'Student-y or Studious': An exploration of students' perceptions of parallel learning in pre-registration physiotherapy education.

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Abstract

Background/Aim: Within the United Kingdom (UK) physiotherapy pre-registration training is provided at both undergraduate and postgraduate level at 17 Higher Education Institutions (HEIs). Some course teams approach this by teaching pre-registration BSc and MSc students simultaneously to meet the same learning outcomes. This is often termed 'parallel learning' and it is not known how students perceive this mode of learning. The aim of the study was to explore the perceived benefits and challenges to parallel learning of pre-registration BSc and MSc physiotherapy students.

Methods: Students from two different UK based HEIs participated in an exploratory qualitative research design, with data collected in focus groups of each cohort and HEI. Data were analysed using thematic analysis.

Results: Several themes arose from student perceptions of parallel learning that were sceptical: 'starting over again', 'misunderstanding each other's motivations', 'establishing knowledge hierarchies' and 'competing for space'. However some themes emerged from students reflections on the perceived benefits of parallel learning including 'healthy competition' and 'learning from difference'.

Conclusions: It is clear from findings that students perceive the benefits of parallel learning of mixed groups. However to avoid perceptions that it is merely cost cutting, learning resources need to be maintained and from the outset clear explanations of the purposes should be given to students.

Keywords: parallel teaching; parallel learning; cohort-based education; graduate programs

Introduction

Within the United Kingdom (UK) pre-registration physiotherapy training is provided by thirty-five Higher Education Institutions (HEIs) to enable successful students to graduate with Honours level degree awards. Seventeen of these HEIs also offer two-year accelerated Master's level qualifications to provide equal eligibility to apply for licence to practice as a physiotherapist (Chartered Society of Physiotherapy, 2016). The term 'accelerated' is used to mean those courses that run shorter than traditional routes but without significant loss in content (Grounds, 1996). Whilst upholding the clinical and academic standards of proficiency (Health and Care Professions Council, 2013) the manner in which curriculum is delivered varies from institute to institute. Prior to 2017 pre- registration physiotherapy education was publicly funded within the UK. It has been expected of curriculum designers and providers to deliver effective and efficient modes of teaching and learning. The forthcoming Teaching Excellence Framework (TEF) is the UK government's new monitoring and assessing process that will provide students and stakeholders with the information they need to judge teaching quality at Higher Academic Institutions (Department of Business, Innovation and Skills, 2016). Therefore it is essential that any curriculum interventions are evaluated to ensure teaching quality is balanced with value for money.

The two HEIs involved in this study have developed approaches that deliver elements of the pre-registration physiotherapy curriculum to both undergraduates and postgraduate students simultaneously. Although rare in the literature one study (University of Adelaide, 2006) described this approach as 'parallel teaching' to indicate 'any form of teaching that involves a significant component of undergraduate content forming part of a postgraduate course; or any form of teaching that involves undergraduate and postgraduate students being located in the same class'. Dodd (2012) argues that this is possible when the content-related learning

outcomes are similar for the two different groups. For successful implementation there is a need to recognise and implement the differing academic standard requirements for the two groups (Quality Assurance Agency, 2008) and ensure that the assessment methods rightly reflect these different levels at both HEIs.

These have been the experiences for the approach at the two HEIs under investigation in this study. In the early stages the justification for the new parallel teaching approach was to enable efficiency of curriculum planning and delivery without loss of quality. When developing and implementing this approach additional pedagogical benefits were foreseen in terms of student peer learning and support. In both of the HEIs involved in the study the curriculum had been deliberately planned to include several shared teaching modules related to the broad areas of musculoskeletal, neurological and cardio respiratory physiotherapy practice for Year 2 BSc students and Year 1 MSc students. In the final years of each programme, modules related to different physiotherapy contexts and service delivery are also shared. Both MSc and BSc groups are required to participate in all aspects of the shared modules including lectures, practically-based sessions or enquiry-based learning depending on module level and learning outcomes. Students do have other cohort specific modules where they are taught separately. An example of how the two cohorts are taught in parallel is given in Figure 1. All cohorts have similar staff:students ratios regardless of whether they are shared or in the more traditional single cohort format. The cohorts are equivalent in demographics including gender (MSc 74%, BSc 70% women), ethnicity (MSc 81%, BSc 72% white background) and mean age (MSc =24 years, BSc =23 years of age). All MSc participants have already previously completed degree level study. Due to the significant numbers of mature applicants to physiotherapy in the UK the BSc cohorts in both institutions have some students with prior experience of higher education although not necessarily in a science related subject.

Figure 1 – Map of parallel learning experiences across the BSc and MSc pre-registration physiotherapy curriculum – example from one HEI

These approaches to shared teaching have only recently been adopted within the last two academic years at each HEI. Staff recognised the strengths and opportunities of students learning in parallel given that both undergraduate and postgraduate cohorts may have something different to contribute. This is because the undergraduates had the benefits of studying the physiotherapy foundation modules for a full academic year whilst the latter group were able to share their knowledge and skills from studying a science related degree. Anecdotal feedback from students at both HEIs seemed generally positive, however we recognised some hesitation in early classroom activity. Despite the justification for parallel teaching at these HEIs there is a lack of evidence of the impact of the approach on student perceptions and experiences of learning together. For this we have derived the term 'parallel learning'. Therefore given this context, it is important to examine this phenomenon explore the benefits or otherwise of this decision from students' perspectives and to understand the implications for future curriculum planning.

Purpose

The aim of the study was to explore the perceived benefits and challenges to parallel learning of mixed undergraduate and postgraduate pre-registration physiotherapy students in the same learning environments. The overall study objectives were: i) to explore the social and academic interaction of students from differing cohorts whilst in the same learning environment; ii) to identify elements of good practice that students utilise in their learning, revision and consolidation of theory and practice skills; iii) to explore how 'classroom' experiences fed into clinical practice experiences. This paper explores the first objective.

Methods/ Analysis

Being an exploratory study a qualitative interpretive approach was used. To describe the participants' view of parallel learning (the phenomenon) we adopted a theoretical perspective of social construction (Gergen, 2009) and used focus group data collection methods (Robson, 2011) to facilitate open discussions with pre-registration physiotherapy students. To aid transferability of findings the two HEIs (who offer a mode of delivery where parallel learning forms some part of the student experience) mutually agreed to participate in the study. As the opportunities for parallel learning were most varied in the preliminary modules, we made a deliberate decision to invite Year 2 BSc and Year 1 MSc students to participate in separate focus groups for each student group and institution, making four in total.

The research team were academic staff from within the physiotherapy teaching teams of the two universities. Ethical approval was gained from both universities' respective Local Research Ethical Committees. Beneficence and non-maleficence were upheld (Beauchamp and Childress, 2013). It was appreciated that students' anonymity and confidentiality had to be assured. Recruitment of participants was by email via respective Course Leaders. Those wishing to participate received information sheets and consent forms that explained the rationale and procedure for the study. These were returned to the respective Course Administrators to aid the anonymity of the participants from the research team. All participants were informed that they could withdraw from the study up to the point of data analysis. To aid dependability of the data collection (Lincoln and Guba, 1985) the four focus groups at the two different universities were facilitated by the same experienced academic member of staff from outside of the physiotherapy teaching teams. Furthermore, pre-determined questions were developed by the research team based on principles for semi-structured interviews (Robson,

2011, p.278). The focus groups started by asking if each student group knew the other cohort before the course/module started and continued with such questions as 'How did you feel about studying with students from another course [cohort]?' Clarification, elaboration and continuation probes (Rubin and Rubin, 2005) were used during the focus groups. See Appendix A for the interview topic guide. During discussions participants identified themselves by numerical pseudonym only [e.g. 'Participant 1']. The data was recorded digitally and transcribed verbatim by staff external to the teaching teams. No identifying features were transcribed to enable the researchers to analyse the anonymous data.

Transcripts were read by the researchers repeatedly for familiarisation and immersion in the underlying data (Braun and Clarke, 2006; Howitt and Cramer, 2014). Using a thematic analysis the research team from both universities used line-by-line and focussed coding to establish emergent themes (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006). Researcher triangulation was ensured as each data item was reviewed by each researcher in a blinded coding process to enhance confirmability and trustworthiness of the process (Vaismoradi, Turunen and Bondas, 2013; Lincoln and Guba, 1985). Codes were either descriptive in nature that matched exact phrases within the text or interpreted the meaning of the text. Codes were clustered to discover themes (Howitt and Cramer, 2014). As part of analytical process schematic diagrams were used to review common links and patterns of emergent themes. In addition we approached the reading of the data from a phenonemological philosophical standpoint (Howell, 2013). This positioning enabled us to seek understanding of the phenomenon of parallel learning from the lived experiences of students. As all the researchers were involved in constructing and delivering the programme curricula in their institution there can be no claims to neutrality. Nevertheless our knowledge and experience helped to

contextualise the phenomenon under investigation, but we reviewed our analysis iteratively and reflexively.

Findings

In total twenty-three students participated in the four focus groups (fourteen females and nine males with a similar proportion from each institution or cohort). On average each of the four focus groups lasted forty-five minutes. Several principal themes arose. A lack of suitable induction led to misunderstandings of the rationale for the parallel learning. Many student participants initially viewed the concept with scepticism. This led to a sense of segregation and that the group dynamics had altered. The undergraduates felt more 'intimidated' initially in open classroom discussions as they put the Masters students on a pedestal assuming that the latter had significantly greater knowledge. However, with time both cohorts felt that their counterparts brought something new to the classroom, that they learnt from each other and adopted a 'sense of healthy competition'.

The following section discusses themes that arose from the data analysis. The themes are not necessarily chronological but appeared to evolve at differing rates and stages of the shared learning experiences.

'Thinking I was in the wrong room': Starting again

Student participants blamed what they recalled and perceived to be a lack of detailed introduction and induction to the parallel learning process. This was said to be confusing to the students groups who felt that they were forced to 'start again':

> 'When we left for summer we were under the impression that we were going
> to carry on how we were before. So then when we came back it was quite
> a bit of a shock' *[HEI-A MSc]*.

I don't think I realised how many joint classes we'd have with them. I don't

know if I just didn't really think about it.

We might have been told that they were going to be there, but I just hadn't

put two and two together *[HEI-B BSc]*.

An undergraduate student agreed recalling 'confusion' because 'I remember walking in and thinking I was in the wrong room' *[HEI-B BSc]*. The Master's students from the same university also recalled 'very much a kind of throwaway comment' from the staff that the undergraduates would be 'with the MScs now.' To these students 'the intention was almost negative from the beginning' *[HEI-B MSc]*. Students from the other university agreed:

We weren't even warned that they were coming in, were we? So we came

into our first lecture and they were there. So I think, straight away, everyone

just sort of sat back. Then again it's almost like a whole new group again

[HEI-A BSc].

Students considered that it was the lecturing staff's role to have organised some event to aid this. However, even though an event had been organised for them the undergraduates accused the Masters students of leaving 'as soon as they could in that session. They were like "I don't need to do this, I can go" ' *[HEI-A BSc]*. To the undergraduates it could be viewed that the Masters' students rejected integration from the beginning of the classroom interactions. However, one focus group noted a division much earlier:

On the open day to the prospective students, me and [Participant] 'Number

5' had [met] both BSc and MSc students that had been offered a place. And

at the lunch we approached a table and asked, like 'Oh, are you coming to

[name of university] blah, blah, blah' and they were like 'Yeah, yeah, yeah, an MSc.' And then I said 'No, BSc'. It was, like, silence. It was automatically like they didn't want to talk to me because I wasn't on the MSc course. And I was like 'OK, this is really awkward.' And that's how it was throughout the day, you weren't asked questions unless you were on their course *[HEI-B BSc]*.

Overall their experience of induction appeared detrimental and, based on previous experiences, they had wanted and expected 'ice-breakers' to enable cohesion of the larger group:

because they [the MSc students] haven't stood up in front of the class and gone 'I'm this person, my name is...' you know, sort of like an AA meeting-type thing, there isn't that first integration with them

Hence it appeared that the group dynamics had to be re-created. The students acknowledged that based on their experience of the initial modules in their own group they had created their own cohesive community who knew how each other worked and learnt. 'We're very used to being in a little tight knit group' they said. Additionally:

we trust that the other person doing the work, whereas if you're in a new [combined] group you don't know if they're going to get the work done by the deadline, so that's quite frustrating, especially when you get to the night before and they haven't done it. That's quite difficult *[HEI-A MSc]*.

The MSc students were initially taught in a smaller group and felt thrown into a larger learning environment. They felt that both parties had an 'us versus them' mentality:

And that happens in lots of unis, doesn't it when you're told that groups like

PE and Sports Science don't get along. So you go in on your first day and

you're like 'We don't like you.'

[laughter]

… Like a lot of times you end up, a few of them end up being friends and

it's kind of looked down upon because you're not supposed to mix. I think

there was that bit of a thing going on with us *[HEI-B MSc]*.

These participants believed that the dynamics of their own group had changed fundamentally

and affected their learning in the short-term:

'I think I would say it almost affected our learning to begin with, because

we were a bit like "Why are we mixing these groups? Why can't we be like

we were last time?" ' *[HEI-A MSc]*.

However, underlying issues affected this as discussed in the next section.

'Student-y' or studious? Initial misunderstanding of the other's motivations

There were many misperceptions as each student group felt that they did not understand each

other's backgrounds. There was as strong sense from the outset that the undergraduates needed

to feel secure in their learning environments. The 'others' were perceived as outsiders and were

regarded with suspicion:

so you don't know whether or not [that] if you're going to ask a question

they're going to start sniggering at you. *[HEI-B BSc]*

Analysis of the data indicated that there was an assumed divide in terms of needs and

aspirations between the academic cohorts. The Master's students initially only saw what they

viewed as an age divide between themselves and the undergraduates. To them this appeared to be a retrograde step in their own academic journey. They had assumed that all of the undergraduates were: 'Like 19 year olds. Student-y! and we thought 'Oh God!' ' *[HEI-A MSc]*. This reflected the reactions from the MSc students from the other university who recalled their own and others' undergraduate first year studies in that: 'they get drunk in the first year and do whatever they want to do' *[HEI-B MSc]*. To them this meant that, in class, 'you're not really listening half the time…[laughter]' *[HEI-B MSc]*.

To these Masters participants this was an important issue that contrasted them from their physiotherapy undergraduate compatriots. It appeared that, at the time, these MSc physiotherapy students failed to recognise that undergraduate physiotherapy students might sign up to a similar vocation and wish to take it as seriously:

> 'Like *[for]* a BSc, it's an undergraduate first degree, you know, but us, that's going to be our lifelong career, that means a lot more, maybe...' *[HEI-B MSc]*.

These students viewed their studies as the more important as failure for them was not an option: a 'last hope, last chance' *[HEI-B MSc]*.

> There was a clear distinction between, I guess, maybe our ages or our experience, where we're very 'We're here to learn and we need to get as much out of it as possible because we've got a short amount of time'. And it's a career *[HEI-B MSc]*

It could thus be argued that they initially considered the undergraduate physiotherapists in a similar light to other undergraduate courses that seems disparaging in their viewpoint:

...Well really, though, your first year BSc course, you know, it's not that intense, compared to a first year of a two-year Master's course that's going to qualify you as a physiotherapist in such a short period of time *[HEI-B MSc]*.

However, some undergraduate participants from the same university viewed this very differently and contradicted the Master's students:

I think they [the MSc students] probably just thought everyone [on the undergraduate course] was 18, 19, fresh out of A-levels. I felt there was a little bit of contending [contention]. They were older, they'd done their uni thing. Whereas actually most of us were in our mid to late twenties and we'd done degrees, we'd done uni, we were here like them to focus and get it done, we just didn't qualify for a Master's. I think that was a bit of a tension to begin with, and then once we all got to know each other we realised 'Oh no, we're all in the same boat...' I think that was the cause of the main tension *[HEI-B BSc]*.

Hence the analysis indicates that the MSc student groups made assumptions about undergraduate student motivation to study physiotherapy and the BSc students regarded the MSc students hesitantly.

'BSc's sit back whilst the MSc's take the floor': Establishing a knowledge hierarchy

Both BSc groups discussed the sense of intimidation felt from being with the Masters' students and fear of getting 'something wrong in front of them'. For the undergraduates whilst on their own there had been:

no silly questions last year, but this year people who ask questions, it's like...

'You should already know that, because we [the Masters] do.' *[HEI-A BSc]*

For the Master's students:

...because we'd been so interactive with our lecturers until then, and then all of a sudden it was integrated with the BScs and they weren't so interactive with their lecturers. They wouldn't ask as many questions as we did, like everything we were taught, someone would have something to say about, a question to ask, or an experience to share, and that was how we'd been kind of going about our first couple of weeks. And then all of a sudden we were with this gang who barely answered a question and we would just be, like, barking back at the lecturers with the answers... *[HEI-B MSc]*.

Hence according to the undergraduates:

… when they [the Masters] do know the answer, they tend to dominate quite a lot.

Yes, especially in class discussions. I think most of the BSc sit back while they [the Masters] just take the floor.

Yeah, because they don't want to get involved with it.

Because the Masters know more than us, so it's, like, let them speak *[HEI-A BSc]*.

The analysis indicates a common assumption that the Master's students had greater depth of knowledge even from the beginning of the course. Whether an accurate reflection, or not, the undergraduates favoured this:

In some ways it's good, because they've got knowledge and they can help you in certain aspects that we haven't covered yet.

They're quite good at bringing in, like, discussions to the class as well, instead of just an answer, they kind of make people talk about things *[HEI-A BSc]*.

Some Master's students continued to believe that they were more equipped:

I think another thing is, I know they're not all the same, but the younger ones of them, and maybe some that aren't as strong as others in that group, it's kind of another skill to have, you feel almost – at times I feel that you're almost developing them at the same time. I feel, personally, like I've helped some people in that group with certain aspects of things that maybe I've done before, or whatever. It's another thing that, if you're going into clinical practice, as you move through bands, you're going to have maybe a Band 5 come in, that you're going to have to help and develop and guide. So it's a good skill to have, that one *[HEI-A MSc]*

Either way there remained a notable fear of 'looking stupid':

sometimes I get it where I'm less likely to say something out loud, because I get nervous of what other people might... you know, if you get it wrong. And you kind of get used to the group from last year and you don't mind speaking out, or representing and things like that. But when you've got more people - and people you see as really intelligent - watching you mess up...

And you know they're judging you as well [laughs]. *[HEI-B BSc]*

However, analysis from the Masters' focus groups suggested no such accusation from their perspective:

> They [the undergraduates] knew their stuff. They just wouldn't say it. And we were so pro-active with everything we were learning, I think, and they'd been off for the summer I suppose, as well, and things weren't as fresh in their minds, where we had just had a jam-packed couple of weeks of intense learning and...
>
> And intense bonding. *[HEI-B MSc]*

Despite the MSc students acknowledging the BSc students' experience and knowledge the findings here demonstrate that the MSc students asserted themselves in the classroom. Consequently the BSc students felt intimidated by the assumed control over knowledge that the MSc students had.

'Turf wars' – Competing for space and attention

As well as perceived differences in knowledge there was also a sense of ownership that caused a perceived divide between the two student groups at both universities:

> I think as well, because they had that month or so at the beginning, where they got really close, they probably saw it as invasion of their space. Whereas we had been here a whole year and we come back and then they're here. And then they've been here and then we come back *[HEI-B BSc]*.
>
> That's why I said the word 'turf'. Do you think [that for the undergraduates] there was an element of 'We've been here for a year and it's our place' a little territorial? *[HEI-B MSc]*.

This manifested itself by a physical or geographical divide:

> With the seating as well, it's always like 'first come, first served' to get a decent seat and then if not you're pushed to the back and you struggle to hear [HEI-A BSc].

> Wasn't it the first day we walked in and we all kind of swung to one side and just stuck together in a pocket?- and we all sat at the front as well, which is what the 'matures' would do in an undergrads course, so we kind of looked like an annoying gang at the front who asked all the questions... [laughter] *[HEI-B MSc]*

A major concern for the student groups in relation to shared teaching was the impact on staffing as a resource:

> It's just the numbers thing again, isn't it? It's not necessarily who's there [BSc or MSc students], it's that there are so many people *[HEI-B BSc]*.

As a result, there was a sense that these students felt that in the new combined group 'You sometimes have to fight for their [the lecturers'] attention':

> Yeah, you do have to fight sometimes. Especially if it's a self-directed class - you've got lecturers wandering around. Sometimes you're kind of like... honestly, you just want to wave at them 'Can you come over?' And it's like, they put a one question limit on, and it's going to take twenty minutes *[HEI-B BSc]*.

Hence students in each group identified the need to construct their own learning environments that involved marking out a physical space with their own established community (e.g. BSc group or MSc group) whilst also competing for access to resources.

'Seeing them do it, maybe we can?': Healthy competition

To all groups there was a sense of competition as though one group was pitted against the other. This had negative and positive connotations:

> Although there was one moment I recall of a lecturer creating a bit of competition between the two groups, saying 'Come on BScs, the MScs have only been doing this for six weeks and they're already ahead of you.' So that didn't help *[HEI-B MSc]*.

What was perhaps meant to be gentle competition and motivation 'to kind of kick [the undergraduates] into gear a bit' *[HEI-B MSc]* some comments were viewed as goading and described by the participants as being 'very awkward' and unhelpful to group cohesions. However, amongst themselves there was a sense that the other group did motivate each other to 'work harder'. This was seen as a healthy competition that was self-imposed and self-motivating:

> I guess I haven't really thought about it since just talking about it now, but they probably have made us work a bit harder and made us see that... Yeah, they're kind of playing catch-up, but also they seem to be going above and beyond…..
>
> [laughter]
>
> Yeah. To see it can be done in two years, sometimes, you know, you think 'Oh, I'm stressed, I can't do this', [but], two years is quite a short time space

for physiotherapist to learn everything. Seeing them do it in two years, you

think 'Well, maybe we can' *[HEI-B BSc]*.

In another situation, a student described how the competitive spirit became almost cyclical that fed from one group to the other and back again:

It probably works quite well in that they [the Masters] come in and thought 'Gosh, they've [the undergraduates] had a whole year', so they're panicking, kind of looking up to us in that way, but then, because they're working so hard, we're like 'Oh, they're working really hard, so maybe we should work harder'. So it's probably made everyone work harder *[HEI-B BSc]*.

'They know something different we don't know': Learning from the other cohort

Some participants from both student cohorts conceded the skills and knowledge of the others in that the contributions from the two groups were beneficial:

they [the MSc's] bring a twist to it all. They know something different we don't know. They'll ask certain questions which then bring out a whole new thing which we didn't know *[HEI-A BSc]*

Equally from the MSc's perspective:

it's just that the more people you bring in the more different personalities you're going to have, different kinds of traits and characteristics that are good……. A couple of people [from the BSc group that] I've worked with have done other degrees have made me sit back and think 'You're right there, that's a good point, something that I would never have thought of...'

It's easier to kind of think 'Oh, a BSc, they haven't done as much as us'.
But some of them have,... *[HEI-A MSc]*.

These positive interactions were recognised by the BSc students well:

Especially when they [the Masters] ask questions. They come to us and ask
questions. So that's nice *[HEI-B BSc]*.

In other cases this was not necessarily related to level of knowledge but the parallel learning enabled cohorts to observe how others learnt and developed professionally:

I think they [the Masters] bring quite a strong work ethic as well. They're
really motivated to do well. And I think that does reflect on the way we
would act as physios, maybe last year we were a bit more relaxed, now we
see them really wanting to succeed and obviously pick up what we learned,
and I think that's quite important *[HEI-B BSc]*

Discussion/ Conclusions

This study offered useful insights into parallel teaching and learning. According to Dinsmore and Wenger (2006, p58) learning is 'enhanced through a sense of community' that develops positive relationships and interactions within the cohort. McCarthy, Trenag and Weiner (2005) describe the nature of cohorts as a 'group' having cohesion with strong affiliations sufficient to provide psychological support to each other. In the following discussion findings are considered in the context of the literature and recommendations are made.

In relation to induction or explanation for the new delivery format, as noted, our students misinterpreted or failed to understand the rationale and reasoning for parallel teaching and learning in the merged cohorts. Staff had hoped and anticipated that the joint learning

engendered short-term classroom benefits as much as longer-term learning opportunities into clinical placement practice. Staff believed that examples of short-term benefits included communication skills and the confidence to discuss theoretical concepts with others deemed to be more experienced or knowledgeable than themselves. In the authors' opinion this created greater resilience and empowerment in those students who successfully countered their fears. Examples of longer term benefits could be transferring skills to the clinical environment by enhancing teamwork and leadership.

Despite organised induction activities in each of our institutions the students perceived a lack of explanation that led to mistrust and misunderstanding between groups. It is clear from findings that our students require a clearer rationale from the outset to avoid perceptions that parallel learning is only a means to conserve resources. Findings from our study concur with those from Swayze and Jakeman (2014) who interviewed two separate cohorts who were subsequently joined together as a 'merged cohort' as occurred in our study. Whilst participants from the latter study were not from a healthcare focused programme in both studies students described a change in the nature of the learning environment following the amalgamation. These had both positive and negative connotations. Students from Swayze and Jakeman's study (2014, p108) stated that 'I don't think that it brought out the best in us. It brought us out of our comfort zone, though'. Our students accepted that the new delivery had benefits however there needs to be more explicit introductory activities to foster greater teamwork and cohesion. They advocated 'early integration' suggesting 'a massive ice-breaker at the start' to facilitate interaction amongst the new combined group. Again, our findings agree with Swayze and Jakeman (2014, p107) who suggest that such group introductions are important for group bonding as otherwise each separate cohort 'closed ranks' initially. Furthermore the findings from both studies indicate that boundaries and ground rules are necessary to help different

cohorts of students to integrate. This is in line with advice from Tawse (2015) who advocates 'opportunities for engagement' that include mentoring. Examples of ground rules include agreement of the expectations of both the tutor and the students with agreement of the roles and responsibilities of the group members and action plans should issues arise (Horgan, 2003).

The second theme related to the perception of being 'student-y or studious'. The results from this study show that there were perceived assumptions about each other's motivations with BSc students being perceived as taking the course less seriously than the MSc students. This finding is perhaps surprising as it might be assumed that as the students are from the same profession they would be seen to have similar endpoint motivations. Indeed, physiotherapy remains a highly desirable career choice and the competition for places in the UK is high with approximately 10 students applying for any one place based on our own data. Therefore all HEI's, including our own, are able to be selective and adopt strategies that focused upon previous experience and interviews to determine those with suitable motivation to succeed. Therefore this finding might reflect what van Langenhove and Harré (1999) describe as 'positioning'. In the social context of these early interactions, students describe how they recall how they were either positioning themselves or being positioned in relation to the other cohort in order to make their own actions (speaking up, studying hard) understandable. These findings are common in classroom settings and may contribute to a student's sense of belonging and integration (Forrester et al. 2005). Therefore it may be helpful to scaffold these early interactions with induction sessions to help students recognise similar motivations and minimise assumptions.

A related theme which was identified was that hierarchies were established between the cohorts based on perceived knowledge. In this situation, the MSc students were assumed to have

scientific knowledge and status by virtue of their prior degree and were again 'positioned' as more powerful in the physiotherapy classroom. Therefore the participants utilise 'knowledge' as another strategy to position themselves or others in the classroom (Langenhove and Harré, 1999). Hierarchies in relation to knowledge have been observed between professional groups in the interprofessional education literature (Pollard, Miers and Rickaby, 2012; McFadyen et al, 2010; Mandy, Milton and Mandy, 2004), however this study highlights that hierarchies do form between cohorts of students not only based on different domains of professional knowledge but also in apparent mastery of knowledge. Therefore there may be lessons learned from interprofessional education in that curricula needs to be structured so that students not only learn 'with' each other but also from and about each other (Barr et al, 2016).

Competition for space and resources was another finding. Our participants described situations where claims over space and resources were contested. Postgraduate students were perceived as making claims to the space at the front of the class or 'closest to the action'. This in its own way limited interaction between the two. The competition for space and resources reflect strategies described by Bradley to propose 'challenges' of a minority group entering a community. Bradley (1993) uses migration metaphors to describe three strategies; 'takeover', 'invasion' or 'infiltration' that occur when men enter women's professions. Using this metaphor the dominance of the MSc group in each institution might reflect Bradley's 'invasion' metaphor, where the minority group enter the community and begin to dominate roles and responsibilities. Similarly in Swayze and Jakeman's study (2014) the physical environment was also an issue for both cohorts. Attempts of one group to welcome the other backfired and were misinterpreted as it suggested that the space belonged to one group more than the other. As a result these authors recommended the introduction of a 'new, third space-one that is not

"owned" by either cohort' (Swayze and Jakeman, 2014, p110), and this might have implications for educators considering parallel learning and merging two cohorts.

Although the previous sections may indicate that the competition for space and knowledge was perceived negatively, there were also aspects of competition perceived more positively. With the new merged cohort the undergraduates felt that they needed to 'raise their game'. This was because they continued their perception that the MSc students were more knowledgeable despite them having studied physiotherapy for the shorter time but had the benefit of having previously studied a breadth of science-related subjects. As such our undergraduate cohorts described 'playing catch up'. However, having studied together both undergraduates and postgraduates later agreed that there was less difference between them than first thought and that they were at similar levels of knowledge base and had mutual respect for each other. That said, this outcome may not have been reached without the healthy competition. Our undergraduates believed that, despite feeling intimidated, working with the Master's students was perceived to be both positive and helpful as it encouraged them to 'work harder'. Woodhouse and Athanasos (2006, p132) advocate competition as a 'useful tool for motivating students to improve the effort that they put into the learning process' but with the proviso that group dynamics are reviewed as student personalities and dynamics are not permitted to be 'destructive'. Indeed, Mandzuk (2005, p174) studied the effects of cohort teaching of differing students merged together. He noted 'dense relationships' within the separate cohorts with strong collective identities that led to rivalries in and amongst the group that contributed to a sense of competitive tension.

Lastly, our final theme related to differing students being prepared to learn from the other cohort. Initially, our undergraduate students reported hesitancy in working alongside the

Master's students individually. However, merged cohort teaching and learning provided benefits as identified in our study and that of Swayze and Jakeman (2014, p109) in that 'the merged course provided… the potential for greater variety of perspectives' that aided student learning. Hence, students from differing backgrounds augmented each other's learning as the combined group discussions provided 'another dimension' in terms of greater breadth and perspectives. From a Delphi study of 636 expert clinical educators across the Allied Health Professions Chipchase et al. (2012) identified six themes that the experts expected pre-registration students to demonstrate whilst on clinical practice placement. Two of these themes included students' willingness to engage, assist, learn and practice and students' communication and interactive ability. Our students are taught and encouraged to develop such attributes across the curriculum and the findings from this study suggest that parallel learning has facilitated this. Our students reflected that this helped them academically as well as assisting them in the personal and professional development for future clinical roles.

Impact and implications

The research team accept limitations with this study, not least being that the findings are based on two HEIs in the UK and therefore may not be representative of other arrangements elsewhere. Furthermore, the study was conducted only a few months after the groups were introduced to each other and may reflect initial teething problems and indeed some participants reflected on this in the interviews. Therefore further study may be recommended at a point later in the curriculum when the students have had a more substantial period of integration.

Given that the UK's new Teaching Excellence Framework (TEF) will be more clearly understood in forthcoming years expanding upon this study will further inform curriculum

philosophy. This is to fulfil the aims of the TEF, namely, to engage students in curriculum design and experience.

Finally, when observing or highlighting a phenomenon, such as this, it is likely that there is greater attention may have been paid to the 'issues' which might be indicative of a broader phenomenon of learning in higher education rather than specifically attributed to merged cohorts or parallel learning. Nevertheless these findings have implications for the two institutions involved and readers who also adopt, or are considering, parallel learning may infer their own conclusions within their own context.

Ultimately, students from both sets of academic cohorts viewed the process positively and agreed that they had benefitted from each other's involvement in their learning and this is a reassuring message to both institutions, warranting the continued practice of parallel learning in pre-registration physiotherapy education. The impact of parallel learning on summative assessment results were not analysed as part of this study, but would be worthy of further investigation. However, academic colleagues should recognise that merging of cohorts, even when of the same discipline, poses challenges to individual student trust and confidence. Therefore educators should provide a more overt rationale for parallel learning and spend greater time on formal management of group inductions and interactions. Swayze and Jakeman (2014, p110) recommended that students be provided more information about the cohort merge with 'formal opportunities' for discussion and feedback. This should include ice-breakers but then repeated social induction activities so that the 'rigidity of a[ny one] cohort can be eroded' (Swayze and Jakeman, 2014, p110).

Specifically pedagogic strategies should be designed to help students understand their respective colleagues' motivations and the value of learning with, from and about each other (Barr et al, 2016). Additionally, resources need to be in place to ensure appropriate physical learning spaces and that suitable student: staff ratios remain.

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Appendix A: Topic Guide focus group interviews

Did you know folk from the other group [course] before the modules started?

How did you feel about studying with students from another course [cohort?]

To what extent did the two different groups integrate? If so, how did it work?

Have there been any positives [of mixed teaching and learning]? If so, what were they? What did you enjoy?

Have there been any downsides or challenges? If so, what were they?

Should we continue with this method of mixed group teaching?

If so, what would you change? [Specific examples needed] If not, why not?

What good practice and tips have you picked up from the other cohort? What advice would you offer to future physiotherapy students taking these modules?

How do you envisage that the experience of learning in mixed groups might influence clinical practice?