Orr, 2007), action learning sets for focused group discussion (McGill and Beaty, 2001), simulated-learning for practising professional skills (Chernikova et al, 2020) and problem-based learning using case studies or briefs (Yew and Goh, 2016). Examples of the literature that met the inclusion criteria but were still embedded within the curriculum included studies such as a group peer supervision for a nursing research dissertation module (Baker et al, 2014); a *Collaborative Learning in Practice* model for nursing students whilst on placement, involving mentoring relationships and group support (Williamson et al 2020) and group peer tutoring for supporting psychology students' learning of statistics (Cantinotti, Désormeaux-Moreau, and Balbinotti, 2017).

Co-curricular activities are defined in this report as those related to the content of the curriculum, but not included as part of the formal timetabled or planned curriculum of a module or course. For example, PASS/PAL sessions (Varghese and Zijlstra-Shaw, 2020) or

opt-in peer learning and support schemes for professional development (Fisher and Stanyer, 2018). Other examples in literature include schemes for developing confidence in English and discipline-specific languages (Chilvers, 2018). Coaching and mentoring practices have been implemented by Lochtie and Hillman for assisting non-traditional students to learn how to learn (2022) and attempting to close the awarding gap (2023), with further detail on support for these populations in section 4.3. These techniques have also been utilised for peer learning specifically (Wareing et al, 2018; Harvey and Uren, 2019).

Extra-curricular activities we define as those which are not associated with the course delivery, which students join voluntarily. These could focus on their discipline, such as an Engineering or Geography Students' Union Society, or it could be related to social activities, sports, wellbeing or identities. For example, a voluntary group-based peer support network was established for a range of undergraduate healthcare professional students across courses to support their mental health and wellbeing whilst at university (Felten and Lambert, 2020). Further details on peer learning and support for wellbeing can be found in section 4.5.

3.2 Reciprocal or directional

A third emerging feature relating to models of peer learning is the direction of support and whether it is one-directional or a reciprocal exchange of learning and support. Examples of one-directional peer support are usually found in the contexts of peer learning and support models, where experienced students are trained to teach or reteach course material to students during timetabled sessions (Burgess, McGregor and Mellis, 2014). For example, one study highlights one-to-one peer leaders being assigned to students who were failing and referred in order to receive support for their learning and progression in their studies (Jayakumar, Albasha and Annan, 2015).

However, the more common theme emerging from literature is the mutual benefits gained from both peer learning leaders and participants, where all gain developments in either their learning, confidence or professional skills. This highlights the importance of designing peer models with opportunities for reciprocity and the exchanging of experiences so all benefit. Further details of benefits can be found throughout section 5. Reinforcing this, Christie's (2014) critical appraisal of an institutional peer learning and support programme highlighted the common assumptions that peer support only benefits the participants and highlighted the range of benefits for the leaders too. Illustrating this theme of exchange, a 'Paired peers' approach by Edmonds and Fogg-Rogers (2021) involves pre-service trainee teachers, paired with undergraduate Engineering students, exchanging knowledge and developing challenges to use for School Outreach, which led to increasing science knowledge and confidence in the teachers and students.

3.3 Group peer tutoring (non-clinical)

Interventions included 90-minute group peer tutoring sessions to support the development of statistics for Psychology students (Cantinotti, Désormeaux-Moreau, and Balbinotti, 2017), group study sessions to support first year students development of study skills (McConnell and Chilvers, 2014), postgraduate group discussions to consolidate lecture topic knowledge (Williamson and Paulsen, 2018), and group peer learning sessions to support (Baker at al. 2014).

3.4 Collaborative peer and placement-based learning schemes (clinical)

These schemes comprised of running sessions to support the development of problemsolving and teamwork skills for students specifically for clinical practice (Williamson et al, 2020). Allen (2023) reports on a clinical-based peer learning activity (CLiP) in which students work together to problem-solve and manage a clinical setting, to simulate the skills required to run such an operation. In contrast, Harvey and Uren (2019) discuss the benefits of facilitating collaborative peer learning with students from a range of year groups across the programme of study, including the development of confidence in students and their increased willingness to share knowledge and ideas between each other.

However, findings from clinical literature suggest that some students felt exposed, overwhelmed or inadequate (Harvey and Uren, 2019; Allen, 2023) compared to their peers when working in peer groups. It appears that peer learning in the clinical based context has an element of staff supervision although it is not always clear as to what level the supervisors are involved. Additionally, consideration must be given to whether these clinical-based peer learning models are mandatory or voluntary for students' participation, and when analysing the impact of peer learning, the context in which it operates needs to be taken into consideration.

Particularly in nursing, modes of collaborative and focused placement-related learning are common. The collaborative work in clinical settings supported greater skill development (such as problem-solving) and mentees reported understanding their role as nurses in a clinical setting, better with this support (Williamson et al, 2020). Moreover, the collaboration between students across different stages of their professional development allowed students to develop teamwork and leadership skills when faced with challenges on clinical placements (Harvey and Uren, 2019).

3.5 Online peer learning

Online peer learning (non-clinical) incorporates different approaches and practices such as appointing an e-tutor who facilitates effective knowledge building through supporting interactions to synchronous and asynchronous peer learning and support schemes (Topping, 2023). Culpeper and Qian's (2020) research highlighted the benefits of providing online peer learning to support on online language learning courses, with peer leaders'

abilities to enhance rapport leading to increased active participation. Whilst findings and evidence of practice in this area is currently limited, there is a suggestion that online peer learning is more effective than face to face, perhaps, because it enables responses at any time. It further allows for anonymity providing a wider nexus of relationships.

As institutions have increased the hybrid nature of their teaching, further exploration of online peer learning practices and their benefits would contribute important recommendations for future practice. Further analysis should be completed to explore the benefits and disadvantages of this type of collaborative peer learning. Moreover, whilst qualitative data in case studies and self-report questionnaires are evidenced, future literature must show greater impact of the implementation of peer learning types. Literature often lacks an explanation of the exact intervention and process used, making it difficult to compare. A clearer description of interventions to support the evidence of impact would also be useful as part of further research, recommended in more detail in section 5.9.

4 Supporting the student journey by peer learning and support

4.1 Supporting transitions and the first year experience

Students entering HE often experience culture shocks, both in their academic and personal circumstances, as they navigate their way through their new environments (Ragavan, 2014). To help with this transition to HE, peer learning interventions are well placed to support first year students (Spiridon et al, 2020). Peer learning and support schemes for first year students can provide a range of benefits and depending on the approach taken, can focus on particular aspects of student life (Foy and Keane, 2018), building upon Keenan's (2014) recommendation that institutions implement schemes early in the student life cycle.

Students are typically more at risk of leaving HE in their first year as they may struggle to adapt to different academic practices, become homesick or struggle to adapt to a new culture (Akinla et al, 2018). Important factors include homesickness and social integration, cultural adjustment and transition to independent academic study. Student retention was a concern for Collings, Swanson and Watkins (2016) who found students who struggled with wellbeing sought out increased support from leaders on their peer learning scheme. Therefore, in the literature we see examples of peer learning and support schemes that aim to address these challenges for students by focusing on retention, socialisation, academic development and cultural adjustment. Given the typically larger cohort sizes in first year, peer learning and support schemes are also well placed to provide greater impact in helping students transition to university life. Evaluation of impact upon student retention is considered in greater depth in section 5.8 and wellbeing in section 4.5.

Foy and Keane (2018), reported that Biomedical students engaging in peer learning and support developed confidence in navigating university and their understanding of what to expect from their degree. Students reported feeling comfortable and able to express concerns about university life, suggesting that peer learning and support schemes could be used to support transitions into university and becoming a university student.

A systematic review of near-peer support (first years supported by at least second year student or above) (Akinla et al, 2018), discussed benefits for first year medical students. The studies showed how near-peer support helped address student transition by supporting professional and personal development, stress reduction and ease of transitioning into HE. These findings are also echoed in another systematic review, with PAL supporting nursing student transitions to clinical practice (Carey et al, 2018). The role peer learning and support can play in helping students transition to HE and maintain their wellbeing is also stated in other healthcare course related papers. First year nursing students were helped by peer facilitators to develop their clinical skills in preparation for OSCEs (Pegram and Fordham-Clarke, 2015). Students would find OSCEs stressful, but the peer facilitators helped them reduce their anxiety, gain confidence and develop their clinical skills in a supportive environment. Similar benefits were also reported by Davis and Richardson (2017) and

Ramm et al (2015) to support first year nursing students, who focussed on similar benefits of social learning, communication and exam preparation.

4.2 Supporting socialisation, belonging and connection via learning communities

A core factor in many peer learning and support schemes is the range of benefits they offer in helping first year students transition to university life, socially as well as academically. Students studying in HE can find the switch from their previous learning and life experiences challenging and the literature demonstrates how more experienced peers can help translate new study practices and provide reassurance to new students. Also, working closely with students and providing a supportive environment for social integration, peer learning and support also facilitates personal and emotional adjustments to university life.

One study had a clear goal of increasing retention rates for first year biomedical science students by helping them prepare for university education through academic and social integration (Foy and Keane, 2018). Spiridon et al (2020), developed an Integrated Learning Community (ILC), small group tutorials with first year psychology students, which aided positive transitions on to their course. Although there was little evidence to suggest that these groups increased retention rates, students spoke positively of the impact the groups had on their sense of community. In clinical settings, peer learning and support offered both academic and social gains including the opportunity to observe behaviours and knowledge and the socialisation between peers which increased positive social experiences (Carey, Kent, and Latour, 2018). Similarly, Rohatinsky, Harding, and Carriere's (2017) review of literature reports that peer learning supports the reduction of student anxieties and feelings of isolation. The review also stated that peer learning supported students to become part of communities when they transition into the university environment.

In a study conducted by Green (2018) exploring the impact of PASS on disability nursing students, 30% of students reported that they felt a greater sense of community and identity attached to their learning experiences, through their participation in the study groups. A learning community was developed through peer learning and support, described as a community of practice in which students shared disciplinary knowledge and experiences of university learning. This allowed students to feel related to a professional community. Similarly, Furmedge, Iwata and Gill (2014) discuss how participation from peer leaders in the designing of curriculum and assessment practices gave the leaders a greater sense of academic community, knowing they were contributing to the curriculum design that other students would benefit from.

Prideaux, Jones, and Paul (2022) reported that the peer learning process supported the formation of academic communities that increased students' sense of belonging, even if the fact that peer learning leaders and participants did not always attend each week, limited the ability to create strong academic bonds. Maccabe and Dias Fonseca (2021) reported, from a

case study of their institution pilot of a peer learning and support scheme, that leaders felt a sense of belonging to their learning environment and to the staff and students that were participating in the scheme. Leaders developed this sense of belonging through being part of a group of students and staff committed to learning. Additionally, Ragavan (2014) reported findings from their institution peer learning pilot that international students felt that they belonged to a wider community of peers after receiving support, covered in greater detail in section 4.3.

The literature suggests that engaging in peer learning and support can promote the development of communities, often with like-minded peers which develops a greater sense of belonging to students' courses and institutions. This positively impacts transitions into the university's social and cultural space.

4.3 Supporting specific student populations

Institutions can let students down by assuming that the induction curriculum is adequate to expose them – regardless of background, needs or experience – to new academic expectations (Ragavan 2014). The challenges incurred can lead certain student groups to restrict themselves to the familiar surroundings of those with like experiences e.g. international students will sit together in lecturers, rather than integrate, because those fellow international students (particularly those from the same country, or region) may have a greater understanding of what they are experiencing (Ragavan, 2014).

Students valued the benefit of this community in their transition to UK study and this approach was echoed by Chilvers (2016) who used PASS to develop an intermediary community of practice to help students adjust to university life.

Gazeley and Hinton-Smith (2018), focusing on pre-arrival at university, similarly showcasing that care leavers, or looked-after children (LAC) face similar difficulties in integrating at university. Before arriving on a campus, before selecting a course, LAC are impeded by the absence of parents, or by social workers with insufficient time or knowledge, to help make good choices about universities. LAC students can therefore lack a foundation upon which to understand university before arriving. Peer learning and support, in this context, helps provide LAC students with the "experience and knowledge of what uni has in store for us" (Gazeley and Hinton-Smith, 2018, 959).

A participant in Ragavan's (2014) research noted "I am a mature student, but it doesn't follow that just because you have graduate experience that you don't need a mentor" (2014, 297). Prideaux, Jones, and Paul (2022)'s research suggested that mature students, in particular, found being supported by peers helped them to feel connected to their studies whilst Foy and Keane (2018)'s research found that mature students may benefit from peer learning and support.

Chilvers (2024) notes that there are insufficient data sets for determining the quantitative value of peer learning and support schemes for students from lower socio-economic

backgrounds and black, Asian and minority ethnic identities and we have found in this review similar gaps in the literature relating to other student populations such as students with disabilities, despite these being a significant feature in Keenan's mapping review (2014).

4.4 Supporting integration through shared lived experience

Ragavan (2014) shared initial concerns regarding the risk of separating a group of students from the cohort, but these were overridden by the benefits of having a community of students who share common concerns and interests and with Chilvers (2016) demonstrated that peer learning and support ultimately helps international students overcome the temptation to avoid mixing with home students and students of varying nationalities (Ragavan, 2014; Chilvers, 2016).

Chilvers (2016) stated the scheme provides an opportunity to socialise outside of classes, therefore enabling international students to develop English language, listening and speaking skills ("for free") with one another in what is deemed a safer, and more comfortable environment which one participant likened to feeling like home. It is an opportunity to regain confidence for those who are put off from speaking at university, because "people don't understand me and I have to repeat myself over and over" (Chilvers, 2016, 13).

One key proponent of this success is the quality of the leader in the sessions. Chilvers (2016) and Tatum (1994, quoted in Ragavan 2014) show that the perceived benefit of the scheme to international students is quite leader-dependent; having a peer learning leader who has shared lived experience is valuable for encouraging attendance and engagement in sessions. Care-leavers' experience of peer learning and support is correlated to the quality of the session leader; those with prior care experience, or experience as an LAC, themselves, are valuable for providing a safe and familiar environment in which to develop. There are benefits to the leaders - some of whom are care-leavers too - for the development of emotional intelligence and for learning a lot about themselves (Gazeley and Hinton-Smith 2018), explored in further detail in section 5.3. Engagement with the peer learning and support scheme benefited other aspects of the students' lives, including their educational experiences (Gazeley and Hinton-Smith 2018).

The literature has begun to explore how, for some populations, peer learning can support better transition into university life and a sense of fit to a community, but this is limited and further research into the specific interventions that are used to support different student groups could help identify good practice in leading them and may, if TASO recommendations on causal impact (2024) are considered, demonstrate the impact that schemes have for these students in terms of attainment, retention and progression (further details in section 5.9).

4.5 Supporting mental health and wellbeing

The selected papers were reviewed to determine whether wellbeing and/or mental health had been impacted by the peer support interventions. Less than 20 papers which referenced wellbeing and/or mental health specifically were identified and of these, two were systematic reviews. The range of peer support, reviewed in the identified papers was broad, from more traditional mentoring to PAL and based in a variety of settings with many based in a clinical context.

Only six of the papers reviewed attempted to perform any quantitative analysis to determine impact on mental health and only two used a form of recognised scale to measure wellbeing - Byrom (2018) and Bosmans, Young and McLoughlin (2019). Other research in this category captured positive feedback or anecdotal/self-reported evidence rather than test and control groups and/or longitudinal studies. Bosmans et al (2019) noted that in the PAL schemes studied, and where it was hoped negative emotions would be alleviated, student overall anxiety increased regardless of their participation in the scheme. However, those who did not participate in the PAL scheme, were left feeling more anxious at the end of the semester.

Whilst Byrom (2018) noted in her multi-site research that the predominantly female participants experienced a significant increase in mental wellbeing, a limitation of the study was the fact there was no control group and the second measure was taken immediately after the intervention. Therefore, it was not possible to ascertain whether the improvement would have occurred naturally despite the intervention.

Collins, Swanson and Watkins (2014) suggest that peer learning resulted in students being more adjusted to university and a significant decrease in negative affect when compared with non-participants in peer learning and support, who showed no change when self-reported measures were taken during the first week at university and again at 10 weeks. They suggest that future studies assess students in a longitudinal framework over the transition to university.

It is worth noting that for some participants in a clinical setting, there was evidence of a negative impact (Wareing et al, 2018). This study noted in some cases there was a detrimental effect on the initial learning experiences of the participants which was attributed to poor preparation and shift patterns.

5 Impact and evaluation of peer learning and support

5.1 Benefits to peer leaders - knowledge, skills and altruism

Of the peer learning and support schemes documented within the literature, many highlight elements relating to the perceived benefits to peer leaders. For example, Christie's (2014) critical appraisal of an institutional scheme highlighted the range of benefits for peer leaders as well as students.

Studies that discuss such benefits nearly all involve those who are further along in their study or professional journey aiding those who are newer. This review found small scale studies, often aiming to evaluate a specific initiative within a course, department or institution, with largely self-reported benefits from peer leaders. Studies utilised a range of methods, both quantitative and qualitative, via questionnaires (e.g. ratings and open-ended questions), focus group and interviews. For qualitative studies/aspects, thematic analysis and content analysis (e.g. frequency of certain terms) were used.

Numerous studies emerge from the clinical field and it is worth noting that several of these involved near-peer support from those already in the profession (e.g. junior doctors supporting final year medical students).

The benefits to peer leaders revealed in the literature often focus on skills and knowledge development, including self-reflection and awareness, and notably confidence. In addition, the value leaders took from supporting others and possible connections to partnership activity are revealed, although not all leader experiences are consistent or universally positive.

Consolidation of knowledge through revisiting this, improved knowledge and greater workplace knowledge were included (Hilsdon 2014; Curtis 2016; Rashid et al, 2017; Wareing et al, 2018; Varghese and Zijlstra-Shaw, 2020; Gracie, Winter and Clarke, 2021; Lewis et al, 2021; Maccabe and Dias Fonseca 2021), as were learning and collaborative opportunities, such as across levels or different specialities (Talapatra et al, 2019) and networking opportunities (Hayman et al, 2022).

Various skills come through a range of studies such as communication, particularly verbal skills via talking in front of others or explaining things (Drake, 2014; McConnell and Chilvers 2014; Ramm et al, 2015; Bates et al, 2016; Curtis 2016; Rashid et al, 2017; Foye and Keane 2018; Maccabe and Dias Fonseca 2021). These studies and others (Ford et al, 2015; Rohatinsky et al, 2017; Chilvers and Waghorne 2018; Wareing et al, 2018; Varghese and Zijlstra-Shaw, 2020; Lewis et al, 2021; Hayman et al, 2022) also note improved time management and organisation, teamwork, leadership and confidence.

Connecting the leader role to teaching, teaching skills and developing an interest in teaching was also noted (Sbaffi et al, 2014; Furmedge, Iwata and Gill, 2014, Pegram and Fordham-

Clarke, 2015, Bates et al, 2016; Davis and Richardson 2017; Wareing et al, 2018; Bell et al, 2018; Lewis et al, 2021; Hayman et al, 2022).

Beyond skills and knowledge, further benefits were found in the value leaders held regarding supporting others, sharing experiences, making an impact, or giving to others what they had experienced (Drake 2014; Bell et al, 2018). Gazeley and Hinton-Smith (2018) argue that this has far-reaching consequences through enriching the life of another and also learning about themselves, linking back to self-reflection benefits.

5.2 Benefits to peer leaders - partnerships, reflection and careers

Some studies saw, or raised the potential of, how the leader role fosters student and staff relationships and partnerships (Furmedge, Iwata and Gill, 2014; Ezzat, Dynes and Parson, 2016); including an appreciation from students on why staff take certain teaching approaches (Varghese and Zijlstra-Shaw, 2020) or the ability to relate to staff (Bates et al, 2016). Furmedge, Iwata and Gill (2014) also raise scope for further impact through co-creation, such as student generated learning content/materials.

Peer leaders reported having greater self-awareness of their skills and being able to reflect on and develop these (Ramm et al, 2015; Varghese and Zijlstra-Shaw 2020). The importance of supporting leaders to do this and articulate skills/employability development emerged (Maccabe and Dias Fonseca, 2021 and Giles, Zacharopoulou and Condell, 2016), the latter study also raised the particular value of students understanding where they needed to develop further. Ford et al (2015) also suggest that some seek the role specifically to develop skills and confidence, and that confidence can come through the development or practising of such skills as noted above, but also through the process of self-reflection.

In clinical areas, specific connections to role requirements/qualifications were cited such as mentoring or teaching (Ramm et al, 2015; Ezzat, Dynes and Parson, 2016; Bell et al, 2018; Foy and Keane 2018), including the emergence of a professional identity (Wareing et al, 2018).

Leaders are often seen to have been able to make clear connections as to how the role and the skills involved are linked to their career paths or had an understanding of the value of the transferable skills (Drake 2014; Maccabe and Dias Fonseca 2021) or professional values. With one study stressing the 'cultural capital' the role afforded less represented groups in HE which could enable them to feel they had 'the edge' in competition for real or perceived profit in the job market (Hayman et al, 2022). Unlike other studies, Chilvers and Waghorne (2018) focus on leaders post-graduation and note that they are using their PASS Leader role in CVs, application and interviews and can clearly evidence their development of employability skills, which again they perceived as enabling them to stand out from other job candidates.

Some studies reported varied experiences or highlighted that negatives for leaders could occur (Ford et al, 2015) if they were not effectively recruited, trained or supported or if student availability was not considered within the structure of the role (Burgess et al, 2014; Hayman et al, 2022).

5.3 Benefits to peer leaders - limitations to the literature and implications for future practice

General consensus can be seen over the benefits to peer leaders, via the themes outlined. Not all schemes share these benefits, however, and studies tend to involve small-scale and self-reported benefits from leaders whereas it could be argued that the development of particular skills or goals may have happened anyway. There is variance across schemes, not just of leader roles and benefits, but of aims. We therefore need to be mindful of what practitioners are setting out to achieve and how this will shape what they can and do measure. Burgess et al's review (2014) found no improved exam performance for example, but few studies in this review state that they were trying to achieve that for leader roles.

Beyond self-perception of development, further exploration on determining actual/demonstrable skills or employability gains could strengthen the field, as well as studies considering any possible correlation between training and/or support offered/model of peer learning and/or context and negative/positive impact.

However, the perception of having gained these benefits from those who themselves are undertaking the role remains an important finding. Likewise, if they feel at that time in their educational journey greater confidence, about their studies, their profession etc. then that is of value, as is the value they report gaining, from giving back to and supporting others. In addition, there is evidence of them using the experience post-graduation when seeking employment. Further and longitudinal studies on if/how these roles continue to impact students after graduation would be of benefit.

Practical implications for sector practice emerge regarding the need for effective and appropriate recruitment, training and specific and ongoing support for those in these types of roles (including support to understand and demonstrate employability gains), as well as effective planning, logistics and staff resourcing for schemes. Beyond the individual benefits of skills or knowledge, further work on the themes that link to partnership could be explored, including how peer learning and support roles could be developed or expanded to provide opportunities to co-create curriculum or resources.

5.4 Benefits to peer learning participants - practical clinical skills support

In several papers, peer learning and support has been used specifically for the development of practical skills, attitudes, and values central to the practice of professions in the healthcare sector. Usually, this set of skills, attitudes, and values are formally identified by professional bodies regulating the necessary training of future practitioners (for example, the General Medical Council, or GMC, in Medical Education). Within this theme, Nursing seems to be very well represented in the literature (Wareing et al, 2018; Carey et al, 2018; Harvey and Uren, 2019; Carey, Kent and Latour, 2018; Rohatinsky, Harding and Carriere, 2017 and Williamson et al, 2020) and Medicine (Hayes et al, 2014; Gracie, Winter and Clarke, 2021; Gibson et al, 2014; Aba Alkhail, 2015; Khalid, 2018; Giurca, 2018 and Bennett, Morris and Mirza, 2018), though there are also examples from other healthcare courses; Paramedics (Jadzinski, Jack and Darby, 2019), Dentistry (Cameron et al, 2015), Veterinary (Bates et al, 2016) and Midwifery (Fisher and Stanyer, 2018 and Williamson et al, 2020).

Some of the research related to the use of peer learning for professional training and development report how participation in this type of scheme has increased confidence and achievement among participants with the practice of specific (clinical) skills. For example, Gibson et al (2014) recorded improvements in confidence with prescribing skills in 183 final year medical students who participated in a near-peer scheme consisting of Foundation doctors delivering prescribing group tutorials to third year medical students. Bennet, Morris and Mirza (2018) also noted an increase in confidence when practising surgical skills among 70 students (59 from Medicine, nine from Physician Associates, and two from Dentistry), after taking a basic surgical skills course delivered by more senior students.

Research with Dentistry students (Cameron et al, 2015) in a randomised controlled trial showed higher levels of satisfaction (concerning feeling more comfortable asking questions and the quality of the feedback provided) among those participating in peer learning in comparison to those who learned with academic staff when performing two specific dentistry skills. There was also a comparison of performances at two relevant OSCE stations between the peer taught group and the controlled group, showing scores were slightly higher for the former. However, this difference was not statistically significant.

5.5 Benefits to peer learning participants - clinical placement support

Another emergent theme in the literature discussing peer learning for professional training and development relates to the use of peer learning within clinical placements (also referred to as placements or clinical settings), a core component in healthcare courses as required by regulatory professional bodies. The General Medical Council defines clinical placements as: "any arrangement where a student is present, for educational purposes, in an environment that provides healthcare or related services to patients or the public" (GMC, 2024). A very high proportion of the learning in Nursing, Medicine, and Midwifery is done within those placements. For example, Carey et al (2018) explain that in Nursing it is approximately 50% of the total learning. In the past ten years, there have been 10 different research papers published in the UK investigating the use of peer learning within clinical placements: six in Nursing (Wearing et al, 2018; Carey et al, 2018; Harvey and Uren, 2019; Carey, Kent and Latour, 2018; Rohatinsky, Harding and Carriere, 2017, and Williamson et al, 2020), three in Medicine (Bennett, Morris and Mirza, 2017; Aba Alkhail, 2015 and Gracie, Winter and Clarke, 2021) and one in Midwifery (Williamson et al, 2020). Three of these studies are systematic reviews or literature reviews (Carey, Kent, and Latour, 2018; Rohatinsky, Harding, and Carriere, 2017, and Williamson et al, 2020).

Existing research has identified several benefits to the use of peer (or near-peer) learning and support in clinical placements. A common one refers to the increase in confidence when practising clinical skills, as discussed earlier, as well as a reduction in the levels of stress and anxiety commonly associated with starting placements (Carey, Kent, and Latour, 2018; Rohatinsky, Harding, and Carriere, 2017). Another benefit mentioned in the literature is a reduction in the over-reliance on senior doctors to supervise medical students in placement. which frees their time for better patient care (Gracie, Winter and Clarke, 2021). This also allows foundation doctors/medical interns to gain experience as educators (a key aspect of the medical profession) (Gibson et al, 2014). Students who have participated in peer learning during placements also report better support for specific difficulties encountered when learning in clinical settings, which tend to be very different from those encountered within pre-placement studies or more traditional educational settings (Carev et al. 2018). Concerning this last benefit, peer learning during placements can also help with socialisation and the building of peer support networks within the new professional contexts (Harvey and Uren, 2019; Wareing et al, 2018). Finally, apart from highlighting the benefits, some of the studies also identify problems and downfalls with the use of peer learning within placements. For example, Harvey and Uren (2019) report some peer learning and support leaders can feel overwhelmed with the extra responsibility. There are also risks concerning the lack of teaching training among the peer leaders (Gibson et al, 2014).

Looking at the existing literature on the topic of peer learning for professional training, Nursing is very well represented in the literature, as is to a lesser extent Medicine, with a limited number of papers discussing other subject areas (covering Midwifery, Dentistry, Paramedic Sciences and Veterinary). Considering that many other healthcare courses are heavily dependent on placements and practical skills training (e.g., Physician Associate Practice or Physiotherapy), there is a need to research whether peer learning is equally used within these other courses, and if not, whether students taking them could also benefit from this practice. This area will also gain from research on the benefits of peer learning to improve the wellbeing during placements of those embarking on professions where there is heavy exposure to work-related trauma (e.g. paramedics), an aspect hardly mentioned in the current literature.

5.6 Measuring impact - narrative evidence

One of Keenan's (2014) recommendations when mapping peer learning was that the peer learning community should build a bank of impact studies. Comprehensive evaluation of student support to draw conclusions on impact is one of the UK Quality Code's guiding principles for advice and guidance (Quality Assurance Agency, 2024). The review of the

literature found impact and evaluation to be the most commonly found theme among qualifying publications on peer learning and support, though there is considerable diversity within how, and how effectively, this was measured.

The Office for Students standards of evidence framework (2024) identifies three types of evaluation, generating three different types of evidence - narrative (knowing what you are doing and why), empirical inquiry (measuring changes generated by activities) and causal claims (identifying impact as a direct result of activities).

This review found numerous examples of evaluation which provides a narrative on peer learning by evaluating student feedback and satisfaction with peer learning schemes without necessarily demonstrating impact on measurable student outcomes (such as Ragavan, 2014; Harvey and Aren, 2019; Spiridon et al, 2020). Generally, these studies reported that students enjoyed and were highly satisfied with the positive experience of receiving learning from their peers (Mills, Dalleywater and Tischler, 2014; Jadzinski, Jack and Darby, 2019).

Of course, student satisfaction in itself can be considered an important institutional measure, but the only eligible study which sought to measure the influence of peer learning on a direct satisfaction outcome measured by the National Student Survey concluded this had not been achieved (Prideaux, Jones, and Paul, 2022).

5.7 Measuring impact - self-assessments

This review also found numerous examples of studies based upon students' selfassessment of the impact peer learning had upon them. Several of these were built around questionnaires (such as Gracie, Winter and Clarke, 2021), utilising quantitative techniques such as likert scales (Bennet, Morris and Mirza, 2018), qualitative open-ended questions (Davis and Richardson, 2017) or a combination of both (Aldrich et al, 2022; Cash et al, 2016). Some studies utilised pre-intervention and post-intervention self-assessments to measure perceived distance travelled (Cash et al, 2016; Sammaraiee et al, 2016; Williamson and Paulsen-Becejac, 2018; Arico, 2019; Young and Wilkinson, 2018).

Some studies utilised participant interviews (Rashid et al, 2016; Jackson and Price, 2019), focus groups (Sbaffi et al, 2015; Varghese and Zijlstra-Shaw, 2020) or participation reflection captured as part of learning (Davis and Richardson, 2017; Harvey and Aren, 2019; Varghese and Zijlstra-Shaw, 2020). Some studies utilised mixed methods research (Wareing et al, 2018; McLeod, Jamison and Treasure, 2018; Arico, 2019), whilst several triangulated the views of students with peer leaders (Hilsdon, 2014; Bates et al, 2016; Davis and Richardson, 2017; McLeod, Jamison and Treasure, 2018; Jackson and Price, 2019; Varghese and Zijlstra-Shaw, 2020) or staff (Davis and Richardson, 2017; Prideaux, Jones and Paul, 2022).

A variety of different data analysis techniques were utilised including thematic analysis (Cash et al, 2016; McLeod, Jamison and Treasure, 2018) or constant comparative analysis

(Wareing et al, 2018) of qualitative data as well as statistical significance testing of quantitative data (Cash et al, 2016; Sammaraiee et al, 2016).

Studies stated increases in confidence (Pegram and Fordham-Clarke, 2015; Bates et al, 2016; Cash et al, 2016; Bennett, Morris and Mirza, 2018; Wareing et al, 2018; Arico, 2019; Varghese and Zijlstra-Shaw, 2020; Lewis et al, 2021), self-efficacy (Pegram and Fordham-Clarke, 2015; Arico, 2019; Lewis et al, 2021), self-awareness (Wareing et al, 2018) and sense of belonging among participants (Chilvers, 2016), as well as reduced anxiety (Pegram and Fordham-Clarke, 2015). Studies also reported a positive impact on student engagement (Gracie, Winter and Clarke, 2021) and retention (Collins, Swanson and Watkins, 2014), as well as increased knowledge (Pegram and Fordham-Clarke, 2015; Davis and Richardson, 2017; Williamson and Paulsen-Becejac, 2018; Cole, 2021; Lewis et al, 2021) and skills (Sbaffi et al, 2015; Bates et al, 2016; Bennett, Morris and Mirza, 2018; McLeod, Jamison and Treasure, 2018; Bell Lygo-Baker, 2019; Varghese and Zijlstra-Shaw, 2020; Gracie, Winter and Clarke, 2021).

5.8 Measuring impact - attempts to evaluate causality

However, Bates et al (2016) suggest that self-created ratings do not necessarily reflect competence. This review found fewer studies that evaluate impact on actual student knowledge, skills or outcomes, but significant diversity within those that were found, including in terms of what they sought to compare student outcomes to.

Foy and Keane (2018) reported a rise in overall cohort retention among a group who had received peer support compared to the previous year when no peer support was offered, but it should be noted retention had also risen year on year prior to the scheme, and their suggestion is that peer learning has contributed to (rather than caused) this. Baker et al (2014) compared outcomes of students who had received peer support, with two previous cohorts who had instead received staff support, finding no statistically significant difference between the two, proposing peer learning as a more resource efficient form of support. Binnie et al (2015) conducted a cluster randomised controlled trial but compared students from peer led groups versus staff-led groups and found mean scores were similar, though slightly higher in the peer group for two specific sets of skills.

Lowton-Smith (2019) measured student knowledge but only compared the skills participants had taught to their peers with skills they had learned from their peers in a reciprocal scheme (reporting better performance from the former than the latter). Gibson et al (2014), found that students who attended more tutorials also tended to perform (statistically significantly) better in end-of-year examinations compared to those that did not attend but acknowledged a limitation of their study due to potential self-selection bias.

Some studies found a positive correlation between engagement with peer learning and increased grades, when compared to students' previous grades prior to receiving peer support (Drumm Rae and Ward, 2019; Schaffer et al, 2021), with some studies finding the

difference to be statistically significant (Jayakumar, Albasha and Annan, 2015; Meletiadou, 2022). Duah et al (2014)'s study had similar findings, adding rigour to this claim by controlling for attendance and prior attainment as covariates, replicating the initial study with comparable results and running a multiple regression analysis, indicating each PAL session attended was associated with around 1.2% extra in the final assessment. They stated they were not able to conduct a "true experiment" of a randomised control trial, so their findings were "correlational only" (Duah et al, 2014, 561).

5.9 Measuring impact - limitations to the literature and implications for future practice

For this reason, this review would suggest that, outside of student feedback and perceptions, the literature considered in this review is empirical inquiry which "collects data on impact and reports evidence that those receiving an intervention have better outcomes, though does not establish any direct causal effect" and not causality (Office for Students, 2024). This is in line with other reviews of the literature which have been conducted (Collins, Swanson and Watkins, 2014; Irvine, Williams and McKenna, 2016; Rohatinsky et al, 2017; Pointon-Haas, 2023; TASO, 2024), drawing upon studies in the UK and beyond, which have been critical of the design of research on the impact of peer learning and strength of evidence they provide.

This review has found that the bank of impact studies on peer learning Keenan recommended in 2014 does exist in the following 10 years of literature. They provide compelling evidence, captured via a wide variety of research methods, that participants perceive the impact of peer learning on them and their studies to be considerable. They include a number of studies, again via a variety of research methods, which report significant correlating evidence that those students receiving peer support experience better outcomes but without, what TASO (2024) might consider, evidence of causation, perhaps due to ethical challenges associated with randomised control trials. Unless this can be overcome the evidence base for peer support interventions in the UK will remain contested.

Sabri (2023, 534) has suggested a rethinking of causality however, calling upon the Office for Students to revise its current evaluation guidance in favour of evidential pluralism and more systematic, "cumulatively illuminating", research. An argument could be made that the literature of the ten years following Keenan's report (2014) combined achieves this illumination, but it cannot be described as systematic and, outside of the lack of randomised control tests, there are further limitations to the literature.

Several authors suggested that further longitudinal studies would be beneficial to be able to report positive findings with more confidence. Using data that is not self-reported and/or self-perceived would also serve to provide more robust evidence of impact on mental health and/or wellbeing specifically as well as the incorporation of tried and trusted instruments for measuring wellbeing and/or levels of anxiety.

Furthermore, the evaluations reviewed did not collect demographic data relating to protected characteristics, such as ethnicity or disability. This will also be an important consideration for future research to account for or test for correlation and/or causality. Definitions of the exact nature of the peer support interventions was unclear in most of the reviewed papers. The descriptions of the schemes, their aims and objectives vary greatly in the literature with no universally accepted definitions available. This too adds to the difficulty in carrying out robust evaluations and conclusions.

6 Conclusions and implications for future research

This literature review has illuminated an incredible variety of peer learning and support practices that have developed in the past 10 years within the UK HE context. Practices range across the curriculum, co- and extra-curricular contexts, continuing the formal models of SI/PASS/PAL as well as adapting and creating new approaches. Recent literature demonstrates innovative, creative and inclusive approaches which are responding to the changing demographics and needs of students, advancements in online learning post-covid, and professional development requirements for employment. Research evidences the positive impacts for students' university and learning experiences, enriching their sense of belonging to course communities and enabling personal, academic and professional development.

Research focusing on peer learning and support in the clinical healthcare disciplines dominated the literature with many different approaches being used both within and alongside the curriculum. More research of practices across other discipline areas is encouraged to explore the differing ways that peer learning can support students' learning, university experience and professional development in line with the discipline-specific learning support needs and graduate attributes and skills required.

Limitations to the scope of this review mean that a wider review of international literature is recommended allowing for explorations into the influence of cultural and political contexts on the design and impact evaluation of peer learning and support. The themes emerging from this review have been useful to explore the student and staff experiences of different approaches, but a lack of parity in the quantity of literature across themes and practices (e.g. rewards for leaders) also highlights areas for further research. With many peer learning schemes being coordinated by professional services colleagues, there may be gaps in literature potentially related to the lack of academic publishing typically encouraged in these roles, therefore new opportunities and professional development for these colleagues in the *third space* (Whitchurch, 2013) is recommended in order to effectively capture the learning from developed practice across the sector.

Consistent with Keenan's (2014) report, UK literature continues to evidence the wide range of benefits to both student participants and peer leaders, highlighting the mutually beneficial

experience that peer learning and support can be for all involved. There were however notable gaps in literature around the experience and perspectives of students who have disabilities, are from ethnic minorities (both identified as relevant populations in Keenan, 2014), are neurodiverse, or are mature students which further research could explore.

The review has highlighted the varied rigour and depth of research methodologies used in impact evaluations of peer learning and support, and much more development is needed in this area of peer learning practice. If more strategic and clearer aims for the design and

implementation of peer learning can be identified, then more rigorous and strategic impact evaluations can be conducted, generating a larger evidence data set for the HE sector. Currently, the challenges of gathering statistically-significant sized data sets, as well as the ethical challenges of using control groups to investigate potential causation links, means many studies are not providing the data that senior leaders are looking for to justify larger scale implementation. Therefore, exploring rigorous impact evaluation methodologies, which are also ethically robust, is an important area for further research, potentially on a multiinstitutional level.

The lack of literature in relation to partnerships with students to create schemes and curricula, compared to the case studies aspect of this report, highlights another dimension for further research. The limited literature found in this area does highlight opportunities for greater partnership working between students and staff in the co-design and creation of peer activities, materials and programmes to enhance the student learning experience.

This review demonstrates a vibrant array of peer learning and support practices, and a growing evidence base across the UK, which it is hoped will be built on in the next 10 years, informed by the recommendations for further research from this review.

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