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BSc (Physiotherapy)

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Student Perceptions of Peer Learning in an Undergraduate Physiotherapy Programme

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Author’s Declaration

I, the undersigned declare that this coursework which I am submitting is all my own work and that I have acknowledged the writings, ideas and work of others. Furthermore, I have not knowingly allowed another to copy my work.

________________________       (Signature)

________________________       (Printed Name)

________________________       (Date)
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To my “ladies”. Without the support, craic and all-round awesome time I’ve had with ye over the past 4 years I would never have made it! Dee, Coon’s, Emma, Marie, Lou lou and The Stephmeister ye have made the last 4 years some of the best of my life- Roll on France and the tans/ freckles!

To our Elm park household- yes Coon’s, Maire & Emma ye’re getting another mention, and to the “sense and sensibility” of Lia and Maarrrieee what a time we’ve had! Girls ye better keep a room or 2 free next year because we will be a calling! Someone has to keep the entertainment going!

To our fourth year class- what an amazing party bunch we have been, let us never lose the laughter or let the good times ever end!
Student perceptions of peer learning in an undergraduate physiotherapy programme

Authors: Julianne Ryan, Dr. Rabia Malik, Dr. Amanda Clifford

Background: Peer Learning (PL) involves people from similar social groupings who are not professional teachers helping each other to learn and learning themselves in doing so (Topping 2005). Despite the predominant amount of PL literature presented in the medical domain and the benefits offered across the undergraduate spectrum (Capstick 2004) there is little evidence with regards student’s perceptions of this learning strategy, in particular undergraduate physiotherapy.

Objectives: To investigate the perceptions of two styles of PL in two cohorts of students in an undergraduate physiotherapy programme. To identify factors influencing these perceptions.

Methodology: This is a pilot quasi-quantitative cross-sectional retrospective questionnaire design. Ethical approval was obtained. A sample of convenience was used - included cohorts of registered second and fourth year University of Limerick physiotherapy students. Both questionnaires (designed by researcher using Survey Monkey®™) consisted of open and closed questions (rated on five-point-Likert scale). Frequency analysis was performed using SPSS for Windows Version 18.0 for closed-questions with thematic analysis undertaken for open-questions.

Results: A valid response rate of 82% (n=44) was obtained and analysed. Frequency analysis revealed that PL was perceived as being beneficial to learning (71% of second years and 83% of fourth years either agreed/Strongly Agreed with the statement) and majority of participants remarked that it did not create any barriers to learning needs. Thematic analysis revealed four dominant themes (learning, teaching, development of skills and peer support) and factors influencing student perceptions.

Conclusion: Both cohorts perceived PL to be valuable in terms of themes identified, which they felt did not inhibit their learning. Factors which affected these perceptions included; Style of PL experienced educational exposure and module expectations.

{Keywords: Peer learning, Undergraduate programme, Perceptions}
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1. Introduction

Peer learning (PL) can be defined as the acquisition of knowledge and skill through active help and support among status equals or matched companions (Topping 2005). It involves people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by so doing. PL operates most usually by using trained third year students (leaders), working alone or in pairs, to regularly supervise the learning of a small group of first year students (learners) (Kassab et al 2005). It may also operate by having leaders within a class tutoring their own classmates. Literature reveals that although all parties may be students there is a clear and consistent differentiation between the leading and learning roles (Boud et al 1999). This group learning is usually classroom-based ‘PL session’ and is designed to offer a range of benefits to an institution, its teaching teams and courses, and to those students involved with it (Capstick 2004). The potential benefits of PL have long been recognised and are especially relevant today (Longfellow et al 2008). Such benefits of this learning strategy are assumed to derive primarily from the environment in which learners can adjust quickly to university life, improve their study habits, acquire a clear view of course direction and expectations and enhance their understanding of the subject matter through group discussion (Capstick 2004; Hudson and Tonkin 2008).

It should be noted that PL has been examined in vast detail in the medical (Secomb 2008) and pharmacological (Santee and Garavalia 2006) fields. Most sources tend to treat PL as an instructional strategy with its success being judged in terms of effect in improving academic results (Hafiz 2008; Forester et al 2004) and clinical skills (Boud et al 1999; Ladyshewsky 2002) for students involved. The most common tool used in this area is questionnaire based with pre/post study questionnaires (Hudson and Tonkin 2008; Forester et al 2004) and course experience questionnaires (Burke et al 2007) being used as outcome evaluators. Within the medical field however the literature examining PL in terms of students’ perceptions is lacking.

Despite the predominant amount of recent PL literature presented in the undergraduate medical domain the evidence in the field of physiotherapy is widely
dispersed over the past twenty-five years. The prime focus of such is clinical competencies and education models in undergraduate clinical placements (Ladyshewsky 2002). The methods of examining its effects, as highlighted above, have also be transferred to the physiotherapy domain with Ladyshewsky (2002) and Solomon and Crowe (2001) being examples of the few authors specifically examining PL in physiotherapy at undergraduate and postgraduate levels. Results of such studies have demonstrated that students in a peer-led group significantly outperformed their peers, in the individual learning group, in the clinical setting (Ladyshwesky 2002). However there was no investigation into how these students perceived this method of learning.

Although there is a considerable lack of literature concerning student’s perceptions of PL in both the medical and physiotherapy domains, Solomon and Crowe (2001) did conduct a study examining the perspectives of the student leaders. This was examined in a problem-based learning (PBL) physiotherapy programme with regards students’ experience of PL versus faculty led learning. Qualitative content analysis of students’ reflective journals outlining their experience indicated that they struggled with basic facilitation skills and had difficulty with separating the role of learner from that of leader with their own classmates. In contrast students described how they developed strategies which allowed them to succeed, were able to evaluate their performance in a positive light and appeared to value their tutoring experience (Solomon and Crowe 2001). This is a beneficial foundation in examining current perceptions surrounding PL in the university environment. However this study focused specifically on peer tutors, not looking at overall perceptions of this learning style and when compared to the level of quantitative analysis performed in this field, it remains deficient.

Studies that have examined the effectiveness of PL using a combination of quantitative and qualitative data (Hudson and Tonkin, 2008; Longfellow et al 2008), helped analyse the diverse features of the PL environment, in comparison to using one research method. The use of this quasi-quantitative approach provides an opportunity to carry out robust tests of quantitative outcomes, while also exploring causative reasons of any differences found (Hudson and Tonkin 2008; Longfellow et al 2008).
It has been acknowledged that although PL has a host of educational benefits there is a significant lack of evidence concerning student’s perceptions of this learning strategy. With this there are noteworthy gaps in the literature with regards PL in the undergraduate physiotherapy programme when compared to other university degree courses. There is disparity in the overall literature when comparing the style of PL between years and how this is reflected in student’s perceptions, investigated with a quasi-quantitative design. Overall this presents a divergence in the current research which identifies the need to examine the styles of PL partaken by students and how this is reflected in their perceptions of this learning strategy in an undergraduate physiotherapy programme.

**Aim:**
To investigate student perceptions of peer learning in an undergraduate physiotherapy programme

**Objectives:**
- To investigate the perceptions of two styles of PL in two cohorts of students in an undergraduate physiotherapy programme
- To identify factors influencing these perceptions.
2. Methodology

2.1. Study Design
This is pilot quasi-quantitative cross-sectional retrospective questionnaire design study. Two cohorts of undergraduate physiotherapy students were asked to complete a questionnaire (Appendix 4) applicable to the style of PL they experienced in the previous academic year.

2.2. Ethical Approval
Ethical approval was obtained through Education and Health Sciences (EHS) research committee prior to commencement of the study.

2.3. Selection Procedure
Research participants recruited were registered second and fourth year undergraduate physiotherapy students of the 2010/2011 academic year, over the age of 18, in the department of physiotherapy, University of Limerick. Second years experienced formal unilateral structured PL sessions delivered by senior students. Fourth years partook in reciprocal group style PBL PL sessions within their cohort (Santee and Garavalia, 2006). The participants were a "sample of convenience" as they were easily accessible and are peers of the primary researcher. Students were recruited by e-mail (sent by the project supervisor (Appendix 1) containing information sheet (Appendix 2) with regards the study and link to the appropriate questionnaire on survey monkey®™. Anonymity was insured, with participants assured that participation was voluntary.

Inclusion criteria:
- Above highlighted cohorts, who consented and had attended a minimum of one PL session.

Exclusion criteria:
- First and third year physiotherapy students; as they did not have had a full academic year experience of PL at the time of recruitment.
- The researcher was excluded from being a fourth year participant to avoid bias.
Any student who provided valid justification from being a participant / refused to give consent.

2.4. Questionnaire design and development

No suitable tool existed for the requirements of this study, thus two questionnaires were designed by the researcher (with unknown reliability and validity) following the recommended method outlined by Hicks (2004). Questionnaires are vehicles for turning abstract concepts into measured variables (Forester et al 2004). The format consisted of mainly closed questions (with the participant rating statements on a 5-point Likert scale from Strongly Disagree (SD) to Strongly Agree (SA) (Vagis and Wade 2006)) with several open questions at intervals throughout the questionnaire (based on approach by Longfellow et al 2008). A quasi-quantitative research tool is particularly effective for a study of this type (Polgar and Thomas 2008). To assess readability, layout and content the questionnaires were piloted on four lecturers and three third year students in the physiotherapy department. Based on feedback structural changes were made.

2.4. Data Collection

Recruitment emails were distributed during the autumn semester of the 2010/2011 academic year by primary investigator. Reminder e-mails (Appendix 3) were distributed four weeks after recruitment e-mails to gain a maximum response rate (Polgar and Thomas 2008). With the survey monkey®™ design the participant’s identity is unknown and only their responses were retrieved from the data. Participants were reminded of this prior to questionnaire completion. Participants were informed that collected data would be used for this study with the intention of future presentation and publication.

2.5. Data Analysis

Frequency and descriptive statistics were calculated using Statistical Package for Social Sciences (SPSS) for Windows Version 18.0. Microsoft Office Word (2010) was used to perform thematic analysis in order to comprehensively identify, interpret and report themes within the data. Microsoft Office Excel (2010) was used to graphically display relevant data.
3. Results

3.1. Response rate
Of the 54 questionnaires distributed, a valid response rate of 82% (n=44; 22 participants from each cohort) was received and analysed. This response rate is stated as valid according to Hicks (2004). There is no “optimal number” for sample size of this study rather the literature states that; “optimum” size depends on the characteristics of the investigation and the context in which the sample is drawn (Polgar and Thomas 2008). This high percentage return rate allows for more data to analyse which will positively influence the variability in the results (Hicks 2004; Polgar and Thomas 2008). Not all respondents answered every question in the questionnaires however, for data analysis these participants were included in the results as a “non-response” answer.

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Range of PL sessions attended</th>
<th>Median PL sessions attended</th>
<th>Sex of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second years</td>
<td>2-16</td>
<td>12</td>
<td>95% (n=21) Female 5% (n=1) Male</td>
</tr>
<tr>
<td>Fourth years</td>
<td>12-14</td>
<td>14</td>
<td>73% (n=16) Female 27% (n=6) Male</td>
</tr>
</tbody>
</table>

Table 1: Demographics of respondents

3.2. Main Findings
Main findings from closed-questions are expressed by frequency and descriptive analysis (using bar charts and table formats) followed by thematic analysis of open-ended questions (concepts being displayed as quotes). Four main themes, each composing of subthemes (Figure 1; Pg: 19), were identified in relation to the two cohorts of physiotherapy students’ perceptions towards PL. From this analysis factors influencing perceptions of PL were also identified.
### 3.3. Frequency analysis

#### 3.3.1. Common closed-questions between cohorts

When asked to rate level of agreement on a five-point Likert scale from SD-SA whether “PL benefited me in 3rd level education” there was an extensively positive response from both cohorts. This is highlighted by figures such as; 71% (n=15) of second year respondents either agreed/SA with the statement, and 83% (n=19) of the fourth year cohort responding in similar fashion. These results are evident in Graph 1.

![Graph 1](image)

*Graph 1: Cohorts level of agreement with “PL benefited me in third level education”*

A frequently researched aspect of PL is its effects on examination results, thus to examine perceptions of whether “PL helped me gain an understanding into the exam expectations” was of importance in this study. These results are highlighted in Graph 2.
In contrast to these initial statements, more specific declarations directed at learning did not have the same extensive positive response. Results to these statements are displayed in Table 2.

Table 2: Cohorts level of agreement with “PL helped me gain an understanding into the exam expectations” and “PL increased my motivation to learn”
Results regarding statements “PL has improved my interaction with my classmates” and “PL improved my verbal communication skills” were contrasting between cohorts. This is demonstrated by 38% (n=8) of second year cohort NA/D with the initial statement, with only one fourth year respondent having the same response. Regarding the latter statement the fourth year cohort were predominantly positive as; 87% (n=20) either agreed/SA with the statement, in contrast the second year responses were evidently lower as 29% (n=6) had the same response. These detailed results are displayed in Table 3.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Cohort</th>
<th>No response</th>
<th>SD</th>
<th>Disagree</th>
<th>NA/D</th>
<th>Agree</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helped develop interaction with classmates</td>
<td>Second years</td>
<td>19%(n=4)</td>
<td>5% (n=1)</td>
<td>0</td>
<td>38%  (n=8)</td>
<td>24%(n=5)</td>
<td>14%(n=3)</td>
</tr>
<tr>
<td></td>
<td>Fourth years</td>
<td>9%(n=2)</td>
<td>0</td>
<td>4%(n=1)</td>
<td>4%(n=1)</td>
<td>44%   (n=10)</td>
<td>39%9n=9</td>
</tr>
<tr>
<td>Improved verbal communication</td>
<td>Second years</td>
<td>19%(n=4)</td>
<td>5% (n=1)</td>
<td>5%(n=1)</td>
<td>43%  (n=9)</td>
<td>23%(n=5)</td>
<td>5%(n=1)</td>
</tr>
<tr>
<td>-ation</td>
<td>Fourth years</td>
<td>9%(n=2)</td>
<td>0</td>
<td>0</td>
<td>4%(n=1)</td>
<td>61%   (n=14)</td>
<td>26%(n=6)</td>
</tr>
</tbody>
</table>

*Table 3: Cohorts levels of agreement with statements related to Interaction and Communication*

The final shared closed-question between cohorts was whether “PL created barriers to my learning needs”. These responses contrasted between years as the second years had a more positive response in comparison to fourth years (Graph 3). Hypothesised reasons for these conflicting levels of agreement may be due to the type of PL experienced and the educational exposure for each cohort in the undergraduate physiotherapy programme.
Graph 3: Cohorts level of agreement with “PL created barriers to my learning needs”
3.3.2. Specific questions for second year cohort

Regarding these closed-questions results were considerably constructive, highlighting the positive perceptions of PL by the second year cohort. Results are displayed in detail in Table 4.

<table>
<thead>
<tr>
<th>Statement</th>
<th>No response</th>
<th>SD</th>
<th>Disagree</th>
<th>NA/D</th>
<th>Agree</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence in learning anatomy</td>
<td>19%(n=4)</td>
<td>0</td>
<td>5%(n=1)</td>
<td>5%(n=1)</td>
<td>43%(n=9)</td>
<td>29%(n=6)</td>
</tr>
<tr>
<td>Apply knowledge in practical skills</td>
<td>19%(n=4)</td>
<td>5%(n=1)</td>
<td>5%(n=1)</td>
<td>5%(n=1)</td>
<td>61%(n=13)</td>
<td>5%(n=1)</td>
</tr>
<tr>
<td>Develop &amp; practice anatomical terminology</td>
<td>19%(n=4)</td>
<td>5%(n=1)</td>
<td>0</td>
<td>9%(n=2)</td>
<td>38%(n=8)</td>
<td>29%(n=6)</td>
</tr>
<tr>
<td>Helping my written skills</td>
<td>19%(n=4)</td>
<td>0</td>
<td>24%(n=5)</td>
<td>33%(n=7)</td>
<td>24%(n=5)</td>
<td>0</td>
</tr>
<tr>
<td>Developing my palpation skills</td>
<td>24%(n=5)</td>
<td>5%(n=1)</td>
<td>0</td>
<td>5%(n=1)</td>
<td>33%(n=7)</td>
<td>33%(n=7)</td>
</tr>
<tr>
<td>Developing my muscle testing skills</td>
<td>19%(n=4)</td>
<td>0</td>
<td>0</td>
<td>10%(n=2)</td>
<td>19%(n=4)</td>
<td>52%(n=11)</td>
</tr>
</tbody>
</table>

*Table 4: Levels of agreement with specific closed-questions regarding how PL helped second year cohort with skills/ confidence in anatomy*
3.3.3. Specific questions for fourth year cohort

Results were considerably positive for these closed-questions, highlighting the affirmative perceptions of PL by the fourth year cohort. Results are displayed in detail in Table 5.

<table>
<thead>
<tr>
<th>Statement</th>
<th>No response</th>
<th>SD</th>
<th>Disagree</th>
<th>NA/D</th>
<th>Agree</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased knowledge…</td>
<td>9%(n=2)</td>
<td>0</td>
<td>9%(n=2)</td>
<td>13%(n=3)</td>
<td>52%(n=12)</td>
<td>17%(n=4)</td>
</tr>
<tr>
<td>Improved my problem solving…</td>
<td>9%(n=2)</td>
<td>0</td>
<td>0</td>
<td>17%(n=4)</td>
<td>61%(n=14)</td>
<td>13%(n=3)</td>
</tr>
<tr>
<td>Confidence to research…</td>
<td>9%(n=2)</td>
<td>0</td>
<td>17%(n=4)</td>
<td>0</td>
<td>52%(n=12)</td>
<td>22%(n=5)</td>
</tr>
<tr>
<td>Improved my ability to work as part of a team</td>
<td>9%(n=2)</td>
<td>0</td>
<td>0</td>
<td>4%(n=1)</td>
<td>48%(n=11)</td>
<td>39%(n=9)</td>
</tr>
<tr>
<td>Improved my ability to present information…</td>
<td>9%(n=2)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>61%(n=14)</td>
<td>30%(n=7)</td>
</tr>
<tr>
<td>Improved verbal communication skills</td>
<td>9%(n=2)</td>
<td>0</td>
<td>0</td>
<td>4%(n=1)</td>
<td>61%(n=14)</td>
<td>26%(n=6)</td>
</tr>
</tbody>
</table>

Table 5: Levels of agreement with specific closed-questions regarding how PL helped the fourth year cohort with skills in the Theory and Context module
3.4. Thematic Analysis:

The majority of participants displayed very positive perceptions of PL regarding the themes highlighted in Figure 1., with a small minority underlining negative aspects of this learning style. This is evident throughout comments made by both cohorts in response to open-ended questions. Through this analysis section factors influencing student perceptions of PL were identified.

3.4.1. Theme 1: Learning

PL was perceived extensively as a facilitator to learning and much less frequently as a barrier. Another frequent manner in which PL was perceived was of creating a comfortable learning environment.

Facilitating Learning:

This sub-theme was identified extensively across both cohorts with frequent comments such as;

“I felt (PL) enabled my learning skills and needs” (Second year)
“I feel that my PL... helped to facilitate my learning experience” (fourth year)

Adding to this are results from frequency analysis of statements such as; “PL benefited me in 3rd level education”, “PL helped me focus on learning rather than just getting a good grade in the course” and “PL increased my motivation to learn” which are graphically and descriptively demonstrated on Graph 1 and Table 2 (pg.13-14).

Barrier to Learning:

This sub-theme was not as extensively identified as facilitators. Responses from open-ended questions identified possible barriers as; PL sessions were hindered because of becoming more of a social event rather than focusing on learning and that PL sessions were hampered for fourth year cohort due to the distraction of executing their own presentations.

“As some students got to know the peer learners better less time was being spent on learning it became more of a catch up for the first half of the session” (second year)

“I was too caught up with doing a decent presentation myself that I tended not to pay attention to other peoples presentation which affected my learning” (fourth year)

However taking results from frequency analysis of Graph 3 (pg.16) “PL created barriers to my learning needs” into account, perceptions with regards barriers can be viewed more positively.

Learning Environment:

Students extensively emphasized the opinion that PL was positively influenced by the comfortable learning environment created. This is frequently demonstrated by both cohorts with quotes such as;

“(PL is an) Easy comfortable environment to learn” (second year)

“PL encourages learning in a non-threatening environment” (fourth year)
3.4.2. Theme 2: Teaching

Although PL is predominantly perceived as a learning experience, the extensiveness of comments made by both cohorts’ highlighted that it was also identified as a teaching strategy. This theme was further classified through analysis of the open-ended questions and the frequency at which comments were made regarding it. Such comments included;

“Students in higher years teaching students in lower years” (second years)
“(PL) is students teaching students” (fourth year)

Presenting/ teaching a topic

Although this sub-theme is of greater relevance to the fourth year cohort, it cannot be disputed that it was perceived as valuable to both cohorts. This can be demonstrated through the high frequency of comments;

“Our peers utilise a variety of teaching styles which enhance the learning experience in comparison to our lecturers” (Fourth year)
“(Peers) can make presentations more interesting and use a variety of teaching methods” (fourth year)

These statements are further supported by the level of positive agreement in the fourth year cohort to the statement “PL improved my ability to present information to an audience” in Table 5(pg. 18) Although there are no specific comments regarding this sub-theme for the second year cohort (due to the style of PL experienced) it should be recognised that through their skills development for exam preparation they were utilizing presentation methods when delivering their knowledge in practical exams- the positive of which are demonstrated can in Table 4(pg. 17).

Passing on knowledge/ information

This area is extensively recognized across the participant population under forms of teaching, with recurrent responses such as;
“It’s when students that have already passed a module, pass on their knowledge” (Second years)

“(PL is) acquiring knowledge from peers” (Fourth years)

3.4.3. Theme 3: Development of Skills
There was a widespread consensus amongst both cohorts that PL helped them develop skills which they perceived as beneficial.

Exam preparation:
The second year cohort had a recurrent positive perception of PL aiding in them in exam preparation in comparison to the fourth year cohort, this is demonstrated through comments;

“I learned lots of ways to remember areas I found difficult” (Second year)
“We can share our personal experiences of a module, give exam advice” (Fourth year)

These results are supported by frequency analysis of the closed-question “PL helped me gain an understanding into the exam expectations” (Graph 2.pg. 14). The contrasting fourth year answers may be due to education exposure and module expectations of each cohort-which will be discussed later. Regarding the development of specific exam focused skills and how they were positively perceived by the second year cohort please refer to Table 4 (pg 17).

Preparing for future:
This sub-theme was of particular relevance to the fourth year cohort in comparison to the second years. The perception of PL aiding fourth year students preparing for their future careers was identified extensively throughout open questions, with recurrent comments such as;

“(PL) will help in future practice” and
“PL will (help in) treating the patient in a holistic manner and not just for their impairment” (Fourth year)

These perceptions are further supported by the encouraging levels of agreement highlighted in Table 5 (pg. 18).

3.4.4. Theme 4: Peer Support
This theme had an extensive but diverse response when compared to the others. It was widely perceived as a positive of PL in analysis of open-ended responses within cohorts however, there was a disparity in results in closed-questions. As emphasized earlier, this may be due to the difference in style of PL experienced by the cohorts, module expectations and educational exposure which will be discussed later.

Due to the high frequency of recurrent statements regarding questioning and discussion of topics, these were identified as sub-themes.

Questioning:
This sub-theme emerged extensively across both cohorts with frequent comments such as;

“(PL is) a chance to ask questions you feel can’t be addressed in lectures” (Second year)

“You are learning from your own peer group ... therefore you are not intimidated by asking certain questions” (Fourth year)

Discussion
This sub-theme was identified by the widespread and recurrent number of comments such as;

“(PL gives) a chance to discuss difficult subject matter” (Second year)

“(PL) gave us time to discuss and get to grips with our lab and lecture material” (Second year)

“Did topics similar to lectures-discussed topics students found difficult” (Fourth year)
“PL involves improving knowledge and or skills by gaining feedback and encouragement”

(Fourth year)

Through analysis of these results it came to light that within questioning and discussion experienced in PL, participants found it helped improve interaction with their classmates. This is contradicted by both cohorts in frequency analysis of the statement “PL helped improve interaction with my classmates” (Table 3.p. 15).
4. Discussion
Although much of the literature regarding PL derives from research in second level education, there is a growing body of evidence for its effectiveness in third level (Hudson and Tonkin 2008). There are both pragmatic and principled reasons for the current focus on PL in university courses (Boud et al 1999) which involves maintaining the level of learning without additional input from staff (Topping 2005). Since its inception there has been a proliferation of PL which now operates across the full spectrum of degree courses (Capstick 2004). This is identifiable in this study by its implementation across the Physiotherapy programme in the University of Limerick. The perceptions surrounding this learning strategy are predominantly positive as 71% of second year and 83% of fourth year cohorts either agreed/SA that PL benefited them in higher education.

The ‘Cognitive Congruence’ and ‘Role’ Theories may assist in understanding why PL received positive evaluations (De Grave et al 1990 cited Solomon and Crowe 2001). The initial theory suggests the greater similarity in cognitive congruence between leaders and learners allows leaders to better explain/ clarify concepts. The Role Theory implies; the greater role similarity between leaders and learners increases the motivation in learning for both groups.

The objectives of this study were; to investigate the perceptions of two styles of PL in two cohorts of students in an undergraduate physiotherapy programme and identify factors influencing these perceptions. The key findings of this study will be discussed in terms of the four key themes identified-corresponding with the approach taken by Longfellow et al (2008).

4.1. Perceptions of PL:
Learning: this theme has been extensively perceived as;
- Facilitator or barrier to learning.
- Comfortable learning environment.
These are identifiable in literature surrounding PL in higher education (Longfellow et al 2008; Kassab et al 2005).
Students perceived that learning from their peers was advantageous to their education—explained by the congruence and role theories (Solomon and Crowe 2001). In this study the fourth year cohort, found working with their peers made difficult topics enjoyable and disseminated subjects to an academics level. These results are in conjunction with current literature which emphasised students perceptions regarding the usefulness of having peers as learning facilitators since they; had similar perspectives, useful learning tips and were better able to explain difficult concepts from explanations provided by lecturers (Longfellow et al 2008; Kassab et al 2005).

Although key findings of this study are primarily positive, it cannot be disregarded that a minority of participants perceived PL as a barrier to learning i.e. 22% of the fourth years agreed with this statement. Reasoning for which was; students being too engrossed in their own presentations to learn from other groups. This has been identified in current literature as difficulty separating the roles of learner and leader (Solomon and Crowe 2001) and identified as a negative of PL (Longfellow et al 2008). While the second years did not agree with this statement, they made comments in open-questions regarding areas for improvement in PL sessions i.e. timing of sessions. These administrative issues, highlighted by both cohorts, have also been stressed in PL literature (Kassab et al 2005; Longfellow et al 2008).

Undoubtedly it was comprehensively perceived across both cohorts, and indeed across PL literature, that the learning environment created in PL sessions was comfortable, relaxing and supportive (Santee and Garavalia 2006; Chojecki et al 2010). Students reported this relaxed atmosphere enabled their learning and decision-making, which is also supported in findings by Kassab et al (2005).

**Teaching:** this theme is not as extensively stressed in research concerning PL. In truth, it may be perceived in literature as a drawback, due to students taking the role of teacher, rather than facilitator (Ten-Cate and During 2007). Although peer teaching has a clear and consistent differentiation between the teaching and learning role, both parties are peers and are learning (Boud et al 1999) which are demonstrated in both PL styles in this study. This
may explain why results have revealed teaching as a beneficial aspect of PL regarding participants’ acquisition of knowledge. These perceptions are supported by the cognitive congruence theory and identified in comments of fourth year participants such as; “peers utilize a variety of teaching styles which enhance the learning experience compared to lectures”.

Development of skills; has been identified in this study as exam preparation and preparing for future. Without doubt the development of academic and psychomotor can be seen extensively in the literature as a positive and beneficial aspect of PL (Ladyshewsky 2002; Forester et al 2004; Kassab et al 2005). However in conjunction with the identified gap in the literature and thus the purpose of this study, examination results were not included in this study’s evaluation. Rather, exam preparation and preparing for future employment emerged as beneficial aspects of PL in undergraduate physiotherapy. These results are demonstrated in the second year cohort with frequent positive perceptions such as; “I learned lots of ways to remember areas I found difficult”.

Peer Support; was viewed by this study’s cohorts as a positive aspect of their PL experience. Participants felt that PL promoted the ability to openly ask questions and discuss topics of benefit to their education, as demonstrated by the congruence and role theories. Students felt more comfortable within PL sessions to ask questions, seek clarification and explore methodologies, as they perceived it as a non-judgemental forum. These results are comparable with current literature which demonstrated that those who engaged regularly in PL sessions, perceived the enabling PL environment as a stark contrast to traditional lecture-led sessions that fostered passive learning (Longfellow et al 2008). Students felt that the PL sessions clarified new material, actively engaged them in learning (Ertl and Wright 2008) and reduced feelings of being intimidated about asking questions, thus promoting students responsibility for learning. This may seem minor in third level education however the importance of feeling confident to ask for help or clarification cannot be understated (Kassab et al 2005).
4.2. Factors influencing perceptions:

Throughout results of this study three dominant affective factors were identified which have influenced participants perceptions regarding PL. This approach of identifying affective factors through results analysis was adapted from study by Solomon and Crowe (2001). These influences can be catagorised according to Parsons Theory of Influence (1963). This theory states that influence is any factor which affects the formation of a person’s attitudes and opinions by having a direct impact on one’s beliefs (Hallinan and Williams 1990). Parsons argued that a person can be influenced when he or she needs information to adapt to and interact in a particular situation –which can be evidently noted in the PL environment. External factors such as the structured style of PL and the educational exposure of each cohort have been frequently identified. In conjunction with this the internal factor of participants’ module expectations regarding PL has been identified.

Style of PL experienced: this referred to the two identified styles (as described in methodology) of PL undertaken by participants. Within these affective factors include; the group size, whether there is a clearly defined role of leader versus learner, group dynamics and the degree of familiarity of material for all concerned. These are identified in recent PL literature (Kassab et al 2005; Solomon and Crowe 2001). For example; regarding the second year cohort there was a clearly defined leader role (senior student) compared to the learner. This was perceived as a positive influence in the PL experience. Contrasting this, the fourth year cohort had leaders and learners within the same class, all presenting information. Thus the leader and learner roles were interchangeable- perceived and identified in literature as a challenge to one’s learning (Solomon and Crowe 2001).

Educational exposure: Can be viewed as an affective factor by the stage of the undergraduate programme participants are at, their level of maturity towards PL as learning strategy and structure of the curriculum (Forester et al 2004; Kassab et al 2005). Literature has supported how a more relaxed learning atmosphere has promoted better decision-
making and learning which was reflected by the degree of maturity of students in the undergraduate programme (Kassab et al 2005). These factors are identifiable by how PL was perceived by each cohort. For example; the second years were in their first year of undergraduate education, thus they felt having the support of a senior student for aspects of guidance was a huge positive in their academic introduction to third level education. In contrast the fourth year cohort were at the senior end of their undergraduate education and thus were more focused on addressing their own learning needs through PL sessions and interaction.

Module expectations: this has been identified in this study and indeed in comparable research as having influenced participants’ perceptions of PL. Aspects of such include; understanding what students gained from sessions, their commitment to sessions and characteristics of the course (Kassab et al 2005; Forester et al 2004). Module expectations are further demonstrated by whether participants used PL sessions as means of clarifying concepts and understanding the subject better or whether it was used to achieve learning outcomes, be better prepared for assignments and gain better examination results (Capstick 2004). Results of this study have demonstrated that PL sessions were used more for the benefit of academic and examination skills by the second year cohort in comparison to the fourth year cohort.

4.3 Limitations:

- A level of ‘constant error’ can be identified as; the researcher was both a peer in the fourth year and a leader for the second year cohorts (Hicks 2004). Both cohorts knew this prior to study commencement. This may also be beneficial as the researcher had a clear insight into the styles of PL experienced by each cohort-which can aid in results interpretation.

- The use of an original data collection tool may have affected the quality of results however this was minimalised by piloting questionnaires prior to data collection (Polgar and Thomas 2008).
The use of a ‘sample of convenience’ can assume that there is an aspect of sampling error in this study. These participants are a sample the researchers peers, thus they cannot be attributed as an accurate and widespread representation of the true undergraduate physiotherapy population partaking in PL (Hicks 2004).

There was no comparative analysis undertaken- which takes from the analysis of these cohorts perceptions of PL.

4.4. Directions for future research:

- A longitudinal study approach could be used to gain a broader perception of how physiotherapy students view PL.
- A comparative analysis of the perceptions of these two cohorts versus the 2011/2012 second and fourth year cohorts could be performed. This would give greater depth in comparison of perceptions of two styles of PL.
- A comparative analysis of student’s perceptions of the PL style between this study’s second year cohort and 2011/2012 second year cohort could be performed. This would minimise influencing factors of students’ perceptions (Hicks 2004).
- The above could also be performed for the fourth year cohorts and their style of PL.
5. Conclusion

Without doubt PL has profound benefits in third-level education (Secomb 2008; Capstick 2004) with identified gaps in the physiotherapy and indeed undergraduate domain, regarding students’ perceptions of this learning strategy. Both second and fourth year cohorts perceived PL to be beneficial and worthwhile in terms of learning, teaching, development of skills and peer-support. Participants felt PL did not inhibit their learning in their undergraduate programme. Factors identified which affected these perceptions included; Style of PL experienced by each cohort, educational exposure of both cohorts and participants’ expectations of the PL module. Based on this study PL is perceived as a valuable learning style, with further studies warranted in comparable cohorts and across a broader sample population.
6. References

- Chojecki, P., Lamarre, J., Buck, M., St-Sauveur, I., Eldaoud, N. and Purden, M (2010) “Perceptions of a Peer Learning Approach to Paediatric Clinical Education” *International Journal of Nursing Education Scholarship*, 7(1); 39


Longfellow, E., May, S., Burke, L. and Marks-Maran, D (2008) “‘They had a way of helping that actually helped’: a case study of a peer-assisted learning scheme”, *Teaching in Higher Education*, 13(1); 93-105.


website (SurveyMonkey.com, LLC, Palo Alto, California, USA).
7. Appendices

7.1. Appendix 1: Recruitment e-mail.

Hello,

My name is Julianne Ryan, a current 4th year physiotherapy student in U.L. I am currently doing my final year project in which I am looking at “student perceptions of peer learning in the undergraduate physiotherapy programme”.

The study involves completing a questionnaire which should take approximately 10 minutes. After reading the following information regarding the study I would greatly appreciate it if you could participate and complete a short questionnaire accessible through the following link-

If you have any further questions regarding the study please do not hesitate to contact me at 0733458@studentmail.ul.ie

Participation is entirely voluntary and very much appreciated.

Kind regards,
JULIANNE RYAN
An investigation into student perceptions of peer learning in the undergraduate physiotherapy programme

Aim: “To understand student perceptions of peer learning in the undergraduate physiotherapy programme”

Objective:
An observational study will be undertaken as the current 2nd and 4th year undergraduate physiotherapy students complete a questionnaire based on their experiences of peer learning sessions during the programme, to understand the perceptions about this learning strategy.

What is the study about?
Peer learning (PL) can be defined as “the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions. It involves people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by so doing”. Although much of the literature on peer tutoring comes from research in secondary schools, there is a growing body of evidence for its effectiveness in higher education (Hudson and Tonkin 2008). Various forms of peer, collaborative or co-operative learning, particularly small group activities, are increasingly used within university courses to assist students meet a variety of learning outcomes. This study aims to gain an understanding of the perceived advantages or disadvantages for the students receiving/ not receiving PL in the undergraduate physiotherapy programme.

What will I have to do?
1. Fill out a questionnaire, by rating the statements provided on a scale from 1-5 and answering 2 open ended questions.
2. The questionnaire will take no longer than 10 minutes to complete.
3. All information is anonymous and treated with utmost confidence.

What if I do not want to take part?
Participation is voluntary and you are free to withdraw from the study at any time if you do not wish to continue.

**What are the benefits?**

By participating in this study, you will be expressing how you perceived your experience of Peer Learning in the undergraduate physiotherapy programme, whether it was beneficial/not. This will result in a better understanding of the perception of Peer learning to students in the undergraduate physiotherapy programme.

**What are the risks?**

The risks associated with this study are minimal as it is a questionnaire.

**What if I have more questions or do not understand something?**

Subjects will be able to contact project investigators at any time via e-mail and will be available to answer any questions or concerns you may have regarding the study.

**What happens to the information?**

All information gathered during this final year project will be confidential and will be used for presentation and publication. Subjects will be unidentifiable in all data due to design of survey monkey.

**Contact name and number of project investigators**

**Principal Investigator:**

Dr. Rabia Malik  
[rabia.malik@ul.ie](mailto:rabia.malik@ul.ie)

**Other Investigators:**

Julianne Ryan  
[0733458@studentmail.ul.ie](mailto:0733458@studentmail.ul.ie)

Amanda Clifford  
[amanda.clifford@ul.ie](mailto:amanda.clifford@ul.ie)

If you have concerns about this study and wish to contact someone independent you may contact:

The Chairman of the University of Limerick Research Ethics Committee  
Prof Alan Donnelly, PESS Dept, University of Limerick  
Limerick  
Tel: (061) 202022
7.3. Appendix 3: Reminder e-mail

Hello again!

My name is Julianne Ryan, a current 4\textsuperscript{th} year physiotherapy student in U.L. I am currently doing my final year project in which I am looking at “\textit{student perceptions of peer learning in the undergraduate physiotherapy programme}”.

I have previously sent out an e-mail (find attached) with a link regarding a questionnaire in student perceptions of peer learning.

I would like to give a great “thank you” to all those who have already completed the questionnaire, thus taken part in this study.

If you have not had a chance to complete the questionnaire, but would still like to take part in the study, please click on the following link to begin–

If you have any further questions regarding the study please do not hesitate to contact me at \texttt{0733458@studentmail.ul.ie}

Participation is entirely voluntary and very much appreciated.

Kind regards,
Julianne Ryan
7.4. Appendix 4 : Questionnaires.

Questionnaire on Peer Learning.

2nd years:

By ticking the following box I am stating that I have read the attached information sheet and fully consent to be part of this study. [ ]

Please state: the number of anatomy peer learning sessions you attended;

I attended ________peer learning sessions (over the 2 semesters).

1. What is your understanding of Peer Learning?

___________________________________________________________________________________________________________________________________________________

2. Do you think Peer Learning has educational value?

___________________________________________________________________________________________________________________________________________________

Based on your experience of peer learning please circle one of the following.

3. Do you feel Peer Learning sessions complimented lectures? Yes/ No.

Please expand as to why they did/ didn’t.

___________________________________________________________________________________________________________________________________________________

4. Peer Learning has benefited me in 3\textsuperscript{rd} level education

- Strongly disagree  - Disagree  - Neither Agree/disagree  - Agree  - Strongly agree
5. Peer learning helped me gain an understanding into the exam expectations.

6. Through peer learning I felt I was able to focus on learning rather than just getting a good grade in the course.

7. Peer learning increased my motivation to learn.

8. Peer learning has improved my interaction with my classmates.

9. I found peer learning helped me develop and practice my anatomical terminology.


11. Peer learning was useful in helping my written skills in anatomy.

I found that peer learning....

12. Was useful in developing my palpation skills.
13. Was useful in developing my muscle testing skills.

14. Was useful in understanding how to apply my knowledge in practical skills.

15. Helped my verbal communication skills.

16. Created barriers to my learning needs.

Please expand on the above statement.

17. Would like to add anything further positive or negative about the sessions?
18. Do you have anything to add to help improve future peer learning sessions, to the above?

Questionnaire on Peer Learning

4th years:
By ticking the following box I am stating that I have read the attached information sheet and fully consent to be part of this study. ☐

Please state; the number of Theory and Context formal presentation peer learning sessions you attended;

I attended _________ sessions (over the 2 semesters, 7= full attendance).

1. What is your understanding of Peer Learning?

2. Do you think Peer Learning has educational value?

Based on your experience of peer learning last year please rate by circling one of the following;
3. Do you feel Peer Learning sessions complimented lectures? Yes/ No.
   Please expand as to why they did/ didn’t.

4. Peer Learning has benefited me in 3rd level education

5. Peer learning helped me gain an understanding into the overall exam expectations.

6. Through peer learning I felt I was able to focus on learning rather than just getting a good grade in the course.

7. Peer learning increased my motivation to learn.

8. Peer learning helped me develop interaction with my classmates.

Peer Learning has....
9. Increased my knowledge in the areas studied during the Theory and Context module.

10. Improved my problem solving skills.

11. Given me the confidence to research not only a condition but all aspects of a patient care that may present itself in the professional setting.

Through peer learning ....

12. I have improved my ability to work as part of a team.

13. I have improved my ability to present information to an audience.

14. I improved verbal communication skills.

15. Created barriers to my learning needs.

Please expand on the above statement.
16. Would like to add anything further positive or negative about the sessions?

17. Do you have anything to add to help improve future peer learning sessions, to the above?

7.5. Appendix 5: Raw data

Closed-Questions responses

“Peer Learning has benefited me in 3rd level education”

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<thead>
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<th>4th year responses</th>
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<tr>
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<tr>
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“Peer Learning has helped me gain an understanding into the overall exam expectations”

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<tr>
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“Through peer learning I felt I was able to focus on learning rather than just getting a good grade in the course”

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“Peer learning increased my motivation to learn”
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“Peer learning helped me develop my interaction with my classmates”

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I found Peer Learning helped me develop and practice my anatomical terminology

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Peer Learning helped me improve my confidence in learning anatomy

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Peer Learning was useful in helping develop my written skills in anatomy

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I found that Peer Learning…

Was useful in developing my palpation skills

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Was useful in developing my muscle testing skills

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Was useful in understanding how to apply my knowledge in practical skills

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Helped my verbal communication skills

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4th years statements comprised of;
  - Peer learning has...
  - Increased my knowledge in the area’s studied during the Theory and Context module

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✓ Improved my problem solving skills

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✓ Given me the confidence to research not only a condition, but all aspects of patient care that may present itself in the professional setting

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- Through Peer Learning… I have improved my ability to work as part of a team
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- I have improved my ability to present information to an audience

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- I have improved my verbal communication skills

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Both year

- “Peer Learning created barriers to learning needs”

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Open-Questions responses

- 2nd year
  - 4th years

What is your understanding of PL?

- Easy comfortable environment to learn from people your own age.
- students teaching students in relaxed atmosphere
- People from older years facilitating younger years with their learning.
- Students who have recently completed the module helped us to gain an understanding of concepts and passed on useful study tips which they found beneficial
- Classes that offer support for material covered in lectures and labs.
- students in higher years teaching students in lower years
- learning from peers who have previously undertaken the same course of study
- The 3rd years (at the time) passing the information that they have acquired onto us in an easy to understand way.
- when students who have already done the same module as us previously teach us and help us understand it better
• It is a relaxed way of learning from older years. It’s a chance to ask questions you feel can’t be addressed in lectures.
• Older students teaching the younger years the anatomy course on top of the lectures they are receiving.
• It is a less formal more exam-focused way of learning.
• It’s when students that have already passed a module, pass on their knowledge.
• Learning from and teaching those who are at a similar academic level to oneself.
• Students helping students to learn and understand the new concepts being taught in the course.
• A chance to discuss difficult subject matter with older and more experienced students.
• Students in older years facilitating learning in topics of modules for younger years.

❖ Learning from each other
❖ Where we help or classmates to learn about a chosen topic without the assistance of lecturers.
❖ Being educated on certain topics within the physiotherapy domain by your peers.
❖ Teaching someone such as classmates who are the same level as you but have more experience in a specific area.
❖ That it is students teaching students.
❖ Learning from people who are of a similar standing in society.
❖ Learning facilitated by colleagues and peers. Learning about a topic and then teaching same.
❖ Learning of new topics facilitated by your peers.
❖ Peer learning involves improving knowledge and or skills by gaining feedback and encouragement from your peers, or people uninvolved in teaching the topic, about the topic area.
❖ Learning about new material from your peers.
❖ Peer Learning is a way of learning or teaching information to people who are in your class or of the same academic level.
❖ Being educated by peers.
❖ Teaching other students in the class.
❖ It enables students to learn from and sometimes educate their peers i.e. their classmates.
❖ Learning off of your fellow classmates.
❖ Acquiring knowledge from peers and collaborating in learning and sharing different skills.
Peer learning is where people of the same peer group teach one another information instead of being taught by a lecturer etc.

Peer learning is a form of learning whereby undergraduate students facilitate the learning process of fellow colleagues in their class or classes lower to them by means of providing new information, guiding them to further reading, stimulating discussion and debate through interactive teaching strategies and by providing a harmonious environment reflecting reassurance and support.

Classmates teaching classmates

Students in older years facilitating learning for younger years

Learning from peers/classmates about important areas of practice in PT. Peers focus in on an area and use a variety of methods and resources to get the important information across to the other classmates

Do you think PL has educational value? Y/N - Please expand.

Positive

- Your peers provide different methods of learning eg memory aids etc.
- It gave us time to discuss and get to grips with our lab and lecture material. By discussing difficult topics with group leaders we got a better all round understanding of topics
- Helps clarify difficult topics, provides advice on the best way to learn topics, facilitates discussion and questions on topics that aren't fully understood. Small groups made it easier to ask for explanations to be repeated without feeling like you were holding up the whole class
- Helped me to understand information from another student's perspective
- Allowed a chance to review material covered in lectures, especially complex material.
- Students in 3rd/4th year know what to expect in the modules and can explain and teach ways to help learning
- It allows for a review of work covered and a comfortable environment to ask questions
- **You don't feel under pressure to get an answer correct, which encourages more participation. They also tell us exactly what we need to know.
- Yes it's excellent to get other people's perception on learning and what helped them. The older students know exactly what's going to be asked in the exam so they helped clarify everything
- Yes it has an educational value because in peer learning we are learning in a more relaxed easier way than in lectures but still manage to get an educational value out of it.
I learned lots of ways to remember areas I found difficult to learn and it helped my exam technique

It helped me pass

Peer learning encourages more questions to be asked and can break the info down to the level of an academic rather than a lecturer

It wasn't intimidating with the peer learners compared to lecturers. you knew the peer learners wouldn't judge or give out for not knowing something and it was easier to them questions then too. The tutorials were a more relaxed environment which I found easier to learn.

peer learning teaches you how to study, to break down the information in the book and from the lecture notes. its a chance to ask questions

Share personal experiences of module and give advice about exams. Younger students might be less afraid to ask peers questions that they wouldn't ask lecturer

I think we best know our learning needs, so peer learning can be very beneficial in this regard

It can make the learning process more friendly. Also as we have similar learning needs as our peers, the topics covered can be covered in a more student orientated approach.

Yes as our peers utilise a variety of teaching styles which enhance the learning experience in comparison to our lecturers.

As the teacher is on the same level as you it would be easier for them to know the information that you need and how best to deliver it.

by working in groups you lear more and go into greater depth on the topics

You are learning from your own peer group so it tends to be more informal and therefore you are not intimidated by asking certain questions

Because you dont know something until you can teach it

As you can connect alot more with people your own age and its usually a conducive way to learn.

Good to work in a team and get a collaboration of ideas, information and experience from each individual in the team. Helpful in addressing learning needs. Offers good support from team members. Good to work with different people in the class.

Yes as everybody approach learning differently and interprets information differently. And peers are more in tune with your baseline level of knowledge when teaching new material

I think peer learning is of benefit. Your peers/classmates will be on the same wave length and realise that you might not understand what is being taught so and they are able to explain it in another manner which is easier to understand. It can be
difficult to get lecturers to comprehend that you don't grasp a certain topic. It is much less threatening to learn or teach in a peer learning environment.

- It is valuable in terms of gaining new knowledge from somebody who has relatively the same level of education and skills as you - makes it easier to relate to.
- Sometimes it does, as you feel perhaps more comfortable learning from peers, but often you do not regard information given by peers as valuable as receiving the information from experts.
- I feel it helps students to learn through each other, thus also improving their own learning needs through teaching.
- You can learn better from some of your classmates as they know how to explain things in a simple manner for you.
- I feel it is very beneficial as it is advantageous from the point of view of developing teaching skills. It is also beneficial from the point of view of team work skill development.
- I do think peer learning has educational value because sometimes people learn better and remember more information when they learn from people their own age and at the same stage of education as themselves.
- I feel it provides the student with additional learning both enhancing the learning of the tutor and the student.
- You learn loads about your topic but sometimes it is hard to concentrate on other peoples presentation when you are waiting to do your own or if there is a bad presentation you don't learn much.
- We can share our personal experiences of a module, give exam advice and answer questions students might be afraid to ask lecturers.
- Sometimes it is easier to listen to your peers than a lecturer. They know what your going through and can often break things down in a way that suits the learners more. They can make presentations more interesting and use a variety of teaching methods.

**Negative**

- I felt that it was often a waste of both my time and the peer learners time. I thought that often we just ended up chatting, which while was nice, not very beneficial and is why I eventually stopped going.

*Do you feel PL complemented lectures? Y/N - Please expand*

**Positive**

- It's good to run through the more difficult detailed topics covered with the lecturer. Sometimes things are skimmed over in the lecture or you afraid to ask a question that you feel in obvious to everyone else. It's very easy to ask your peers!
• it was up to us to decide what we wanted to cover in each session so we had the option to choose to discuss anything we found difficult in the lectures
• They reiterated what was taught in the lectures and focused on the points we found difficult
• Provided useful reinforcement of lecture material
• They covered the same information. Reviewed more complex material
• they broke down the lectures in easy to learn ways
• difficult material could be covered again to ensure understanding and a general review of work covered was also helpful
• Similar info was given
• went through basically what we did in lectures but in a slower and more understandable way.
• If any problems or confusions arose during lectures they were brought up in peer learning sessions
• they zoned in on areas the lectures skimmed over, areas it was difficult to understand in class.
• If we ever had a problem with lectures, it would be solved in these (sessions)
• See above answer (Peer learning encourages more questions to be asked and can break the info down to the level of an academic rather than a lecturer)
• The peer learners picked out the most important things to learn from the lectures which was very helpful for us as we didn't really know what the more and less important things were.
• we got to ask questions on the subject matter we found difficult. it was also good to revise the lecture material, and to make you think about the concepts that were put forward
• Tried to do topics similar to what was discussed in lectures-discussed topics students found difficult
• i feel that i may be alone in this as often i knew that i didnt understand some of the lecture content or get it clear in my head but also didnt know exactly what it was that i didnt understand so found it hard to ask beneficial questions to the peer leaders. they did however cover what was being covered in class that same week which when i did have it clear in my head was good revision

Yes
  ❖ Yes, easier to understand information coming from your peers
  ❖ They it helps us by allowing us to discover different methods of teaching which will help in future practice.
The lectures give very specific information about the topics while the peer learning sessions then covered a wide range of topics that were not previously discussed in lectures. This gave us an opportunity to have a deep understanding about many aspects of each case study.

- They expand on the material covered in lectures in more detail.
- It helps to expand knowledge on a particular area that a lecture may not have covered.
- As it enables you to gain a lot more independence over your study.
- Helped to increase knowledge.
- Yes, as generally the information was not repetitive of what was covered in lectures.
- They are good as they may help clarify some aspects of what has been taught in the lecturer lead session. Like above they may pick up on an easier way of teaching or explaining a topic.
- Yes - T&C presentations were very educational.
- They did as the lecturers tailored the content of T and C presentations to fix.
- Sometimes a lecturer that is complex can be broken down into simpler terms during peer learning sessions.
- Yes, they help to further supplement info.
- Yes because in theory and context the peer learning sessions were based on the core content covered in the lectures.
- I think that some of the peer learning sessions went into greater depth than lectures as well as incorporating some of the information covered in lectures.
- Did topics similar to lectures - discussed topics students found difficult.
- They certainly have. As mentioned previously, a variety of teaching methods were used and various areas that were more important for us to know for future practice were highlighted and focused on.

No

- As each peer learning session has been on a different topic to that which we are taught in lectures.
- I feel they did sometimes but not all the time. The topics covered in T and C peer learning sessions were very important, in fact more relevant than the topics covered in lectures for that module and I suppose given the fact that every student was worried about the grade they received for each presentation, they had a tendency to zone out for other presentations.

PL created barriers to my learning needs. Rated on scale… please expand

S.D.-

- It didn’t create any barriers it helped.
• It facilitated my learning, it didn't hinder it
• Didn't create barriers but provided a great opportunity to reinforce material from lectures. Also provided an opportunity to ask questions and not feel judged.
• don't see what barriers to learning it could possibly create!
  ❖ **SD-** no it helped
  ❖ It complemented material covered in lectures and allowed an opportunity to ask questions in a more comfortable
• It actually helped me to learn
• No i dont think it did. I felt if anything it got rid of any barriers that existed such as nerves before exams.
• I do not know of these barriers
• I felt it enabled my learning skills and needs
• It helped with my learning needs. Put what to focus on in the exams in perspective.
• i dont think it really did
  ❖ Peer learning has been a positive experience and has no way creates a barrier to my learning needs. As we chose the topics to present to each other they were essentially "our own" learning needs and have complemented them as such.
  ❖ Peer learning has done the opposite to create barriers and has opened new pathways for me with an increase in the amount of knowledge which I now acquire with regard to treating the patient in a holistic manner and not just for their impairment.
  ❖ it facilitated learning as opposed create barriers as it encourages you to go into more detail and research topics thoroughly
  ❖ As you only learn what you are presenting and are inclined not to listen to the other presentations
  ❖ It can sometimes be better to work in a team than individually.
• Peer learning encourages learning in a non threatening environment.
• I feel that my peer learning experiences helped to facilitate my learning experience and share the opinions and thoughts of my fellow class.
• I dont think peer learning created barriers to my learning needs. I think it helped to facilitate my learning needs.
• If anything it facilitated my needs. It encouraged me to learn how to research things and where to go for good quality information.

**Neither A/D:**
• it didnt create barriers to my learning needs but it also didnt benefit them.
at times presentations have had a very narrow focus and research has been time consuming affecting other areas such as other coursework preparation for placement etc
If there is a bad presentation done you dont learn as much as you would if a lecturer gave us the presentation

Agree

Although peer learning can be a useful tool, I think in combination with lectures on the various areas of physiotherapy studies would have been more beneficial
Sometimes in relation to a presentation I was too caught up with doing a decent presentation myself that I tended not to pay attention to other peoples presentation which affected my learning in these topics.
I felt as we had to present to class, I often only focused on my own presentation as I was under pressure to obtain information and present.
information was often not portrayed as effectively, as it would be by professional lecturers, leading to a decrease in my motivation to learn
As i mentioned previously, each student was focused on their own topic and did not take interest in the topics of others.

Would you like to add anything further, positive or negative, about the sessions?

Positive
• i felt the peer leaders very approachable. i felt more comfortable at both asking and answering qs in PL than i did in lectures or labs
• Provided an excellent opportunity to practice muscle tests which were covered very quickly and briefly in anatomy labs. I found this the most beneficial aspect.
  Improved handling skills.
• sessions run in autumn semester were well organised, and benefited me greatly. we were divided into groups which remained the same for the semester, we got to know the two peer learners and could easily ask questions. Sessions run in spring semester were not well run as groups were reorganised at each session and people were more
• The best aspect of the session is that they tell us what comes up often in exams and give us 'fun' ways of remembering things. Also they were very approachable and I felt like i could ask them anything.
• I found peer learning to be a brilliant way of getting the 4th yrs advice on anatomy. they told us what was important. clarified what we had to know and explained things in a really simple way. It was a great way also to get more information on other modules and to get advice on them too which helped us.
- People lost interest in the 2nd semester later on. This may have been down to pressure of exams but I felt it put an added pressure on the leaders. The fact that the peer learners had recent experience of exams reassured me a lot before exams.
- It was great that it's a less intimidating atmosphere than a lecture so you are more free and more likely to ask questions.
- The were a good idea and helped me feel more comfortable with the course because I found it a little overwhelming at the start.
- Working as part of a team is extremely beneficial
- Great advantage of improving research and presentation skills
- Positive aspects were that the presentations did improve my presentation and teamworking skills and my motivation to learn, within my own group.
- Overall feel they are beneficial
- Peer learning is really good because you work as part of a team to problem solve and present to your peers on something nobody knows anything about and you learn from other people, not only in your own group but from the other groups as well.
- Positive- Students do learn their particular topic very well, but on the flip side that's all they learn

**Negative**
- As some students got to know the peer learners better less time was being spent on learning it became more of a catch up for the 1st half of the session.
- Second semester sessions weren't as organised, we had different leaders and groups every week so there was a lack of continuity. It wasn't as good as in the first semester.
- The sessions began very well but towards the end they became less focused on work and became more about socializing, while it was fun it seemed pointless in going just to chat when exams were approaching towards the end of the semester
- Sometimes it's difficult to get all members of a group to contribute
- As above (Sometimes in relation to a presentation I was too caught up with doing a decent presentation myself that I tended not to pay attention to other people's presentation which affected my learning in these topics.)
- 5% is too little for work put in-

**Doesn't have anything to do with PL more the module**
- Negative: if there is a group with poor presentation skills or lack of breadth in the information presented it can be difficult to maintain concentration throughout the presentation. Some group members can become too focused on the grade rather than the learning.
Sometimes it was a little intense having maybe 3 presentations in one day. By the end of the 3rd one you were not as alert and focused as you were for the 1st or 2nd one. Apart from that they were very beneficial; aspects such as demos, humour, role plays and other methods that you don't see used a lot all helped information sink in compared to just power point, power point, power point!

- i feel they would be more beneficial if they had been more organised and if the all involved in the class actually wanted to be there! i think that it ended up being an hour of chatting when it could have been used much more efficiently
- in semester two we started too early and didn't have enough information to cover to fill the hour, and people got demotivated and stopped going. it is better to start when you can revise from a couple of weeks

*Do you have anything to add to help improve future peer learning sessions?*

- Same groups if possible are best.
- i think its most beneficial to first year students...more advice on answering exam qs and mock practical exams would be helpful.
- Keep same groups and peer leaders.
- Some sessions were poorly organised especially at the start of semester 2. Small groups of 4/5 students per 2 peer learners was beneficial in terms of practicing skills and asking questions.
- More regular time slot for it during the week.
- try to remain focused on the learning aspect of the sessions
- more organised sessions, clear outlines etc. better use of the lab i feel that the sessions didn't use the lab that often and for me it was the practical that i had problems with, not the written exam.
- start them at the start of the semester!
- It's not just what a person knows that can be a peer leader, its down to their personality and whether or not they can engage an audience
- They should begin in Week 1 of 1st year so that they can be continued throughout the academic years and encourage further learning
- maybe facilitated session if groups aren't mixing well or are encountering difficulties
- It's a difficult one to suggest changes on as this was more to do with my anxiety about presenting than anything else
- *Dont grade peer learning sessions as they take away from the learning.*
- make sure all the topics are relevant and well defined
- I believe that peer learning should have more focus placed on it from 1st year to 4th year
- By putting a halt to peer assessment, students may engage more with the group presenting instead of worrying in case they are doing better than the other students
group. The element of grading for T and C should also be stopped for the same reasons- students will be worried about receiving a grade which negatively impacts on the students concentration.

- Just ensuring team work is used throughout. As someone who has been involved in planning sessions it works very well when everyone looks up their respective areas and feeds back to the group before making the presentation etc, Sometimes people tend not to feed back much, do their few slides and speak on them when some of the group may be none the wiser about the area. As someone learning from a session it can be easier to switch off if one group member is talking or performing far more than the others.