The Benefits of Peer-Led Interventions in Higher Education: Lessons from Practice

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ABSTRACT

There are a growing number of peer-led support interventions in Higher Education (Andrews & Clark, 2011). This paper seeks to outline the different types of intervention and the benefits of such interventions. It first seeks to establish definitions that will be used throughout the review such as 'non-traditional' students (Goncalves, 2007 cited in Treiniene, 2017) and cultural capital (Bourdieu,1977; 1986). The paper will then explore the reported benefits of various peer-led learning and mentoring interventions using a variety of studies and reports (e.g. Capstick, 2004; Dawson et al, 2014 and Tangalakis et al 2017) before moving on to discuss the main Themes arising from the Review, namely the inter-connectedness of the reported benefits and the considerations for HEIs (e.g. Advance HE 2020b; Andrews & Clark, 2011 and the QAAHE, 2008). The paper closes with a number of recommendations for HEIs based on the findings of the review.

ACRONYM

HE Higher Education

HEA Higher Education Academy (now Advance HE)

HECG Higher Education Consultancy Group

HEFCE Higher Education Funding Council England

HEFCW Higher Education Funding Council Wales

HEI Higher Education Institutions

NCSR National Centre for Social Research

PAL Peer Assisted Learning

PASS Peer Assisted Study Support

QA Quality Assurance

QAAHE Quality Assurance Agency for Higher Education

SI Supplemental Instruction

UWTSD University of Wales Trinity St. David

1. INTRODUCTION

This review seeks to explore the benefits of peer-led interventions in Higher Education as perceived by a range of studies of such interventions in practice. Before moving on to look at a range of perceived benefits outlined in the literature the review first seeks to contextualise the topic.

Firstly, in Section 2.2, a number of key concepts are defined in order to support the structure of the later work beginning with definitions of widening access and 'nontraditional' students (Goncalves, 2007 cited in Treiniene, 2017). This is important as it has a bearing, not only on the benefits explored later in the work, but also on the exploration of a crucial lens through which to analyse the subject in Section 2.3, that of 'cultural capital'. It should also be noted that as part of this Section there will also be attention paid to some of the policy drivers that influence this area of HE provision as well as an overview of some of the programmes included in the studies (e.g. Peer Assisted Learning (PAL) (Donaldson & Topping, 1996); Peer Assisted Study Support (PASS) (Timpson & Ellis, 2013); Supplemental Instruction (SI) (Martin, and Burmeister, 1996); and Peer Mentoring Christie, 2014)). Section 2.3 explores the literature on theories of cultural capital as outlined by Bourdieu (1977, 1986) in order to establish whether students from a non-traditional background can been seen to be disadvantaged by a cultural deficit' on joining a programme of study in HE. The Review then turns its attention to the benefits of peer-led interventions as reported in the literature. These benefits will include improvements to attainment and retention, enhanced wellbeing and belonging as well as the specific benefits for' non-traditional' students and for the peer tutors/mentors/leaders themselves before moving on to a discussion of the main themes in Section 3.

The first Theme to be discussed in Section 3 is the interconnectedness of the benefits of such programmes, that is to say that whatever the reason of introducing a peer-led intervention, the literature indicates that such programmes have benefits beyond those intended. The second Theme is a discussion of the considerations for HEIs when considering peer-led interventions. The recommendations are based on this final Theme (Section 3.3) and indicate key sources for further reading.

2. LITERATURE REVIEW

2.1.Introduction

This Literature Review will seek to find evidence of the positive impact of peer-led interventions in Higher Education. In order to establish the context for the review Section 2.2 will seek to establish a series of definitions of the various, complex and 'contested' (Andrews & Clark, 2011) concepts involved. Drawing on guidance and policy from, for example, Connell-Smith & Hubble (2018) and Allen & Storan (2005) the paper will first seek to provide a working definition of widening access and 'nontraditional' students (Goncalves, 2007 *cited in* Treiniene, 2017). Section 2.2 will then move on to explore the various forms of peer-led interventions (e.g., Peer Assisted Learning (PAL), Peer Assisted Study Support (PASS), Peer Mentoring and Supplemental Instruction (SI) and the differences between them. Where studies refer to a specific intervention the name of that intervention will be used but, when discussion is of general principles the phrase peer-led interventions will be used.

Section 2.3 sets out to explore the cultural implications of the widening access agenda in HE via the theoretical lens of 'cultural capital' as developed by Bourdieu (1977 & 1986) and others such as Wong (2018).

The Review will then move on to look at the impact of per-led interventions on various aspects of the student experience. For example, in Section 2.4 there will be an exploration of the literature linking involvement in peer-led interventions and improved academic performance (e.g., Christie, 2014 and Jayathilake and Huxham, 2021) whilst Section 2.5 will investigate the evidence for positive impact on student wellbeing (e.g., Eisenberg, Hunt & Speer, 2013; Eisenberg, Lipson and Posselt, 2016; Ketchen Lipson, et al. 2015 and Robbins, Oh, Le & Button, 2009).

In Section 2.6 attention will turn to studies which highlight a link between involvement in peer-led interventions and improved engagement and retention (e.g. Brunk-Chavez, *et al*,2017; Pedlar, Willis and Nieuwoudt, 2022 and Tangalakis, Best and Hryciw, 2017) before we return to the concept of widening access and non-traditional students and the perceived benefits for them on involvement in peer-led interventions (e.g. Dawson, *et al.*, 2014 and Underhill & McDonald, 2010). Finally, in Section 2.7 attention will turn to studies which highlight the benefits for those students who perform the role of peer mentor, peer leader or peer tutor (e.g.,

2.2.Definitions: Widening Access/Participation, Peer Assisted Learning (PAL) Programmes, Peer Assisted Study Support (PASS), Peer Mentoring and Supplemental Instruction (SI)

Connolly-Pnagopoulos, 2021; Colvin and Ashman, 2020 and Ningrum, 2018)

In section 2.7 of this review, as well as in other areas of the discussion, attention will be given to the impact of peer support interventions on students that have joined Higher Education (HE) from non-traditional backgrounds or via *widening access/participation* routes and it is therefore important to establish what is meant by this categorisation. As with many other elements of this discussion there is often no consensus on exactly what is meant by the terms *widening access/participation* but there are a number of sources that can help us to work towards a definition. For example, in a briefing paper for the House of Commons, Connell-Smith & Hubble (2018, p.3) state that 'students from disadvantaged backgrounds, lower income households and other under-represented groups may face barriers to entry to higher education'. They go on to explain that 'Widen participation (sic) schemes attempt to remove these barriers and improve access to education' (Ibid.).

The fact some students may face barriers in accessing and engaging with HE due to their background is also highlighted by one of the professional bodies for HE staff, Advance HE (previously the Higher Education Academy [HEA]). For example, in *Widening Participation: A Rough Guide for Higher Education Providers*, Allen & Storan (2005, p.3) tell us that:

Widening Participation in HE is usually taken to refer to activities and interventions aimed at creating an HE system that includes all who can benefit from it – people who might not otherwise view learning as an option, or who may be discouraged by social, cultural, economic or institutional barriers.

This theme is also taken up by the Higher Education Funding Council for Wales (HEFCW) which is the quasi-autonomous body tasked by Welsh Government to oversee the funding of HE in Wales. For example, in their *Widening Access Programme of Action Progress Report* they state that:

The aim of widening access is to secure inclusion, progression and success in higher education to enable learners across all age ranges and backgrounds, who face the highest social and economic barriers, to fulfil their potential as students, lifelong learners, citizens and employees (HEFCW, 2016, p. 2).

Whilst there are any number of further sources that could be referred to in this matter it can be seen that, whatever the source, *widening access/participation* refers to attempts to ensure that students who might otherwise struggle to access or engage with HE are encouraged and support to do so. It is this sense, of support for potential excluded students, that the phrases will be used throughout this work.

One further phrase, that will occur frequently throughout this review, needs some clarification for the reader. Throughout the literature on this subject, reference is made

to 'non-traditional' students, and it is important to establish what is meant by this phrase. Researchers have noted that there are at least some forty-five different definitions this term (Chung *et al*, 2014), and others have gone further and noted that 'There is no unanimous definition of the non-traditional (sic) student either in national or international research analysis (Goncalves, 2007 *cited in* Treiniene, 2017). However, for the purposes of this review the definition used by Wong (2018) will be used which is that:

Non-traditional students, in UK higher education and policy discourses, include first-generation university students, students from low-income households, students from minority ethnic/racial backgrounds, mature students (age 21 or over on university entry), and/or students with a declared disability.

It is important to note that, the researcher's own experience, as an Academic Lead for the PASS scheme on the Carmarthen campus of the University of Wales Trinity St. David (UWSTD), is that a significant number of students who accessed support from PASS can be seen as being non-traditional.

Keenan (2014, p.8), describes a variety of terms used to describe 'student-led peer academic learning activity' in UK Higher Education (HE). He differentiates between 'peer-learning and peer-support approaches' (Ody et al, 2013 cited in Keenan, 2014) and 'peer-mentoring' (Andrews, 2011 cited in Keenan, 2014). Although Keenan would seem to indicate that there is a clear distinction between these two forms of intervention there is evidence that other sources can often conflate the two terms causing confusion for the interested enquirer. For example, the two terms are used together in the Advance HE Peer Learning and Mentoring Scheme Toolkit. The introduction to the toolkit states that the toolkit is based on a project 'between the Cathedrals Group, Leeds Trinity University and the Higher Education Academy

[which] ran from July 2016 - February 2017' (Advance HE, 2020b). The introduction goes on to state that the project 'sought to identify and showcase practice in Student Peer Assisted Learning and / or Mentoring Schemes'. This conflation and confusion of the two concepts, which Keenan argues should be discrete, can be seen elsewhere. For example, Giles *et al* (2016, p. 2), in a paper which examines the benefits of the PASS scheme in UK universities uses the phrases *peer learning* and *peer mentoring* interchangeably. It is for this reason that this review seeks to establish a clearer distinction between the two concepts. It should also be noted that other works have also chosen to look at several of the interventions discussed in this paper, rather than focusing on specific interventions. For example, the Quality Assurance Agency for Higher Education [QAAHE] in its paper *Quality Enhancement Themes: The First Year Experience, Peer Support in the First Year* assesses a number of interventions which include PAL and Peer Mentoring among others (QAAHE, 2008, pp. 4-5).

In terms of *peer learning* this study will focus on two common approaches (Keenan, 2014, p.9), namely the Peer Assisted Learning (PAL) (Donaldson & Topping, 1996; Glynn *et al*, 2006; Longfellow *et al*, 2008; Hammond *et al* 2010; and, Bailey, 2021) and Peer Assisted Study Support (PASS) (Timpson & Ellis, 2013; Dawson *et al*, 2014; European Centre for PASS-SI, 2020; Connolly-Pnagopoulos, 2021). *Peer Learning*, or as Topping (1996) also calls it *peer tutoring*, can be seen to be 'more able students helping less able students to learn in co-operative working pairs or small groups carefully organised by a professional teacher.' (Topping, 1996, p. 322 *this author's emphasis*). In this definition we can see that *peer learning* requires a judgement to be made on the ability of students and the allocation of those deemed more able to work with those deemed less able by a member of the academic teaching

staff. Indeed, Topping himself goes on to argue that such a precise definition has given way to what he calls the 'rather bland' (ibid) definition that he summarises as 'people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by teaching' (Topping, 1996, p. 322). In terms of *peer mentoring* the review will draw on a range of literature exploring peermentoring approaches (Andrews & Clark, 2011; Christie, 2014; Cornelius *et al*, 2016; Olivier & Burton, 2020).

It should be noted that in many studies of the subject the terms peer-led learning and peer mentoring are often conflated or used interchangeably, for example in the *Peer Learning and Mentoring Scheme Toolkit* (Advance HE, 2020b) or Giles *et al* (2016). However, in other studies (e.g., Dawson *et al* 2014; Siamack, 2014 and Thomas 2012) over-come this issue by referring to the programmes and interventions they have studied as 'Supplemental Instruction' (SI) (Martin, and Burmeister, 1996). Indeed, Chan *et al* (2016, p. 1812) go as far as to say that 'Many of the peer assisted learning programmes in higher education are derived from the Supplemental Instruction Approach (SI) pioneered by Deanna Martin at the University of Missouri'. It should therefore be noted that, unless a study is focused specifically on a Peer Assisted Learning (PAL) programme, a Peer Assisted Study Support Programme, or Supplemental Instruction the phrase peer-led interventions will be used in this work. Finally, it should be noted that there is a growing research interest in this field as indicated by the existence of several editions of the peer reviewed journal, '*Mentoring and Tutoring*' dedicated to this subject (Mullen. 2010)

2.3. The 'Cultural' Implications of the Widening Access agenda.

This section will explore the case for additional support, beyond that provided by staff, for students, particularly from a non-traditional background or widening access students as defined in the previous section. In doing so, it is important to understand the context with regard to the current increase in numbers of 'non-traditional' students in HE. It can be seen that the concept of widening access to Higher Education has been part of the political and public debate regarding HE for some considerable time. For example, nearly 20 years ago, the New Labour Government in the White Paper The Future of Higher Education (Department of Education and Skills, 2003) stated that:

The social class gap in entry to higher education remains unacceptably wide. While many more people from all backgrounds benefit from higher education, the proportion coming from lower-income families has not substantially increased. It means a waste of potential for individuals and for the country as a whole.

At the time, this commitment was questioned by many, as Maisuria (2010) pointed out:

...the announcements were met with scepticism by right-wing traditionalists who predicted that educational standards would decline [...] and the value of the bachelor's degree would deflate...

This is not the place for a debate on the values and attitudes that can be seen to underpin such statements of intent by the Government of the day, nor to critique such decisions but it should be noted that the debate has moved on to the extent where the Minister for Higher and Further Education in a Conservative Government could recently claim that 'Disadvantaged English 18-year-olds are now two thirds more likely to go to university than they were 10 years ago.' (Donelan, 2021). From the above one can identify a policy thread running through governments of different

political persuasions that both encourages and celebrates the recruitment of 'nontraditional' students into HE. The literature also indicates that this political agenda has been taken up and implemented by regulatory and professional bodies. For example, we have already seen above how the HEFCW have adopted this policy in their Widening Access Programme of Action Progress Report (Op cit). However, it is not only in Wales that this commitment exists and this has been acknowledged in the Evaluation of the HEFCE Widening Participation Support Strategy produced by the Higher Education Consultancy Group [HECG] and National Centre for Social Research [NCSR] which states that the commitment to widening access in England comes, not only from government policy but from other influences such as the Dearing Report (HECG & NCSR, No Date, p. 21). However, it has been argued that a such a consensus on widening access does not automatically lead to an equity of experience for students from non-traditional backgrounds. This point is made by Wong (2018) when he states that 'Students from "non-traditional" backgrounds, by comparison [to white, middle-class, students], are less likely to achieve the highest undergraduate degree outcome'. In making this argument Wong draws heavily on the concepts of Bourdieu and others in order to explore the tension between the culture within which non-traditional students have been socialised and the culture of Higher Education and these concepts will be explored below.

Students of sociology will, no doubt be familiar with the concept of socialisation, that is to say:

The process through which people develop [...] an understanding of societal norms and values, and the knowledge and skills required for participation in society. It is the process through which they acquire their society's culture (Crawford & Novak, 2018).

However, in the example above there is an implication that a society has a single culture. Bourdieu's theories expand on this concept by suggesting that the lived

experience of different groups in society will produce different cultures. Thus, Bourdieu argues, an individual's culture is created by their 'habitus' which he defines as;

system of internalized structures, schemes of perception, conception and action common to all members of the same group or class and constituting the precondition for all objectification and apperception (Bourdieu, 1977, p.86).

He goes on to argue that these internalised schemes effectively mean that the individual is socially conditioned to respond to situations in a way which is based on their personal experience (Op cit). Thus, it can be argued that a student from a nontraditional background may well have, initially at least, limited or inappropriate responses to stimuli received during their experiences in HE as they have not been prepared for the experience by their 'habitus'. This would seem to be borne out by Wong (2018, p.3), who states that 'the university experiences of non-traditional students can be highly complex', and goes on to describe 'the struggles of fitting in' (Op cit.) for these students. This tension is also explored by Alex Moore in 'Teaching and Learning: Pedagogy, Curriculum and Culture' when he states that 'Students whose 'home cultures' provide less of a match with 'school culture' may [...] have little or no formally-recognised cultural capital to begin with' (Moore, 2000, p. 98). In using the phrase cultural capital, Moore is drawing on the theories of Bourdieu (1971, p. 201), who states that cultural capital is 'transmitted by inheritance' i.e. that is it the knowledge and understanding that is acquired from the habitus. In the context of education, Thompson (1990, p.148) argues that cultural capital 'includes knowledge, skills and [...] educational qualifications' and both he and Moore argue that non-traditional students are less likely to have the cultural capital expected by HE. McLaren takes the point further by developing the concept of 'cultural literacy', that is to say the ability to present work in a format and style that is perceived as

'correct' by academic staff and fellow students. For all of the theorists cited above, the tension between the acquired cultural capital of the 'non-traditional' habitus and the cultural capital required by HE is a significant issue which Moore argues 'may lead to cultural self-deprecation and low self-expectation' (Moore, 200, p, 96). The tensions outlined above are summed up by Hayman *et al* (2022) when they state that:

the education system is based on the assumption of the possession of cultural capital, which, for students from lower social class backgrounds – or families where there has been no previous experience of university education – may be lacking.

However, it has been argued that, given appropriate support, it is possible to mediate such cultural tension in order to make the experience more productive for the nontraditional student. For example, Mills argues that with appropriate support from individuals or institutions it is possible for a student to move from what she calls a reproductive habitus to a transformative habitus (Mills 2008) and we will take a little time to explore these two concepts further. For Mills a reproductive habitus is one which predisposes a student towards 'feeling the burden of their circumstances' (Mills, 2008, p. 100) and to perceive a future which fits with their conditioning (Op cit.). In such a case the habitus, for Mills, is restrictive in that it 'induces an atmosphere of hopelessness (Op cit. p. 101). She goes on to argue that a reproductive habitus can be altered to a transformative habitus with appropriate support and intervention. When using the term transformative habitus, Mills is arguing that this is where the student has altered their responses to stimuli to 'see possibilities in what might otherwise appear constraining' [and] 'which invites agency and is generative of alternatives not immediately apparent' (Mills, 2008, p. 104). It can be seen that student-led peer academic learning activities such as those that will be explored below could potentially provide the catalyst to move a non-traditional student from a reproductive to a transformative habitus.

It is important to acknowledge that Bourdieu's theories on cultural capital (Bourdieu, 1986) are relevant to a discussion of the need, or otherwise, for peer support programmes. As Wong (2018, p. 3) states, for Bourdieu, 'cultural capital refers to cultural competencies, which can be embodied, objectified, and institutionalized, and includes valued cultural knowledge'. If this is the case then it can be seen that any programme in which a more experienced student can share their own 'cultural knowledge' of the HE system acquired during their studies might be seen to facilitate the exchange of cultural capital between peers. In some senses, the discussion above can be seen as one of addressing particular needs in non-traditional students, that is to say the need to develop a transformative habitus and the need to acquire relevant and useful cultural capital and other researchers have identified other potential needs in non-traditional students. For example, Sellar and Gale (2011) have argued that, in order to experience equity in HE, such students need to be supported to develop their own 'mobility, aspiration and voice' and this work will now take a little time to explore each of these.

By 'mobility' Sellar and Gale (2011, p. 117) are, in part, referring to 'the capacity to cultivate networks' and the ability to accrue 'network capital' (Op cit. p. 119). In stating this they are arguing that success in HE can often depend on what they call 'capacities for cultivating networks' (Op cit. p.121). It is therefore possible to see that any programme which increases contact with peers who can share experience and knowledge of the HE 'system' may well be of benefit for non-traditional students as a vehicle for acquiring the cultural capital expected of them, and this will be explored further in Section 1.7 in particular. When discussing 'aspiration' Sellar and Gale are

referring to 'the capacity to imagine futures' (op cit. p. 122) in that students may not have the cultural knowledge or capital in order to visualise what success could mean for them. In a paper tilted 'Challenging discourses of aspiration', Harrison and Waller expand on this point when they argue that positive interventions are ones which promote and expand:

'The individual's palette of possible, probable and like-to-be selves [which] is therefore open to change and greater elaboration, with scope for planned interventions to achieve this (Harrison & Waller, 2018, p. 918).

Thus, it can be seen that a programme which allows students to explore their 'like-to-be' selves with others who have similar experiences may also be of benefit and this will be explored further in the sections below. Finally, in discussing 'voice', Sellar and Gale (2011) are arguing that students need to be able to engage with the 'narrative' and speak the 'language' of HE. In this they can be seen to build on the ideas of McLaren outlined above and to reinforce the work of Couldry, who argues that:

having a voice requires resources: both practical resources (e.g. language) and the (seemingly purely symbolic) status necessary if one is to be recognised by others as having a voice.

(Couldry, 2010 cited in Sellar & Gale, 2011)

In this section, there has been an exploration of the particular issues, in terms of habitus, cultural capital and cultural literacy, that non-traditional students may face. In the sections below attention will be given to the benefits of peer learning and mentoring programmes for this group as well as for traditional students, those acting as leaders/mentors and for HE itself.

2.4. Effects on Student Performance

It is no surprise that the Quality Assessment Framework for Wales (HEFCW, 2020, p.10) clearly states that a key focus for HE establishments should be 'matters relating to standards and student academic experience'. Indeed, this focus on the quality of teaching and learning is a main responsibility for HEFCW as detailed in the Higher Education (Wales) Act 2015 (section 17.1). It is, therefore, logical that any exploration of the benefits of PAL and Peer Mentoring programmes should focus on the impact of such programmes on academic performance.

This theme, of linking supplemental instruction programmes with attainment. Is taken up by Advance HE (formerly the Higher Education Academy). This, third sector organisation has a remit from its members to 'promote excellence' in teaching and learning in higher education (Advance HE, 2020c) in their 'Peer Learning and Mentoring Scheme Toolkit' (Advance HE 2020b). The toolkit is designed to assist institutions to plan and implement effective Supplemental Instruction programmes. One of the 'Eight Key Issues' (Advance HE 2020b) identified is the Strategic Intent for creating such programmes and they go on to state that the institution should 'Drill down into key intention and identify specifics e.g., to raise attainment rates on specific [...] Modules' (Advance HE 2020b). This we can see that there is a focus from Regulatory bodies, funding bodies and professional associations to ensure that the raising of attainment levels is a key focus of such programmes.

There is a wealth of qualitative research into this area which points to a positive impact on academic performance. For example, Chan et al (2016) in an ethnographic study of peer tutors and tutees involved in a PAL programme in UCSI University in

Malaysia found that 'intended learning outcomes of improving academic performance [...] were generally met' (Chan et al., 2016, p,1818). Other studies, such as that carried out by Glynn et al. (2006) have also indicated that there is a perceived improvement in academic performance. Indeed, in this study the researchers argue that 'those involved in PAL learn not just about the material in question but also appear to learn about learning' (Price & Rust, 1995 cited in Glynn et al, 2006, p. 7). Thus, as well as contributing to increased subject knowledge such schemes would appear to aid the development of meta-cognition in students. This point is also made by Topping when he states that peer tutoring, as well as providing cognitive gains, can also be seen to promote 'improved retention, greater meta-cognitive awareness and better application of knowledge and skills to new situations' (Topping, 1996, p.325). This is also borne out by Hazel Christie who finds that 'the help and advice of the mentors had enhanced the mentees' confidence in their academic skills and enabled them to develop identities as successful students' (Christie, 2014, p.962) and Jayathilake and Huxham (2021) who found that 'Being taught by peers removes that fear and provides the confidence and freedom to ask questions until full understanding is achieved'.

In the studies above much of the impact on academic performance was self-reported by the subjects of the research (i.e. peer tutors and tutees), however, other studies have tried to overcome the potential for bias of such self-reporting by seeking to include a control group. Dawson et al (2014) in a review of such research have found that there is evidence that involvement in SI programmes such as PAL or PASS can be seen to have a measurable benefit.in terms of final course grades. For example, they point to a study by Dancer et al (2007) which compared the course grades of students who had participated in an SI programme against those who had not (non-SI)

and state that 'The difference between the marks for the non-SI (M= 58.9) and SI participants (M=64.1) was significant' Dancer et al, 2007 cited in Dawson et al 2014). In all the Dawson meta-analysis found 16 studies which used final course grades and although not all studies used the comparison of SI versus non-SI participation, all were able to make a case for the positive effect of peer tutoring on academic performance (Dawson et al, 2014, p.620).

Another quantitative study which demonstrates a positive link between involvement in Supplemental Instruction and performance was undertaken by Siamack, Davis and Root (2014). In this study their sample consisted of 'Two-hundred twenty-five undergraduate students with a GPA {Grade Point Average} below 2.00' (Siamack *et al* (2014, p. 33). One key consideration for the researchers was to avoid making assumptions about a causality between involvement in an SI project and improved performance (see the critique of Capstick, Fleming and Hurne (2004) below). As part of their Methodology the research team state that 'This paper attempts to overcome most of

these flaws by using paired samples t-tests, as well as a stepwise Ordinary Least Squares, to establish causality in addition to measure correlations' (Siamack *et al* (2014, p. 33). The use of Ordinary Least Squares allows the researchers to illustrate the relationship between a number of 'independent quantitative variables' and a 'dependent variable' (Cohen, Manion & Morrison, 2000). In this research the 'independent quantitative variable as the GPA over four semesters after involvement in the SI project – which in this case was the 'dependent variable'.

Their evidence indicates 'that mentoring programs at the university and school levels significantly contribute to an increase in the post-mentoring GPA of cohorts who successfully complete the programs' (Ibid) and they go on to state that a;

significant increase in post-mentoring GPA of those in the ACP is sustained at least three semesters after the mentorship program is successfully completed without any additional interventions.

They do, however, go on to argue that, for the causality to be more clearly established the same research should be carried out in other institutions. Just such research, i.e. a quantitative, empirical study, undertaken in 'an urban institution of eleven thousand students' (Blanc, DeBuhr & Martin, 1983, p. 80) some years before the study carried out by Cohen *at al* (2000). The study, which looked at the 'performance, admission and re-enrolment (sic) data on 746 students enrolled in seven arts & sciences courses' students' (Blanc, DeBuhr & Martin, 1983, p. 83) found that 'students in the high-risk group showed significant gains in course grades compared to those not using the service' students' (Blanc, DeBuhr & Martin, 1983, p. 85) thus corroborating the findings of Cohen, Manion and Morrison (2000). This correlation between involvement in peer-led interventions and improved grade results is also noted by Chan *et al* (2016, p. 1819) when they state that 'PAL study sessions has had successful extrinsic outcomes which directly impacted the enhanced examination scores of tutees'.

One other area of improved performance highlighted in the literature is that of improved study skills in general – as outlined by Fletcher & Mullen (2012); Garcia-Meglar, East & Meyers (2021); Sheffield Hallam University (No Date); Meletiadou, (2022) and Taylor (2021) among others. For example, a survey of student nurses participating in a peer mentoring programme by Ross, Bruderle and Meakim (2015) found that 'students commented that their confidence and competence in each of the skills had increased' and that the students reported that they 'valued having the opportunity for extra practice to reinforce skills, reflect on their strengths and weaknesses, and gain confidence' (Ross *et al*, 2015). This ability of SI and similar

schemes to assist students to 'learn to learn' (Andrews & Clark, 2011, p50) has been highlighted in reports by the HEA (Andrews & Clark, 2011) and its successor Advance HE (2020b). Another such study, carried out by Capstick *et al*, (2004) reported on the experience of introducing a PAL scheme in Bournemouth University indicated that students identified that one of the ways that the scheme helped them was in 'developing study skills' Capstick *et al*, 2004, p.7). However, this was an internal report based on student appraisals and, it is important to note that the reliability of such 'self-reported data' (Rosenman, Tennekoon & Hill, 2011) can be questioned. This is due to the issue of 'response bias' which Rosenman *et al* (2011) go on to assert 'shows up in many fields of behavioural and healthcare research'. This would be an important consideration in evaluating and researching the efficacy of any such programme which informed the methodology of Siamack *et al* (2014) above and will be returned to in Section 3.

2.5. Effects on Student Wellbeing

Whilst student performance has always been a focus of the quality assurance (QA) of Higher Education, there is increasing attention being paid to student well-being as a QA standard as evidenced in the HEFCW publication Well-being of Future Generations: A plan for wellbeing and health in higher education (HEFCW, 2019). Indeed, this document goes as far as to say that 'wellbeing and health in higher education are a priority for the Welsh Government' (HEFCW, 2019, p.5). Given the increasing importance of student wellbeing as a consideration it is useful to explore whether the types of intervention under discussion here can be found to have an impact on wellbeing. In addressing this issue Dawson et al (2014, p. 630) go as far as

to state simply that 'any intervention that results in students doing better in their course will result in enhanced wellbeing' and whilst this would seem a logical conclusion it is important to seek empirical evidence to support this hypothesis. One such study which seems to provide support was carried out by Susan Bronstein. She undertook focus groups and one to one interviews with students who had participated in SI sessions and found that;

students suggested that this opportunity helps reduce [...] anxiety – both by increasing their time on the task in a supported environment and by the chance to process the difficult course material with their peers

(Bronstein, S., 2008, p. 38)

This review has already referred to aspects of Welsh Government and Higher Education policy that relate to the study of peer-learning, peer mentoring and supplemental instruction and one, further, way in which policy touches on this is the high priority given to student well-being and the link between well-being and mental health - see, for example, 'Support for learners' mental health and emotional wellbeing: government response' (Welsh Government, 2021) and 'Suicide-Safer Universities' (Universities UK, 2021). Indeed, at the time of writing this issue has become the subject of much public debate with Universities UK having for respond to the coroner's report into the death of Theo Brennan-Hulme (Courts & Tribunals Judiciary, 2022) which highlighted the importance of positive mental health for student wellbeing. This has also been the focus of several studies of supplemental instruction programmes such as that carried out by Eisenberg, Lipson and Posselt, (2016, p. 90) who state that 'Peer-based programs have [...] increased in popularity as an approach to support distressed students'. Other such studies have highlighted that the lack of provision of peer-mentoring or other peer-led projects can be a contributing factor to variations in mental wellbeing among students - see for example Ketchen Lipson, S. et al. (2015) and Eisenberg, Hunt & Speer (2013).

There have also been meta-analytical studies of the effects peer-led interventions such as that carried out by Robbins, Oh, Le & Button (2009). One aspect of their research was to analyse 'interventions [..] specifically designed for first-year students' successful transition to college life' (Robbins et al, 2009, p.1165) including peer-led programmes. It is important, for the purposes of this review, to note that they found that, although the effects on academic performance were 'low to moderate', the 'interventions had moderate to strong effects on motivational control and emotional control' (Robbins et al, 2009, p.1176). They go on to say that many of the interventions studies also had a positive impact on emotional and wellbeing skills such as 'self-regulation' which can be defined as a person's ability to control their cognition, emotions and actions in order to achieve targets and goals (Bandura, 1997). In another study, Richardson et al (2012, p 359) found that such SI interventions could have a positive effect on a number of student attributes. For example, they found that involvement is SI activities lead to greater sense of control over the academic outcomes achieved and therefore a greater sense of motivation. This is in line with the social learning theories of Julian Rotter (1966). Rotter argued that an individual with a strong sense of internal control is more likely to be resilient in the face of difficulties.

This connection between SI interventions and the development of a sense of internal control links to the following section, which explores the impact of peer-learning, peer mentoring and SI interventions on engagement and retention, as it has been argued that resilience is a key factor in students maintaining engagement with their programmes of study. Indeed, researchers such as Eisenberg, Lipson and Posselt, (2016), in their paper 'Promoting Resilience, Retention, and Mental Health' argue that resilience 'allows students to persist through and bounce back from academic

challenges, such as failing an exam' (Eisenburg *et al*, 2016, p. 88). Indeed, Eisenberg *et al* (2016, p. 92-3) go as far as to state that, in terms of contributing to wellbeing, 'Peer support groups can offer an important complement to the services provided by campus professionals' and that 'Student affairs leaders should foster the growth and development of these groups and help them implement evidence-based methods for teaching resilience skills' Eisenberg *et al* (2016, p. 92-3).

2.6.Impact on Student Engagement and Retention

It has been asserted by Brunk-Chavez, et al. (2017, p. 93) that 'research on retention and improving student engagement [...] has been going on for decades' and we have noted, in Section 2.3, that there is a debate regarding the preparedness of widening access or 'non-traditional' students (see Section 2.1 for definitions of these phrases) for Higher Education due their different social and cultural capital (e.g. Mills, 2008; Wong, 2018). Such potential mis-matches between the students' socially learnt cultural capital and the cultural capital required to succeed in their place of study can negatively effect their sense of belonging, which Maslow identified as essential for self-actualisation (see Pichère, Cadiat, and Probert, (2015) *Maslow's hierarchy of needs*). The connection between a sense of belonging and student retention is also clearly stated in the final report from Advance HE on the 'What Works project when it asserts that:

The evidence from across the seven What Works? Projects firmly points to the importance of students having a strong sense of belonging in HE, which is the result of engagement (Thomas, 2012, p.12)

More recently Pedlar, Willis and Nieuwoudt (2022) in a study that explores the 'relationships between university students' sense of belonging and student retention'

have argued that 'A sense of belonging is important as it incorporates feelings of being valued, included and accepted at university' Pedlar, Willis and Nieuwoudt (2022). This study, among others makes a clear link between the types of intervention that are the focus of this review and the engagement and retention of students and, whilst it might seem logical to assume that this link exists it is important to interrogate the literature in order to establish the link empirically where possible.

The research by Pedlar *et al* (2022) clearly states that 'students with a low sense of belonging [are] more at risk of dropping out of university' and this assertion is supported elsewhere (e.g., Fourie 2020; Meehan & Howells 2019; Soria and Stubblefield 2015). Given that this correlation is clearly identified in the literature it is therefore of interest for this review to identify if there is evidence that peer-led interventions and have a positive impact on students' sense of belonging and therefore their continued engagement with their studies.

One study which clearly links peer-led interventions with student retention is that carried out by Eisenberg, Lipson and Posselt, (2016, p.90) which, among other projects, looked at 'the Student Support Network at Worcester Polytechnic Institute [which] trained hundreds of students to help peers in crisis' and they found that such support was an effective addition to the services provided to maintain student engagement. This link between peer-led interventions and engagement & retention is also noted in a number of other studies (e.g., McIntosh, 2019; Thomas, 2012) and Lim, Anderson and Mortimer (2016, p. 62) have found that 'Many students reported that their feelings of isolation lessened once they were able to discuss and contrast their difficulties with their peers'

Another study, in this case of the effects on engagement and social inclusion of a Peer Assisted Study (PASS) programme, Tangalakis, Best and Hryciw (2017, p.42) found

that 'peer support and resources, may assist successful completion of higher education in students from at risk cohorts' and, whilst this is a qualified statement of the connection other studies clearly identify a link. For example, a recent study of the effectiveness of an online peer-support programme for distance learners found that it 'reduced isolation among the students that took part and that it provided a platform that increased communication between mentees and mentors' (Tibingana-Ahimbisibwe, Willis, Catherall, Butler & Harrison, 2020). The reduction of isolation and creation of effective peer to peer communication can also be referred to as 'social congruence' (Garcia-Melgar, East, and Meyers, 2021,) and in their study of the effectiveness of a Peer Assisted Learning (PAL) programme Garcia et al (2021) state that 'Once students felt more comfortable as a result of PLAs emphasising social congruence aspects, they were more likely to disclose additional learning gaps and further queries'. This is also borne out by a number of other studies which indicate links between mentoring support and student retention (e.g., Chan et al, 2016: Reeves, Kiteley, Spall & Flint, 2019) and Deanna Martin, who pioneered the Supplemental Instruction approach has claimed that such programmes lead to 'fewer withdrawals and failures' (Martin, and Burmeister, 1996). This claim seems to be borne out by an empirical study which found that 'students in the high-risk group (i.e. those identified as performing poorly in academic tasks) using SI services showed higher retention rates than students not using SI services' (Blanc, DeBuhr & Martin, 1983, p.85). One other aspect of the role that peer-led interventions can have in increasing retention is their contribution to student satisfaction. In a study of 'peer-assisted teaching programmes' (Carbone, Ross, Phelan, Lindsay, Drew, Stoney, & Cottman, 2015, p.165) covering twenty-six courses in five Australian HE establishments. The results of the pilot project demonstrated 'improvements in the

level of student satisfaction with courses' (Carbone *et al*, 2015, p.178) and whilst the researchers acknowledge that a 'the connection between student learning outcomes and student satisfaction with courses is not a straightforward one' (Carbone *et al*, 2015, p.178) they do find a link between student satisfaction and retention. This link is also emphasised by Gorard (2006, p. 79) when they state that 'The importance of peer support networks is highlighted in a study on student retention' (*citing* May and Boutsted 2003).

Thus it can be seen that a number of studies, both qualitative and quantitative, have indicated a correlation between participation in peer-led support activities and retention on learning programmes. In the last study mentioned above (Blanc, DeBuhr & Martin, 1983) it should be noted that the intervention was particularly effective for students defined as 'high-risk'. We have seen, in Section 2.3, that students from non-traditional or 'widening access' backgrounds may be at more risk of failure in higher education due to the incongruence between their socialised 'cultural capital' and that of the institution (Wong, 2018) and for that reason the next section will explore the impact of peer-led interventions for these students

2.7. Impact on Widening Access/ Non-Traditional Students

We have seen, above (e.g., Section 2.3), some of the issues faced by non-traditional students (i.e. mature and widening access students) due to the potential conflict between their acquired cultural capital and that required by HE and we have also seen that this is a key feature of guidance and policy in Higher Education. For example, the Higher Education Funding Council for Wales (HEFCW), in their *Widening Access Programme of Action Progress report*, indicate that HE establishments should

'identify and promote effective practice on retention and success' for widening access students (HEFCW, 2016, p. 15). They define this group as including those:

based in Communities First cluster areas; the bottom quintile of the lower super output areas of the Welsh Index of Multiple Deprivation (WIMD); low participation neighbourhoods; workless households; those families experiencing 'in work poverty'; pupils in receipt of Educational Maintenance Allowance (EMA), pupils eligible for free school meals; carers or those with a care background; [and] ex-offenders.

(HEFCW, 2016, pp. 2-3)

and, whilst they acknowledge that this definition may not cover all students who may find engagement with HE more difficult they do have a clear focus on supporting students in this situation. Given this focus, it is therefore useful to interrogate the literature in order to see whether peer-led interventions can be seen to have a positive impact in this area.

The focus on widening participation is not confined to the UK, for example, Jenni Underhill and Jared McDonald have noted that 'Transformation policies in South Africa have seen higher education come under increasing pressure to broaden participation from historically under-represented groups' (Underhill & McDonald, 2010) and they have undertaken a study of peer-tutoring programmes at the University of Johannesburg designed to support such students. Although they acknowledge that the 'the term "peer tutor" has been contested' (Underhill & McDonald, 2010) they find that peer tutors can indeed have a positive effect on the aspirations and attitudes of non-traditional students.

This argument has also been made in an extensive review of the research into the effectiveness of SI interventions for 'traditionally underrepresented student populations' (Dawson, van der Meer, Skalicky, & Cowley, 2014, p. 627). They found that, in at least one study of 'underrepresented minority' students (URM) (Dawson *et al*, 2014, p. 628) '...the percentage of URM-SI participants who ultimately graduated was higher (73%) than for URM non-SI participants who did not (50%)'. Although

only one study, this would seem to indicate that involvement in a SI programme is beneficial for students from underrepresented minority groups and this finding is supported by Tangalakis, Best & Hryciw (2017) in their paper *Peer Assisted Study Sessions to Enhance Learning Strategies and Social Inclusion in Undergraduate Students from Low Socioeconomic Backgrounds*. The focus of their research were students from low socio-economic (SES), students who were first in their family to attend HA and mature students and the impact of involvement in a PASS programme (Tangalakis *et al*, 2017, p. 36). The student cohort for the research was taken from two programmes of study, namely 'Paramedicine and Biomedical Sciences' (Tangalakis *et al*, 2017, p. 42) and the researchers reported that 'Both cohorts, with a high number of "at risk" students benefited from the PASS program as demonstrated by a reduction in failures and improvement in the average scores' (Tangalakis *et al*, 2017, p. 42).

Other research, such as that undertaken by Meletiadou, E. (2022, p.137) indicates that peer-led interventions such as PAL 'foster inclusivity and help the diverse student cohort, including low-achieving students' and this promotion of 'inclusivity is found elsewhere in the literature. For example, in a study entitled 'Roles, Risks, and Benefits of Peer Mentoring Relationships in Higher Education' Colvin and Ashman found that peer mentoring could help to foster a feeling of connectedness to the HE establishment as evidenced by responses to their qualitative study such as;

My mentor actually was extremely helpful with me, and not necessarily in the information I was learning in the class, but just connecting me to the campus, and helping me figure out financial aid and residency. I mean, there's so many aspects of college you don't know about when you're new, and your mentor just helps you see how to get through all of it. (Interview 28)

(Colvin, & Ashman, 2010)

This is also borne out by qualitative research undertaken by Loke and Chow (2007) into the benefits of peer-tutoring for students who are unfamiliar with HE when they

found that 'Many tutors and tutees appreciated the chance to expand their circle of friends and valued the friendships that developed through the arrangement' (Loke & Chow, 2007) and it is of interest to note that this finding also relates of the following Section in which the benefits for peer leaders/mentors are explored. One further study which also indicates a link between peer-led interventions and inclusive practice was an evaluation of the PASS programme which was established in this Institution (Macauley, 2016). Their initial evaluation, which consisted of informal interviews with PASS Leaders, found that 'Attention was drawn to the social aspect of PASS in enabling students to get the most of out of their university course in a relaxed, inclusive and student led way, complementing their learning experience' (Macauley, 2016, p.7). It can be seen that these, supportive, networks created by such peer-led interventions can assist in the acclimatisation to the new cultural expectations of HE, as Eggens, Werf and Bosker (2008) argue when they state that their study found 'that can motivate students' desire to achieve academically by providing them with standards and expectations for performance'.

One further way in which peer-led interventions can support non-traditional students is by helping them to overcome feelings of 'learned helplessness' and promoting resilience (Schofield, 2019, p, 23). The concept of 'learned helplessness' was first outlined by Martin Seligman in a paper published in 1972 and although the initial paper discussed the effects of trauma on animals the concept has come to be applied to human psychology. We have seen, in Section 2.3, that a lack of appropriate cultural capital can negatively effect the experience of HE for widening access students and that the resulting cultural conflict can cause anxiety and alienation in students. Scofield (2019, p. 23) argues that peer mentoring can help

the student to over-come the 'challenge' of this cultural conflict by instilling a sense of 'learned optimism' (Seligman, 1990) and he goes on to argue that;

An individual who has been effectively mentored, appropriately supported and challenged and who feels increasingly competent and confident in their competencies and in their skilfulness and ability to apply and integrate knowledge is on a trajectory towards high levels of resilience in both familiar and novel situations they encounter.

(Scofield, 2019, p. 23)

It can be seen that a number of studies indicate that peer-led interventions do have a positive impact on the experience of students from widening access and non-traditional backgrounds who 'have little or no formally-recognised **cultural capital** to begin with' (Moore, 2000, p. 98) and this is reinforced by Connolly-Pnagopoulos, (2021, p.3) who states that 'PASS is particularly beneficial to students from economically or socially disadvantaged communities'.

2.8. Benefits for Peer Leaders, Peer Tutors and Peer Mentors

In Sections 2.4 to 2.7 we have explored various ways in which peer-led interventions can impact on students in HE. In this Section we will turn our attention to the ways in which peer-led intervention can benefit the Peer leaders, Peer Tutors and Peer mentors who provide the support to their fellow students in such interventions. The nomenclature used is dependent on the type of intervention (e.g., PAL, PASS or SI) and will be used accordingly.

The first benefit has been identified by a number of studies is that the students providing support can develop their own academic skills (e.g. Andrews and Clark, 2011; Hall, & Jaugietis, 2011; Skaniakos, Penttinen, and Lairio, 2014; and Underhill and McDonald, 2010). For example, Underhill & McDonald (2010) have argued that 'peer tutors may "learn by teaching" (*citing* Topping, 1998, p. 50) and, in so doing,

may become better students themselves or may even develop into academics'. Similarly, Colvin and Ashman (2020) have found that peer mentors have reported an increase in their awareness of the academic skills that they are modelling for their peers and quote a participant as saying that:

There are principles that are taught in the class and by me mentoring. I am able to continually be refreshed on all those items, and I'm always able to... It is not uncommon for me to be doing, like teaching a presentation or preparing a presentation that I'm going to be giving to a class and realize that in my own schooling I need to reapply that. I've done it in the past, I know about it, but it reminds me. (Interview 1)

(Colvin and Ashman, 2020)

In other studies, such as that carried out by Sarah Bailey (2021, p. 62) it was found that 'Learning the skill of being able to explain something clearly and elicit the understanding of others' was seen as a positive outcome of involvement as a peer leader. This process of developing the mentor's own academic skills in order to mentor other students has been described as the principle of 'learn it and pass it on by Cressey (2019, p. 71) and Connolly-Pnagopoulos, (2021, p.3) also argues that 'The benefits to the mentors also include developed academic knowledge as they are able to review and strengthen their understanding of course material through facilitation'. There are two further studies that reinforce this point, the first looked at the perceived benefits for Peer Leaders on a PAL programme in medical school and which found that 'peer tutor(s) valued the opportunity to practice and improve their medical knowledge and teaching skill' (Ningrum, 2018, p. 4). The second paper. published in the Journal of Geography in Higher Education, was co-written by a member of the academic staff and two former PAL Leaders and acknowledged that one of the main benefits was that 'You tend to deepen your geography understanding by revisiting material, which might lead to you improving your grades' (West, Jenkins & Hill, 2017 p. 464). Thus, it can be seen that, across a range of disciplines, participation in peer-led interventions has positive consequences for the leader/mentor as well as for the target cohort.

A second benefit identified in much of the literature is the development of transferrable skills and an enhancement to employability. This is another area in which HE policy and guidance encourages HE establishments to continue to enhance and innovate practice (e.g. Advance HE, 2020a; Norton & Dalrymple, 2020). Billy Wong acknowledges this policy direction when he talks of employability consisting of the development of:

Graduate attributes are generally understood as the qualities, skills and understandings a university community agrees its students would desirably develop during their time at the institution which are inextricably linked to employability, and this is a focus of several studies of peer-led interventions.

(Wong, B., 2021)

This theme is taken up by other researchers, for example, in her paper 'Centralisation: placing Peer Assisted Study Sessions (PASS) within the wider work of learning developers', Maxinne Connolly- Pnagopoulos (2021), argues that 'The benefits of participation in PASS also extend to mentors, who are able to develop transferable skills and in turn increase their employability' and this theme is taken up by Linda Holbeche in the journal Career Development International when she argues that 'peer mentoring can lead to greater understanding and collaboration and a healthy willingness to take risks and offer challenges to each other' (Holbeche, 1996).

The concept of peer-led interventions improving the transferrable skills of mentors is further developed by Reeves, Kiteley, Spall, & Flint, 2019, pp. 40-41) who state that:

Peer mentor comments on the beneficial impact of mentoring on their transferrable skills (e.g. confidence, communication, presentation, interpersonal relationships) [...] support the claim that students who act as peer mentors benefit in a number of ways.

Another study, of the benefits of peer mentoring in the context of Finnish HE found that involvement as a mentor develop another transferrable skill in that 'The mentors' overall experiences of mentoring were rather positive: 63% reported that they learned group guidance skills' (Skaniakos, Penttinen, and Lairio, (2014). As all of the programmes under discussion in this review involve arranging and leading group activities if is important to note that this skills is seen as being important for a number of employment opportunities including group advocacy in which 'offers the opportunity for groups of service users to come together to address shared issues' (Wilks, 2012, p.31), youth and community work, family engagement and social work (Swain, 2021) among other. Although not a complete list of employment opportunities where this skill is required it is interesting to note that, from the context of equity and diversity all of the jobs outlined above involve supporting those at risk of marginalisation. However, the development of groupwork skills has been identified as a benefit for leaders/mentors in other disciplines as well. For example (West et al, 2017, p.464) reported that one Pal Leader found that "I learnt how to change my style depending on the students that came. Something that will work with one student won't work for another ... you have to be flexible'.

To summarise the impact on employability and transferrable skills the study mentioned above also indicates the positive effect on employability is as follows 'Being a PAL Leader will let you develop graduate competencies that are applicable beyond university, including understanding how others learn and respond' (West *et al*, 2017). This message, that involvement as a leader/mentor can improve general employability, in this case in the discipline of social sciences, is reinforced by Snowden and Halsall (2019, p.4) when they state that 'their work promotes a 'discussion of how mentorship can be used to shape the leaders of tomorrow' and is

also emphasised by Andrews and Clark (2011) in a report sponsored by the HEFCE and HEA when they report a mentor as saying:

I think the amount that peer Guides get out of it is really important. The skills I've gained from being on the organising committee include kind of managing a team, team-building, organising and planning. I gained all these new skills about leading groups and working with people. [UK Student: 3rd Year: Senior Peer Mentor: Female]

(Andrews & Clark, 2011, p.60)

A further benefit for leaders/mentors identified in the literature is that of increased confidence and a sense of agency and this is a feature of the description of the peer mentoring projects established across social sciences programmes in the University of Huddersfield (Reeves *et al*, 2019). In this study they discuss the fact that the 'coproduced' nature of the project was important in 'cultivating the parameters within which students felt confident enough to assert ownership of the process' (Reeves *et al*, 2019, p.39). This same point is made by (Chan *et al*, 2016, p.1819), in their study of the effects of a PAL programme, when they state that their ethnographic study found that one of the 'intrinsic outcomes' (Ibid) of the intervention was 'increased confidence' (Ibid). Indeed, one study (West *et al*, 2017) finds that this increase in confidence also applies, not only to the participants identity as a student, but to their confidence for the future when they quote a PAL Leader as saying 'I will be more confident going into the recruitment process knowing that I have got these skills to show off' (West *et al*, 2017, p. 464).

We have noted above that some of the benefits for leaders/tutors can be seen as 'intrinsic outcomes' (Chan *et al*, 2016) and one further such outcome has been identified by Andrews & Clark (2011) among others as a sense of 'personal satisfaction' (Ibid, p. 61), as for example a mentor states that;

I'd say, yeah, it's satisfaction, like you're seeing people, like you're seeing everyone arrive ... not really knowing anyone and then within a day you sort of see little groups forming and like little friendships making and then by

looking at them now you can see these friendships that were made like the first day are still like there now [2nd Year: UK Student: Male: Mentor]

(Andrews & Clark, 2011, p. 61)

The same study goes on to provide evidence that much of this positive satisfaction is derived from the fact that students feel they are contributing to the development of others, as vocalised by this mentor:

For me it was knowing that you were helping someone to starting by themselves at uni...., and just being able to say that I helped them make friends, I helped them choose modules, and I helped them settle in. Just part of that was pretty good. [2nd Year: UK Student: Female: Mentor]

(Ibid, p. 62)

Thus, as well as the benefits for students participating as learners or mentees, there is evidence of additional benefits for those taking on the roles of leaders/mentors. Indeed, in *An overview of the benefits of peer mentoring for PASS leaders*, Giles *et al* (2016) find that the following can be identified as benefits for the leaders; academic benefits, confidence, interpersonal skills, communication skills, teamwork and leadership. This is supported by the work undertaken by Colvin and Ashman (2010) who studied peer-mentoring projects. They found that the feedback on such projects had 'three main themes' which were 'being able to support students, reapplying concepts in their own lives, and developing connections'. Finally, one study goes as far as linking the sense of satisfaction developed by the mentors to the theories and ideas explored in Section 2.2 when they state that mentors vocalised sense that they had 'a moral duty to support the social and cultural capital of mentees' Hayman, R. *et al.* (2022).

2.9. Conclusion

As we can see from the analysis of the available literature above, there are a number of ways in which peer-led interventions can contribute positively to the experience of students in Higher Education. Studies such as those carried out by Christie, H., 2014 and Jayathilake and Huxham, 2021 have established links between involvement in peer-led interventions and improved academic performance and the evidence used I Sections 2.5 onwards have indicated that there also evidence that such interventions can improve wellbeing (Bronstein, S., 2008) and engagement and retention (Brunk-Chavez, B. et al. 2017) as well as having positive effects for widening access students (Schofield, 2019) and those performing the roles of peer mentor/leaders (Reeves et al, 2019). It is also important to note that these benefits align closely with many of the policy drivers referred to above such as the Widening Access Programme of Action Progress Report (HEFCW, 2016) and the Teaching Excellence and Student Outcomes Framework Specification (TEF) (Department of Education, 2017) which discusses both the importance of support for students (Ibid, p. 15) and the need to take into account students from widening access and non-traditional backgrounds (Ibid, p16). We will return to these policy drivers and other consideration for HE providers in Section 3.3 below.

3. DISCUSSION OF RESULTS

3.1.Introduction

We will now turn our attention to the key messages that have arisen as a result of the literature Review above. In Section 3.2, this paper will discuss how the many benefits outlined in Sections 2.4-2.8 are interconnected and how this can mean that a single intervention can have a number of benefits beyond those of its main focus or purpose. Section 3.3 will begin with a brief discussion of the way in which the benefits for students and leader/mentors will also be of benefit to the HE institutions themselves before moving on to discuss some of the more strategic and logistic implications found in the literature.

3.2. Theme 1: The Interdependency of the Benefits of Peer-Led Interventions

The first conclusion to draw from the Literature Review is that there are many hundreds of peer-led interventions in Higher Education throughout the world as evidenced by surveys such as those carried out by the Chan *et* al (2016); the European Centre for SI-PASS, (2020) and Meletiadou, (2022) among others. These interventions have a number of different foci ranging from the development of academic skills and subject based knowledge of PAL, PASS and SI programmes (e.g. Dawson, P. *et al.*, 2014; Donaldson. & Topping, 1996; Giles, *et al* 2016 and Jayathilake & Huxham, 2021) to an emphasis on inclusion and mentoring (e.g. Fletcher & Mullen, 2012; Hayman *et al*, 2022 and Mullen, 2010). The implications of this variety in the focus of programmes will be further explored in Section 3.2.

A second, key lesson to be learnt from the review of the literature is that much of the evidence for the positive impact of interventions is qualitative research which often relies on self-reporting and the risk of response bias (see for example Rosenman, Tennekoon & Hill, 2011). Whilst such research is both valid and useful for evaluating

the effectiveness of peer-led interventions it also needs to be supported with quantitative data such as that undertaken by Siamack, Davis and Root (2014) and Cohen, Manion & Morrison (2000). This can be more difficult when measuring wellbeing but the studies above have been able to show correlations between involvement in peer-led interventions and more measurable outcomes such as improvements in academic performance and retention. In the case of the former Siamack, Davis and Root (2014) were able to show that there was a connection between attendance at peer-led intervention sessions and an improvement in the Grade Point Average (GPA) of students. In the case of retention, empirical studies such as those undertaken by Blanc, DeBuhr & Martin (1983, p.85) have shown that students 'using SI services showed higher retention rates than students not using SI services'. Wellbeing is a more difficult area to assess quantitatively but many of the reports studied have attempted to remove response bias in their methodologies (see for example Mills (2008).

One clear message that has been repeated in many of the surveys and studies included above is that the benefits of such interventions are multiple and interdependent (see for example Andres & Clark, 2011; Dawson *et al*, 2014 and Garcia *et al*, 2021). Indeed, many of the works surveyed comments on many, if not all, of the aspects covered in Sections 2.4 to 2.7 rather than focusing on only one (i.e. only attainment, retention or well-being). Indeed, some of the research argues that this interdependence is important to the success of such programmes. By way of example, Eggens *et al* (2008) conclude that;

the influence of personal networks and social support on academic performance can be both direct and indirect and the link between personal networks and social support and academic performance can be mediated by self-esteem, well-being and achievement motivation.

We have already noted the multi-faceted benefits identified by leaders/mentors in the studies carried out by Giles *et al* (2016) and Colvin and Ashman (2010) in Section 2.8 above and other studies highlight the multi-faceted nature of the benefits for participants (i.e. learners/mentees). In some cases such work focus on a specific relationship, for example between attainment and retention (Blanc *et al*, 1983) or retention and resilience (Brunck-Chavez *et al* 2017), whilst others identify benefits in all of the areas explored in Sections 2.4 to 2.8 (e.g. Andrews & Clark; 2011; Bronstein, 2008 and Tibingana-Ahimbisibwe, *et al.*,2020). Although many of the papers reviewed indicate that further research is required to establish causal links there is a consensus that such provision does indeed and interdependent, or in the words of Lisa Taylor (2021), Associate Professor in Occupational Therapy and Associate Dean for Employability at the University of East Anglia that peer to peer learning is 'greater than the sum of its parts'.

3.3. Theme 2: Considerations for Higher Education establishments

This paper has focused on the benefits of peer-led interventions for the participants, both leaders and learners or mentors and mentees. However, throughout the Review it is clear that there are benefits for the HE Institution which has such provision and the first part of this section will briefly look at each of these in turn. For example, the improvement in academic achievement highlighted by such studies as those carried out by Chan *et al.* (2016); Cohen, Manion & Morrison, (2000); Glynn *et al* (2006) and Siamack *et al* (2014), can be seen to benefit HE institutions as academic achievement data, gathered for example by the Higher Education Standards Agency (HESA) is used by UK and Welsh Government for benchmarking purposes. (N.B. it should be noted for the purposes of accuracy that with effect from October 2022 HESA has been

merged with Jisc). Thus, it can be seen that the identified link between peer-led interventions and increased attainment (see Section 2.4 above) will benefit the Institutions that run such programmes. The same can be said of retention as this is another key benchmark against which HE institutions are judged and both HESA and the Department for Education produce indicative data. Once again, the literature (see for example, Eisenberg, Lipson and Posselt, 2016; Mills, 2008 and Wong, 2018) indicates that peer-led interventions have a role to play in promoting retention and completion of courses by students and it is therefore a positive factor to be considered by HE. This is also the case for wellbeing, in that, if peer-led interventions can be seen to benefit student wellbeing then they are also of benefit to HE establishments which are under growing pressure to consider this aspect of student life particularly as a result of the isolation experienced in the Covid-19 pandemic. Indeed, as recently as the 6th October 2022 (i.e. too late to be included in the Literature review) Universities UK produced guidelines for Universities 'when there are serious concerns about a student's safety or mental health' (Universities UK, 2022). Thus, if peer-led interventions have a demonstrable impact on the wellbeing of students, as indicated by studies such as those carried out by Dawson et al, (2014) and Robbins et al, (2009) Confusion and conflation of terms, then they should also be considered as part of the overall wellbeing strategy of universities. Finally, in terms of the Themes in Section 2 of this work, it is useful to consider the role of such interventions as part of an HE establishment's Widening Access strategy. We have seen, in Section 2.2, that there is a clear steer to HE that they should be recruiting and supporting students from nontraditional backgrounds (see for example Connell-Smith & Hubble, 2018) and we have also explored the arguments, in Section 2.3, that such students may well suffer what might be called a cultural capital deficit. We have seen evidence from ConnollyPnagopoulos, (2021); Dawson *et al*, (2014) and Moore, (2000) that this is the case and, therefore, the benefits, of peer-led interventions, for such students should not be ignored by HE.

Thus far in this Section, we have discussed the way in which the benefits for students can be seen to also benefits the universities in which they are studying. We now turn our attention to other messages for HE that have been found in the literature. The first of these is the need for such interventions to be included in the strategic planning for student support. For example, in Section 2.1, we have explored the plethora of interventions that exist ranging from PAL (Bailey, 2021), PASS (Connolly-Pnagopoulos, (2021) and SI (Dawson et al, 2014) – all of which have a varying amount of focus on subject and academic skills, to Peer Mentoring schemes (Cornelius et al, 2016) which focus more in connectedness, inclusion and social support. It can be seen from this variety of foci that interventions should be chosen to meet the needs of students identified by the university. Indeed, this is a specific risk mentioned by Cornelius et al, (2016) when they argue that there are 'substantial variations in programme design and overall effectiveness of formal mentoring programmes' due to the lack of clear identification of need when planning an intervention. The danger of such lack of focus was also highlighted by Capstick et al (2004) in their evaluation of the introduction of a PAL scheme to Bournemouth University which found that 'A recurrent criticism of the PAL scheme by first year students has been that it is seen by many as being too unstructured, lacking in clear aims or format'.

This lack of clear focus in the design and implementation of peer-led interventions brings us to another message that is clear in the literature in that such issues can be exacerbated if the interventions are introduced on an ad hoc basis without reference to strategic considerations. We have already explored (in Section 2.2 and elsewhere) that such programmes can assist HE institutions to meet many of the policy drivers, for example Advance HE (2020a) *Embedding Employability in Higher Education*, Department for Education (2017) *Teaching Excellence and Student Outcomes Framework* etc., and yet much of the literature used here discusses such programmes as being introduced as 'pilot projects' (i.e. Capstick *et al*, 2004 and Reeves *et al*, 2019) or, to quote the QAAHE (2008, p.57) 'the field was highly piecemeal in nature [...] especially in the implementation of practical initiatives'. The lack of strategic focus is also address by Advance HE when they argue that priority should be given to:

Looking at the issues around peer mentoring from the Institutional or Managerial perspective in order that administrative and management problems can [be] identified and critiqued, and solutions found

(Andrews & Clark, 2011, p.90)

This theme, of a lack of strategic oversight, is also apparent in the evaluation of the PASS programme undertaken in UWTSD, in which PASS Co-ordinators (i.e. Student Services staff responsible for coordinating between the PASS Leaders and Academic staff) 'reported the feeling of having to compete with other departments and colleagues to prove the credentials of PASS as opposed to it being supported institution wide' (Macauley, 2016, p.10).

The quote above is taken from an informal evaluation which relies on self-reporting and it is important to note that, in their paper *Quality Enhancement Themes: The First Year Experience, Peer Support in the First Year*, the QAAHE (2008, p.58) hypothesise that one reason that Institutions may not be taking up such interventions wholesale is because;

All the literature we identified was based on the implicit assumption that peer support is a 'good thing', although there appeared to be little solid backing to support this assumption. There is no overarching framework of the benefits of peer support and peer learning, and therefore little academically valid data to

show that the various forms of peer support are beneficial in any meaningful way.

This issue has already been noted in Section 2.4 (p. 21 above), as well as being mentioned by studies such as that undertaken recently by Bailey (2012) and the need for 'systematic research in this area' (QAAHE, 2008, p. 58) will be returned to in the final section of this work.

One key message from the literature reviewed, is that, whatever the nature of role being performed (i.e. leader/tutor/mentor) the students performing the role need to be given the skills knowledge and support to perform the task. This need for, what Andrews & Clark (2011, p. 88) term 'high quality training' is a theme that recurs throughout the studies (see for example Chan *et al*, (2016) and Colvin & Ashman (2010) among others. This is reinforced by Underhill & MacDonald (2010) who argue that 'if [peer] tutors are going to play an integral part in developing students optimally then they will need to be supported and trained to perform in the role effectively' The role of training in successful programmes is also discussed by and this is reinforced by the QAAHE (2008, p. 63) they describe how leaders on a PAL programme;

received a two-day training course that took place before the start of the academic year. This course contained a practical element, which permitted candidates to run and participate in PAL sessions, and covered topics that included the theory and background of PAL, deep and surface learning and group dynamics.

The same message can also be found on the studies of peer mentoring programmes as well as peer learning programmes. For example, Cornelius *et al* (2016) state that a 'critical mentoring programme design feature is the training and orientation provided to the mentees and mentors'. They go on to argue that such training should include 'programme goals and objectives, meeting guidelines and roles and responsibilities of mentors and mentees' among other features. One other consideration raised in some

studies, for example Andrews and Clark (2011, p. 88), is that of awarding academic or vocational credit for those performing the role of peer leader/tutor/mentor. Thus, it can be seen that the success of such programmes relies on the effective training that is given to the participants and this needs to be considered by HE institutions when planning to implement such schemes.

Mention of the training of students to perform the roles also leads, in many of the sources, to a discussion of the costs and cost-effectiveness of these interventions. As we have noted above, the QAAHE among others have highlighted the need for more robust research into aspects such as this that would benefit the Senior Management Teams of HE institutions in deciding whether to implement such programmes. However, it should be noted that many of the studies (e.g. Macauley, 2016, Martin & Burmeister, 1996)) do raise the issue of the time required, both from Student Service staff and their Academic colleagues to support such programmes, but feel that the outlay is justified by the positive outcomes outlined in Section 2 above. In the majority of cases such as those above the staff time usually consists of time for coordination, supervising and training (see for example Andrews and Clark, 2011) but some studies highlight a further time input where programme materials are coproduced by staff and students. For example, in their study of SI programmes, Blanc et al (1983, p. 88) discuss a programme where the 'The program staff has worked with instructors (i.e. student) to develop such aids as [...] concepts sheets and study guides'. In most of the cases mentioned above, the role of mentor/tutor/leader is voluntary but, in some cases, for example the implementation of a PAL programme in Bournemouth University, students were paid '£250 per Leader per year' (Capstick, 2004) for attending the training required. Whether there are direct costs such as those mentioned by Capstick above or the indirect cost of staff time for training and evaluation the costs of such programmes are a key consideration for HE institutions. One final consideration for HE establishments when considering such programmes is the role they can play in improving the evaluations of the quality of teaching and learning in surveys such as the National Student Survey NSS and others (Snowden & Halsall (2019, p. 2) and this is reinforced by Carbone *et al* (2015) when they discuss the role of such programmes in making 'significant improvements in students' evaluations of courses'. Although not a key focus of such programmes this can be seen to be an additional benefit for HE establishments of implementing such a programme.

3.4.Conclusion

In this section we have discussed the inter-connectedness and interdependence of the benefits of peer-led interventions, and we have also taken some time to extrapolate key messages for HE institutions from studies that were primarily, in the words of the QAAHE (2008, p.58) 'student focused'. Although we have acknowledged that many of these studies were evaluations or informal, self-reporting, studies, they would seem to indicate that further exploration would be of use when considering peer-led interventions as ways if enhancing the student experience. It should also be noted that, combining a wider body of empirical research alongside effective training for leaders/tutors/mentors could lead, in time, to the 'adoption of a peer-led support as a form of 'critical education praxis' (Aarnikoivu et al, 2020, p.18).

4. CONCLUSION AND RECOMMENDATIONS

This review has explored the wide range of peer-led interventions available to HE institutions as a way of enhancing the student experience. There is a wealth of evidence of the benefits of such programmes in terms of attainment, retention and wellbeing among others. It has also explored the role that such programmes can play in assisting students from non-traditional backgrounds in developing the 'cultural capital' that such students need to develop in order to successfully negotiate their academic career. One criticism of many of the studies, as expressed by Rosenman *et al* (2011) and the QAAHE (2008) among others, is the relative lack of empirical, quantitate data on which to base evaluations of the effectiveness of such programmes and this is reflected in the recommendations below. Other recommendations are drawn from the findings in Section 3.3 and indicate where in the literature such recommendations are supported.

Recommendations:

- That further, quantitative, research be undertaken which seeks to establish causal links between peer-led interventions and the reported benefits (Rosenman *et al* 2011; Andrews & Clark 2011; Advance HE 2020b).
- That new students, should be introduced to such programmes **before** the start of the academic year in order to establish rapport before they experience the potential clash between their own 'cultural capital' and that of the HE establishment (Hayman *et al* 2022).
- That effective training is given to tutors/leaders/mentors in order to perform their role and that, where possible, this training should be accredited (Advance HE 2020b; Andrews & Clark, 2011).

- That the planning and implementation of such programmes should be included in the strategic planning of the establishment rather than being an adjunct to academic programmes (QAAHE, 2008; Macauley, 2016) and should be linked to KPIs to ensure 'buy-in' (Advance HE 2020b).
- That such programmes should be implemented based on a needs analysis of students so that the interventions is targeted on real need rather than perceived benefits (Andrews & Clark, 2011).

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APPENDICES

Appendices 1 Ethics Form

APPLICATION FOR ETHICAL APPROVAL

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of **research activity**: "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the "principal researcher".

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity. Please see Checklist for details of process for different categories of application.

SECTION A: About You (Principal Researcher)

1	Full Name:		Kenneth Dicks				
2	Tick all boxes that apply:		Member of staff:	V	Honorary research fellow:		
	Undergraduate Student		Taught Postgraduate Student	\boxtimes	Postgraduate Research Student		
	1 ('((/) 1))		N AII 6 10 1 6			1	
3	Institute/Academic Discipline/Centre:		Yr Athrofa/Centre for Humanities and Social Sciences				
4	Campus:		Carmarthen				
5	E-mail address:		1605981@student.uwtsd.ac.uk / ken.dicks@uwtsd.ac.uk				
6	Contact Telephone Number:		07950482555				
	For students:						
7	Student Number:		1605981				
8	Programme of Study	y:	MA Equity & Diversity in Society				
9	Director of Studies/Supervisor:		Associate Professor Dr. Caroline Lohmann-Hancock				

SECTION B: Approval for Research Activity

1	Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)			\boxtimes	NO	
					Date	
2	source of approval (and Committee					
	date where known): Institute Research **Approval in principle must* Committee					
	be obtained from the relevant source prior to seeking ethical approval	evant source prior to Assoc Prof C Lohman		\boxtimes	08/02/2	2022

SECTION C: Internal and External Ethical Guidance Materials

	Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, location-specific codes of research ethics, and also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines. You may add rows to this table if needed.				
1	UWTSD Research Ethics & Integrity Code of Practice	\boxtimes			
2	UWTSD Research Data Management Policy	\boxtimes			
3	BERA Ethical Guidelines				
4	BSA Statement of Ethical Practice				

SECTION D: External Collaborative Research Activity

If there are external collaborators then you should gain consent from the contact persons to share their personal data with the university. If there are no external collaborators then leave this section blank and continue to section E.

1	Institution				
		N/A			
2	Contact person name				
		N/A			
3	Contact person e-mail				
	address	N/A			
4	Is your research externally fund	ded?	YES	NO	
5	Are you in receipt of a KESS s	cholarship?	YES	NO	
6	Are you specifically	Voluntary	YES	NO	
7	employed to undertake this	Francisco			
1	research in either a paid or	Employed	YES	NO	
	voluntary capacity?		0		

8	Is the research being undertaken within an existing UWTSD Athrofa Professional Learning Partnership (APLP)?	If YES then the permission question below does not need to be answered.	YES	NO	
9	Has permission to undertake the research has been provided by the partner organisation?	(If YES attach copy) If NO the application cannot continue	YES	NO	

Where research activity is carried out in collaboration with an external organisation

10	Does this organisation have its own ethics approval system?	YES	NO	
	If Yes, please attach a copy of any final approval (corganisation (this may be a copy of an email if approximation)		al) from	the

SECTION E: Details of Research Activity

1	Indicative title:	The Benefits of Peer-Led Interventions: Lesions from Practice					
2	Proposed start date:	14/02/2022	Proposed end date:	10/10/2022			
	Introduction to the F	Research (maximum 300 words per section)					
	Ensure that you write for a <u>Non-Specialist Audience</u> when outlining your response to the points below:						
	Purpose of Research Activity: Aims of Research Activity: Objectives of Research Activity:						
	Demonstrate, briefly, activity and explain	Demonstrate, briefly, how <u>Existing Research</u> has informed the proposed activity and explain					
	What the research activity will add to the body of knowledge How it addresses an area of importance. O						
3	Purpose of Research Activity This literature review seeks to establish the benefits of re-introducing a PAL intervention such as PASS to a higher education setting and therefore seeks to: • To investigate the efficacy of Peer-Led Interventions						
	Details of the proposed focus of the literature review are given in Section E7 below.						

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Research Question

The research question has been devised in order to support the ongoing development of support for students from a range of backgrounds and experiences.

 What is the evidence for the effectiveness of Supplemental Instruction interventions in Higher Education?

Aims of Research Activity

- To differentiate between peer-learning and peer-mentoring schemes (supplemental instruction)
- To explore the elements of a successful Supplemental Instruction scheme
- To consider how peer-led learning interventions impact upon:
 - o Student Performance
 - o Student Wellbeing
 - Student engagement/retention
 - o Employability for leaders/coaches/mentors

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4

Objectives of Research Activity

 To establish the evidence for the impact of peer -led Supplemental Instruction schemes on a variety of aspects of the student experience

- To establish the evidence for the benefit of peer -led Supplemental Instruction schemes for Higher Education establishments
- To analyse the potential benefits of various peer -led Supplemental Instruction

Proposed methods (maximum 600 words)

Provide a brief summary of all the methods that **may** be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed. You do not need to justify the methods here, but should instead describe how you intend to collect the data necessary for you to complete your project.

This research will take the form of a desk-based literature review of relevant information. This will include peer reviewed journal articles as well as polices and papers produced by organisations.

Please see Section E3 for Reference list

As described by Keenan (2014, p.8), there are a variety of terms used to describe 'student-led peer academic learning activity' in UK Higher Education (HE). Keenan goes on to differentiate between 'peer-learning and peer-support approaches' (Ody *et al*, 2013 *cited in* Keenan, 2014) and 'peer-mentoring' (Andrews, 2011 *cited in* Keenan, 2014).

The first task of this review is to differentiate between peer-learning and peermentoring approaches. In this section the work will also identify the conflation of the two terms (e.g. HEA Toolkit and Giles *et al 2016*) In terms of the former, this study will focus on two common approaches (Keenan, 2014, p.9), namely the Peer Assisted Learning (PAL) (Donaldson & Topping, 1996; Glynn *et al*, 2006; Longfellow *et al*, 2008; Hammond *et al* 2010; and, Bailey, 2021) and Peer Assisted Study Support (PASS) (Timpson & Ellis, 2013; Dawson *et al*, 2014; European Centre for PASS-SI, 2020; Connolly-Pnagopoulos, 2021). In terms of the latter, the review will draw on a range of literature exploring per-mentoring approaches (Andrews & Clark, 2011; Christie, 2014; Cornelius *et al*, 2016; Olivier & Burton, 2020). It will also seek to establish an academically accepted phrase to use for all such peer-led interventions based on research such as that carried out by Dawson et al (2014).

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13	A resilient Wales		X		
12	A prosperous Wales		\boxtimes		
	Does your research relate to one or more of the seven a of the Well-being of Future Generations (Wales) Act 2015?		ES	NO	
	(this box should expand as you type)				
11	If Yes, please provide details here of how you will gain access to specific documentation that is not in the public domain and that this is in accordance with the current data protection law of the country in question and that of England and Wales.				
10	documents <u>NOT</u> publicly available?	YES			
9	N/A Use of documentation not in the public domain: Are any	NO		\boxtimes	
	Research activity outside of the UK If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (e.g. from local professional associations/learned societies/universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural and/or legal sensitivities or vulnerabilities of participants. If you live in the country where you will do the research then please state this.				
8	UWTSD Carmarthen and Student's Home				
	Location of research activity Identify all locations where research activity will take place.				
	'critical education praxis' (Aarnikoivu <i>et al</i> , 2020, p.18).				
	make recommendations for the adoption of a peer-led support				
	Plan (HEFCW, 2021). Finally, the literature review will seek to draw conclusions from	n the liter	atur	e and	
	wellbeing in line with the Well-being and Health Strategy and I			on	
	Funding Council for Wales (HEFCW), 2020, p.7). The review w establish links between peer learning and peer mentoring sche			to	
	line with the Quality Assessment framework for Wales (Higher				
	of student attainment, progression, completion and employme	nt outcor	nes	in	
	mentoring approaches in terms of the identifiable benefits and	barriers	in te	erms	

15	A more equal Wales	\boxtimes		
16	A Wales of cohesive communities		\boxtimes	
17	A Wales of vibrant culture and thriving Welsh language		\boxtimes	
18	A globally responsible Wales		\boxtimes	
19	If YES to any of the above, please give details:			
	12) The identification of interventions which improve the academic outcomes of such students will allow them to engage more effectively with employment thus contributing to a more prosperous Wales. 13) The identification of interventions that improve student wellbeing is related to the aim of creating a healthier Wales 15) The identification of interventions that support the achievement of widening access students is related to the aim of creating a more equal Wales			

SECTION F: Scope of Research Activity

	Will the research activity include:	YES	NO
1	Use of a questionnaire or similar research instrument?		\boxtimes
2	Use of interviews?		\boxtimes
3	Use of focus groups?		\boxtimes
4	Use of participant diaries?		\boxtimes
5	Use of video or audio recording?		\boxtimes
6	Use of computer-generated log files?		\boxtimes
7	Participant observation with their knowledge?		\boxtimes
8	Participant observation without their knowledge?		\boxtimes
9	Access to personal or confidential information without the participants' specific consent?		\boxtimes
10	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?		\boxtimes
11	Performance of any acts which may cause embarrassment or affect self-esteem?		\boxtimes
12	Investigation of participants involved in illegal activities?		\boxtimes
13	Use of procedures that involve deception?		\boxtimes
14	Administration of any substance, agent or placebo?		\boxtimes
15	Working with live vertebrate animals?		\boxtimes
16	Procedures that may have a negative impact on the environment?		\boxtimes
17	Other primary data collection methods. Please indicate the type of data collection method(s) below. Details of any other primary data collection method:		\boxtimes

(this box should expand as you type)	
(and box endand expand de year type)	

If NO to every question, then the research activity is (ethically) low risk and **may** be exempt from **some** of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

If there are no participants then do not complete this section, but go directly to section H.

	Who are the intended participants:	YES	NO
1	Students or staff at the University?		
2	Adults (over the age of 18 and competent to give consent)?		\boxtimes
3	Vulnerable adults?		\boxtimes
4	Children and Young People under the age of 18? (Consent from Parent, Carer or Guardian will be required)		\boxtimes
5	Prisoners?		\boxtimes
6	Young offenders?		\boxtimes
7	Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?		\boxtimes
8	People engaged in illegal activities?		\boxtimes
9	Others. Please indicate the participants below, and specifically any group who may be unable to give consent.		
	Details of any other participant groups:		
	(this box should expand as you type)		

	Participant numbers and source Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?				
How many participants are expected?					
	(this box should expand as you type)				
11	Who will the participants be?	N/A			
		(this box should expand as you type)			
12	How will you identify the participants?	N/A			

	(this box should expand as you type)

	Information for participants:	YES	NO	N/A
13	Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?			\boxtimes
14	Will you tell participants that their participation is voluntary?			\boxtimes
15	Will you obtain written consent for participation?			\boxtimes
16	Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?			\boxtimes
17	If the research is observational, will you ask participants for their consent to being observed?			\boxtimes
18	Will you tell participants that they may withdraw from the research at any time and for any reason?			\boxtimes
19	With questionnaires, will you give participants the option of omitting questions they do not want to answer?			\boxtimes
20	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?			\boxtimes
21	Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?			\boxtimes
22	If NO to any of above questions, please give an explanation	on		
	(this box should expand as you type)			

	Information for participants:	YES	NO	N/A
24	Will participants be paid?			\boxtimes
25	Is specialist electrical or other equipment to be used with participants?			\boxtimes
26	Are there any financial or other interests to the investigator or University arising from this study?			\boxtimes
27	Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?			\boxtimes
28	If YES to any question, please provide full details			
	(this box should expand as you type)			

SECTION H: Anticipated Risks

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	Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them.					
	If you have completed a full risk assortation and alternative completed a full risk assortation and the second completed and the seco	•	-	-		
1	Full risk assessment completed and append	ed?	Yes No			
2	Risks to participants For example: sector-specific health & sa disclosure, physical harm, transfer of pe information	rsonal data, sensitive organis	sational			
	Risk to participants:	How you will mitigate the risk to p	articipan	ts:		
3	N/A If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities					
	N/A (this box should expand as you type)					
4	Risks to the investigator For example: personal health & safety, paccusation of harm/impropriety, conflict of	of interest		sk of		
	Although unlikely, given the focus of the literature review, it is possible that the Researcher may engage with literature that may cause emotional or psychological harm.	Use reflective practite techniques to enobjectivity whilst undertaking the review Discuss any issues Supervisor Utilise additional sor support (e.g. Stresservices) if neces	ce nsure literatu arising urces o udent	with		
5	University/institutional risks For example: adverse publicity, financial	loss, data protection				
	Risk to the University:	How you will mitigate the risk to the	he Unive	rsity:		
	The main risk identified is that to Institutional Reputation.	The researcher will all ethical guidelines Section C above.				

	(this box should expand as you type)	
6	Environmental risks For example: accidental spillage of pollu	tants, damage to local ecosystems
	Risk to the environment:	How you will mitigate the risk to environment:
	None Identified	 Very limited carbon footprint implications due to nature
	(this box should expand as you type)	of a desktop research activity
		(this box should expand as you type)

	Disclosure and Barring Service			
	If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.	YES	NO	N/A
7	Does your research require you to hold a current DBS Certificate?			
8	If YES, please give the certificate number. If the certificate number is not available please write "Pending"; in this case any ethical approval will be subject to providing the appropriate certificate number.			

SECTION I: Feedback, Consent and Confidentiality

1	Feedback	
	What de-briefing and feedback will be provided to participants, how will this be	
	done and when?	
	done and when:	
	N/A	
	(this box should expand as you type)	
2	Informed consent	
	Describe the arrangements to inform potential participants, before providing	
	consent, of what is involved in participating. Describe the arrangements for	
	participants to provide full consent before data collection begins. If gaining	
	consent in this way is inappropriate, explain how consent will be obtained and	
	recorded in accordance with prevailing data protection legislation.	
	N/A	
	14/7	
	(this have also also are and as you true)	
_	(this box should expand as you type)	
3	Confidentiality / Anonymity	
	Set out how anonymity of participants and confidentiality will be ensured in any	
	outputs. If anonymity is not being offered, explain why this is the case.	
	N/A	
	IV/^\ 	
	(this box should expand as you type)	

SECTION J: Data Protection and Storage

	Does the research activity involve personal data (as defined by the General Data Protection Regulation 2016 "GDPR" and the Data Protection Act 2018 "DPA")?	YES	NO
1	"Personal data" means any information relating to an identified or identifiable natural person ('data subject'). An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person. Any video or audio recordings of participants is considered to be personal data.		×
	If YES, provide a description of the data and explain why this data collected:	a needs	to be
2	(this box should expand as you type)		
	Does it involve special category data (as defined by the GDPR)?	YES	NO
3	"Special category data" means sensitive personal data consisting of information as to the data subjects'— (a) racial or ethnic origin, (b) political opinions, (c) religious beliefs or other beliefs of a similar nature, (d) membership of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992), (e) physical or mental health or condition, (f) sexual life, (g) genetics, (h) biometric data (as used for ID purposes),		×
	If YES, provide a description of the special category data and expediate needs to be collected:	olain why	this
4	(this box should expand as you type)		

	Will data from the research activity (collected data, drafts of the thesis, or materials for publication) be stored in any of the following ways?	YES	NO
5	Manual files (i.e. in paper form)?		\boxtimes
6	University computers?		
7	Private company computers?		\boxtimes
8	Home or other personal computers?		\boxtimes
9	Laptop computers/ CDs/ Portable disk-drives/ memory sticks?		
10	"Cloud" storage or websites?		\boxtimes
11	Other – specify:		
12	For all stored data, explain the measures in place to ensure the security of the data collected, data confidentiality, including details of backup procedures,		

password protection, encryption, anonymisation and pseudonymisation:

Both the University Computer and USB memory stick are password protected.

(this box should expand as you type)

	Data Protection		
	Will the research activity involve any of the following activities:	YES	
13	Electronic transfer of data in any form?	\boxtimes	
14	Sharing of data with others at the University outside of the immediate research team?	\boxtimes	
15	Sharing of data with other organisations?		
16	Export of data outside the UK or importing of data from outside the UK?		
17	Use of personal addresses, postcodes, faxes, emails or telephone numbers?		
18	Publication of data that might allow identification of individuals?		
19	Use of data management system?		
20	Data archiving?		
21	If VES to any question, please provide full details, explaining how this will be conducted in acco		
	I have full support from the Student Services team working on the PASS intervention; so Kate Butler Fri 19/11/2021 11:18 To: Ken Dicks Cc: Jo Kelleher; Christopher Fleming WISA PASS Handbook 2019 PASS at UWTSD Evaluation R 2 attachments (3 MB) Save all to OneDrive - University of Wales Trinity Saint David Download all Hi Ken, A few research papers/links you might find useful, and documents produced by Chris and me when we attempted to get trigger a review of PASS a cour latest training handbook and a review of PASS activity undertaken by Catrin Macaulay in 2015-16 just after the first year of PASS activity. You have already been put on the online PASS leader training 'module' we created last year (just search PASS Leader Training on Moodle). This module make it a more professional and less wordy affair. Nevertheless, I think we did quite well to get something online in such a short timeframe. Cheers Kate	出 ら ouple of years ago. A	
22			
23	List who will have control of, and act as custodian(s) for, data generated by the research	h activity:	

Researcher only (no primary data will be generated)

(this box should expand as you type)

24	Give details of data storage arrangements, including security measures in place to protect the data, where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.			
	(this box should expand as yo			
25	Please indicate if your data will be stored in the UWTSD Research Data Repository (see https://researchdata.uwtsd.ac.uk/). If so please explain. (Most relevant to academic staff)			
	N/A			
26		ead the UWTSD guidance on data:://www.uwtsd.ac.uk/library/research-	YES	\boxtimes
27	Confirm that you are aw	are that you need to keep all data until completed or the end of your funding	YES	
SEC	CTION K: Declaration			
	The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants. In submitting this application I hereby confirm that I undertake to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice which is published on the website: https://www.uwtsd.ac.uk/research/research-ethics/			
1	Signature of applicant:		Date: 08/02/20)22
For	STUDENT Submission	s:		
2	Director of Studies/Supervisor:		Date:	
3	Signature:			
For	STAFF Submissions:			
4	Academic Director/ Assistant Dean:		Date:	
5	Signature:			

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

	I have read the guidance notes supplied before completing the form.
\boxtimes	I have completed ALL RELEVANT sections of the form in full.
\boxtimes	I confirm that the research activity has received approval in principle
	I have attached a copy of final/interim approval from external organisation (where appropriate) Copy of Email in Section XX
	I have attached a full risk assessment (where appropriate) ONLY TICK IF YOU HAVE ATTACHED A FULL RISK ASSESSMENT
\boxtimes	I understand that it is my responsibility to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice.
	I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Academic Director.

RESEARCH STUDENTS AND STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk, with the title 'Ethical Approval' followed by your name.

You will be informed of the outcome of your claim by email; therefore it is important that you check your University and personal email accounts regularly.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

This form is available electronically from the Academic Office web pages: https://www.uwtsd.ac.uk/academic-office/appendices-and-forms/

Appendices 2: Proposal Form



Institute of Education and Humanities/ Yr Athrofa Addysg a'r Dyniaethau

MA Dissertation Approval Form/ Ffurflen Gymeradwyo Traethawd Hir MA ECGE7002Q

Student Name/	
Enw Myfyriwr	Ken Dicks
Degree Scheme/	MA Equity & Diversity in Society
Cynllun Gradd	
Start date/	
Dyddiad	
cychwyn	

I have completed Part 1 of my degree.

- Title of Dissertation:
- Teitl eich Traethawd Hir
 - o The Benefits of Peer-Led Interventions: Lessons from Practice
- Resreach Question
- Cwestiwn Ymchwil
 - What are the benefits of Supplemental Instruction Programmes for Higher Education?

Aims and Objectives:

Nodau ac Amcanion

- Introduction
 - This literature review is designed to gauge the ways in which a PAL can effectively support teaching and learning in Higher Education.
- Literature Review
 - o Theme
 - Student Performance

^{*}Please delete as appropriate.

- o Theme
 - Student Wellbeing
- o Theme
 - Student engagement/retention
- o Theme
 - Employability PAL leaders

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Abstract/Plan (approximately 500 words):

Crynodeb (tua 500 gair):

INTRODUCTION

LITERATURE REVIEW

Introduction

Definitions: Widening Access/Participation, Peer Assisted Learning (PAL)

Programmes, Peer Assisted Study Support (PASS), Supplemental Instruction (SI) and Peer Mentoring

The 'Cultural' Implications of the Widening Access agenda.

Effects on Student Performance

Effects on Student Wellbeing

Impact on Student Engagement and Retention

Impact on Widening Access/ Non-Traditional Students

Impact on Employability of PAL Leaders 22

Conclusion

DISCUSSION OF RESULTS

Introduction

Theme 1: Summary of the Benefits of Supplemental Instruction

Theme 2: Considerations for Higher Education establishments

Conclusion

CONCLUSION AND RECOMMENDATIONS

Short Introductory Bibliography: Llyfryddiaeth rhagarweiniol byr

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Proposed Supervisor: Goruchwyliwr awgrymedig

Dr. Caroline Lohmann-Hancock

Please indicate whether ethical approval for project is needed – YES/NO

Nodwch a oes angen cymeradwyaeth foesegol ar gyfer y prosiect - OES / NAC OES

Please indicate whether sufficient resources are available for the project – YES/NO

Nodwch a oes digon o adnoddau ar gael ar gyfer y prosiect - OES / NAC OES

The above topic, proposal, and supervisor have been agreed: *Cytunwyd ar y pwnc, y cynnig a'r goruchwyliwr uchod:*

Signed:	Programme Director/
Llofnod rhaglen	Cyfarwyddwr y
Date: Dyddiad	

Please return this form to your Programme Director.

Dychwelwch y ffurflen hon at eich Cyfarwyddwr Rhaglen.