An investigation of MPharm Students’ Study Habits and an Evaluation of Mentoring and the Peer Assisted Learning Programme at the University of Portsmouth

By Helen Hull

This thesis is submitted in partial fulfilment of the requirements for the award of the degree Doctor of Philosophy of the University of Portsmouth

March 2018
An investigation of MPharm Students’ Study Habits and an Evaluation of Mentoring and the Peer Assisted Learning Programme at the University of Portsmouth

Abstract

Introduction

Students’ transition into university is often a daunting experience. In 2012 the University of Portsmouth (UOP) revised its academic structure where written assessments would be undertaken at the end of the academic year. The new structure was considerably different to the modularised learning environment students were familiar with and the need for additional support was indicated. A number of studies have determined students’ study habits and where they turn for academic support, however none were specific to MPharm students. This study explored the provision of academic support at UOP and where MPharm students turn for help with their studies.

Methods

A mixed methods study (questionnaire and focus groups) was conducted in Phase 1 targeting MPharm students in Stages 2, 3 and 4 exploring: why they chose to study pharmacy, their experiences of study support at UOP, the effect the support had upon them, and where they turned to for support. Phase 2, informed by Phase 1, evaluated the student mentoring programme (SMP) using a mixed methods approach; targeting Stages 2 and 3 students to explore opinions
of the programme from both mentees’ and mentors’ perspectives. Phase 3, informed by Phases 1 and 2, used a mixed methods approach to explore opinions of the Peer Assisted Learning (PAL) programme from both PAL mentees’ and PAL leaders’ perspectives.

**Key findings**

Phase 1 showed that students at UOP demonstrated both intrinsic and extrinsic reasons for choosing to study pharmacy; students who passed assessments without second attempts adopted more effective organisational strategies than their peers who failed assessments; and students thought a student mentoring programme would help with transition into university and the MPharm.

Phase 2 revealed students who volunteered to be mentors wanted to help new students settle into university and the MPharm course. Students who met on more occasions with mentors benefitted most from the mentoring relationship. Finally the SMP needed to be timetabled and structured to enable students to meet face-to-face with mentors.

A timetabled PAL programme was developed and introduced in Phase 3; findings indicate that higher levels of attendance, and organisation of the PAL sessions by the PAL leaders, provided more positive benefits for Stage 1 students. PAL leaders wanted to help new students and enhance their own *curricula vitae* and develop transferable skills.
All Phases revealed students were more comfortable approaching their peers and higher year students for academic study support as opposed to contacting a member of staff.

Conclusions

The supportive network gained from PAL can be compared to Communities of Practice. PAL brought MPharm students, with the same interests and goals, together and achieved a collective and collaborative learning environment.
# Contents

Abstract ................................................................................................................................ i  
Contents ................................................................................................................................ iv  
Declaration ................................................................................................................................ xi  
List of Tables ................................................................................................................................ xii  
List of Figures ................................................................................................................................ xvi  
Abbreviations ................................................................................................................................ xvii  
Acknowledgements .................................................................................................................... xx  
Dissemination .......................................................................................................................... xxi  

Chapter 1 : Introduction ........................................................................................................ 1  
1.1 Pharmacy Practice in the UK ..................................................................................... 1  
1.1.1 The development of pharmacy services .............................................................. 1  
1.2 Pharmacists ............................................................................................................... 2  
1.2.1 The evolving role of the pharmacist ................................................................. 2  
1.2.2 The pharmacist as a professional ................................................................. 4  
1.3 Education and training of pharmacists ..................................................................... 5  
1.3.1 Initial education and training of pharmacists in Great Britain ....................... 5  
1.3.2 The MPharm at the University of Portsmouth ................................................. 7  
1.3.3 Revised academic structure at the University of Portsmouth ......................... 10  
1.4 Changes in Higher Education .................................................................................. 12  
1.4.1 The Robbins Report ......................................................................................... 12  
1.4.2 The Higher Education Funding Council for England .................................... 13  
1.4.3 The Quality Assurance Agency ....................................................................... 14  
1.4.4 The Dearing Report ......................................................................................... 14  
1.4.5 Widening participation in Higher Education ................................................... 16  
1.5 Transition into Higher Education ............................................................................ 18  
1.5.1 Sense of Community and Belonging ............................................................. 20  
1.5.2 Student attainment ......................................................................................... 22  
1.5.3 Student aspiration ......................................................................................... 23  
1.5.4 Student motivation ...................................................................................... 29  
1.5.4.1 Intrinsic motivation ..................................................................................... 31  
1.5.4.2 Extrinsic motivation ................................................................. 34
1.5.4.3 Parental influence .............................................................. 37
1.5.4.4 Motivating diverse students .......................................... 39
1.6 How students learn ............................................................... 42
   1.6.1 The social context of learning ....................................... 43
   1.6.2 Psychological theories of learning ............................... 43
   1.6.3 Cognitive theories of learning ....................................... 44
   1.6.4 Andragogy ................................................................. 45
   1.6.5 Learning styles .......................................................... 46
1.7 Factors that support learning .............................................. 50
   1.7.1 Academic Support Systems ................................. 50
1.8 Research aims ................................................................. 53
   1.8.1 Phase 1 aims ............................................................ 55
   1.8.2 Phase 2 aims ............................................................ 55
   1.8.3 Phase 3 aims ............................................................ 56
Chapter 2: Mixed methods study of University of Portsmouth MPharm students and their study habits ................................................................. 58
  2.1 Introduction ................................................................. 58
  2.2 Methodology ................................................................. 58
  2.3 Research methods and approaches .................................... 59
     2.3.1 Quantitative research .............................................. 59
     2.3.2 Qualitative research .............................................. 59
     2.3.3 Positivism ............................................................. 60
     2.3.4 Post-positivism ...................................................... 60
     2.3.5 Constructivism ...................................................... 61
     2.3.6 Paradigms ............................................................. 61
     2.3.7 The paradigm debate .............................................. 62
     2.3.8 A mixed methods approach .................................... 63
  2.4 Methodological approach to this study ......................... 65
     2.4.1 Self-completed questionnaire .................................. 66
     2.4.2 Questionnaire data analysis .................................... 67
     2.4.3 Qualitative study of how students currently study .......... 68
     2.4.4 Focus group design ............................................... 69
     2.4.5 Focus group delivery .............................................. 70
     2.4.6 Recruitment of focus group subjects ......................... 71
     2.4.7 Semi-Structured focus group conduct ....................... 72
     2.4.7.1 Focus group plan ............................................... 72
2.4.7.2 Focus group delivery .......................................................... 74
2.4.7.3 Structured focus group data analysis method ..................... 75
2.4.7.4 Analytical strategy for this study ....................................... 79
2.4.8 Ethics approval ................................................................. 86
2.5 Phase 1 Results and Discussion – self completed questionnaire ......................................................................................... 87
2.5.1 Response rate ..................................................................... 87
2.5.2 Respondent demographics .................................................. 87
2.5.3 Reasons for choosing pharmacy .......................................... 91
2.5.4 Students’ opinions of workload .......................................... 100
2.5.5 Study support .................................................................... 106
2.5.6 Study support services at UOP .......................................... 111
2.5.7 Academic help-seeking behaviour ..................................... 114
2.5.8 Additional study support ................................................... 121
2.5.9 Exam failure rates ............................................................ 122
2.5.10 Student mentors .............................................................. 131
2.5.11 MPharm tutorial programme .......................................... 136
2.6 Phase 1 Results and Discussion - Focus Groups ..................... 140
2.6.1 Phase 1 qualitative findings .............................................. 142
2.6.2 Category 1 – The MPharm Course ...................................... 142
2.6.3 Theme 1 – Delivery of the MPharm programme ................ 143
2.6.4 Discussion of theme 1 findings ......................................... 144
2.6.5 Summary of theme 1 findings ........................................... 152
2.6.6 Theme 2 – Managing studies ............................................ 153
2.6.7 Discussion of theme 2 findings ......................................... 154
2.6.8 Summary of theme 2 findings ........................................... 160
2.6.9 Category 2 – Study support services ................................. 160
2.6.10 Theme 1 – Support from the institution ......................... 161
2.6.11 Discussion of theme 1 findings ......................................... 161
2.6.12 Summary of theme 1 findings ........................................... 167
2.6.13 Theme 2 – Proposed study support ................................. 168
2.6.14 Discussion of theme 2 findings ......................................... 168
2.6.15 Summary of theme 2 findings ........................................... 172
2.7 Limitation of Phase 1 .......................................................... 172
2.8 Conclusion from Phase 1 ...................................................... 173

Chapter 3: Mixed methods study to evaluate the University of Portsmouth MPharm student mentor programme. .......................................................... 177
Chapter 4: Mixed methods study to evaluate the University of Portsmouth MPharm peer assisted learning scheme

4.1 Introduction

4.1.1 The concept of Communities of Practice

4.2 Methodology – Phase 3

4.3 Research methods and approaches

4.4 Methodological approach to this study

4.4.1 Self-completed questionnaire

4.4.2 Questionnaire data analysis

4.4.3 Qualitative study of MPharm PAL leaders' opinions of PAL

4.4.4 One-to-one interview design

4.4.5 One-to-one interview delivery

4.4.6 Recruitment of one-to-one interview subjects

4.4.7 Semi-structured one-to-one interview conduct

4.5 Phase 3 Results and Discussion – PAL mentee questionnaire

4.5.1 Response rates

4.5.2 Attendance at PAL sessions

4.5.3 Academic benefits of PAL

4.5.4 Drawbacks of PAL

4.5.5 Students' opinions of their PAL leaders

4.5.6 Impact of PAL on assessment

4.5.7 Social and transitional support of PAL

4.5.8 Learning strategies of PAL

4.5.9 Learning environment of PAL

4.5.10 Students' attendance and opinions of their PAL leaders

4.5.11 Impact of organised PAL sessions

4.5.12 PAL leader skills

4.5.13 Approachability of PAL leaders

4.5.14 Challenges and improvements for PAL

4.6 Phase 3 Results and Discussion – PAL leader questionnaire

4.6.1 Response rates

4.6.2 Skills achieved from undertaking the PAL leader role

4.6.3 Perceived benefits from being a PAL leader

4.6.4 Reasons for volunteering to be a PAL leader

4.6.5 Improvements to the PAL programme

4.7 Phase 3 Results and Discussion – PAL leader one-to-one interviews
Appendix 7. Questionnaire sent to Stage 1 MPharm mentees of the student mentoring programme in phase 2 .......................................................... 424
Appendix 8. Questionnaire sent to Stage 2 MPharm mentors of the student mentoring programme in phase 2 ................................................................................................. 429
Appendix 9. Focus group schedule used in phase 2 of the study. ..................................... 433
Appendix 10. Focus group participant demographics in phase 2 ...................................... 435
Appendix 11. Professional attributes framework for pre-registration pharmacist trainees. ...................................................................................................................... 437
Appendix 12. Questionnaire sent to Stage 1 PAL mentees in phase 3 ......................... 441
Appendix 13. Questionnaire sent to Stage 2 PAL leaders in phase 3 ......................... 445
Appendix 14. One-to-one interview participant demographics in phase 3 ............... 449
Declaration

Whilst registered as a candidate for this PhD, I have not registered for any other research award. The results and conclusions embodied in this thesis are the work of the named candidate and have not been submitted for any other academic award.

Helen Hull

October 2017
List of Tables

Table 1-1 The Quaglia Institute for Student Aspirations (QISA) Eight Conditions ................................................................. 27

Table 2-1 Summary of the Qualitative Analysis Methods (this research uses one of these analytical methods) .................................................................................................................................................. 76

Table 2-2 Steps and processes involved in qualitative data analysis – adapted from Braun and Clarke’s six stages of analysis. ................................................................. 85

Table 2-3 Gender of Stages 2, 3 and 4 MPharm undergraduates at UOP during 2012/2013 .................................................................................................................................................. 88

Table 2-4 Ethnicity of Stages 2, 3 and 4 MPharm undergraduates at UOP during 2012/2013 .................................................................................................................................................. 88

Table 2-5 Gender of respondents to the self-completed questionnaire distributed to Stages 2, 3 and 4 MPharm undergraduates at UOP. ........................................................................ 89

Table 2-6 Ethnicity of respondents to the self-completed questionnaire distributed to Stages 2, 3 and 4 MPharm undergraduates at UOP. ........................................................................ 90

Table 2-7 The three main reasons respondents chose to study pharmacy. ................................................................................... 92

Table 2-8 Reasons female respondents chose to study pharmacy. ................................................................................................. 93

Table 2-9 Reasons male respondents chose to study pharmacy. ................................................................................................. 94

Table 2-10 Reasons white respondents chose to study pharmacy. ................................................................................................. 95

Table 2-11 Reasons non-white respondents chose to study pharmacy. ................................................................................... 96

Table 2-12 Students’ opinions of the workload on the MPharm ................................................................................................. 100

Table 2-13 Female students’ opinions of the workload on the MPharm ................................................................................... 101

Table 2-14 Male students’ opinions of the workload on the MPharm ................................................................................... 102

Table 2-15 Students’ opinions of the workload on the MPharm according to academic year group. ............................................................................................................................................... 103

Table 2-16 Nature of study support students seek ......................................................................................................................... 107

Table 2-17 Nature of study support female students seek .................................................................................................................. 107

Table 2-18 Nature of study support male students seek .................................................................................................................. 108

Table 2-19 Nature of support white students seek ......................................................................................................................... 108

Table 2-20 Nature of study support non-white students seek ......................................................................................................... 109

Table 2-21 Students’ awareness of the study support services at UOP .......................................................................................... 111

Table 2-22 Students’ usage of the study support services at UOP ............................................................................................... 112

Table 2-23 Students’ opinions of UOP study support services available .......................................................................................... 115

Table 2-24 Students’ reasons for using UOP study support services. ............................................................................................ 116
Table 2-25 Additional study support services suggested by respondents ................................. 122
Table 2-26 Can study support services minimise exam failure? ........................................ 122
Table 2-27 Students’ pass and failure rates in each academic year. .................................... 127
Table 2-28 Students’ explanations for poor performance in assessments .......................... 128
Table 2-29 Students’ use of study support services and their performance in assessments. .......................................................................................................................... 130
Table 2-30 Students’ opinions of MPharm Student Mentors .............................................. 132
Table 2-31 Students’ comments about advantages of student mentors .............................. 133
Table 2-32 Students’ comments about disadvantages of student mentors ........................ 134
Table 2-33 Students’ level of agreement with the statement “The MPharm tutorial programme is designed to support student learning throughout your degree”. ............. 137
Table 2-34 Categories, themes and concepts emerging from the data ................................. 141
Table 2-35 Themes and concepts in the category “The MPharm Course” ............................ 143
Table 2-36 Themes and concepts in the category “Study support services” ....................... 161
Table 3-1 Genders of MPharm undergraduate mentees at UOP during 2013/2014. ......... 186
Table 3-2 Ethnicity of Stage 1 MPharm undergraduates at UOP during 2013/2014. ......... 187
Table 3-3 Genders of respondents to the self-completed questionnaire distributed to mentees of the student mentor programme at UOP ................................................................. 187
Table 3-4 Ethnicity of respondents to the self-completed questionnaire distributed to mentees of the student mentor programme ................................................................. 188
Table 3-5 Gender of mentors of UOP SMP during 2013/14 .............................................. 189
Table 3-6 Ethnicities of mentors of UOP SMP during 2013/14 ........................................... 189
Table 3-7 The degree to which mentee respondents agreed or disagreed with the statements in questions 3 to 7 (n=62) ................................................................. 191
Table 3-8 Gender differences between the degree to which mentee respondents agreed or disagreed with the statements in questions 3 to 7 (n=62) .................. 195
Table 3-9 Differences between mentee respondents’ ethnicity and the degree to which they agreed or disagreed with the statements in questions 3 to 7 (n=56) .............. 198
Table 3-10 Themes identified from respondents’ understanding of the term mentor ............ 200
Table 3-11 Themes identified about characteristics and skills that make a good mentor ................................................................................................................................. 201
Table 3-12 Number of students who had contact with their allocated mentor or mentee ................................................................. 202
Table 3-13 Number of times mentors and mentees had contact with their prospective mentees and mentors ................................................................. 204
Table 3-14 Number of students who felt having a mentor, or being a mentor, was beneficial ........................................................................................................................................... 208

Table 3-15 perceived impact of the mentoring role on mentors’ skills development ... 210

Table 3-16 Perceived impact of mentoring on mentees’ and mentors’ exam performances ........................................................................................................................................... 211

Table 3-17 Categories, themes and concepts emerging from the data仔aremM .............................................. 214

Table 3-18 Themes and concepts in the category “The Student Mentoring Programme”. ........................................................................................................................................... 216

Table 3-19 Themes and concepts in the category “Development of the mentor” ........ 245

Table 4-1 Genders of MPharm undergraduates involved in PAL (n=219) ...................... 274

Table 4-2 Genders of MPharm undergraduates involved in PAL and completed the questionnaires (n=182) ........................................................................................................................................... 275

Table 4-3 Number of students who attended PAL sessions. ........................................ 275

Table 4-4 Number of good and poor attenders of PAL sessions. ................................ 276

Table 4-5 Reasons for non-attendance at PAL sessions ............................................. 276

Table 4-6 Academic benefits of PAL .............................................................................. 277

Table 4-7 Participants’ perceived drawbacks of PAL sessions ....................................... 279

Table 4-8 Number of students who suggested topics for PAL sessions ............... 280

Table 4-9 MPharm students’ opinions of PAL leaders .................................................. 282

Table 4-10 Number of students encouraged to participate in group discussion and their enhanced confidence with the MPharm course ........................................................ 283

Table 4-11 Number of students encouraged to participate in group discussion and their understanding of course topics. ............................................................. 284

Table 4-12 Number of students encouraged to participate in group discussion and their workload management ............................................................. 284

Table 4-13 Number of students encouraged to participate in group discussion and their motivation. ............................................................. 285

Table 4-14 Number of students encouraged to participate in group discussion and understanding of course expectations. ........................................................ 285

Table 4-15 Number of students encouraged to participate in group discussion and their learning. ........................................................................................................................................... 286

Table 4-16 Number of students encouraged to participate in group discussion and their knowledge gain. ........................................................................................................................................... 286

Table 4-17 Students’ perceived preparedness for assessments as a results of PAL ...... 287

Table 4-18 Students’ perceived impact of PAL on their overall assessment performance. ........................................................................................................................................... 288
Table 4-19 Students’ perceived impact PAL had upon their preparedness and performance in assessments ................................................................. 289
Table 4-20 Academic benefits gained and level of PAL attendance. ......................... 291
Table 4-21 Students’ transition into university against attendance rates .................... 293
Table 4-22 Development of social skills against attendance of PAL ......................... 294
Table 4-23 Number of students who thought PAL helped them develop learning strategies ................................................................. 296
Table 4-24 Students perceived preparedness for assessments with their learning strategy gain ................................................................. 298
Table 4-25 Students’ opinions of the safe learning environment of PAL ..................... 300
Table 4-26 Students’ opinions of the supportive learning environment of PAL ............... 300
Table 4-27 Number of students who enjoyed attending PAL ....................................... 301
Table 4-28 Students’ opinions of PAL leaders against their attendance rates ................ 302
Table 4-29 Students’ perceived preparedness for assessments against PAL leaders’ organisation of PAL sessions ................................................................. 304
Table 4-30 Students’ improved knowledge of the subject against PAL leaders’ organisation of PAL sessions ................................................................. 304
Table 4-31 Students’ gain in understanding of course topics against PAL leaders’ organisation of PAL sessions ................................................................. 304
Table 4-32 Students’ enhanced levels of confidence against PAL leaders’ organisation of PAL sessions ................................................................. 305
Table 4-33 Students’ perceived understanding of course expectations against PAL leaders’ organisation of PAL sessions ................................................................. 305
Table 4-34 Skills students listed their PAL leaders demonstrated ............................... 307
Table 4-35 Skills students listed which they wanted their PAL leader to demonstrate. 308
Table 4-36 The degree to which students agreed to the statement “I preferred to ask a PAL leader certain questions as opposed to asking a member of university staff” ... 310
Table 4-37 Students’ suggestions for improvements to the PAL programme ............... 312
Table 4-38 Skills achieved as a result of undertaking the PAL leader role ................. 314
Table 4-39 The degree to which PAL leaders agreed with the statements .................... 316
Table 4-40 Benefits gained from undertaking the PAL leader role ............................. 318
Table 4-41 PAL leaders’ reasons for volunteering to undertake their role ................... 319
Table 4-42 Suggested improvements to PAL ............................................................. 321
Table 4-43 Categories, themes and concepts emerging from the data ....................... 323
Table 6-1 Model for the implementation of PAL ......................................................... 362
List of Figures

Figure 1-1 Flowchart to illustrate the three routes to registration as a pharmacist ....................... 6

Figure 1-2 Kolb's experiential learning cycle.................................................................................. 48

Figure 3-1 The degree to which mentee respondents agreed or disagreed with the statements in questions 3 to 7 (n=62) ......................................................................................... 192

Figure 3-2 Degree to which female respondents agreed or disagreed with the statements in questions 3 to 7 (n=30) ............................................................................................................ 196

Figure 3-3 Degree to which male respondents agreed or disagreed with the statements in questions 3 to 7 (n=28) ............................................................................................................ 196

Figure 4-1 The three inter-related characteristics of a community of practice (COP).................... 265
Abbreviations

ASDAC - Additional Support and Disability Advice Centre

ASK - Academic Skills Unit

CA – Content Analysis

CAQDAS - Computer-assisted qualitative data analysis software

CATS - Credit Accumulation and Transfer Scheme

CPD – Continuing Professional Development

DA – Discourse Analysis

EAP – English for academic purposes

FE – Further Education

FEDA - Further Education Development Agency

GCSE - General Certificate of Secondary Education

GPhC - General Pharmaceutical Council

GT – Grounded Theory

HE - Higher Education

HEFCE - Higher Education Funding Council for England

HEI - Higher Education Institution
IPA – Interpretive Phenomenological Analysis

IS – Information services

LST - Learning Support Tutor

MPharm – Master of Pharmacy

MUR – Medicines Use Review

NA – Narrative Analysis

NCSA - National Centre for Student Aspirations

NHS – National Health Service

NMS – New Medicines Service

OSCEs - Observed Structured Clinical Exams

OU – Open University

PAL - Peer Assisted Learning

PASS - Peer Assisted Study Sessions

PDP – Personal Development Plan

PIANA - Pharmacy in a New Age

QAA - Quality Assurance Agency

QISA - Quaglia Institute for Student Aspirations
RAS - Revised Academic Structure

RPS - Royal Pharmaceutical Society

RPSGB - Royal Pharmaceutical Society of Great Britain

SFEC - Science Faculty Ethics Committee

TA – Thematic Analysis

UCL - University College London

UK – United Kingdom

UOP – University of Portsmouth
Acknowledgements

First and foremost, I want to thank Professor David Brown who has played an important role as first supervisor for my PhD research and thesis writing. His continued support, advice and humour throughout this journey have been immensely appreciated. I have learned a lot throughout this whole process and it would not have been possible to achieve this without him.

Secondly I want to thank Professor Jane Portlock, second supervisor for this PhD research and thesis. I have known Jane for almost thirty years from when I was a pharmacy undergraduate at Portsmouth Polytechnic and her ability to guide, direct and get the best out of people is truly inspirational. Jane, thank you for your guidance, expertise and your friendship.

A word of thanks must also go to all MPharm undergraduates who participated in this study.

And last, but definitely not least, I would like to thank my family. My parents Thea and Roger for always believing in me; my husband Mark for his patience and support during my six years of PhD study; and my two wonderful sons Christopher and Matthew for understanding when I needed to hide away in my office to write. I will make up the time to you, I promise.

Thank you all.
Dissemination

Work presented in Chapter 2 of this thesis was presented in oral presentation format at the Health Science Research in Pharmacy Practice Conference, University of Newcastle, April 2018 and subsequently published as:


Work presented in Chapter 3 of this thesis was presented in oral presentation format at the Annual Teaching and Learning Conference at the University of Portsmouth, 12 June 2014 and subsequently available as:


Work presented in Chapter 4 of this thesis was presented in poster and oral presentation formats at the Annual Pharmacy Education Conference, the University of Manchester, 26 June 2016; Health Science Research in Pharmacy Practice Conference, University of Nottingham, April 2017; Higher Education Academy Annual Conference 2017 Generation TEF: Teaching in the Spotlight, 5 July 2017 and Pharmacy Education Symposium, Monash University, Prato, Italy, 9-12 July 2017 and subsequently published as:
Hull H and Broome H. Impact of peer assisted learning (PAL) on MPharm students’ transition to university and preparedness for assessments [Internet]. University of Manchester. 2016 [cited 14 August 2017]. Available from: https://www.escholar.manchester.ac.uk/uk-ac-man-scw:301318


Chapter 1: Introduction

1.1 Pharmacy Practice in the UK

1.1.1 The development of pharmacy services

During the late 1980s, health inequalities and failure to meet patients’ expectations resulted from increased demands placed upon the NHS as a whole. The Government addressed these failures throughout the following decade, by introducing new policies which encouraged the NHS to focus on improving quality and ensuring services were more responsive to the needs of patients. A radical modernisation of the NHS was required in order to implement these changes, and new ways of working were essential if these policies were going to work. In 1995, the Royal Pharmaceutical Society of Great Britain (RPSGB) responded to the modernisation of services by the appearance of a new initiative, Pharmacy in a New Age (PIANA). PIANA was a vision set out to shape the future of pharmacy which aimed to engage and prepare the pharmacy profession; four major areas crucial to the future of the pharmacy profession were identified: managing prescribed medicines; managing chronic conditions; managing common ailments; and promoting and supporting healthy lifestyles.

In March 2000, the NHS received an historic four-year increase in funding from the government and set a challenge to modernise and reform its practices. As a result the NHS Plan was published, setting out measures to modernise the NHS and make it a health service fit for the 21st century which provided patient-focused care. A number of documents were subsequently published to underpin
specific aspects of the modernisation strategy. Meanwhile pharmacy had an important role to play in the reform of the NHS which was highlighted in “Pharmacy in the Future”14, “A Vision for Pharmacy in the New NHS” 15 and other key documents. 16-19

In order to meet the Government’s requirements, key changes were needed for pharmacy services as a whole. Workforce redesign and role extension were undertaken; operational and supply procedures were redesigned; dispensing robots were increasingly utilised and medicines management systems implemented in order to increase capacity. 12, 14, 20-22 New and more efficient ways of working were introduced fully to utilise the clinical skills of pharmacists and their support staff. Pharmacists started to attend ward rounds, prescribe and run clinics and have a more clinical role and within two decades there had been a shift from a product-focus service to a patient-focused service 23 which was consistent with the NHS Plan. 24

1.2 Pharmacists

1.2.1 The evolving role of the pharmacist

Over the last decade the demand for pharmacists has increased substantially. The public’s expectations have changed with regard to accessing services resulting in longer opening for some community pharmacies, up to 100 hours per week, and an increase in the number of pharmacy outlets. Meanwhile there has been a 50% increase in the amount of prescribed items and community pharmacies have increased the amount and complexity of services they provide. Furthermore, the increasing number of NHS establishments has placed an
increased demand upon hospital pharmacists. As a result of these changes, there is increased pressure for pharmacists to undertake extended roles and work extended hours.

Pharmacy is a constantly changing and evolving profession with diverse roles in academia, community, hospital, industry and various other areas. NHS Community Pharmacy contract for England and Wales was introduced in 2005 and a number of developments were made in 2011 and 2012. The contractual framework for community pharmacies had three different elements. The first was essential services and it was compulsory for all contractors to provide them; they included dispensing of medicines, self-care support and clinical governance. The second was advanced services which could only be provided by contractors if they met the accreditation requirements; these included Medicines Use Reviews (MURs) and a New Medicines Service (NMS). The third element were locally commissioned services (formally known as enhanced services); these were commissioned to meet the local healthcare needs and included emergency hormonal contraception, minor ailment schemes and smoking cessation.

It is estimated that the number of people aged over 80 years will double by 2030; thus future pharmacists are likely to face further challenges in delivering healthcare services. Mature people tend to need more medicines and often require treatments for more than one medical condition, increasing the demand for pharmacists with expert clinical knowledge of medication interactions and awareness of patient safety issues. Such changes will mean that pharmacists will need to combine their scientific and clinical training, and utilise their
communication skills to work closely with other healthcare professionals and patients to make the most effective and safe use of medicines. Pharmacists now work within a new NHS structure and the government declared its vision for the delivery of healthcare in the 21st century through NHS and public health white papers. Part of the proposed changes, saw the abolishment of strategic health authorities and primary care trusts in 2013 and clinicians were put in the driving seat. Hospitals and healthcare providers were encouraged to be more innovative, providing stronger incentives to adopt best practice. All these changes have presented fresh challenges to pharmacists.

1.2.2 The pharmacist as a professional

In order to practise in Great Britain it is mandatory for all pharmacists to register with the General Pharmaceutical Council (GPhC) and have met certain professional requirements. Membership renewal is undertaken annually, involving the completion of a declaration stating that they meet all the professional, fitness to practise and ethical standards. The GPhC sets out the standards of conduct, ethics and performance that all pharmacy professionals must follow. The nine principles are: provide person-centred care; work in partnership with others; communicate effectively; maintain, develop and use their professional knowledge and skills; use professional judgement; behave in a professional manner; respect and maintain the person’s confidentiality and privacy; speak up when they have concerns or when things go wrong and demonstrate leadership. All of these principles are recognised, to a greater or lesser extent, in the design of the UOP undergraduate pharmacy course.
Pharmacists are expected to maintain their professional capability throughout their career by keeping a detailed record of their continuing professional development (CPD) and to submit their records on request by the GPhC. Records may be online or as hard copy and must be in the format approved by the GPhC. It is mandatory for all practising pharmacists to make a minimum of nine CPD entries per annum which reflect the context and scope of their practice as a pharmacist. Records must demonstrate how the new learning has contributed to the quality or development of the pharmacist’s practice.  

1.3 Education and training of pharmacists

1.3.1 Initial education and training of pharmacists in Great Britain

The A-level entry requirements for a GPhC-accredited MPharm degree range from A-B grade in chemistry and two further A-levels in either biology, mathematics or physics; entry requirements vary between universities. In addition, the GPhC requires prospective MPharm students to hold GCSEs in English language and mathematics at grade C (4 or 5 in the new GSCE grading system) as a minimum. Beyond this, individual universities, offering the MPharm degree, set their own entry requirements and may accept equivalent qualifications, including qualifications from outside of the UK. There are currently three routes to registration as a pharmacist, for students studying in Great Britain and each route must be completed within eight years.
Figure 1-1 Flowchart to illustrate the three routes to registration as a pharmacist

A four-year MPharm degree

A two-year part-time foundation degree in pharmacy (comprising year 1 of an MPharm degree plus work experience and study skills)

A five-year MPharm degree, including intercalated blocks of preregistration training equalling 52 weeks

Years 2 to 4 of an MPharm degree

52 weeks of pre-registration training

The GPhC Registration Assessment - a multiple choice examination
All students studying on an MPharm degree must abide by the GPhC standards for pharmacy professionals at all times \(^{34}\) (see Section 1.2.2). Students must also demonstrate professional conduct as they would be expected to as a registered pharmacist. In addition to the standards for pharmacy professionals, all students studying on an MPharm degree must demonstrate their fitness to practise. \(^{38}\)

In 2013 the GPhC further revised the learning outcomes for the initial education and training of pharmacists. The learning outcomes were characterised within four distinct domains: Pharmacist as a Professional; Pharmacist as a Scientist and Researcher; Pharmacist as a Leader and Manager; and Pharmacist as a Clinician and Prescriber. \(^{39}\)

**1.3.2 The MPharm at the University of Portsmouth**

The MPharm at the University of Portsmouth is a four-year, full-time course comprising of 480 Credit Accumulation and Transfer Scheme (CATS) points. Each course Stage accounts for 120 credits, divided into 20- or 40-credit units. Students are required to complete each Stage in its entirety before progressing to the next Stage. The knowledge and skills gained within units at any Stage of the degree underpin and support learning in subsequent units, both within and among the three main topic areas of Pharmaceutical Sciences, Life Sciences and Pharmacy Practice. Throughout the programme major emphasis is placed on how science disciplines underpin the safe and effective practice of pharmacy, and the teaching of Pharmacy Practice draws upon a sound understanding of these sciences. \(^{40,41}\) See Appendix 1 for an illustration of the UOP MPharm four-year programme.
Stage 1 concentrates on assisting students’ transition to higher education, and consolidating and developing students’ general scientific knowledge and academic skills. It provides an introduction to pharmacy practice and the interrelationship between these disciplines with particular emphasis on patient safety. Core units in this Stage include: Learning Skills in Pharmacy; Chemistry; Drug Formulation; Physiology and Pharmacology; and Pharmacy Practice.\textsuperscript{36, 42}

Stage 2 provides more in-depth knowledge specific to pharmacy. It develops students’ understanding of health, pathology and ill-health, of preventative and therapeutic interventions, pharmaceutical manufacturing and formulation, and the role of the pharmacist in medicines control and management. Students explore the systems of the body and the diseases that affect them and core units in this Stage include: Pharmaceutics; Pathology and Therapeutics of Body Systems; Microbiology and Infective Diseases; and Medicines, Patients and Public Health. \textsuperscript{36, 42}

Stage 3 involves the study of more advanced topics. It develops students’ clinical practice skills and their ability to apply knowledge through an integrated approach to the science and practice of pharmacy in increasingly complex situations. This Stage is more patient-orientated and increases students’ ability to research and analyse information. Students’ practical experience of pharmacy is extended through observational placements in both hospital and community pharmacy settings and these contribute towards students’ understanding of the inter-professional nature of healthcare. Stage 3 builds upon earlier consideration of ethics to give students a solid grounding in professional and ethical decision
making. Core units in this Stage include: Pharmaceutical Formulation; Bioactives; Antimicrobials; Pharmaceutical Care of Patients; and Research Methods and Ethics. 36, 42

All units at Stage 4 meet Masters level outcomes and this final Stage contains a 40 credit research project allowing students to demonstrate their ability to plan and carry out in-depth research in a topic relevant to pharmacy. This stage gives further consideration to the design and discovery of drugs and advanced aspects of formulation and drug delivery. Students learn to research, evaluate and collate information to develop comprehensive plans to allow application of their understanding of the science, practice and regulation of pharmacy to therapeutic interventions. Particular consideration is given to healthcare priorities both in terms of the general regulation and direction of the profession and in terms of specific pathologies, for example, cancer and mental health. Students’ practical understanding of pharmacy practice is extended at this stage through case studies, clinical simulations and Observed Structured Clinical Exams (OSCEs). Students at Stage 4 are required to undertake integration and application of previously acquired knowledge on a far wider scale than previously undertaken during lower stages. Core units in this stage include: Drug Design and Advanced Delivery Methods; Cancer and Mental Health; Advanced Pharmacy Practice; and a Research Project. 36, 42

Throughout the four stages a tutorial programme supports the development of students and provides them with the opportunity to learn in small groups under the direction of their individual tutors. This structured tutorial programme
focuses upon the development and enhancement of study skills and introduces students to both personal development planning (PDP) and CPD increasing the development of their individual academic skills. 36

Students are taught through a combination of lectures, practical laboratory work, seminars and simulated training. A student-centred approach to teaching is provided and all units are fully supported by online lecture and study materials.

There is a balance of formal (summative) examinations and coursework, supported with informal (formative) examinations and coursework throughout each stage. Assessment methods include: diagnostic tests; written assignments; simulated patient-focused case studies; oral and poster presentations; online tests; and group-based assessments. 42

1.3.3 Revised academic structure at the University of Portsmouth

Over the last 30 years the change from Ordinary Level (O-level) assessment to General Certificate of Secondary Education (GCSE) has prompted a move from assessment after 2 years of study to a method of assessment which is continuous and modularised. This new approach to teaching, learning and assessment has encouraged students to learn small sections of information prior to assessment and to compartmentalise information, as opposed to think creatively and demonstrate knowledge application. Most students will start university with good intentions of developing a deep, conceptual understanding of the course material but soon the realities of student life impose themselves. Modularisation and semesterisation have led students to focus their attention on assessments, which happen twice as often. It has been reported that some students have
ignored one subject in order to prepare for other more demanding subjects, \(^{43}\) which has led to a more surface learning approach. Modularisation can be far more challenging for both staff and students due to workload and amount of assessments. This method of teaching removes the consistent peer-group support associated with traditional degrees’ teaching sessions.

In 2010 the new government proposed to reform the AS and A level course structure to a more linear fashion to allow the depth of synoptic learning to be covered, this is generally preferred by Higher Education Institutions (HEIs). \(^{44, 45}\)

Meanwhile, the UOP began to prepare for a major overhaul of its own academic structures and curriculums and in 2012, implemented a Revised Academic Structure (RAS) across all undergraduate courses. This major restructure was referred to as RAS-2012, and all courses would be delivered over a 30 week period. Teaching material would be delivered across two 12-weeks teaching blocks, followed by a 6 week period of consolidation of learning and final summative assessment undertaken at the end of the 30 week period. \(^{36}\)

As a result, students traditionally exposed to the modularised method of teaching would need to adjust to the revised academic structure introduced at the UOP. The main driving forces behind RAS-2012 was to achieve better student learning by incorporating more information and feedback into the curriculum over a much longer period of time; to improve independent learning and provide enough time for new students to make adjustments to the new learning environment at university \(^{46}\). RAS-2012 aimed to better equip students to adapt to the university culture and its academic expectations. Thus a deeper
understanding of learning would be embedded and equip students with the essential skills to support them throughout their time at university and beyond their chosen career paths 46-48.

1.4 Changes in Higher Education

Higher education (HE) was once seen as an elitist university activity for a minority of academically successful young people. The rapid economic, social and technological changes of the late 20th and early 21st centuries however, have been reflected in a significant expansion in student numbers between the twentieth and twenty first centuries. The proportion of 18-19 year olds enrolling on HE courses, between 1963 to the present day, has more than tripled. This expansion led to a range of institutions widening participation to students from various cultures, backgrounds and educational experiences. 49, 50 Knowledge is perceived by governments as an important factor for gaining a competitive advantage in a global economy, with education and training a central part of economic policy-making. It is no longer accepted that there is a limited pool of talent in a society and a consensus is emerging that all, as opposed to an elite few, are capable of academic achievement. 51 Key documents and initiatives that echo these sentiments are described in the following sections.

1.4.1 The Robbins Report

The initial significant increase in participation in HE occurred following the Committee on HE report, chaired by Lord Robbins, commissioned by the British
government: the 1963 Robbins Report. The report concluded that access to HE by only the elite members of the population was unsuited to the emerging post-war vision of increased equality and social mobility, and recommended immediate expansion of universities. Places were to be made available in HE for all who were qualified for them by ability and attainment, and wished to participate. Consequently, the number of full-time university students almost doubled over the following decade. Government spending reductions led to a levelling off of numbers until the late 1980s. Then in 1989, Kenneth Baker, the Secretary of State for Education, called for student numbers to increase once again and by 1992, student numbers had increased from about 17% of school leavers to 30%; however, it must be noted that most of the increase was in students attending polytechnics and colleges of HE, as opposed to those attending universities. Restrictions on funding were further imposed which meant that numbers remained at about 33% until the end of the 1990s.

1.4.2 The Higher Education Funding Council for England

During the expansion of student numbers the Government formed an independent public body to take control of HE funding and in 1992 the Higher Education Funding Council for England (HEFCE) was formed. HEFCE is a non-departmental public body of the Department for Business, Innovation and Skills (previously the department for Innovation, Universities and Skills) in the UK. Its main role is to allocate and distribute public money from the Government to universities and colleges in England. HEFCE aims to ensure, through openness, impartiality, fairness and objectivity, that the money is used to deliver a high-
quality learning experience that fully benefits and meets the needs of all HE students and that of society. It strives to safeguard the collective interests of all students by monitoring universities’ and colleges’ finances, assuring that courses offered are of good quality. Widening participation is a central part of its strategy so that all those with the potential to benefit from participating in HE should have an equal opportunity to do so. HEFCE focuses on the whole experience of a student in HE, which covers pre-entry, through admission, study support and successful completion at undergraduate level and beyond, into further study or employment.

1.4.3 The Quality Assurance Agency

HEFCE thus has a statutory duty to make provision for the assessment of the quality of all HE provision and carry out this duty by contracting the Quality Assurance Agency (QAA) to devise and apply quality assurance methods. The QAA is responsible for reviewing the quality of all publically funded HE provision in England on behalf of HEFCE. 54, 55

1.4.4 The Dearing Report

Student numbers continued to increase and in 1997 the Dearing Report predicted that HE participation could increase to 45% over the next 20 years. 56

In 2001, the Labour government set a target of 50% participation by 2010, which included young people aged 18-30, as well as school leavers. The report was known as the National Committee of Inquiry into Higher Education and is a collection of major reports of the future of Higher Education in the UK. The report, which was commissioned by the UK government, was the largest review
of HE in the UK since the Robbins Report in 1963; it made 93 recommendations concerning the funding, expansion, and maintenance of academic standards. The most significant change was that of funding which saw a shift from entirely government funded tuition, by the provision of grants, to a system which combined the increase of tuition fees, supported by a low interest government loan. The report also recommended:

- the cap on full-time undergraduate places should be lifted;
- funding bodies should give priority to those institutions which demonstrated a commitment to widening participation;
- learning and teaching strategies should be implemented to focus on the promotion of students’ learning;
- careers services should integrate more with academic affairs which would be reviewed by the Quality Assurance Agency (QAA);
- students’ unions and institutions should review the services offered to meet the needs of students;
- institutions should identify opportunities to help students become familiar with work and help them to reflect on such experience;
- a programme specification listing the intended learning outcomes should be developed for each course;
- the Government should encourage employers to offer more work experience opportunities for students;
- and an expansion to degree courses due to the demand from employers for applicants with life and transferable skills. 57
1.4.5 Widening participation in Higher Education

In January 2003 the Department for Education and Skills published a White Paper entitled, “The future of Higher Education” in which it set out its intention to expand the higher education system for the next generation. Fair access for all was a central concern particularly those from low socio-economic groups. The White Paper stated that education must be a force for opportunity not for the entrenchment of privilege; opportunities should be available to everyone regardless of their background; and potential must be recognised and fostered. Key proposals included raising participation and standards in secondary and further education whilst raising the aspirations of schools and young people. In April 2003 the Government put forward proposals for the creation and remit of the Office for Fair Access in a document entitled, “Widening participation in higher education”. Within this document the Government stated four conditions which were to be met if capable students were to embark upon an appropriate HE course: attainment i.e. raising standards of education; aspiration i.e. raising young people’s aspirations, especially those from working class backgrounds, to enter HE; application i.e. reaching out to young people and encouraging broader range of applications to universities; and admission i.e. admissions to universities should always be on merit, irrespective of class, background or school attended.

In February 2009 a progress document, ordered by the House of Commons, revealed that although overall participation in HE had increased since 1999-2000 and the gap was narrowing, progress in widening participation had been slow.
More than twice the proportion of people from upper socio-economic backgrounds was entering HE compared to those from lower socio-economic groups. White men from lower socio-economic backgrounds were significantly under-represented. Ethnicity, gender, place of residence and socio-economic background all influenced the likelihood of an individual to attend HE, primarily because of their effect on attainment at school. GCSE performance was a strong predictor of HE participation. Thus the principal barriers to access into HE, and success once within the HE system, appeared to be attainment and aspiration.

In November 2009 Lord Browne of Madingley led an independent panel to review the funding and student finance of HE. Over twelve months they consulted students, teachers, academics, employers and regulators. There were three aims of this review: to increase participation in HE, improve the quality of HEIs and create a sustainable long term future for HE. In October 2010 the panel’s recommendations were published in a document entitled “Securing a Sustainable future for HE”. The six core principles included: more investment for HE; increasing student choice; all those with the potential should be able to benefit from HE; no one should pay until they start to work; payments should be affordable; and the ‘upfront’ costs for part time students should be eliminated.

During this independent review, in May 2010, there was a change of government from Labour to a Liberal-Conservative coalition. It soon became apparent that the new coalition had inherited a huge budget deficit which required spending cuts across government and it fell to the coalition to receive the independent “Browne Review”. The coalition proposed a new system for HE funding,
supporting students with their living costs and no ‘upfront’ tuition fees would be required. However, further changes to student finance were quite controversial, in particular the reduction in grant money from HEFCE to universities and colleges and the introduction of the £6000 basic threshold for undergraduate course charges, to a maximum of £9000 per academic year. Government loans were proposed to help pay for tuition fees and living costs, and the loans would be repaid at a rate of nine per cent of earnings over £21,000. 62

1.5 Transition into Higher Education

For many students the greatest hurdle in HE is the transition from school to university, which is often an exciting yet daunting experience. Students are particularly vulnerable at the start of their courses while they learn to adapt to a new environment. 63 About two-thirds of all university dropouts happen throughout or by the end of the first year at university, and most of these students make the decision to leave university within the first few weeks. 64 Effective transition and induction programmes in the first six weeks of term are fundamental factors in promoting student success. To be successful it is imperative they address multiple aspects of integration into the academic and social communities at university. Such programmes need to build students’ confidence for academic life and their ability to develop a peer community, and are a successful way of supporting student achievement and progression. 65-67 Ultimately the success of a transition and induction programme can affect the students’ ability to achieve academically as well as make that all important decision to continue with their studies or withdraw from the course. 64
Stress is another factor which has a significant effect upon students entering university for the first time. The life changes associated with the transition from school or college to university can cause a significant amount of disruption and anxiety for a student. This in turn can lead to a feeling of reduced control over their lifestyle and to stress. The situation can sometimes become so marked that even the smallest “daily hassle” can be damaging. The most significant changes for students entering university is the increased class sizes and the difference in personal contact with tutors and staff compared to school or college. In particular, the inaccessibility of staff especially close to assessment periods can place an intolerable strain upon students and academic support provision within the institution. It appears that the attitude towards staff can be formed as a result of one or two early incidents on the course and although these negative experiences can seem trivial they manage to overshadow the positive points and often make students reluctant to approach any staff member subsequently. It appears that the staff-student relationship is key to providing students with an enjoyable and successful university experience. Students can develop feelings of anonymity and isolation which lead to frustration, anger, de-motivation and stress. Whilst students do not expect formal classes they just want to be treated as individuals and to know that someone cares about their progress.

The transition from school or college to university depends also upon the emotional and social support network students have around them e.g. relatives, friends or spouse. Studies have shown that such support can reduce the incidence of stress related illnesses. Not only is the contact between staff and
students reducing, but more and more students are filling their non-contact time with part-time jobs in order to cope with the increasing financial demands of HE, in particular the cost of living and rising tuition fees. Thus the pressure of university workload and employment is resulting in limited time available for socialising, family contact and, more importantly, completing assignments on time.

The transition into university could also be affected for those students who achieved lower grades than predicted and they may feel the demands of HE are now outside of their capabilities resulting in stress. In addition the high achieving student who was expected to secure a place in one of the “old red brick” universities may feel resentful if they did not make it and consequently attend a different university or degree course. They may feel further pressure from family and peers to do well and may feel less of a sense of community and belonging compared to their student peers.

1.5.1 Sense of Community and Belonging

A student’s sense of belonging to a university campus community is their sense of identification and affiliation with it. Various studies have shown that student involvement and integration into the academic environment and social aspects of university, cultivates learning and development which can ultimately lead to increased retention. In addition, a sense of belonging to a university community appears to increase student satisfaction. Whilst there is no universal definition of the term “sense of community” there are several useful conceptualisations e.g. trust, interactivity, mutual interdependence among
peers, connectedness, and shared values and goals. Research has demonstrated that the need to belong is a fundamental human motivation which is hugely influential on behaviour. This in turn could mean that students who fail to achieve a satisfactory sense of belonging may perform less well or even fail to progress. Making compatible friends plays an essential part in retention and students’ living arrangements can also influence their sense of belonging.

Within the classroom, seminar, tutorial, workshop or lecture environment the common element for learning is the social and communicative interaction between the students and their peers, and the students with the lecturers. The fundamental learning activities that take place in the classroom environment are the ability to ask questions, to share opinions and discuss or debate a point of view. An assumption is made that the student feels a sense of belonging to the class or the group of students on their course as a result of their physical presence in the classroom. They listen, may choose to raise their hand to comment, or ask/answer a question. The student may go on further to develop working relationships with other students in the class and continue to have further discussions about the topic outside of the classroom; however, this is an assumption that is not true in all cases. Some students for a variety of reasons can feel alienated or not part of the group e.g. because of increased class sizes or student diversity. The transition from school into HE is a major component in students’ sense of belonging and sense of community, and the success of retention and completion of their studies. It is of particular importance when ensuring that students are equipped with appropriate study skills and have the ability to develop a sense of community between staff and their peers.
1.5.2 Student attainment

Student attainment, or performance, is understood to be a multivariable phenomenon affected by communication skills, maturity, prior knowledge, study habits, time available for study, teacher effectiveness and the HE Institution.\textsuperscript{76}

Course completion and attrition rates are considered to be important measures for both students and academic providers. However, attrition is a complex phenomenon dependent on a myriad of academic, social and personal factors including the academic programme, admissions criteria and the nature of the student and HE Institution.\textsuperscript{76}

It is apparent that all learning involves a relationship between what a student already knows and the new challenges ahead. It is the degree to which existing knowledge is confirmed and the amount of new information that is introduced that help to develop learner motivation and participation. This relationship can also be expressed as a continuum between confirmation and challenge.

Confirmation is recognising the learner’s previous experience, knowledge and existing skills on which to base new skills and knowledge. This method of confirming previous experience will enhance the learner’s confidence and initiate a learner-centred approach. The challenge is the introduction of new knowledge and skills. It is human nature to accept a challenge and most people will face a challenge if it appears attainable by them.\textsuperscript{80}

Knowles has observed that if too much emphasis is placed upon making the learner feel comfortable there is a danger of operating at the extreme end of the
continuum. Too much confirmation may result in under-stimulation of the learner who is likely to state “been there, done that” or “that’s boring”. This is especially likely to occur if the teacher or lecturer is over cautious in exposing the learner to new concepts and challenges. Conversely, if the challenge and new information are set too high then the learner is likely to state “surely you don’t expect me to do that?” and they may not engage with the concept, become disruptive and lack any effort or commitment. Thus it is extremely important to get the balance right between confirmation and challenge at this stage and it is the lecturer’s experience and professionalism that lie at the heart of managing the confirmation and challenge continuum. As time progresses and the learner develops, so the lecturer can introduce new concepts and ideas, thus continually shifting the process and increasing the challenge by utilising and building upon prior knowledge, experience and skills.

1.5.3 Student aspiration

Any educational mission statement today is likely to make some reference to student aspiration. As do the following extracts from the University of Portsmouth mission statement:

“Your expectations as a University of Portsmouth student will quite rightly match your aspirations. Our Charter explains how the University is committed to delivering a high quality student experience that aims to meet and exceed your expectations, while enabling you to achieve your goals”.

“We aspire to be the first choice for students...........Educational aspiration and attainment...........Our vision for Education is to provide an excellent, inspiring and
challenging educational experience........that inspires, engages and challenges students.” 82

The term aspiration has been defined as ambition, dream, drive and goal; 83 these can be used interchangeably to define aspiration. It is thought that it is a student’s aspiration which drives them to what they will become. 83 Academics recognise the value of teaching students who set themselves ambitious goals because they appear to be more task-orientated, feel a sense of purpose and learn more. 83 In order to improve levels of attainment young people’s aspirations need to be raised. Yet it is apparent that about a quarter of young people from lower socio-economic backgrounds who achieve eight good GCSE passes still do not enter HE. 59 The Government’s “Aim higher” campaign and the 2011 Higher Education: Students at the Heart of the System White Paper each aimed to encourage more students to apply to university, 62 making it a priority for all educational establishments to raise the aspirations of their students. 84

Russell Quaglia observed that a major responsibility for all educators is to help all young people learn. 83 Yet what can occur is that students become sorted and tracked according to their educational ability and performance. Thus, students who initially perform well, appear to be encouraged to excel, whilst those who perform less well receive less encouragement which could lead to a feeling of alienation, disillusion and disinterest and, they will more often than not, fall behind and ultimately have fewer choices and opportunities to achieve and succeed. 83 It is important to recognise that students’ aspirations are derived from educational goals, vocational endeavours and their own self esteem to
achieve the lifestyle of their choice. Thus the definition for aspiration must address future perspectives as well as those in the present. 83, 84

In 2000, the National Centre for Student Aspirations (NCSA) at the University of Maine’s College of Education in Orono, America, reported the results of a survey of more than 50,000 students. The authors of the study determined that 90% of the students believed that their lecturers were concerned about their academic growth, whilst only 40% believed their lecturers actually cared about their personal and social problems or their feelings. 71 Similar findings were determined during a study at Sunderland Business School. 68 These findings suggested that the strict educational reforms driving and demanding academic and assessment standards affected the student–lecturer relationship and students perceived that their lecturers only really cared about academic development, end of year results and university league tables. Thus it was determined that there was a need to establish a learning environment that promoted aspiration. Students with a high level of aspiration should have the ability to dream about their future, whilst at the same time be inspired, by their lecturers, to reach those dreams. However, all too often, the required conditions to inspire and support them are not always fully in place and so only a few students reach their fullest potential. 85

In 1999 the Further Education Development Agency (FEDA) undertook a study of student retention in Further Education and those students who dropped out showed a marked lower satisfaction with the quality of teaching, help and support from teachers, organisation of teachers, and help and advice with
coursework. Observations such as these highlight that teachers cannot take for granted that their students regard them in a positive light and students require inspiration as well as aspiration in order to succeed. They need to be provided with learning environments and experiences to help them reach their aspirations. The Quaglia Institute for Student Aspirations (QISA) identified eight conditions to help students fulfil their academic potential; these emphasised relationships between peers and academic staff, engaged student learning, students’ sense of belonging and students’ sense of community within their education establishment, (see Table 1.1).
Table 1-1 The Quaglia Institute for Student Aspirations (QISA) Eight Conditions

| 1. Belonging | Students feel part of a group and a valued member of the student community, while still maintaining uniqueness. A relationship, characterised by a sense of connection and support, between students. A sense of belonging is necessary for students’ well-being, social engagement and competence and fosters self-confidence. |
| 2. Heroes – teachers, friends and family | Those who inspire the students to excel and make positive changes in their attitudes and lifestyles. They have a positive influence and listen to and value students’ ideas. Building such relationships with the students through support, guidance and encouragement instils confidence in their academic, personal and social growth. |
| 3. Sense of accomplishment | Students’ efforts, perseverance and achievements are recognised by educators without the traditional narrow view of who is “best in the class”. A student’s individual personal growth and effort are recognised not just their class rank and exam marks. Result is - motivated students who persevere through difficult tasks via hard work, determination and dedication. |
| 4. Fun and excitement | Students are encouraged to enjoy what they are doing, whether at work, university or play. They become actively engaged in their academic work and are self-confident, curious and better prepared. Students are offered new opportunities and meaningful challenges that are connected with their individual interests. |
| 5. Curiosity and creativity | Students are encouraged to ask “why?” and “why not?” about the world around them. The notions of eagerness, inquisitiveness and a desire to learn new or interesting things are presented. |
| 6. Spirit of adventure | Students are encouraged to try new things or tackle something new without the fear of failure or success. The promotion of decision making and risk taking enable students to become more confident and resilient. |
| 7. Leadership and responsibility | Students are able to make their own decisions and are willing to accept the consequences for their choices. This cultivates accountability for their actions and words. |
| 8. Confidence to take action | The extent to which students believe in themselves encourages them to set their own goals and take the steps they need to reach them. Students are supported, independent thinking is encouraged and their diversity is acknowledged. |
Fallows and Ahmet suggested that it is the key role of any educator to inspire students to become independent and motivated learners, and that such inspiring educators should transfer their knowledge of a subject to their students with enthusiasm and can influence them to learn. Finding ways to inspire students could include: creatively applying material to students’ own experiences, devising assignments to develop transferable skills, presenting material to best meet students’ individual learning styles, and presenting material in exciting and inspiring ways.

Within HE there is always a need to underpin the teaching of a chosen discipline with a range of supporting material. Quite often it can be the supporting material which students lack interest in and yet without this pre-requisite material, they would undoubtedly fail to understand their chosen discipline fully. Inspiring students is principally a matter of motivation. When students are inspired they become motivated to engage with the subject and to learn.

Young adults need support in the transition to adulthood and the transition from school into Further Education (FE) and HE. Students predominantly leave school as heavily supported and dependent learners and are expected to graduate from HE as partially supported and independent learners. Knowles describes a concept called andragogy to describe a set of principles for teaching and learning specifically relating to adults and states that adult learners move away from dependent learning and towards self-direction and independence. It is important that teaching and learning processes include and respect the values and experiences of each individual learner and it is well recognised that everyone...
has their own individual learning style which affects what they are good at and what they gravitate towards. In addition to an individual’s learning style, the parenting styles they experience and their socio-economic background can also influence their educational progress. Thus educational achievement can be influenced by environmental factors as well as learning style or level of intelligence. Despite these natural or environmental disadvantages, it appears that people still want to learn and this characteristic is called motivation, discussed in Section 1.5.4.

1.5.4 Student motivation

The term motivation is defined by the Oxford English dictionary as something that either causes a person to act in a particular way or stimulates the interest of a person in an activity.

Motivation plays a role in many areas of life including, work, education, business, family and health. It is a person’s energy and drive to participate in a chosen activity in order to attain a goal, ambition or desirable end. Motivation is the crucial determinant of how students approach their studies and how well they perform.

For many years motivation has been an important issue for researchers of student learning. Lecturers have complained that students are not motivated, nor interested in the courses they have selected, but simply “want a qualification and a good job”. Their desire to participate in a learning process is influenced by the ultimate goal at the end and the level of involvement or non-involvement in the academic activity depends upon the achievement motivation.
A number of factors can determine an individual’s motivation to learn: the desire to please their lecturer, the perceived need for the material presented, the degree of interest and attitude towards the subject material, the personal views and beliefs of the learner, the incentives and rewards from the learning, and the academic and career aspirations of the learner. These factors led Fallows and Ahmet to question what the student is seeking to gain from the course i.e. whether they are questing for new knowledge or merely seeking a qualification to acquire a good job and affluent lifestyle. For the student who is merely seeking academic credit for progression or graduation, their desire for learning is minimal and confined to that which is only formally assessed. This student will commonly be heard asking “will this material be assessed?” or “do I need to know this for the exam?”

Another factor which can determine an individual’s motivation is the type of educational establishment they attend in the UK. FE and HE are not compulsory for students over 18-years of age. Thus the students’ motivations for being there are entirely different to younger students participating in compulsory school education. However, the assumption here is that FE and HE colleges and universities contain self-motivated students who have enrolled on a course of their own free will.

It is evident that people not only have different levels of motivation i.e. how much, but also different orientations of motivation i.e. type of motivation. The type and orientation of motivation concerns the underlying attitudes and goals that give rise to the action i.e. why someone is motivated, e.g. a student can be
hugely motivated to complete their homework because they are curious or have a desire or interest to learn. Alternatively, they may wish to gain approval from their tutor or parents. A student could be motivated to learn a new set of skills because they appreciate their value in helping them to obtain good academic marks or open doors to opportunities later. These examples may all have the same or similar levels of motivation, but the focus and orientation of the motivation are all quite varied. The basic distinction between such orientations of motivation is classed as intrinsic and extrinsic motivation. 95 These are discussed in Sections 1.5.4.1 and 1.5.4.2.

1.5.4.1 Intrinsic motivation

Intrinsic motivation refers to doing something because it is interesting or enjoyable and for its inherent satisfaction rather than for some separable consequence or apparent reward. A person follows their interests and decides to undertake a task for the fun or challenge entailed rather than the external pressures or rewards i.e. the reward associated with intrinsic motivation is the undertaking of the activity itself, and it is the activity which is the end in itself and not a means to an end. These are activities that people do freely which encompass curiosity and exploration, and are important with respect to education where the student has a natural desire for learning that comes from within, as opposed to from an external stimulus.

The primary motivators of intrinsic motivation are the spontaneous, internal experiences that accompany the behaviour. This is most evident in small children because they want to learn, solve problems and understand challenges. Children
are curious and want to see the effect of their actions; they pick things up, shake, smell, taste and throw things and ask what things are. This desire to explore and discover is intrinsic to everyone’s nature and is a central component of the educational process. Individuals with a natural curiosity and interest to learn for its own sake, rather than for a particular reward, achieve high quality learning and creativity. Examples of intrinsic motivation would be students who study history just because they want to know about the past, or someone who is motivated towards choosing a career which involves interesting work assignments. 96, 100-103

Yet all too often educators and parents alike ignore intrinsic motivation and view education as an extrinsic process: one that must be pushed, prodded and controlled. Meanwhile the key to successful student learning is to provide challenges, stimulation and autonomy in order to nurture intrinsic motivation. Several studies have demonstrated that a learning environment which is supportive of autonomy and personal responsibility will instil a greater intrinsic motivation in the student, i.e. a curiosity and a desire for a challenge. Conversely, if students are controlled they appear to learn less and lose any initiative. The difficult task for any educator is how to maintain a student’s intrinsic motivation for learning throughout their educational journey be it at school, college or university. 102

Almost every child, in the early stages of its life, is exposed to reward and punishment to help them think and learn, albeit in the home or at school. Typically at school if a child or young adult continues to receive rewards e.g. a
gold star or a high mark, for producing good work this could result in them obtaining an inflated opinion of their own academic abilities and achievements whilst failing to develop the capacity to transform their learning into flexible useful cognitive components. Ultimately this reward system can result in a student who may be able to memorise facts but may not have the ability to think creatively and apply their knowledge. One of the most important ways to get students to think and learn for themselves is to help them approach their learning as a task to discover new knowledge as opposed to rote learning. Problem based learning activities which encourage students to draw upon a range of knowledge gained throughout the academic year to solve a task is one teaching method to help students to achieve and demonstrate creative thinking and application of knowledge.

This approach should encourage them to work with autonomy and the reward should be the discovery of the knowledge itself. Furthermore, when students learn intrinsically, they tend to reflect upon their successes and failures to help them develop and improve. Helping students to think and learn without the control of reward and punishment not only appears to be successful in achieving a learning style that leads to flexible cognitive structures, but also a greater self-esteem in the learner. Achieving an adaptive intrinsic motivational orientation to study encourages students to enjoy, be interested in and value their studies, and is likely to enable them to succeed in their studies.

Similar studies have investigated the effects a student’s parents can have upon their desire to learn and the orientation of their motivation. It appears that
children of parents who are more supportive of autonomy i.e. they support independent learning, are more likely to challenge themselves than those from more controlling parents. Thus the classroom and home surroundings can promote intrinsic motivation by supporting the need for autonomy and competence.  

95, 103-105

It is apparent that intrinsic motivation declines through the advancing years at school and HE as social demands and roles require individuals to take responsibility for non-intrinsically interesting tasks i.e. an interesting task that carries a consequence or reward.

1.5.4.2 Extrinsic motivation

Extrinsic motivation refers to doing something because it leads to a separable outcome or goal i.e. the process of satisfying a need which is related to the learning activity, but is not satisfied by the learning itself.  

100 A student can perform an extrinsically motivated task with a feeling of resentment, resistance or disinterest because they are externally propelled into action, e.g. incentives or rewards are offered in order to get the student motivated to participate.  

102 In contrast an extrinsically motivated action can be undertaken with an attitude of willingness that reflects an inner acceptance of the value of the task because the goal at the end is self-endorsed by the student and so is adopted with a feeling of desire, pleasure or volition.

95

The degree of autonomy and independent learning varies widely within extrinsic motivation, examples include:
• a student finishes her homework only from fear of sanctions for not doing it – this is extrinsic motivation to avoid the sanction; or

• a student finishes her homework because she personally believes it is a valuable task to achieve her chosen career – this student is extrinsically motivated to finish her homework because she is doing it for instrumental value rather than because she finds the subject interesting.

Both forms of extrinsic motivation represent intentional behaviour but the orientation of the extrinsic motivation varies in their relative autonomy (independence and freedom). The first involves compliance with an external pressure or control whilst the second entails a personal endorsement and a feeling of choice.

Knowing how to promote active and volitional, as opposed to passive and controlling, forms of extrinsic motivation is an essential strategy for successful teaching and learning because students’ intrinsic motivation cannot be relied upon to foster learning. It is necessary for educators to understand these two different types of extrinsic motivation. The difficulty many educators have is motivating their students in the early years of a chosen discipline. Many introductory tasks, pre-requisites and under-pinning topics of a desired discipline are not always foreseen as interesting or enjoyable by the student. The material is not consciously designed to be intrinsically interesting and so it is essential to encourage students to value and self-regulate such activities without displaying external pressure to carry them out on their own. The more students are
externally pressured, the less interest, self-initiation and value they show in the topic and the more they tend to lay blame on others, such as their lecturers, for their negative outcomes. Students want lecturers to explain clearly what they are going to be doing in the course and the reasons why. A holistic subject-specific approach supports students during the vulnerable initial stages of transition into HE and helps them to understand what is expected from them at university. 65

Then, through the successful delivery of the course, this will ultimately prove that the reasons given were sound. Students’ confidence in the value of the course they are undertaking and the importance of the knowledge and skills developed within it, should increase and ultimately reduce any motivational issues arising. 95, 96, 104

Grolnick and Ryan undertook a study comparing students’ learning and recall of a subject following either, directed and controlling learning conditions, directed non-controlling learning conditions or non-directed spontaneous learning conditions. Both directed forms of learning achieved a higher level of recall than the non-directed condition. However, the non-controlling and non-directed sets displayed a greater interest in the subject and conceptual learning compared to the controlling set. Furthermore, the students in the directed and controlling set reported they experienced higher levels of pressure than their counterparts in the other sets and demonstrated a greater deterioration in rote recall after a period of eight days. This suggests that strong external pressures to learn may encourage rote and surface learning, and material learned this way is less likely to be retained. 105
Thus a teaching method that focuses on autonomous extrinsic motivation i.e. the freedom to make their own choice together with external pressure and direction but without the controlling element, is likely to result in greater engagement from the student. Furthermore, a better performance and higher quality of learning are more likely whilst less likelihood of dropping out. When this occurs students not only feel competent but also self-determined, as they carry out extrinsically valued activities.

The difference between intrinsic and extrinsic motivation was clearly expressed by Lepper. He stated that intrinsically motivated students engage in academic activities “for its own sake, for the enjoyment it provides, the learning it permits, or the feelings of accomplishment it evokes,” meanwhile an extrinsically motivated student performs “in order to obtain some reward or avoid some punishment external to the activity itself.”

1.5.4.3 Parental influence

Whilst learning environments can influence a student’s desire to learn, parents can also influence their child’s learning experience, from infant to adolescent, and play a key role in their motivation to learn. Parents can be supportive of autonomy, controlling, provide structure and/or be involved in their child’s educational and learning journey.

Parents who support autonomy encourage their children to solve their own problems and take their children’s perspectives and viewpoints into account. Children of such parents are more likely to explore and extend themselves by intrinsic motivation and ultimately perform well. This parenting
approach lays the groundwork for self-regulation, independence and competence necessary for academic success. It also prepares the adolescent for an educational environment e.g. university, that requires independent mastery and self-regulation. 108

In contrast, controlling parents use power to achieve obedience in their children. 108 They solve problems for their children and direct their behaviour from their own perspective, rather than that of their children. 107 Adolescents with controlling parents find it difficult to integrate and make friends, are less likely to turn to their parents for support, have a low level of social interaction and are sometimes dominated by their peers. 103 Excessive control in the home can lead to non-compliance with college or university regulations which are not monitored. In particular, an adolescent excessively controlled at home could struggle with tasks at college or university that are not intrinsically or spontaneously motivating for them.

Meanwhile parents who provide structure for their children give clear and consistent guidelines, expectations and rules for behaviour. 108 When explanations and feedback are provided, their children understand how to achieve success, avoid failure and have a sense of control which is crucial to motivation. 107

Finally involvement is the extent to which parents are interested in, knowledgeable about and take an active part in their child’s life. 108 Children who have parents who are caring and supportive, internalise the values promoted by their parents e.g. doing well at school, college or university. 107
Striking a balance between autonomy and independence, whilst offering guidance is the key to successful parenting. Internalisation and integration of school, college and university related values is observed among children and adolescents whose parents were supportive of autonomy and relatedness.\textsuperscript{103, 107, 108}

Parenting styles continue to influence a child as they approach adulthood, and can in fact influence whether they decide to stay at home or leave to attend university.\textsuperscript{109, 110} Parenting styles also appear to influence a child’s ability to cope with the transition from school to university. There appears to be an increased risk of loneliness during this transition when young adults are faced with the concept of living away from home and their family. However, students with parents where autonomy is prevalent, tend to adapt more easily and are more self-motivated, confident and secure.\textsuperscript{108} They form close friendships and relationships with their peers and within social groups at university and therefore are less lonely, and better adjust during the school to university transition than the emerging adults from parents with controlling parenting styles.\textsuperscript{111-117} It is also apparent that having a parent from the same profession being studied, e.g. an MPharm student with a pharmacist parent(s), can have negative connotations in the form of expectations by the parents which can burden the student with unwanted stress.\textsuperscript{118}

1.5.4.4 Motivating diverse students

The pressure, demands and the overall experience of being a student in HE are very different today compared to those students who went to university over 20
years ago. Students enter HE for many different reasons, and the student population is not only growing but is also increasingly diverse. 98

In the last 20-25 years in the UK the number of mature students, defined as 21 years and over, and the proportion of female students have increased. In addition, there has been a move towards more student-centred and autonomous learning. 69, 119 A study was undertaken to gain a greater understanding of how students approach their learning and what influences their motivation to learn. 120 The results showed that mature students had a tendency for more deep learning by reading widely to discover meaning and inter-relating with previous relevant knowledge. Meanwhile younger students were more likely to adopt a surface learning approach by reading the bare essentials to achieve their target and to reproduce them through rote learning. Male students had a higher surface learning approach whilst female students were more likely to adopt a deep learning approach. Gender differences were not influenced by age though. It was suggested that mature students were more intrinsically motivated whilst younger students acquired a surface learning approach from secondary education where they experienced excessive assessment throughout a modularised education system.

A similar study investigating the effects of gender upon approaches to learning, 121 found female students demonstrated significantly more intrinsic motivation, wanting to learn for their own interest. Male students were more extrinsically motivated by the qualifications they would obtain than the actual course they were studying. However in contrast to the previous studies, significantly more
males adopted a deep approach to learning whilst significantly more female students adopted a surface learning approach. Workload and fear of failure were also considered in this study and significantly more females reported that the pressure of work-assignments and deadlines affected their approach to learning. It appeared that both the amount of workload and the perceived challenge of the workload, each played an important role and especially impacted upon the female students’ tendencies to surface learn. Significantly more females had a fear of failure and felt more intimidated than the male students. Female students also commented that lecturers liked to make the subject complicated by using complex language to impress students.\textsuperscript{68, 122} If students were to be encouraged to adopt a deep learning approach then a reduction in the number of assignments and the types of assignment should be considered, similar to the changes made at the University of Portsmouth in RAS-2012.\textsuperscript{46, 123}

Isroff and del Soldato investigated student motivations with respect to institutional setting. The researchers compared the motivational differences between two very diverse student groups, from University College London (UCL) and the Open University (OU).\textsuperscript{124} UCL is a traditional university with undergraduate students who on the whole were younger, had less opportunity to engage in full time employment and had recently left school. Meanwhile the OU students on the whole were mature, generally in full time employment and had not studied for several years.\textsuperscript{124} The results demonstrated marked differences between the OU students and full time undergraduates at UCL. The younger undergraduate students were more motivated to get good grades than the OU students and felt that it was the responsibility of the academic staff to
motivate them whilst the OU students felt they could motivate themselves. At the same time, the OU students were more intrinsically motivated and interested in their subjects and a significant minority of the undergraduate students had no interest in their subjects at all. An explanation for this differing behaviour could be a result of the school education system where teachers appear to take on most of the responsibility for motivating their pupils. The rigid examination system directs teachers to teach to a particular syllabus without providing opportunities for their pupils to take responsibility for their own learning. In effect, pupils are taught to pass their exams. In contrast the OU students were mature students and most likely had experienced a less rigid examination system. Together with the confidence they had developed from life experiences they could be less reliant upon the direct guidance and motivation from their lecturers. As universities begin to accept more mature students on to their degree courses, this raises questions about how they will integrate both socially and academically with their younger counterparts.

1.6 How students learn

Research in cognitive science and educational psychology inform teachers, lecturers and instructors about how students learn. Individual learners learn in many distinctive ways. An important aspect of students’ learning is the learning environment within which they undertake their learning and the provision of a learning environment that encourages students to meet their learning goals and outcomes.\(^{125}\)
1.6.1 The social context of learning

In the late nineteenth century an American psychologist called John Dewey founded a type of education known as progressive education. Dewey believed that learning occurred in a social context, which gave meaning and direction to instincts arising in the individual and learners would adapt their behaviour to that of their environment. 126

Meanwhile, Albert Bandura saw learning occurring from social observations i.e. learning that occurred through observation of others. 127 Whilst Jean Lave and Etienne Wenger believed that knowledge and learning developed in communities of practice. 128 See Sections 3.8, 4.1.1 and 5.2.

In the mid-twentieth century Paulo Freire developed his critical pedagogy where learning occurred through critical examination of experience and implicit understanding.129 He used this method to challenge society and taught students self-reflection so that they could gather learning opportunities from their own experiences.

1.6.2 Psychological theories of learning

In the early twentieth century, psychologists identified a behavioural approach to understanding learning by using animals. 130 They showed how animals learned habitual responses through the association of rewards with certain behaviour. This was known as positive reinforcement and was linked to an outcome-based approach.
Meanwhile, another psychological approach focused on the internal motivation of learners, where students took responsibility for their own learning. Learning occurred best when students felt that the learning was valuable, and that their efforts were valued and contributed towards a positive outcome. If learners felt that their success came from their own efforts, their locus of control was located internally and they were intrinsically motivated.  

Intrinsic motivation is the most enduring form of motivation. It creates the strongest positive attribution of success to learning ability and develops the drive to become a self-motivated lifelong learner.

1.6.3 Cognitive theories of learning

Jean Piaget viewed learning as arising from knowledge gathered from experiences. These experiences, however, could be processed only according to the capabilities present in learners’ cognitive stage of development.

His theories displayed a form of sequential constructivism known as cognitive constructivism. Constructivism is a theory of knowledge that views knowledge as being constructed internally by an individual rather than imposed from the outside and helps a person makes sense of the world.

Benjamin Bloom was a pivotal thinker in applying cognitive theory to learning. He developed a taxonomy describing the cognitive stages involved in assimilating new concepts (Bloom’s taxonomy). Bloom viewed each instance of learning as
progressing through stages of access, understanding, processing, manipulating and evaluating before new knowledge was integrated and used.

### 1.6.4 Andragogy

Andragogy is the style of independent learning developed by a mature learner, commonly referred to lifelong learning.

Secondary school students begin to develop andragogy and the skills of independent thinking, however they have not fully developed skills in independent learning. Their learning process is still largely directed by others and they are used to information being interpreted for them by their teachers. Furthermore, the life experiences of first-year university students do not necessarily guarantee learning maturity e.g. an academic and theoretically focused subject may develop an entirely different method of learning from a more vocationally focused subject which applies secondary school learning directly to the workplace. It is only once students have control of their own learning that they begin to develop autonomy and independence in their learning. ¹³³

One of the most important things students need to learn is how to take a deep learning approach to their study, as opposed to a surface learning approach. See Section 1.5.4. It is essential for first-year university students to develop deep learning skills, not least because the spiral curriculum structure of academic learning requires students to pass through threshold concepts in order to achieve ever-higher levels of understanding. See Appendix 1. University students need to quickly master key concepts in order to progress through their degree
course. This can be achieved only through deep learning and the linkages that it forms. Knowledge must be built, or constructed in order to gain understanding, it cannot simply be gathered.

Certain teaching and learning environments may direct the learner towards a more surface thinking approach and make it difficult for sophisticated thinking to develop. Front-of-class lecturing is a passive form of teaching that fails to provide metacognitive frameworks for students who may not have yet developed deep thinking. Meanwhile, tutorials can encourage both deep and surface learning, depending on how well tutors engage their students or whether they simply teach from the front of the class in a similar way as a lecture.

Summative assessments are more likely to encourage surface learning in students, as they encourage competition between students and memorisation rather than understanding. Meanwhile, formative assessments encourage students to reflect on their progress and reward the development of skills rather than the ability to recall information.

The main point to consider is that some students will already have strategies of deep learning that can carry them through difficult conceptual landmarks but others may need some guidance in developing learning strategies appropriate to academic thinking.

1.6.5 Learning styles

Learners develop different skills and strategies across a lifetime of learning. However, they remain constant in the way they approach an environment,
process information and express and use knowledge. Different cognitive styles describe the way information is processed whilst learning styles describe the ways in which people interact with ideas and experiences. A cognitive style determines whether a person focuses on parts (an analyst) or the whole (holist) or whether they engage the world using words (a verbalist) or images (a visualist). Figure 1.2 illustrates Kolb’s experiential learning cycle.
Figure 1-2 Kolb's experiential learning cycle

Concrete Experience
Engaging directly in authentic situations

Active Experimentation
Testing new ideas; honing skills in a new experience

Reflective Observation
Noticing what happened and relating to past experience

Abstract Conceptualisation
Distilling perceptions into abstract concepts

Holist: gathers information from world. Involves themselves in experiences, observe their performance.

Verbalist: uses oral and written words to solve problems. Learns as they go.

Visualist: uses images for practical solutions. Tests ideas by applying them to real world.

Diverger/Reflector

Converger/Pragmatist

Assimilator/Theorist

Accommodator/Activist

Analyst: focuses, processes and organises. Observes, analyses and thinks about what they see.
Figure 2.1 illustrates that the analytical cognitive approach is also applied by the theorist in Honey and Mumford’s and the assimilator in Kolb’s learning styles respectively. An analyst focuses on abstract concepts and processes them into individual components and organises the parts. The analyst observes and analyses, thinking about what they see and dwells within the abstract-reflective quadrant of the Kolb experiential learning cycle.

The holist cognitive type displays a holistic approach that is similar to Honey and Mumford’s reflector and Kolb’s diverger. These learners are in the concrete reflective quadrant of the Kolb experiential learning cycle. They involve themselves in experiences, gather information from the whole world around them, apply different perspectives to problems, come up with a range of solutions and observe their performance.

Different types of learning situations also lend themselves towards different processing mediums. Verbalists use oral and written communication skills to solve problems in an interpersonal environment as Kolb’s accommodator. They learn as they go along, are stimulated by the social environment as Honey and Mumford’s activist gaining and applying social knowledge as it arrives through verbal channels. This kind of immersive learning occurs in the concrete-active section of the Kolb experiential learning cycle.

Meanwhile, visualists use images and objects like that of Honey and Mumford’s pragmatist to find practical solutions to problems. Their ability to visualise and test ideas allow them to conceptualise solutions to problems by applying them to real-world situations and apply solutions as Kolb’s converger. Pragmatists and
convergers dwell in the abstract active quadrant of the Kolb experiential learning cycle, displaying both intellectual flexibility and practical innovation.

Lecturers and educators need to appreciate that learners/students do not tend to fall into one single cognitive or learning style, but display a combination of learning capabilities or preferences to different degrees.

1.7 Factors that support learning

1.7.1 Academic Support Systems

Processes need to be put into place to encourage university students to motivate themselves, become less reliant upon academic staff and to feel responsible for their own motivation to learn. If the right support is put into place it could enhance motivation. Support systems are considered to be a major component of the new degree structure at UOP. One of the four key principles of the curriculum framework at UOP is to provide students with an excellent, inclusive learning experience, where students were given continuous support throughout the year and feedback to check their understanding. The provision of such study support aims to help university students in their academic journey together with aspects of their life throughout university. The UOP provides various types of generic academic and pastoral support for all students during all levels of their degree courses.

The Academic Skills Unit service (ASK) provides personalised support on study skills which are imperative for success in university and also in the future world of employment. One-to-one tutorials, online resources, skills-focused workshops
and co-teaching with university lecturers are offered. The Maths Cafe supports students with mathematical and statistical problems, via one-to-one tutoring in drop-in sessions or online resources on Moodle, an online virtual learning environment provided by the university. Meanwhile the university library offers a friendly, encouraging and stimulating environment that aims to enable students to become independent and motivated learners and information services are available to support any issues relating to information technology (IT). 139-142

Students with disabilities are supported via the Additional Support and Disability Advice Centre (ASDAC) which assists and guides them to achieve their full potential. Whilst the Counselling and Wellbeing service has qualified counsellors to listen to students’ concerns and dilemmas to help them resolve issues. 143, 144

Every department at the UOP provides support to its students to develop knowledge and skills and/or signpost them to centrally provided support services described above. Every student is assigned a personal tutor as a point of contact for affective, learning and organisational support throughout university. Tutorial sessions on the MPharm provide students with an opportunity to discuss academic progress and any issues they face. The tutorial activities undertaken by MPharm students aim to equip students with generic and subject specific skills which can be used during their time at university and thereafter. 145
Learning Support Tutors (LST) provide academic support at faculty level. One-to-one tutorials and group workshops are offered, to help students develop academic skills and solve problems. The LST can help with essay writing, presentation skills, organising workload and referencing, they also direct students to more specialised services within the university where appropriate. ¹⁴⁶

UOP aims to promote an excellent student experience that provides students with the knowledge, skills and attributes to be successful in a global workforce. UOP expect all their graduates to:

1. Demonstrate command of a significant body of subject knowledge and skills.
2. Be able to make a successful transition into employment and/or further study.
3. Be confident to engage in lifelong learning in pursuit of personal, academic and career development.
4. Display effective academic, research, information and digital literacy skills.
5. Be able to work autonomously and collaboratively.
6. Have an enterprising outlook and be capable of logical, critical and creative thinking to solve a range of problems.
7. Have a global perspective and be able to act in an ethical and socially responsible manner. ¹⁴⁷
1.8 Research aims

A number of studies in the USA, New Zealand and UK have investigated why students choose to study pharmacy. 148-156 In addition to this, there were a number of studies which determined where students go for support with their studies and student mentoring, 50, 64, 157-163 however none of them was specific to MPharm students.

The pharmacy degree is changing in response to the evolution of the profession, as a result of which students may need different types of support and direction. The 2005 New Pharmacy Contract and the regulation changes for pharmacists in 2010 164, 165 have resulted in pharmacists no longer simply dispensing and providing advice on medicines to patients. New roles and responsibilities exist in pharmacy and more enhanced and advanced services are being delivered. The MPharm degree has advanced to accommodate these changes and the General Pharmaceutical Council reaccreditation process of the MPharm at the UOP has focused the degree on equipping students with the relevant transferable skills required to undertake these new roles and responsibilities. 48 However, little attention has been given to where MPharm students seek support with their studies.

The recent academic and curriculum changes of RAS-2012, see Section 1.3.3, as well increased student numbers, has had a significant effect on the pedagogy of science in higher education. 166 The logistics of providing personalised contact between students and academic tutors becomes increasingly problematic. Small group teaching and active discussion can become limited due to time and space
constraints and this could lead to a more didactic teaching method. Furthermore, small group teaching and discussion, is important to ensure students cope with the cross semester teaching programme. Without such support the quality of the student experience could diminish, particularly with regard to building a strong community of learners.

This research informs development of current and future MPharm provision at Portsmouth School of Pharmacy. The outcomes from this research have been shared with other departments within the UOP and other Schools of Pharmacy nationally and internationally.

The rationale for focusing on one course, the MPharm at the UOP, made it possible to gain a more in-depth understanding of events, processes and relationships within the programme and to study issues in greater depth.

The author’s research had three distinct phases, each with its own aims:
1.8.1 Phase 1 aims

To explore MPharm students’ study habits and their perceptions of the study support services provided by the University of Portsmouth (UOP).

In order to gather the necessary data, the following research questions were used:

1. Why do students choose to study pharmacy?
2. What is their experience of the study support services available at the UOP?
3. What effect do study support services have upon MPharm students?
4. Where do MPharm students go for study support?

Phase 1 is described in Chapter 2 of this thesis.

1.8.2 Phase 2 aims

Informed by Phase 1: to introduce an MPharm student mentor programme (SMP); to evaluate the MPharm SMP; and to determine the experiences and skills developed by both Stage 1 mentees and higher year mentors.

In order to gather the necessary data, the following research questions were used to evaluate the MPharm student mentor programme:

1. What do MPharm students think of the student mentor programme?
2. What is the experience for students involved with a student mentor programme?
3. What effect does a student mentor programme have on pharmacy undergraduates?

4. What opportunities does a student mentor programme offer to make graduates more employable?

This research was informed and facilitated by Phase 1. Phase 2 is described in Chapter 3 of this thesis.

1.8.3 Phase 3 aims

Informed by Phases 1 and 2: to introduce a Peer Assisted Learning scheme (PAL); to evaluate PAL; and to determine the experiences and skills developed by both Stage 1 PAL attendees and higher year PAL leaders.

In order to gather the necessary data, the following research questions were used to evaluate PAL:

1. What do MPharm students think of the peer assisted learning programme?
2. What is the experience for students involved with the peer assisted learning programme?
3. What effect does a peer assisted learning programme have on pharmacy undergraduates?
4. What opportunities does a peer assisted learning programme offer to make graduates more employable?

This research was informed and facilitated by Phases 1 and 2 above.
Phase 3 is described in Chapter 4 of this thesis.

Chapter 5 provides an overall synopsis, discussion and conclusion of the findings and a study critique.

Chapter 6 makes recommendations for future practice and research.
Chapter 2 : Mixed methods study of University of Portsmouth MPharm students and their study habits.

2.1 Introduction

Chapter 1 described the evolving role of the pharmacist, the recent changes in the education of pharmacists in the UK and the revised academic structure introduced by the UOP.

There is very little research on the study habits of MPharm students and where they turn for support with their studies. This chapter describes Phase 1 of research attempting to define how MPharm students at UOP currently study.

In order to gather the necessary data, the following research questions were used:

1. Why do students choose to study pharmacy?
2. What is their experience of the study support available at the UOP?
3. What effect do study support services have upon MPharm students?
4. Where do MPharm students go for study support?

2.2 Methodology

Research methodology constitutes a whole range of strategies and procedures, which must be appropriate to help answer the research questions posed. Thus, the processes used to undertake the research must be tailored to fit the subject or topic being studied. 168-171
2.3 Research methods and approaches

2.3.1 Quantitative research

Quantitative research is the collection of numerical data that are analysed using mathematical processes, e.g. statistics, to explain phenomena. Explaining phenomena is a key element of all research. All researchers are looking to explain something. Some quantitative research methods can have a fixed design and be theory driven. Meanwhile, other quantitative researchers may choose to test a hypothesis to investigate frequencies of events or quantify relationships between clearly defined variables. A research hypothesis is a specialised quantitative research question in which investigators make predications based on theory, previous research or some other rationale, about the relationships among social phenomena, before conducting a research study. A hypothesis is a tentative explanation that accounts for a set of facts and can be tested by further investigation. Quantitative studies can help to answer research questions related to what, how much and how often something is happening. Examples include randomised controlled tests and large scale surveys.

2.3.2 Qualitative research

While quantitative research uses statistically analysed numerical data, qualitative research uses non-numerical data. Qualitative research encompasses a wide variety of methodological approaches, such as, grounded theory, action research and mixed methods. Put simply, ‘qualitative’ describes the data which are in the form of words and the methods used in qualitative research are specific
techniques associated with gathering, analysis, interpretation and presentation
of the narrative information. 174 Qualitative studies are considered most
appropriate for answering ‘how?’ and ‘why?’ questions 173 and focus directly on
understanding the thinking and behaviours of individuals or groups in specific
situations. Such research provides authentic accounts of human thoughts,
feelings and actions, meanwhile recognising that they will not apply to all people
and predications cannot be made in the same way as quantitative research. 168

2.3.3 Positivism

Positivism underpins quantitative methodological approaches to research,
maintaining that only one reality exists and the researcher has the responsibility
to discover what that reality is. 169 Positivism is also said to be value-free because
it is recognised to separate the facts from the values; all scientific propositions
based on facts and hypotheses are tested against these facts. The purpose of
science is to develop universal causal laws and a positivist approach provides a
hierarchy of methods. 169 Experiments are quintessential to determine causality,
however they can be difficult to perform in the social sciences due to practical
and ethical issues. Auguste Comte asserted that scientific knowledge about the
real world comes from empirical observation and knowledge that was not
empirical fell outside the scope of science. 171

2.3.4 Post-positivism

Positivism separates the researcher and the researched person and asserts that
the natural and social worlds can be understood through application of scientific
method. Meanwhile, post-positivism rejects these assumptions and questions
everything. Post-positivists do not believe the world is predictable, they accept that what is observed can be hugely influenced by the background knowledge, theories, hypotheses, and values of the researcher. ¹⁶⁹ The world is ambiguous, infinitely complex, variable and open to interpretation.

### 2.3.5 Constructivism

Constructivists reject scientific realism and claim reality is socially constructed. Each individual constructs his/her own reality so there are multiple interpretations. This is sometimes referred to as interpretivism. Constructivists develop varied and quite subjective meanings of their own personal experiences, and at the same time attempt to fully comprehend the world in which they live. Researchers construct the meaning of the phenomena under investigation, by trying to make sense of how the world is viewed by others, as opposed to simply reducing meanings into fewer categories or themes. Therefore, knowledge is a reflection of what people actually make of it rather than simply a reflection of what is just there i.e. reality is seen as being multiple and holistic. Like post-positivists, constructivists recognise that their interpretations of reality are shaped by their own cultural and historical background. They view their research participants as helping to construct the ‘reality’ with the researchers. ¹⁶⁹

### 2.3.6 Paradigms

Paradigms guide how investigators carry out their research and how they make decisions.¹⁷⁵ Paradigms are characterised through their ontology, epistemology and methodology. These characteristics create a holistic view of how knowledge is viewed, how individuals see themselves in relation to the knowledge and the
methodological strategies used to discover it. Different disciplines will be guided by a paradigm through which their research methodology is undertaken. A paradigm is a formally established research framework shared and used by scientists across a discipline and signifies the practice associated with a particular scientific community committed to the same beliefs, rules and standards. Positivism, post-positivism and constructivism are all examples of paradigms.

2.3.7 The paradigm debate

Researchers with a qualitative orientation are predominantly interested in the narrative data and usually sign up to the constructivist paradigm. Meanwhile, the positivist and post-positivist paradigms are a dominant approach for quantitative orientated researchers principally interested in numerical data.

The debate about quantitative and qualitative research at the epistemological level was known as ‘the paradigm wars’. There was a perception that quantitative and qualitative research were distinct and to a large extent competing paradigms, based on fundamentally different principles. Thomas Kuhn implicated that the two approaches could not be combined because the paradigms were incommensurable, i.e. they could not be judged by the same standards and had no common standard of measurement. The term paradigm wars referred to the conflict between the competing methodological approaches to research and in the 1970s there was a widely held belief that it would be inappropriate to combine quantitative and qualitative methods in a research project.
2.3.8 A mixed methods approach

The paradigm debate between qualitative and quantitative methods has contributed to the amplified divergence between the two approaches. However, the mixing of different methodological approaches in a single research project is not a recent phenomenon and the technique has been applied to research as long ago as the 1960s. The term ‘mixed methods’ has only recently been identified and refers to a research strategy that crosses the boundaries of conventional paradigms of research by deliberately combining methods from different traditions. Put simply, a mixed methods approach is one that combines alternative approaches e.g. qualitative and quantitative methods, within a single research project.

A characteristic feature of the mixed methods approach is the emphasis on practical approaches to the research problem i.e. pragmatist. This approach is problem driven, striving to answer the research question and treating it as the overriding concern. Researchers who chose a mixed methods approach are prepared to use methods that originate from diverse philosophical traditions, provided the findings are of practical value to address the research question. The premise that social research should strive for consistency is challenged when a mixed methods approach is selected. Mixed methods adopt a pragmatist position bringing together methods drawn from paradigms of research conventionally regarded as incompatible.

Social researchers use mixed methods strategies to improve their confidence in the accuracy of findings through the use of different methods to investigate the
same subject. 180 The mixed methods approach provides the researcher with an opportunity to check the findings from one method against the findings from another method. This approach permits researchers to feel more confident in assuming their findings are accurate by seeking convergence, corroboration and correspondence of results from the different methods. 181 A mixed methods approach can also enhance the findings by providing a fuller and more complete picture of the subject being investigated. The data produced from different methods can be complementary and provide alternative perspectives which go further towards an all-embracing vision of the subject compared to that resulting from a mono-method study. Furthermore, a researcher may recognise that different methods have their respective strengths and weaknesses. By combining multiple methods researchers can attempt to overcome the intrinsic bias that results from single methods. 182 A shrewd combination of methods allows the researcher to exploit the strengths of a particular method without leaving their data vulnerable to criticism in connection to the weaknesses of the method. For example a quantitative self-completed questionnaire can gain enormous amounts of factual data but lacks the in-depth understanding of the facts determined. Combining this quantitative method with a qualitative approach e.g. semi-structured interviews or focus groups, will allow the researcher to gain an in-depth understanding of participants’ thoughts, feelings and reasoning; however interviews and focus groups take time to organise, conduct and analyse, the numbers involved are generally quite small. Thus this qualitative method alone could leave the researcher vulnerable to the criticism that the data are not representative. To compensate for this weakness, a mixed methods
strategy can be adopted to exploit the strengths and overcome the weaknesses of both research methods.

2.4 Methodological approach to this study

To achieve a comprehensive data collection a mixed methods approach was appropriate to exploit the strengths of quantitative and qualitative methods. The quantitative approach was based on a philosophy of positivism or post-positivism using a questionnaire to gather large amounts of factual data. Meanwhile the qualitative approach was based on a philosophy of interpretivism or constructivism using focus groups to gather in-depth understanding of participants’ thoughts.

Questionnaires and face-to-face interviews could be considered as independent research methods. Advantages of using the combined approach, adopted in this research, were that it allowed triangulation of convergent and divergent opinions and comparison of viewpoints from different students, mentees and mentors. Focus groups and interviews permitted open-ended questions to be further explored to add richness to the quantitative data gathered from the questionnaires. A potential disadvantage of focus groups and interviews was that it was not possible to ask as many questions as that asked in the questionnaire.

This mixed methods approach aimed to gain an in-depth understanding of how MPharm undergraduates at UOP currently study. 183
2.4.1 Self-completed questionnaire

The first stage of Phase 1 of this study was a fixed and objective quantitative research method. The researcher wished to gather large amounts of factual data about how MPharm students study at UOP. The quantitative approach was conducted using a self-completed questionnaire to capture numerical data which could be statistically analysed. The questionnaires were distributed during lectures in the first academic term, November 2012, prior to Christmas, to Stages 2, 3 and 4 MPharm undergraduates. Distribution during lectures was selected to capture as many MPharm students as possible in one venue. In November 2012 there were 365 MPharm undergraduates in Stages 2, 3 and 4 at UOP. Permission was sought from the lecturers prior to distribution. It was deemed too early in the degree course for Stage 1 MPharm undergraduates to consider where they would turn for support. Further details about the development and questions used in the questionnaire are explained in Section 2.4.2.

A copy of the final, piloted questionnaire appears in Appendix 2. The questionnaire was formulated using brainstorming sessions between the author and the Director of Pharmacy Education for Portsmouth School of Pharmacy and Biomedical Sciences.

A pilot was undertaken with 15 volunteer MPharm undergraduates, 5 each from Stages 2, 3 and 4, to establish both face and content validity. The author approached students in each stage during lectures and asked for 5 volunteers to pilot the questionnaire. Minimal changes were required following the pilot,
largely related to wording, ordering of questions and the use of a table for Question 8.

References on good questionnaire design were consulted \(^\text{185, 186}\) and methods to optimise completion were incorporated. A mixture of open and closed questions was asked; closed questions or statements which required tick-box answers were used to assist questionnaire completion \(^\text{185}\) together with questions to determine students’ demographics i.e. gender and ethnic background. Students were asked to select and rank in order the reason(s) why they chose to study pharmacy and where they turned to for support with their academic studies. In addition students were asked their opinions of the MPharm workload and the study support services currently available at the UOP. Edwards \textit{et al} \(^\text{186}\) demonstrated that shorter questionnaires improve response rate and completion compared to longer ones. The pilot study indicated that MPharm students could complete the 3-pages questionnaire in approximately 10 minutes and this was deemed satisfactory.

### 2.4.2 Questionnaire data analysis

Following the pilot, questionnaires were distributed as explained in Section 2.4.1 and the data from the self-completed questionnaires were analysed using Microsoft Excel 2013. Some statistical inferences were drawn, see Section 2.5.

Microsoft Excel is easier to learn and manipulate compared to other statistical software packages available e.g. SPSS, and is one of the most used software applications. The author used Microsoft Excel 2013 to store and filter data, for conditional formatting and to produce pivot tables. Minitab 16 was used to
perform Chi-squared tests to determine whether there was a significant association between variables, e.g. between students with referrals and those without.

Open questions were analysed by using an adaptation of the principles of thematic analysis of Braun and Clark \(^{187}\), see Section 2.4.7.4.

### 2.4.3 Qualitative study of how students currently study

The latter stage of Phase 1 of this study involved an exploratory qualitative study. Qualitative research is based on a phenomenological position i.e. the personal experiences and opinions of others. It is a holistic approach which takes account of contexts within which human experiences occur and is thus concerned with learning from particular instances or cases. Qualitative research seeks to access the inner world of perception and meaning in order to understand, describe and explain social processes from the perspective of study participants. This approach does not commence with a prior hypothesis to be tested and proved but with a focus of inquiry that takes the researcher on a voyage of discovery; it takes an inductive approach to data analysis. Research outcomes are not broad generalisations but contextual findings and qualitative researchers tend to speak of ‘transferability’, from context to context, rather than generalisability. Thus, qualitative data analysis requires the researcher to find patterns within the words individuals use to explain their experiences and to present those patterns meanwhile remaining as close to the situation as the individuals originally experienced it. \(^{188}\)
This qualitative methodology was used to explore student experiences from a subjective point of view within the context of discovery as opposed to verification. Qualitative approaches have already been applied extensively both in healthcare research and to evaluate education and training in order to provide rich insights into people’s perspectives. Qualitative research meets quite different objectives from quantitative research, and provides a unique and distinctive form of information. In this study the qualitative data is linked with the quantitative data to help develop, interpret and clarify the findings.

Furthermore, qualitative research is dynamic in nature which permits the researcher to discover and learn more about participants within the study and to connect with them on a human level. The method undertaken to analyse the qualitative data is further explained in section 2.4.7.3.

2.4.4 Focus group design

The overall conduct of the focus group was semi-structured as opposed to structured, to adapt to the emerging views of participants. This flexible approach minimised imposing prior frames of reference from the researcher and the effect of predetermined responses. Focus groups were undertaken to gain further insight into the replies obtained from the self-completed questionnaire. The semi-structured schedule was developed to guide but not constrain the interview process. The literature suggests that between six and nine topic areas can be discussed in an interview lasting about 60 minutes.

The number of topics areas included in the questions for the focus groups was set at five to limit the focus groups to a maximum of 45 minutes and ensure that
there was sufficient breadth and depth of topic exploration. Focus groups were limited to 45 minutes for two reasons: firstly, it was deemed likely that longer sessions would put participants off, and scheduling could be more difficult and secondly, the researcher was mindful that there was an increased risk of participant fatigue which could affect data collection. Input from both the researcher’s supervisors was considered before producing a final guide for piloting. Piloting was conducted with six volunteer Stage 4 MPharm undergraduate students recruited from the target population of study. The author approached students during lectures and asked for 6 volunteers to pilot the focus group. The first six volunteers were selected. Few changes to the original focus group schedule were required and responses from the pilot were included in the final analysis.

A copy of the focus group schedule used in the study appears in Appendix 3.

2.4.5 Focus group delivery

All participants received an information sheet prior to the focus group and provided signed consent. Prior to commencing each focus group the researcher started two recording devices to record all responses during the session and provided a brief overview of the aims and objectives of the research. An assurance of confidentiality and anonymity was given by the author referring to the ethics committee compliance and research governance issues. Study participants were encouraged to reveal their true feelings, however the presence of others in the focus groups may have inhibited some respondents: for this
reason, groups were carefully balanced and included people who knew each other and shared a common background or experience.

Respondents were reminded that there were no right or wrong answers and that they had the right to withdraw from the study at any time during data collection or analysis. At the close the focus group respondents were thanked for their time and reassured of confidentiality and anonymity prior to stopping the recording.

2.4.6 Recruitment of focus group subjects

Students were recruited through a quota sampling framework, also considered as a type of purposive sampling. Quota sampling involves deciding the number of people with certain characteristics to include as participants. Characteristics might include age, gender, class or marital status. The criteria chosen for this study were five to seven participants per focus group and MPharm undergraduates from Stages 2, 3 and 4, it was deemed too early for Stage 1 students to discuss their views of UOP study support services. Each academic year group were further divided into students that had passed all their assessments at first attempt or had been required to undertake assessments at second attempt prior to progression. These criteria focused on students who would be most likely to experience, know about, or have insights into the research topic and comparisons could be made between students who progressed with or without second attempt assessments. Students were recruited by announcements made in lectures and emails. No financial incentives were offered but refreshments were provided during the focus groups.
Following the quota sampling process, volunteer participants were selected and informed, via email, when to attend for their scheduled focus group. A brief summary of the details of the research format was provided prior to the focus groups, providing participants the opportunity to ask any questions or concerns they had about the study, or to withdraw from the study, prior to the focus group.

Six focus groups were carried out:

1. Stage 2 – progressed without any second attempt assessments
2. Stage 2 – progressed following second attempt assessments
3. Stage 3 – progressed without any second attempt assessments
4. Stage 3 – progressed following second attempt assessments
5. Stage 4 – progressed without any second attempt assessments
6. Stage 4 – progressed following second attempt assessments

A participant code was allocated to each student i.e. 1:2:R referred to student number 1 in Stage 2 who undertook second attempt assessments (referrals) prior to progression; 23:3:P referred to student number 23 in Stage 3 who progressed without any referrals. Participant demographics and code details can be found in Appendix 4.

2.4.7 Semi-Structured focus group conduct

2.4.7.1 Focus group plan

The focus group discussion schedule was used simply as a guide to remain systematic and keep the interactions focused on the research area. The semi-
structured schedule was designed to capture subjects’ views on student study habits and to enrich the data gathered from the self-completed questionnaire.

The interaction between participants in a focus group acts as a stimulus to produce a wide range of opinions, feelings, perceptions, thoughts and ideas; and encourages participation from those participants who may be more reluctant to speak out if interviewed on their own. Although they can generate bias and manipulation from outspoken participants, which could obscure the views of quieter participants, they are a convenient way of involving more participants from the study.\textsuperscript{207, 208}

They also have the advantage of identifying the differences between participants’ opinions and thoughts,\textsuperscript{175, 209} explore emerging ideas and minimise the effect of predetermined responses.\textsuperscript{210}

The focus group semi-structured schedule was broadly followed but did not constrain the process. This type of approach makes allowances for alternative wording of questions and the use of probes to facilitate comprehension, depth of meaning and complete responses.\textsuperscript{211} The direction of flow depends to some degree on the individuals’ responses to the questions and their reaction to other respondents within the focus group. This flexible approach to the focus group schedule facilitates respondent validation,\textsuperscript{212} as the interviewer is able to clarify understanding and meaning to avoid misinterpretation.\textsuperscript{213} The focus group schedule design was based on non-directive open-ended questions permitting participants to answer as they wished. These questions aimed to explore the views of the participants. The questions were ordered using a funnelling-type
approach, \(^{214}\) where general questions were initially posed to elicit participants’ general views, followed by prompts to encourage discussion, determine more specific concerns or establish a context for participants to express their own personal opinions. \(^{210}\) The discussion schedule was designed to follow an iterative rather than linear process, which follows the fundamental principles of qualitative research. An iterative approach is a systematic, repetitive and recursive process used in qualitative analysis. A sequence of tasks are carried out in exactly the same manner every time and meaning is determined by calling upon the data already collected. The interplay between data collection, preliminary analysis and further data collection are examples of an iterative approach in qualitative research. The philosophy behind an iterative approach is that questions can be used flexibly to meet the needs of the research design and refocused in the light of participants’ responses. \(^{215}\)

This iterative approach made the data collection process focused and systematic, combining flexibility with structure, \(^{216},^{217}\) which in turn facilitated the analysis of the focus group data \(^{218}\) and enhanced validity.

At the close of each focus group, participants were asked if there was anything they wished to re-visit or add to the discussion and to confirm their consent to use their responses in the study.

2.4.7.2 Focus group delivery

Piloting informed the researcher that the focus groups would probably take between 30 and 45 minutes. An appointment was made with each group of
students and a quiet room was booked where the focus group could proceed uninterrupted.

Each focus group was recorded in its entirety using an Olympus Digital Voice Recorder: in addition, the researcher made separate hand written field notes to facilitate transcription and contribute to the internal validity of the study. Respondents were provided with copies of the introductory letter and the consent form prior to the focus group. Completed consent forms were collected by the author immediately prior to commencing the focus group, see Appendix 5.

2.4.7.3 Structured focus group data analysis method

A systematic review of a range of qualitative data analysis methods, which could be used for analysing the dataset, was conducted. Table 2.1 illustrates a review of six well known methods of qualitative data analysis. Column one states the data analysis method, column two provides a brief description of the analysis method, column three is a critique of the analysis method and column four describes a rationale for rejection or inclusion of the analysis method in the context of this research study.
<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
<th>Critique</th>
<th>Rationale for rejection or inclusion of the Analysis Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grounded Theory (GT)</td>
<td>Grounded theory is a systematic methodology involving the discovery of theory through the analysis of data 219. A study using GT is likely to begin with a question and analysis is directed towards theory development. A researcher chooses an existing theoretical framework and collects data to confirm how the theory does or does not apply to the phenomenon being studied.</td>
<td>There is significant disagreement between grounded theorists as to what constitutes GT and GT is often misunderstood. It is almost impossible to have no preconceived ideas when collecting and analysing data as emphasised by Glaser and Strauss 220.</td>
<td>Classic GT requires the researcher to re-enter the field, having analysed the first round of data collection and conduct further interviews to address questions arising from previous analysis. This method option was not available in this study. Furthermore, this study did not aim to develop theory.</td>
</tr>
<tr>
<td>Content Analysis (CA)</td>
<td>Content Analysis is a technique for systematically describing written, spoken or visual communication and provides a quantitative description. CA involves any medium which can be recorded or reviewed e.g. media, television, video and movies. The focus of CA is at a more micro level, providing counts and permits quantitative analysis of qualitative data.</td>
<td>CA is commonly used to analyse documents. Researchers draw distinctions between the fixed text or subject following prescriptive analysis and the dominant themes emerging from the text following open analysis 169.</td>
<td>Documents are often produced for purposes other than the research. Themes are quantified and units of analysis tend to be a word or phrase. The unit of analysis in this study are participants and the themes are not quantified.</td>
</tr>
<tr>
<td>Discourse Analysis (DA)</td>
<td>Discourse Analysis is a detailed examination and close study of language. DA is the analysis of semiotic events or data e.g. written, vocal or sign language. DA is the analysis of language, which has a central role in social life and provides a key to understanding social functioning 169.</td>
<td>In DA it is not only the substance of what is said that is important but how they are said carries equal weight. DA has a wide range of applications, from purely linguistic analyses through social psychological approaches, to sociological enquiries into social practices 169.</td>
<td>There is little agreement as to the usage of the term DA and different manifestations of the method exist, making choice difficult 169. DA requires a detailed knowledge of the approach and thus was rejected for use in this study.</td>
</tr>
<tr>
<td>Narrative Analysis (NA)</td>
<td>Narrative Analysis focuses on the way people create meaning in their lives. NA uses a range of approaches e.g. accounts made by individuals telling of their own experiences, autobiographies, journals, field notes, conversations, photographs.</td>
<td>NA challenges the philosophy behind quantitative methodologies and questions the use of objective and impersonal data. Meanwhile, NA has been criticised for not being theoretical enough.</td>
<td>There does not appear to be a standard set of procedures for undertaking NA, consequently making choice difficult. For this reason, NA was rejected for use in this study.</td>
</tr>
<tr>
<td>Interpretive Phenomenological Analysis (IPA)</td>
<td>IPA is an approach which aims to gain insight into how a person, in a given context, makes sense of a given phenomenon. The phenomena usually relate to personal and significant experience e.g. birth of a baby, i.e. used to understand what an experience was like (phenomenology) and how someone made sense of it (interpretation).</td>
<td>Data is gathered using interview, diaries or focus group. The analyst in IPA reflects upon his/her own preconceptions about the data, meanwhile the focus is more about grasping the experiential world of the research participant 221.</td>
<td>IPA is one of several approaches to qualitative, phenomenological psychology 222 and requires a detailed knowledge of the approach. For this reason, IPA was rejected for use in this study.</td>
</tr>
<tr>
<td>Thematic Analysis (TA)</td>
<td>Thematic analysis is a commonly used method of analysis in qualitative research analysis 223 and is used for identifying, analysing, and reporting themes within data 167. The method of analysis should be driven by both theoretical assumptions and the research questions. Thematic analysis provides a flexible method of data analysis and allows for researchers with various methodological backgrounds to engage in this type of analysis</td>
<td>Critics argue that TA carries less kudos compared to ‘branded’ forms of analysis listed above 169. The reliability of TA is a concern because of the wide variety of interpretations that could arise from the themes, as well as applying themes to large amounts of text. TA enables multiple researchers to code simultaneously and this could be a way in which reliability can be achieved.</td>
<td>TA provides flexible methods of analysis for majority of qualitative data. Researchers with various methodological backgrounds can engage in this type of analysis. TA is relatively easy and quick to learn and use, compared to other analysis approaches, which call for considerable time and effort to understand and require an appreciation of their philosophical and theoretical basis to use 169.</td>
</tr>
</tbody>
</table>
Having reviewed several qualitative analysis methods, it was decided to deploy a thematic analysis (TA) in this study because it aids the researcher to find answers to the research question, by identifying patterns of meaning across a dataset. The patterns are identified through a rigorous process of data familiarisation, data coding, and theme development and revision.

Social science research has employed the use of thematic analysis for a number of years. However, the principles of qualitative research approaches are poorly understood and as a result have been criticised for their perceived subjective nature of data collection and analysis. The rigorous approach of data familiarisation, open coding and theme categorisation followed throughout this project, ensured these potential problems were overcome.

The use of a computer software package to assist with the analysis of qualitative data had its advantages: ease of text manipulation and data management, and ability to facilitate the building of conceptual networks. However, over-reliance on the software package could have resulted in taking quotes out of context, misinterpretation of the transcript or linking different chunks of text together without a clear understanding of the link. It is also important to note that no computer software package, including NVivo11 used in this research, can perform automatic data analysis; all analyses depend on researchers defining and exploring what ideas are important from the qualitative data. Nvivo11 was selected for this study because it provided the facility to store all resources and data gathered in this study; a themed framework could be developed from open coding, code categorisation, coding on and data reduction (see Section 2.4.7.4).
One of the advantages of TA is that it is flexible and can be used within different frameworks to answer quite different types of research questions. It suits questions related to people’s experiences, or people’s views and perceptions e.g. “What are students’ experiences of study support systems?” TA suits questions related to understanding and representation, such as “How are study support systems, represented at university, targeted at students?” It also suits questions relating to the construction of meaning “How is study support constructed in university teaching and learning strategy?”

TA offers a more accessible form of analysis, which is a relatively easy and quick method to apply, particularly for researchers early in their qualitative research career. It can also be applied across a range of theoretical and epistemological approaches. In analysing the data, categories of meaning and relationships between categories were derived from the data itself through a process of inductive reasoning. Through the ‘top-down’ coding approach, a thematic analysis can be driven by the researcher’s analytical interest towards the research question and broader theoretical assumptions. The data analysis adopted in this study is based on the principles of thematic analysis of Braun and Clark.

Whilst qualitative research is not given to mathematical abstractions, it is nonetheless framed by a focus of inquiry in its systematic approach to data collection and analysis. Data are collected through interviews or questionnaires, using open-ended questioning allowing study participants to articulate their perceptions and experiences freely and spontaneously. Salient categories of
meaning and relationships between categories are derived from the data themselves through a process of inductive reasoning.

Inductive reasoning begins with specific observations and measures, to detect patterns and regularities, formulate tentative hypotheses that can be explored and finally the development of some general conclusions or theories.

This method involves breaking down the data into discrete incidents or units and coding them into categories. The thematic analysis approach used in this study permitted a systematic analysis of the data, organising it into categories, themes and related concepts. New themes and concepts emerged as the thematic analysis progressed. The advantages of this methodological approach were: a rigorous process of data familiarisation was undertaken, followed by data coding and theme development; patterns of meaning were identified across the dataset adding to its richness and diversity.

To ensure that the qualitative data were consistently evaluated, the researcher paid attention to the different perspectives, deviant cases and alternative explanations of the data collected; identifying, highlighting and discussing points of contradiction. The steps in data analysis proceeded as follows (see also Table 2.2)

2.4.7.4 Analytical strategy for this study

There were eight discrete steps in the analyses. The first step was transcribing the data from the recording made during each focus group.
Step 1: Transcription - All interview transcripts were copied from the audio record to Word audio files on the author’s password protected computer and given a unique identifier code. Each was then transcribed verbatim into a Microsoft Word file, with frequent reference to the written field notes. Transcriptions were conducted by the researcher to facilitate familiarity with the data and to minimise errors. When the researcher required assistance with transcribing a trained MPharm Stage 4 undergraduate undertook the transcribing which was then checked for accuracy by comparing transcripts with the original audio recordings. The transcripts were checked to ensure consistency in interpretation and the entire tape was reviewed by the author within sight of the transcript to remove discrepancies. Each 30 minutes of taped interview took between 3 and 4 hours to transcribe in this way.

Transcripts were analysed in the same sequence as they were gathered using thematic analysis with the assistance of a computer-assisted qualitative data analysis software (CAQDAS) package called NVivo 11 (QSR International Pty Ltd) – installed on the researcher’s computer. The software enabled the researcher to run reports and queries within the data

Following transcription, three separate steps of coding were undertaken (Steps 2-4).

Step 2: Open coding. This involved broad participant-driven open coding of the focus group transcripts. The researcher repeatedly read through each Word-based transcript and extracted relevant sentences or phrases placing them within open codes. The codes were supported with definitions to deconstruct
the data from its original chronology (order of occurrence) into initial non-hierarchical codes.

Step 3: Categorisation of codes. This involved re-ordering themes identified and coded in Step 2 into categories of themes by grouping related themes under these categories and organising them into a framework. This step also involved distilling, re-labelling and merging common codes generated in Step 2 to ensure that labels and rules for inclusion accurately reflected the coded content. Anything else of particular interest were entered as memos and attached to a particular focus group transcript.

Step 4: Coding on. This involved breaking down the restructured themes into sub-themes or concepts to offer a greater understanding; in particular the divergent views, negative cases, attitudes and behaviours. This process offered clearer insights into the meanings embedded within the data and started to generate a thematic “map” of the analysis. Thus a hierarchical structure of tree nodes began to develop with parent and child nodes.

Steps 2-4 were repeated for each focus group. Following on from the three steps of coding (Steps 2-4), two further steps were undertaken to manage the codes.

Step 5: Data reduction. This involved on-going analysis to refine the specifics of each theme. Codes were consolidated from all three cycles into more abstract, philosophical and literature based codes to create a final framework of clear definitions and names for each theme for reporting purposes.
Step 6: Generating analytical memos. The second cycle of managing codes was generating analytical memos against the higher level themes to accurately summarise the content of each category and its codes. Then empirical findings were proposed, from the knowledge gained from the participants’ opinions, within the categories. The memos considered and developed were:

a. Relevant patterns e.g. exceptional cases identified as well as shared experiences.

b. The background information against participants and any patterns that may exist in relation to participants’ profiles.

c. A storyboard or model of the codes depicting the relatedness of codes to each other, and their importance to addressing the research question. In addition, a sequence of disparate codes i.e. those that are so different that they cannot be compared with anything, which is structured and expressed in a coherent and cohesive manner.

d. Relationships with the literature as well as identifying gaps in the literature.

Following these two phases of managing codes was step 7.

Step 7: Testing, validating and revising the analytical memos. This was a self-audit of the proposed findings, seeking evidence in the data beyond textual quotes to support the stated findings and expand on deeper meanings embedded in the data. This process involved interrogation of the data and forced the consideration of elements beyond the category itself. The process also drew upon relationships across and between categories and cross tabulation with demographics,
observations and literature. This seventh step resulted in evidence based findings as each finding was validated by being rooted in the data itself and relied on the creation of reports from the data to substantiate findings. Re-visiting earlier decisions provided a degree of internal quality assurance of the thematic indexing.

It must be stressed that in using NVivo 11, the author did not relinquish the hermeneutic task i.e. the method of interpreting the transcripts, to the logic of the computer software; rather the software was used as a tool for efficiency and not as a tool to conduct the analysis and draw conclusions. As Fielding and Lee explain, qualitative researchers “want tools which support analysis, but leave the analyst firmly in charge”. Importantly such software also serves as a tool for transparency, producing an audit trail establishing trustworthiness and plausibility throughout the study. The qualitative analysis software logs all data movements, coding patterns, mapping of conceptual categories and thought progression throughout the analytical process. Rendering all stages of the analytical process traceable and transparent and facilitating the researcher in producing a more detailed and comprehensive audit trail than any manual mapping exercise of such a complicated process could permit.

Step 8: Synthesising analytical memos into a coherent, cohesive and well supported outcome statement or findings report; namely the findings and discussion chapters of the thesis. Quotes from each theme were selected to present the essence of recurrent themes. Meanwhile any contrasting views
observed between individuals were presented without bias. References were also made to the findings from the self-completed questionnaire.

Undertaking these 8 discrete steps of analyses moved the presentation of findings away from just naming key themes supported by quotes from the participants. This analytical strategy ensured a much deeper analysis and interpretation of the data. Furthermore it enabled comparison and pattern analysis to refine and relate categories or themes, thus permitting the use of divergent themes and negative cases to challenge generalisations.

These steps followed an iterative process throughout the analysis i.e. a repeating process until no more new information was generated.
Table 2-2 Steps and processes involved in qualitative data analysis – adapted from Braun and Clarke’s six stages of analysis.  

<table>
<thead>
<tr>
<th>Analytical Process (Braun &amp; Clarke, 2006)</th>
<th>Braun and Clarke Practical Application in NVivo</th>
<th>Strategic Objective</th>
<th>Iterative process throughout analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Familiarising with the data</strong></td>
<td>Step 1 – Data transcription. Reading and re-reading data, noting initial ideas. Import data into NVivo 11 data analysis software</td>
<td>Explanatory Accounts <em>(Extrapolating deeper meaning, drafting summary statements and analytical memos through NVivo)</em></td>
<td>Assigning data to refined concepts to portray meaning</td>
</tr>
<tr>
<td><strong>2. Generating initial codes</strong></td>
<td>Step 2 - Open coding. Coding interesting features of data in a systematic fashion across the entire data set, collecting data relevant to each code.</td>
<td>Descriptive Accounts <em>(Reordering, ‘coding on’ and annotating through NVIVO)</em></td>
<td>Refining and distilling more abstract concepts</td>
</tr>
<tr>
<td><strong>3. Searching for themes</strong></td>
<td>Step 3 - Code categorisation. Collating codes into potential themes, gathering data relevant to potential themes.</td>
<td>Data Management <em>(Open and hierarchal coding through NVIVO)</em></td>
<td>Assigning data to themes/concepts to portray meaning</td>
</tr>
<tr>
<td><strong>4. Reviewing themes</strong></td>
<td>Step 4 - Coding on. Checking if the themes work in relation to the coded extracts and the entire data set, generating a thematic ‘map’ of the analysis.</td>
<td></td>
<td>Assigning meaning</td>
</tr>
<tr>
<td><strong>5. Defining and naming themes</strong></td>
<td>Step 5 - Data reduction. On-going analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.</td>
<td></td>
<td>Generating themes and concepts</td>
</tr>
<tr>
<td><strong>6. Producing the report</strong></td>
<td>Step 6 - Generating analytical memos. Step 7 – Testing, validating and revising. Step 8 - Synthesising analytical memos. Final analysis. Select compelling extract examples, final analysis of extracts, relate analysis back to the research question and literature, produce report of analysis.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.4.8 Ethics approval

The study was approved prior to commencement by the University of Portsmouth School of Pharmacy and Biomedical Sciences, Science Faculty Ethics Committee (Chair’s letter, Ref. SFEC 2013-011, dated 08/04/2013). See Appendix 6.
2.5 Phase 1 Results and Discussion – self completed questionnaire

2.5.1 Response rate

There were 361 Stages 2 to 4 MPharm undergraduates enrolled on the degree course 2012/2013, referred to in this study as the sample population. The number of MPharm students who completed the questionnaire is referred to as the response rate, 64.8% (n=361). The higher the response rate the more representative of the sample population are the gathered data and most researchers should have a response rate goal approximating 60%. Furthermore, the sample of respondents drawn for the questionnaire research must closely compare with the original sample population of interest, i.e. must be representative of the sample population. Any lack of response to the questionnaire by potential respondents in a sample population is referred to as nonresponse bias. Nonresponse bias affects both the reliability and validity of the study findings.

2.5.2 Respondent demographics

Genders and ethnicity of 2012/2013 MPharm undergraduates in Stages 2, 3 and 4 appear in Tables 2.3 and 2.4.
Table 2-3 Gender of Stages 2, 3 and 4 MPharm undergraduates at UOP during 2012/2013.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Females (%)</th>
<th>Male (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>57 (50.4%)</td>
<td>56 (49.6%)</td>
<td>113 (31.3%)</td>
</tr>
<tr>
<td>3</td>
<td>80 (61.5%)</td>
<td>50 (38.5%)</td>
<td>130 (36%)</td>
</tr>
<tr>
<td>4</td>
<td>66 (55.9%)</td>
<td>52 (44.1%)</td>
<td>118 (32.7%)</td>
</tr>
<tr>
<td>Total</td>
<td>203 (56%)</td>
<td>158 (44%)</td>
<td>361</td>
</tr>
</tbody>
</table>

Table 2-4 Ethnicity of Stages 2, 3 and 4 MPharm undergraduates at UOP during 2012/2013.

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>176 (48.7%)</td>
</tr>
<tr>
<td>White</td>
<td>70 (19.4%)</td>
</tr>
<tr>
<td>Black</td>
<td>47 (13%)</td>
</tr>
<tr>
<td>Mixed/Other</td>
<td>57 (15.8%)</td>
</tr>
<tr>
<td>Chinese</td>
<td>11 (3.1%)</td>
</tr>
<tr>
<td>Total</td>
<td>361</td>
</tr>
</tbody>
</table>
Gender and ethnic background of the MPharm undergraduates who completed the questionnaire are shown in Tables 2.5 and 2.6 respectively.

**Table 2-5 Gender of respondents to the self-completed questionnaire distributed to Stages 2, 3 and 4 MPharm undergraduates at UOP.**

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Female n=203 (%)</th>
<th>Male n=158 (%)</th>
<th>Total n=361 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>41/57 (71.9%)</td>
<td>42/56 (75%)</td>
<td>83/113 (73.5%)</td>
</tr>
<tr>
<td>3</td>
<td>57/80 (71.3%)</td>
<td>23/50 (46%)</td>
<td>80/130 (61.5%)</td>
</tr>
<tr>
<td>4</td>
<td>48/66 (72.7%)</td>
<td>23/52 (44.2%)</td>
<td>71/118 (60.2%)</td>
</tr>
<tr>
<td>Total (%)</td>
<td>146/203 (71.6%)</td>
<td>88/158 (54.7%)</td>
<td>234/361 (64.8%)</td>
</tr>
</tbody>
</table>
Table 2-6 Ethnicity of respondents to the self-completed questionnaire distributed to Stages 2, 3 and 4 MPharm undergraduates at UOP.

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>119 (50.9%)</td>
</tr>
<tr>
<td>White</td>
<td>61 (26.1%)</td>
</tr>
<tr>
<td>Black</td>
<td>30 (12.8%)</td>
</tr>
<tr>
<td>Mixed</td>
<td>13 (5.6%)</td>
</tr>
<tr>
<td>Chinese</td>
<td>11 (4.7%)</td>
</tr>
<tr>
<td>Total</td>
<td>234</td>
</tr>
</tbody>
</table>

The proportion of female respondents was similar to the sample and no significant difference was observed (Chi-square = 0.04, P = 0.981). Meanwhile there was a lower proportion of male respondents compared to the sample population and the difference observed was significant (Chi-square = 9.75, P = 0.008). The method used to gather the data during lectures could have had an impact upon the proportion of male respondents. According to Horton et al, female undergraduates attend more lectures than their male counterparts. The author believes this could explain the reduced number of male responses to the self-completed questionnaire, though there is no literature available for gender differences in attendance for the MPharm at UOP. Furthermore, responses from students in Stage 4 were lower than those from Years 2 and 3,
though not significant (Chi-square = 5.43, P = 0.066). Rennison confirmed that lecture attendance of Stage 4 MPharm students was consistently lower than their counterparts in lower years.234

The majority of respondents were Asian, 51% (n=234) and non-white students accounted for almost three quarters, 74% (n=234), of respondents. The proportion of white MPharm students enrolled on the MPharm degree course in November 2012 was 21%.235 No significant differences were observed for white and non-white respondents between the sample and response populations (Chi-square = 1.99, P = 0.159) thus respondents in this study were representative of the sample population. Although over 50% of respondents were Asian, comparisons were made between white and non-white students in-line with the literature.152

Question 3 of the self-completed questionnaire (see Appendix 2) required respondents to select up to three reasons why they chose to study pharmacy, ranking them in order of choice. The options were a mixture of intrinsic and extrinsic motivation, see Section 1.5.4.

2.5.3 Reasons for choosing pharmacy

The three main reasons respondents chose to study pharmacy are shown in Table 2.7.
Table 2-7 The three main reasons respondents chose to study pharmacy.

<table>
<thead>
<tr>
<th>Reason chose pharmacy</th>
<th>Ranked 1, 2 or 3 (n=234)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am interested in the subject of pharmacy.</td>
<td>110 (47%)</td>
</tr>
<tr>
<td>I failed to get into medicine, dentistry etc.</td>
<td>91 (38.9%)</td>
</tr>
<tr>
<td>I want to help people.</td>
<td>78 (33.3%)</td>
</tr>
<tr>
<td>I want a job that pays well.</td>
<td>69 (29.5%)</td>
</tr>
<tr>
<td>I want a job I know I will enjoy.</td>
<td>63 (26.9%)</td>
</tr>
<tr>
<td>Science was favourite subject at school.</td>
<td>57 (24.4%)</td>
</tr>
<tr>
<td>Want to be guaranteed a job after university.</td>
<td>56 (23.9%)</td>
</tr>
<tr>
<td>My parents/family wanted me to.</td>
<td>35 (15%)</td>
</tr>
<tr>
<td>I like the flexibility pharmacy has to offer.</td>
<td>14 (6%)</td>
</tr>
<tr>
<td>Other, please specify.</td>
<td>14 (6%)</td>
</tr>
<tr>
<td>Make a difference to healthcare.</td>
<td>10 (4.3%)</td>
</tr>
<tr>
<td>I have pharmacists in my family.</td>
<td>10 (4.3%)</td>
</tr>
<tr>
<td>I got in through clearing.</td>
<td>8 (3.4%)</td>
</tr>
</tbody>
</table>

Tables 2.8 and 2.9 illustrate reasons why female and male students respectively chose to study pharmacy. The shaded boxes indicate the main reasons students ranked in their choices for studying pharmacy.
Table 2-8 Reasons female respondents chose to study pharmacy.

<table>
<thead>
<tr>
<th>Reason chose pharmacy</th>
<th>Ranked 1, 2 or 3 (n=146)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am interested in the subject of pharmacy.</td>
<td>80 (54.8%)</td>
</tr>
<tr>
<td>I failed to get into medicine, dentistry etc.</td>
<td>60 (41.1%)</td>
</tr>
<tr>
<td>I want to help people.</td>
<td>54 (37.0%)</td>
</tr>
<tr>
<td>I want a job I know I will enjoy.</td>
<td>45 (30.8%)</td>
</tr>
<tr>
<td>I want a job that pays well.</td>
<td>43 (29.5%)</td>
</tr>
<tr>
<td>Want to be guaranteed a job after university.</td>
<td>36 (24.7%)</td>
</tr>
<tr>
<td>Science was favourite subject at school.</td>
<td>20 (13.7%)</td>
</tr>
<tr>
<td>My parents/family wanted me to.</td>
<td>20 (13.7%)</td>
</tr>
<tr>
<td>Make a difference to healthcare.</td>
<td>7 (4.8%)</td>
</tr>
<tr>
<td>I like the flexibility pharmacy has to offer.</td>
<td>9 (6.2%)</td>
</tr>
<tr>
<td>Other, please specify.</td>
<td>9 (6.2%)</td>
</tr>
<tr>
<td>I have pharmacists in my family.</td>
<td>5 (3.4%)</td>
</tr>
<tr>
<td>I got in through clearing.</td>
<td>0 (0.0%)</td>
</tr>
</tbody>
</table>
Table 2-9 Reasons male respondents chose to study pharmacy.

<table>
<thead>
<tr>
<th>Reason chose pharmacy</th>
<th>Ranked 1, 2 or 3 (n=88)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science was favourite subject at school.</td>
<td>38 (43.2%)</td>
</tr>
<tr>
<td>I am interested in the subject of pharmacy.</td>
<td>30 (34.1%)</td>
</tr>
<tr>
<td>I failed to get into medicine, dentistry etc.</td>
<td>34 (33.6%)</td>
</tr>
<tr>
<td>I want a job that pays well.</td>
<td>26 (29.5%)</td>
</tr>
<tr>
<td>I want to help people.</td>
<td>24 (27.3%)</td>
</tr>
<tr>
<td>Want to be guaranteed a job after university.</td>
<td>21 (23.9%)</td>
</tr>
<tr>
<td>I want a job I know I will enjoy.</td>
<td>17 (19.3%)</td>
</tr>
<tr>
<td>My parents/family wanted me to</td>
<td>15 (17.0%)</td>
</tr>
<tr>
<td>I got in through clearing.</td>
<td>7 (8.0%)</td>
</tr>
<tr>
<td>I like the flexibility pharmacy has to offer.</td>
<td>5 (5.7%)</td>
</tr>
<tr>
<td>I have pharmacists in my family.</td>
<td>4 (4.5%)</td>
</tr>
<tr>
<td>Make a difference to healthcare.</td>
<td>3 (3.4%)</td>
</tr>
<tr>
<td>Other, please specify.</td>
<td>1 (1.1%)</td>
</tr>
</tbody>
</table>

Significantly more female respondents chose to study pharmacy because they had an interest in the pharmacy profession (Chi-square = 9.45, P = 0.002). Meanwhile, significantly more male respondents chose to study pharmacy because their favourite subject was science (Chi-square = 25.60, P < 0.001).
Tables 2.10 and 2.11 illustrate reasons why white and non-white students respectively chose to study pharmacy.

**Table 2-10 Reasons white respondents chose to study pharmacy.**

<table>
<thead>
<tr>
<th>Reason chose pharmacy</th>
<th>Ranked 1, 2 or 3 (n=61)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am interested in the subject of pharmacy.</td>
<td>26 (42.6%)</td>
</tr>
<tr>
<td>Science was favourite subject at school.</td>
<td>25 (41.0%)</td>
</tr>
<tr>
<td>I want a job I know I will enjoy.</td>
<td>22 (36.1%)</td>
</tr>
<tr>
<td>I want to help people.</td>
<td>20 (32.8%)</td>
</tr>
<tr>
<td>I failed to get into medicine, dentistry etc.</td>
<td>15 (24.6%)</td>
</tr>
<tr>
<td>Want to be guaranteed a job after university.</td>
<td>15 (24.6%)</td>
</tr>
<tr>
<td>I want a job that pays well.</td>
<td>15 (24.6%)</td>
</tr>
<tr>
<td>My parents/family wanted me to.</td>
<td>7 (11.5%)</td>
</tr>
<tr>
<td>Make a difference to healthcare.</td>
<td>7 (11.5%)</td>
</tr>
<tr>
<td>Other, please specify.</td>
<td>5 (8.2%)</td>
</tr>
<tr>
<td>I like the flexibility pharmacy has to offer.</td>
<td>4 (6.6%)</td>
</tr>
<tr>
<td>I got in through clearing.</td>
<td>2 (3.3%)</td>
</tr>
<tr>
<td>I have pharmacists in my family.</td>
<td>1 (1.6%)</td>
</tr>
</tbody>
</table>
Table 2-11 Reasons non-white respondents chose to study pharmacy.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am interested in the subject of pharmacy.</td>
<td>60 (34.7%)</td>
</tr>
<tr>
<td>Science was favourite subject at school.</td>
<td>54 (31.2%)</td>
</tr>
<tr>
<td>I want a job that pays well.</td>
<td>53 (30.6%)</td>
</tr>
<tr>
<td>I want to help people.</td>
<td>49 (28.3%)</td>
</tr>
<tr>
<td>Want to be guaranteed a job after university.</td>
<td>44 (25.4%)</td>
</tr>
<tr>
<td>I failed to get into medicine, dentistry etc.</td>
<td>41 (23.7%)</td>
</tr>
<tr>
<td>I want a job I know I will enjoy.</td>
<td>32 (18.5%)</td>
</tr>
<tr>
<td>I like the flexibility pharmacy has to offer.</td>
<td>27 (15.6%)</td>
</tr>
<tr>
<td>I have pharmacists in my family.</td>
<td>26 (15.0%)</td>
</tr>
<tr>
<td>My parents/family wanted me to.</td>
<td>17 (9.8%)</td>
</tr>
<tr>
<td>Make a difference to healthcare.</td>
<td>16 (9.3%)</td>
</tr>
<tr>
<td>Other, please specify.</td>
<td>5 (2.9%)</td>
</tr>
<tr>
<td>I got in through clearing.</td>
<td>5 (2.9%)</td>
</tr>
</tbody>
</table>

Respondents selected, from a list, the three main influences on their decision to choose to study pharmacy. Amongst the items were statements relating to intrinsic factors motivating their choice such as “I want to help people” and statements relating to extrinsic motivators for choosing pharmacy such as “I want a job that pays well”. In psychological terms, intrinsic motivations are part of an individual rather than any work they undertake and rewards gained are
derived from undertaking the activity rather than a product of the activity. Individuals gain a sense of satisfaction by doing what is important to them by performing the tasks which are intrinsically motivating. Meanwhile, extrinsic motivators provide individuals with satisfaction by the provision of rewards gained as a result of carrying out the tasks e.g. their salary or status. Focusing heavily on the extrinsic rewards as opposed to the task in hand could have a negative impact upon job satisfaction and commitment. ²³⁶

All items listed had influenced respondents in their decision to study pharmacy; however, the frequencies with which they were rated varied greatly. When considering individuals’ reasons for choosing to study pharmacy, respondents were either interested in the subject of pharmacy (47%), had failed to get on a medical or dental course (39%), wanted to help people (33%), wanted a job that paid well (29%) and/or wanted a job they knew they would enjoy (27%), see Table 2.7. These items reflect both intrinsic and extrinsic work values, and suggest respondents were motivated to study pharmacy by a balanced set of factors. These findings are confirmed by Hassell et al, ¹⁵² in a longitudinal cohort study about pharmacy careers where an early choices questionnaire was distributed to approximately 400 UK pharmacy graduates in 2006. The questionnaire had an explicit focus on the choices graduates made prior to studying pharmacy on how, when and why they chose to study pharmacy and determined that most individuals “adopt a balance between intrinsic and extrinsic work values, although their equilibrium points will differ and the point of equilibrium reflects most closely an individual’s values”. ¹⁵²
Results from this study showed significant differences between groups of respondents in terms of their reason for choosing to study pharmacy.

Items that were statistically significant when explored in relation to gender (Tables 2.8-2.9) were: interested in the pharmacy profession; science was my favourite subject; I wanted a job I know I would enjoy.

Table 2.8 shows that significantly more female respondents chose to study pharmacy because they had an interest in the pharmacy profession, meanwhile, significantly more male respondents, Table 2.9, chose to study pharmacy because their favourite subject was science. These intrinsic motivational factors were consistent with personal qualities, intentions and values. They were part of the person rather than part of any work i.e. the rewards are conceptualised as being derived from carrying out the learning activity rather than as a product from the learning activity. 236 In other words the rewards were intrinsic to the task itself; in this case studying pharmacy and gaining the new knowledge rather than the task being a means to an end e.g. a well-paid job. Individuals with intrinsic work values gained a sense of being an effective operator in what is important to them by performing tasks that were intrinsically motivating. Meanwhile, individuals with extrinsic work values e.g. their salary, tend to focus on the extrinsic reward and place too much emphasis on the end product of their work which could be detrimental to their job satisfaction and long term career commitment. 236

When compared with males, female respondents were more influenced by the job at the end of their studies and wanted enjoyment from their future career; a
trend was observed, though not significantly different (Chi square = 3.731, P = 0.0534). Whilst this motivational factor is considered to have an extrinsic reward i.e. a job the respondent enjoys, intrinsic motivation it not necessarily reduced.

Most people adopt a balance between the two opposing work values and their point of symmetry will differ, which would closely reflect their individual and personal values. 152

Items that showed a trend or statistically significant difference were explored in relation to ethnicity (Tables 2.10-2.11). Family and familial relationships were influential on the non-white respondents although not significant (Chi-square = 3.65, P = 0.056). Hassell et al determined significant differences between ethnicities; 27.1% of non-white and 16.5% white students’ decision to study pharmacy were strongly influenced by their families. 152 Furthermore, 62.8% of female students who said their family had influenced their decision were non-white; however, there were no marked differences of influence between genders in this study at UOP. Meanwhile, white respondents in this study were more influenced by gaining a job they enjoyed (Chi-square = 7.84, P = 0.005).

Having a member of the family who was a pharmacist influenced non-white respondents’ choice to study pharmacy. 237 It has been suggested that within an Indian family network, career choices are influenced by parents, siblings, aunts, uncles and cousins and that familial interests take priority over the interests, desires and choices of the individual family member. 152, 237
2.5.4 Students’ opinions of workload

Students’ opinions of their own personal workload on the MPharm, according to gender and ethnicity, are shown in Tables 2.12 – 2.14.

**Table 2-12 Students’ opinions of the workload on the MPharm.**

<table>
<thead>
<tr>
<th>Opinion of workload</th>
<th>Far too much</th>
<th>Heavy, but I cope</th>
<th>Just right</th>
<th>Not enough</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male (n=88)</td>
<td>8 (9.1%)</td>
<td>50 (56.8%)</td>
<td>25 (28.4%)</td>
<td>5 (5.7%)</td>
</tr>
<tr>
<td>Female (n=146)</td>
<td>13 (8.9%)</td>
<td>105 (71.9%)</td>
<td>28 (19.2%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Asian (n=119)</td>
<td>12 (10.1%)</td>
<td>83 (69.7%)</td>
<td>22 (18.5%)</td>
<td>2 (1.7%)</td>
</tr>
<tr>
<td>Black (n=30)</td>
<td>2 (6.7%)</td>
<td>20 (66.7%)</td>
<td>7 (23.3%)</td>
<td>1 (3.3%)</td>
</tr>
<tr>
<td>Chinese (n=11)</td>
<td>1 (9.1%)</td>
<td>9 (81.8%)</td>
<td>1 (9.1%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Mixed (n=13)</td>
<td>2 (15.4%)</td>
<td>8 (61.5%)</td>
<td>3 (23.1%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>White (n=61)</td>
<td>4 (6.6%)</td>
<td>35 (57.4%)</td>
<td>20 (32.8%)</td>
<td>2 (3.3%)</td>
</tr>
<tr>
<td>BME (n=173)</td>
<td>17 (9.8%)</td>
<td>120 (69.4%)</td>
<td>33 (19.1%)</td>
<td>3 (1.7%)</td>
</tr>
<tr>
<td>White (n=61)</td>
<td>4 (6.6%)</td>
<td>35 (57.4%)</td>
<td>20 (32.8%)</td>
<td>2 (3.3%)</td>
</tr>
<tr>
<td>Total (n=234)</td>
<td>21 (9.0%)</td>
<td>155 (66.2%)</td>
<td>53 (22.6%)</td>
<td>5 (2.1%)</td>
</tr>
</tbody>
</table>
Workload was significantly heavier for non-white students (Table 2.12), (Chi-square = 17.21, P < 0.001) and female students (Table 2.12), (Chi-square = 6.55, P = 0.015).

**Table 2-13 Female students’ opinions of the workload on the MPharm.**

<table>
<thead>
<tr>
<th>Opinion of workload</th>
<th>Female students (n=146)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Far too much</td>
<td>Heavy, but I cope</td>
</tr>
<tr>
<td>Asian (n=76)</td>
<td></td>
</tr>
<tr>
<td>7 (9.2%)</td>
<td>54 (71.1%)</td>
</tr>
<tr>
<td>Black (n=17)</td>
<td></td>
</tr>
<tr>
<td>0 (0.0%)</td>
<td>14 (82.4%)</td>
</tr>
<tr>
<td>Chinese (n=6)</td>
<td></td>
</tr>
<tr>
<td>1 (16.7%)</td>
<td>5 (83.3%)</td>
</tr>
<tr>
<td>Mixed (n=9)</td>
<td></td>
</tr>
<tr>
<td>2 (22.2%)</td>
<td>5 (55.6%)</td>
</tr>
<tr>
<td>White (n=38)</td>
<td></td>
</tr>
<tr>
<td>3 (7.9%)</td>
<td>27 (71.1%)</td>
</tr>
<tr>
<td>BME (n=108)</td>
<td></td>
</tr>
<tr>
<td>10 (9.3%)</td>
<td>78 (72.2%)</td>
</tr>
<tr>
<td>White (n=38)</td>
<td></td>
</tr>
<tr>
<td>3 (7.9%)</td>
<td>27 (71.1%)</td>
</tr>
<tr>
<td>Total (n=146)</td>
<td>13 (8.9%)</td>
</tr>
</tbody>
</table>
Table 2-14 Male students’ opinions of the workload on the MPharm.

<table>
<thead>
<tr>
<th></th>
<th>Opinion of workload of male students (n=88)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Far too much</td>
</tr>
<tr>
<td>Asian (n=43)</td>
<td>5 (11.6%)</td>
</tr>
<tr>
<td>Black (n=13)</td>
<td>2 (15.4%)</td>
</tr>
<tr>
<td>Chinese (n=5)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Mixed (n=4)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>White (n=23)</td>
<td>1 (4.3%)</td>
</tr>
<tr>
<td>BME (n=65)</td>
<td>7 (10.8%)</td>
</tr>
<tr>
<td>White (n=23)</td>
<td>1 (4.3%)</td>
</tr>
<tr>
<td>Total (n=88)</td>
<td>8 (9.1%)</td>
</tr>
</tbody>
</table>

Workload was significantly heavier for Asian and Black male students (Table 2.14), (Chi-square = 10.51, P = 0.005).

Students’ opinions of their workload according to academic year group are shown in Table 2.15.
Table 2-15 Students’ opinions of the workload on the MPharm according to academic year group.

<table>
<thead>
<tr>
<th>Opinion of workload of Stage 2 Students (n=83)</th>
<th>Far too much</th>
<th>Heavy, but I cope</th>
<th>Just right</th>
<th>Not enough</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male (n=42)</td>
<td>7 (16.7%)</td>
<td>20 (47.6%)</td>
<td>11 (26.2%)</td>
<td>4 (9.5%)</td>
</tr>
<tr>
<td>Female (n=41)</td>
<td>2 (4.9%)</td>
<td>30 (73.2%)</td>
<td>9 (22.0%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Total (n=83)</td>
<td>9 (10.8%)</td>
<td>50 (60.2%)</td>
<td>20 (24.1%)</td>
<td>4 (4.8%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opinion of workload of Stage 3 Students (n=80)</th>
<th>Far too much</th>
<th>Heavy, but I cope</th>
<th>Just right</th>
<th>Not enough</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male (n=23)</td>
<td>0 (0.0%)</td>
<td>15 (65.2%)</td>
<td>7 (30.4%)</td>
<td>1 (4.3%)</td>
</tr>
<tr>
<td>Female (n=57)</td>
<td>3 (5.3%)</td>
<td>42 (73.7%)</td>
<td>12 (21.1%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Total (n=80)</td>
<td>3 (3.8%)</td>
<td>57 (71.3%)</td>
<td>19 (23.8%)</td>
<td>1 (1.3%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opinion of workload of Stage 4 Students (n=71)</th>
<th>Far too much</th>
<th>Heavy, but I cope</th>
<th>Just right</th>
<th>Not enough</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male (n=23)</td>
<td>1 (4.3%)</td>
<td>15 (65.2%)</td>
<td>7 (30.4%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Female (n=48)</td>
<td>8 (16.7%)</td>
<td>33 (68.8%)</td>
<td>7 (14.6%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Total (n=71)</td>
<td>9 (12.7%)</td>
<td>48 (67.6%)</td>
<td>14 (19.7%)</td>
<td>0 (0.0%)</td>
</tr>
</tbody>
</table>

There were no statistical differences observed in relation to academic year groups and their workload (Table 2.15).
Workload was an important component in the curriculum and yet is a complex construct to define. A wide range of variables, from student characteristics to the academic environment, can influence students’ approach to their learning and study time. A heavy workload, whether it is actual or perceived by that of the student, can influence their learning behaviours and result in surface learning approaches.238, 239

Respondents selected from four items to express their opinion of their current workload on the MPharm at the UOP. Less than a quarter (23%, n=234) of respondents felt that their workload was just right. The majority of respondents reported that their workload was either heavy (though they could cope) or far too much. Statistically significant differences were observed between genders and ethnicity.

An appropriate workload was a key factor facilitating teaching and learning and it promotes student engagement in the learning process. 68, 240 Scully and Kerr concluded that an overloaded curriculum with too much content and limited emphasis upon important areas resulted in an inappropriate student workload.238 During the study accounting undergraduate students were asked to keep a study diary, for a particular unit of study, for four separate weeks of a 14-week semester. Students were advised that an appropriate workload for the unit was about 7 hours per week in addition to the three hours of contact time. The diary also summarised the learning topics for the week, educational activities and assessment preparation. Students were also asked to judge how many of the hours recorded in their diaries they believed promoted meaningful learning.
Results indicated that students were working on average for 5.4 hours per week, below the required workload, and meaningful learning only accounted for half of the time recorded, a mean of 2.7 hours. Students believed that only 50% of their study time promoted meaningful learning, suggesting that either the curriculum needed redesigning or lecturers needed to better communicate expectations to their students. Statistically significant differences (p<0.001) of workload and meaningful learning were observed between the beginning of the semester and the end of the semester. Students worked more towards the end of the semester and more hours were perceived as meaningful learning, possibly influenced by the nearing assessment activities at the end of the semester.

Scully and Kerr also reported that excessive workload led to a surface learning approach, referred to as passive, unmotivated and non-reflective. Students adapted an approach where memorisation and reproduction of facts were prevalent. Curricula which had an appropriate workload helped and encouraged students to conform to a deep learning approach using an enquiring, critical and motivated practice to their learning. 238

Kember concluded that the number of hours students spend undertaking individual study, and their perception of their workload, impacted unfavourably upon the student learning process. In other words, the more time spent studying did not necessarily result in deep learning. 239 Kember stated that to develop a curriculum that inspired students to work hard whilst perceiving an acceptable workload, attention needed to be given to a number of aspects: a coherent programme with transparent relationships between components; teaching that
focused on key concepts and promoting understanding; assessments which tested students’ understanding, not just knowledge; teachers accepting responsibility for motivating and stimulating interest from their students, with a teaching approach which encouraged student engagement; and the promotion of both student-student relationships as well as warm and supportive staff-student relationships.

The author concludes that lecturers needed to actively encourage a deep learning approach through creating an engaging environment in addition to monitoring students’ perception of their workload. Students’ perceptions of workload were influenced by course content and difficulty, assessment types and relationships with their lecturers. The most important factors were that assessments, teaching styles and curricula were well designed and managed. Furthermore, regular student feedback on the curriculum and course will keep course developers informed of students’ opinions of the course.

2.5.5 Study support

Students were asked to select the top three resources they use for support with their studies. Table 2.16 – 2.20 illustrate the nature of support students seek.
### Table 2-16 Nature of study support students seek

<table>
<thead>
<tr>
<th>Nature of Support</th>
<th>Ranked 1, 2 or 3 (n=232)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends in same year</td>
<td>207 (89.2%)</td>
</tr>
<tr>
<td>Lecturers</td>
<td>145 (62.5%)</td>
</tr>
<tr>
<td>Higher year student</td>
<td>112 (48.3%)</td>
</tr>
<tr>
<td>Personal tutor</td>
<td>72 (31.0%)</td>
</tr>
<tr>
<td>Parents/family</td>
<td>32 (13.8%)</td>
</tr>
<tr>
<td>Other</td>
<td>16 (6.9%)</td>
</tr>
<tr>
<td>Friends on other courses</td>
<td>15 (6.5%)</td>
</tr>
</tbody>
</table>

N.B. 2 students did not respond to this question

### Table 2-17 Nature of study support female students seek.

<table>
<thead>
<tr>
<th>Nature of Support</th>
<th>Ranked 1, 2 or 3 (n=146)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends in same year</td>
<td>134 (91.8%)</td>
</tr>
<tr>
<td>Lecturers</td>
<td>99 (67.9%)</td>
</tr>
<tr>
<td>Higher year student</td>
<td>76 (52.1%)</td>
</tr>
<tr>
<td>Personal tutor</td>
<td>41 (28.1%)</td>
</tr>
<tr>
<td>Parents/family</td>
<td>22 (15.1%)</td>
</tr>
<tr>
<td>Other</td>
<td>12 (8.2%)</td>
</tr>
<tr>
<td>Friends on other courses</td>
<td>9 (6.2%)</td>
</tr>
</tbody>
</table>
Significant more female respondents reported seeking support from lecturers (Table 2.17), (Chi-square = 4.74, P = 0.030).

**Table 2-18 Nature of study support male students seek.**

<table>
<thead>
<tr>
<th>Nature of Support</th>
<th>Ranked 1, 2 or 3 (n=86)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends in same year</td>
<td>73 (84.9%)</td>
</tr>
<tr>
<td>Lecturers</td>
<td>46 (53.5%)</td>
</tr>
<tr>
<td>Higher year student</td>
<td>36 (41.9%)</td>
</tr>
<tr>
<td>Personal tutor</td>
<td>31 (36.0%)</td>
</tr>
<tr>
<td>Parents/family</td>
<td>10 (11.6%)</td>
</tr>
<tr>
<td>Friends on other courses</td>
<td>6 (7.0%)</td>
</tr>
<tr>
<td>Other</td>
<td>4 (4.7%)</td>
</tr>
</tbody>
</table>

N.B. 2 students did not respond to this question

**Table 2-19 Nature of support white students seek.**

<table>
<thead>
<tr>
<th>Nature of Support</th>
<th>Ranked 1, 2 or 3 (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends in same year</td>
<td>55 (91.7%)</td>
</tr>
<tr>
<td>Lecturers</td>
<td>36 (60.0%)</td>
</tr>
<tr>
<td>Personal tutor</td>
<td>28 (46.7%)</td>
</tr>
<tr>
<td>Higher year student</td>
<td>14 (23.3%)</td>
</tr>
<tr>
<td>Parents/family</td>
<td>14 (23.3%)</td>
</tr>
<tr>
<td>Other</td>
<td>5 (8.3%)</td>
</tr>
<tr>
<td>Friends on other courses</td>
<td>3 (5.0%)</td>
</tr>
</tbody>
</table>
Significantly more white respondents seek help from personal tutors (Table 2.19), (Chi-square = 9.24, P = 0.002) and non-white respondents seek help from students in a higher academic year (Table 2.20), (Chi-square = 20.14, P < 0.001).

**Table 2-20 Nature of study support non-white students seek.**

<table>
<thead>
<tr>
<th>Nature of Support</th>
<th>Ranked 1, 2 or 3 (n=172)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends in same year</td>
<td>152 (88.4%)</td>
</tr>
<tr>
<td>Lecturers</td>
<td>109 (63.4%)</td>
</tr>
<tr>
<td>Higher year student</td>
<td>98 (57.0%)</td>
</tr>
<tr>
<td>Personal tutor</td>
<td>44 (25.6%)</td>
</tr>
<tr>
<td>Parents/family</td>
<td>14 (8.1%)</td>
</tr>
<tr>
<td>Friends on other courses</td>
<td>12 (7.0%)</td>
</tr>
<tr>
<td>Other</td>
<td>11 (6.4%)</td>
</tr>
</tbody>
</table>

N.B. 1 student did not respond to this question

Respondents selected, from a list, the three main resources they turned to for study support whilst at the UOP. The three main resources were MPharm friends in the same academic year (89% of respondents), lecturers on the course (63%) and MPharm students in higher academic years (48%) (Table 2.16). The close proximity and availability of their peers could be an explanation for participants choosing to approach peers before contacting lecturers for support. It could be that participants were either reluctant to disclose they were struggling or needed
extra support to academic staff; they may have felt that staff were unfriendly, unhelpful or unapproachable; or a combination of these.

The staff-student relationship was a key factor in providing students with an enjoyable and successful university experience. First impressions count and negative encounters had a detrimental impact upon relationships, where students were reluctant to approach any staff members subsequently. Female students have been reported to feel the increased pressure of work-assignments and deadlines and this could account for the significant number of female respondents who reported seeking support from lecturers (Chi-square = 4.74, P = 0.030).

Richardson reported that some ethnic minority students encountered subtle discriminatory teaching practices resulting in lower satisfaction ratings with their choice of course. There is no documented evidence that these discriminatory practices take place at UOP, however respondents may have experienced similar practices prior to entering higher education and this could be an explanation for more non-white respondents seeking support from their peers in higher years as opposed to academic staff and their personal tutors. Furthermore, pastoral care provided by individual tutors can vary widely with regards to tutors’ own individual personalities, ethnic background and understanding of pastoral care. A tutorial programme is likely to be more effective when staff empathise with its aims than when they are coerced to take part.
### 2.5.6 Study support services at UOP

UOP provided numerous academic and study support services for students, see Section 1.6. This study determined students’ awareness, usage and opinions of each of the support services available at UOP. Tables 2.21 – 2.22 show students’ awareness and usage of each of the support services available.

#### Table 2-21 Students’ awareness of the study support services at UOP.

<table>
<thead>
<tr>
<th>Study support service</th>
<th>All students (n=234)</th>
<th>Female students (n=146)</th>
<th>Male students (n=88)</th>
<th>White students (n=61)</th>
<th>Non-white students (n=173)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic skills unit (ASK)</td>
<td>83 (35.5%)</td>
<td>62 (42.5%)</td>
<td>21 (23.9%)</td>
<td>28 (45.9%)</td>
<td>54 (31.2%)</td>
</tr>
<tr>
<td>Science learning support tutor</td>
<td>23 (9.8%)</td>
<td>16 (11.0%)</td>
<td>7 (8.0%)</td>
<td>7 (11.5%)</td>
<td>16 (9.2%)</td>
</tr>
<tr>
<td>English for academic purposes (EAP)</td>
<td>27 (11.5%)</td>
<td>16 (11.0%)</td>
<td>11 (12.5%)</td>
<td>7 (11.5%)</td>
<td>20 (11.6%)</td>
</tr>
<tr>
<td>Maths Café</td>
<td>194 (82.9%)</td>
<td>132 (90.4%)</td>
<td>62 (70.5%)</td>
<td>54 (88.5%)</td>
<td>140 (80.9%)</td>
</tr>
<tr>
<td>University Library</td>
<td>219 (93.6%)</td>
<td>139 (95.2%)</td>
<td>80 (90.9%)</td>
<td>55 (90.2%)</td>
<td>164 (94.8%)</td>
</tr>
<tr>
<td>Information services (IS)</td>
<td>114 (48.7%)</td>
<td>80 (54.8%)</td>
<td>34 (38.6%)</td>
<td>31 (50.8%)</td>
<td>83 (48.0%)</td>
</tr>
</tbody>
</table>
Significantly more females were aware of ASK, (Chi-square = 8.30, P = 0.004); IS, (Chi-square = 5.74, P = 0.017); and the Maths Café, (Chi-square = 17.63, P < 0.001). More white respondents were aware of ASK compared to their non-white counterparts, (Chi-square = 4.27, P value equals 0.039).

Only 39% (n=224) of students reported using one or more of the UOP study support services.

**Table 2-22 Students’ usage of the study support services at UOP.**

<table>
<thead>
<tr>
<th>Study support service</th>
<th>All students (n=234)</th>
<th>Female students (n=146)</th>
<th>Male students (n=88)</th>
<th>White students (n=61)</th>
<th>Non-white students (n=173)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic skills unit (ASK)</td>
<td>10 (4.3%)</td>
<td>8 (5.5%)</td>
<td>2 (2.3%)</td>
<td>5 (8.2%)</td>
<td>5 (2.9%)</td>
</tr>
<tr>
<td>Science learning support tutor</td>
<td>7 (3.0%)</td>
<td>7 (4.8%)</td>
<td>0 (0.0%)</td>
<td>2 (3.3%)</td>
<td>5 (2.9%)</td>
</tr>
<tr>
<td>English for academic purposes (EAP)</td>
<td>5 (2.1%)</td>
<td>3 (2.1%)</td>
<td>2 (2.3%)</td>
<td>0 (0.0%)</td>
<td>5 (2.9%)</td>
</tr>
<tr>
<td>Maths Café</td>
<td>19 (8.1%)</td>
<td>12 (8.2%)</td>
<td>7 (8.0%)</td>
<td>4 (6.6%)</td>
<td>15 (8.7%)</td>
</tr>
<tr>
<td>University Library</td>
<td>72 (30.8%)</td>
<td>48 (32.9%)</td>
<td>24 (27.3%)</td>
<td>16 (26.2%)</td>
<td>56 (32.4%)</td>
</tr>
<tr>
<td>Information services (IS)</td>
<td>20 (8.5%)</td>
<td>14 (9.6%)</td>
<td>6 (6.8%)</td>
<td>4 (6.6%)</td>
<td>16 (9.2%)</td>
</tr>
</tbody>
</table>
All study support services provided at the UOP were known to respondents in this study however, the frequencies with which they were recognised varied greatly. The majority of respondents were familiar with the library (94% of respondents) and Maths Café (83%); meanwhile fewer were aware of IS (49%) and ASK (35%) (Table 2.21).

Student study support systems were promoted during Induction Week at UOP; awareness of systems appeared to vary according to gender and ethnicity of respondents and information of attendance and engagement with Induction Week was unreliable. The transition from school or college into university was very important. The limited one-to-one encounters with staff, which they were normally accustomed to at school and college, could make them feel like one of the crowd with no real accountability. The effects of which could have impacted on their transition and sense of belonging at university.

Respondents’ engagement with the UOP study support services was limited (Table 2.21); only 39% (n=224) reported using one or more of the services. Significantly more Stage 2 and Stage 3 respondents, compared to Stage 4, reported using the study support services, (Chi-square = 6.14, P = 0.047). Meanwhile, significantly more female respondents reported using the study support services, (Chi-square = 3.91, P = 0.048). It has already been observed that female respondents in this study reported a perceived higher workload and this could be an explanation for their increased use of the services compared to male respondents.
The University Library services were utilised the most, by almost a third of respondents (31%) and this could be due to the ease of access of this facility and library promotion activities within the school, faculty and university. Failure to engage with the support services could be as a consequence of students’ motivation. Crabtree reported that students were only motivated by assessment and thus only engaged with the parts of the curriculum that they thought were going to be assessed. Furthermore, learning and assessment objectives differed from those at school or college, and independent learning was not fully supported. Meanwhile, university students were expected to become independent learners, to gain information from numerous sources of literature and to read more widely around the subject.

2.5.7 Academic help-seeking behaviour

Students’ written opinions of each of UOP study support service are shown in Table 2.23. The number of individuals who contributed to the comments in each box is shown in brackets.
<table>
<thead>
<tr>
<th>Study support service</th>
<th>Positive Comments</th>
<th>Negative comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic skills unit (ASK)</td>
<td>Breakdown the information in a way you as a student will understand; Clear and easy to understand; Good (3)</td>
<td>Bit too simple, can be hard to find specific information (1)</td>
</tr>
<tr>
<td>Science learning support tutor</td>
<td>Did learn from him; Easy to get an appointment; Learned how to reference properly; Good; Helped with study skills (5)</td>
<td>Not tailored; Not specific to my course(2)</td>
</tr>
<tr>
<td>English for academic purposes (EAP)</td>
<td>English tutorial; Good for beginners; Good for meeting new people (4)</td>
<td>Too easy; Too basic; Too boring (4)</td>
</tr>
<tr>
<td>Maths Café</td>
<td>Really helpful; Useful; Someone to go to when stuck with maths; Very good support and explanation; One-to-one help provided when necessary; Helped solve maths problems; Convenient and easy to find and use; Easily accessible; No appointment needed; Good service(15)</td>
<td>Not much information on it; Long wait for appointment; Tutors busy; Turned up late and didn’t understand topic title; Does not always fit into my timetable; Tutor didn’t understand the maths I needed; Not always helpful; Only available at specific times; Some facilitators not as good as others (14)</td>
</tr>
<tr>
<td>University Library</td>
<td>Helpful; One-to-one; Lots computers and resources; Very quick and helpful; Quiet place to work, easy access to websites and articles e.g. science direct; Great layout; good info available; Place to work; Available 24/7 during exam period; Allow for more productive use of time; Books that are provided and study rooms; Very informative and can help with lots of things e.g. referencing; Learned about how to cite references; Reliable information; Good support in referencing; Readily accessible; Easy retrieval of information; No need to buy all textbooks; Good place to study in groups; Knowledgeable staff; Warm; Online ebooks; Close, easy to use; Printing (53)</td>
<td>Not always 24 hours; It’s confusing; Hard to find librarians to help; Computers never available; Library loans too long; Overcrowded; hard to find a seat, Difficult to orientate some areas; Too busy; Lack of computers and space; Not enough space at peak periods, not enough books; Too packed, study rooms booked by same people continuously; Can be busy; If you cannot web cache your computer you need to be on school site to access facilities; Books run out and people take ages to return; Can be noisy at times; not enough space especially for laptop users; Sometimes too hot and not enough computers; Not enough computers/room during exam period(45)</td>
</tr>
<tr>
<td>Information services (IS)</td>
<td>Helpful, friendly; Quick &amp; easy for support; Easy access; Helpful with services provided by the uni; Fast and always available; Can access from PC at home; Basic explanations; Next to union, they want to help; Easy to understand; Quick; Helped with my laptop connection; Friendly and happy to help (15)</td>
<td>Slow response sometimes; Takes too long; Sometimes not helpful; Not always available; Can be busy, can take time to be seen (9)</td>
</tr>
</tbody>
</table>
Students who had not used any UOP study support services were asked to explain why they had not taken advantage of the services. Thirty four percent of participants (n=136) provided reasons for non-use services. Table 2.24 lists the reasons students stated for choosing not to seek support from the UOP study support services.

**Table 2-24 Students’ reasons for using UOP study support services.**

<table>
<thead>
<tr>
<th>Reason for not using the UOP study support services</th>
<th>Number of students (n=46)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not needed/can cope on own</td>
<td>30 (65.2%)</td>
</tr>
<tr>
<td>Did not know about them (poorly promoted)</td>
<td>6 (13.0%)</td>
</tr>
<tr>
<td>Support not specific to pharmacy</td>
<td>3 (6.5%)</td>
</tr>
<tr>
<td>No time due to my workload</td>
<td>3 (6.5%)</td>
</tr>
<tr>
<td>Asked friends/others</td>
<td>3 (6.5%)</td>
</tr>
<tr>
<td>Don’t like the library</td>
<td>1 (2.2%)</td>
</tr>
</tbody>
</table>

Respondents made comments about the positive and negative aspects of the study support services they had used at UOP (Table 2.23). Positive comments included ease of accessibility, approachability of the staff, able to meet with an academic one-to-one and pitched at the right level. In contrast, negative comments covered timetable constraints, lack of specificity to the course and increased demand for their use by other students during the assessment period thus less easy to access the support when needed. Students who take advantage of the study support services could profit from the expertise of staff and
recognise the benefits of such services to their own experience and learning at university. The MPharm timetable was often crowded and complex, and time management was an important transferable skill they needed to develop in order to keep in control. Personal development plans (PDPs) were completed and agreed with personal tutors which should aid students’ management of their work and help them to identify their individual learning needs. Personal tutors should monitor students’ PDPs and signpost them to support services when necessary. Some respondents reported that services were difficult to access during the assessment period and perhaps tutors could offer guidance to students to help them become more proactive and plan their learning earlier in the academic year. It could be that students who sort support services later in the academic year, and closer to their assessments, were leaving their assessment preparation until very late and regular study sessions should be encouraged earlier in the academic year to avoid such last minute, surface learning approaches.

Almost two-thirds of respondents (62%, n=234) had not used any of the UOP study support services and a third of these respondents (31%, n=146) provided reasons for choosing not to take advantage of them (Table 2.24). The main reason respondents cited for non-use of support services (Table 2.24) was they did not need the services and could cope 65% (n=46). However, of those students who stated they did not need help 73% (n=30) had initially reported the workload as either heavy or far too much and 70% (n=30) reported seeking help from either their peers or from students in higher years. Thus despite their claim that they did not need support, they have sought help from peers and appear
reluctant to disclose their needs to academic staff members or university support services available.

The key principles of the UOP curriculum framework aimed to provide students with an excellent, inclusive learning experience, providing continuous support throughout the academic years of study. 47 It was imperative that course leaders, lecturers and personal tutors provided appropriate academic, attitudinal and social preparation for all students. Thus induction should not be seen as an event which takes place over one week, but as an ongoing process designed to promote peer group and staff-student interaction as well as academic preparation. 244

Academic help-seeking behaviour was an important and complex self-regulatory behaviour involving specific competencies and motivational resources. 245, 246 Self-regulated learners possess strategies for dealing with academic challenges and were motivated to use them to gain clues or hints so that they could be solved independently, as opposed to simply asking for the answer. 247, 248 Help-seeking has been defined by Ames and Lau, as an achievement related behaviour that seeks meaning and specific strategies to gain access to help. 249 It was perceived as an adaptive process such that when academic or environmental demands exceeded a student’s personal resources, help-seeking became an adaptive coping strategy.250 The specific competencies and motivational resources required for adaptive help-seeking included: a) cognitive competencies, i.e. knowing when they needed help, knowing that others could help and knowing how to ask for help to yield exactly what was needed; 246 b)
social competencies, i.e. knowing who the best person is to approach for help and knowing how to ask for help appropriately; \( ^{246} \) c) personal motivational resources, i.e. having individual personal goals, self-belief, tolerance or resilience for difficult tasks and the willingness to ask for help from others; \( ^{246} \) and d) contextual motivational resources, i.e. factors in the classroom e.g. goals, grading systems, collaborative activities, student-lecturer interaction and lecturer expectations for the student that facilitated the help-seeking. \( ^{246} \) Furthermore, students’ help-seeking behaviours can also depend upon their beliefs and perceptions of the support available, as well as the approachability, openness and flexibility of academic staff. What was clear was that academic help-seeking provided students with an opportunity to re-engage and focus on a difficult task as opposed to entering a vicious cycle of either giving up, becoming passive to the task, non-attendance or eventually feeling helpless when overwhelming difficulties were experienced. \( ^{251} \)

Just over three-fifths (61%) of participants in this study reported never seeking support from the widely available academic study support services at UOP (Table 2.22) and 86% (n=136) of these non-users reported seeking support from their peers. Female students reported greater awareness of all support services except English for academic purposes. Significant differences were observed for ASK (Chi-square = 8.30, \( P = 0.004 \)), Maths Café (Chi-square = 15.43, \( P < 0.001 \)) and Information Services (Chi-square = 5.74, \( P = 0.017 \)). At the same time, more females reported using each of the support services though significant differences were not observed (Tables 2.21 & 2.22). Other research studies have determined similar findings. \( ^{252-254} \)
Al-Ansari et al determined that female dental students had a higher tendency to seek help with their studies. In particular they sort help from, and discussed academic issues with, academic advisors. The researchers suggested that this was due to females’ “desire in general to follow the system and conform to the rules”. Furthermore, the study showed a low satisfaction with the academic and student support systems available. Students displayed a greater reliance upon their peers to resolve their academic issues, only 7.6% (n=221) of students relied solely upon academic support systems, meanwhile 51% used informal peer support. Furthermore, all students were more likely to seek help from support services that were more easily available and accessible, listened carefully to their individual needs and could solve their problems. Similarly, students at UOP stated they prefer support systems that were “clear and easy to understand”, “easily accessible”, “friendly and happy to help” and “specific to the course”. Furthermore, non-use appeared to be affected by the perceptions of the usefulness and relevance of the support for the individual students.

Burk and Bender investigated the use and perceived effectiveness of student support services in 97 first year dental students. Seventy-seven percent of respondents reported seeking support from peers in their year, 80% indicated they tried to solve a problem on their own, 64% approached peers in higher years and 39% accessed professional academic advisors. Students in Burk and Bender’s study reported the informal peer contact as more effective than the structured professional academic support services. Similar findings were determined in the present PhD study.
Payakachat et al investigated help-seeking behaviours among 299 American student pharmacists. Their study showed that students’ academic help-seeking behaviours were directly related to their overall perception of the helpfulness of the services available. Thus students reported seeking help if they thought the support service would be helpful to their development and progress. In contrast, those students who perceived help-seeking as a sign of weakness, threat or ambivalence hindered their help-seeking behaviour, meaning some students avoided asking for help if they perceived it as an admission of failure, did not wish to disclose their shortcomings or look incompetent to staff or peers.

Thus it was apparent that an effective learning environment and a positive staff-student interaction fostered students’ academic help-seeking behaviour. Furthermore, this and other studies mentioned, confirmed that students relied heavily upon peer support to help cope with the demands of their studies.

Results of this PhD research study offer some evidence to recommend the provision of peer support in addition to university and faculty academic support programmes.

**2.5.8 Additional study support**

Additional study support services suggested by respondents are illustrated in Table 2.25.
Table 2-25 Additional study support services suggested by respondents.

<table>
<thead>
<tr>
<th>Additional study support services</th>
<th>Number of students (n=70)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision session/seminars</td>
<td>45 (64.3%)</td>
</tr>
<tr>
<td>Student mentors</td>
<td>19 (27.1%)</td>
</tr>
<tr>
<td>Curriculum Vitae support</td>
<td>2 (2.9%)</td>
</tr>
<tr>
<td>Lecturer availability</td>
<td>2 (2.9%)</td>
</tr>
<tr>
<td>Career centre</td>
<td>1 (1.4%)</td>
</tr>
<tr>
<td>MPharm Twitter</td>
<td>1 (1.4%)</td>
</tr>
</tbody>
</table>

2.5.9 Exam failure rates

Respondents were asked if they thought that engaging with study support services at UOP could lower the occurrence of exam failure. Table 2.26 shows their responses.

Table 2-26 Can study support services minimise exam failure?

<table>
<thead>
<tr>
<th>Could the use of study support services lower the occurrence of exam failure?</th>
<th>Number of students (n=227)</th>
<th>Number of students without referrals (n=118)</th>
<th>Number of students with referrals (n=109)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>159 (70.0%)</td>
<td>93 (78.8%)</td>
<td>66 (60.6%)</td>
</tr>
<tr>
<td>No</td>
<td>66 (29.1%)</td>
<td>25 (21.2%)</td>
<td>41 (37.6%)</td>
</tr>
<tr>
<td>Not sure</td>
<td>2 (0.9%)</td>
<td>0 (0.0%)</td>
<td>2 (1.8%)</td>
</tr>
</tbody>
</table>
Respondents (30%, n=234) offered suggestions for additional services the UOP could offer to support students with their studies throughout university (Table 2.25). Of the 70 students who responded to this question, almost two-thirds, 64% (n=70) suggested smaller group sessions such as revision classes, tutorials and seminars and over a quarter of respondents, 27% (n=70) suggested higher year student mentors could contribute to study support for students. A classroom or seminar environment, as opposed to a large lecture theatre, facilitates interaction and affords a connectedness between the individual learners and with the lecturer or facilitator. Furthermore the social and psychological distance, which prevails in larger groups, appears to dwindle. 

Adjustment to university life can be problematic for some Stage 1 students and those in higher academic years appear to cope better. The author believes that higher year students should be more involved in helping new students with this transition to help both their academic and social adjustment. Results of this study offer some evidence to support providing study and peer support programmes for students.

The majority of respondents (70%, n=227) felt that engagement with UOP study support services could lower the occurrence of exam failure (Table 2.26) and the feeling was mutual between those who had already engaged with support services and those who had yet to. Statistically significant differences were noted between respondents who had previously failed assessments compared to those who had not. More students with no exam failure thought engagement with such study support services would help to lower exam failure rates compared to those who had already experienced failure (Chi-square = 9.01, P = 0.003).
Indicating that students who had failed were less inclined to engage with services to remedy their poor ability and/or performance (Table 2.26).

Sideridis and Stamovlasis stated that help-seeking behaviour was related to an interest and enthusiasm to learn a subject matter and, in the presence of an intrinsic motivational orientation, promoted a positive affect and thus triggered help-seeking. 247 If a student was interested in the topic and aimed to gain as much knowledge about the topic as possible, i.e. a mastery orientation, they were more likely to demonstrate help-seeking behaviours. On the other hand, if the motivational orientation created anxiety or apprehension e.g. if the student was under pressure from external sources or their performance was constantly being compared to other students then help-seeking behaviours may purposefully be avoided. 247

Payakachat et al explained that students who needed academic help did not always seek it for fear of being viewed negatively by academic staff and conceded they were unable to progress through the course without support. 254 Furthermore, some students perceived help-seeking as an admission of failure to complete a task and so avoided asking for help as a form of self-preservation.

Low ranking students in this current PhD study i.e. those required to undertake second attempt assessments prior to progressing to the next academic year, appeared to have less of an ability to perceive or admit they needed help compared to those students who progressed without second attempt assessments. Additionally, they appeared to have an inability to act on a determined need or perceived the help available to be of little benefit.
A student’s perceived academic competence was described as a positive feeling about their own individual ability to succeed academically. It transpired that perceived academic competence strongly predicted academic achievement. 254, 256 Thus, students with a strong perceived academic competence demonstrated greater effort and resilience in accomplishing tasks, were not fazed by more demanding tasks, displayed perseverance, and developed learning strategies and goals closer to a mastery level. These students also possessed higher academic goals and exhibited less anxiety than those students with lower perceived academic competence. 257 Students with strong perceived academic competence were less likely to interpret their academic help-seeking behaviour as a lack of ability and tended to seek help more frequently. 258 Hence, students in this PhD study, who reported undertaking second attempt assessments, could have a lower perceived academic competence which could be a contributing factor to their inability to seek help from academic support services.

McChlery discussed the need to identify those student who were most at risk of withdrawal of performing poorly. 242 There were numerous suggestions for identifying at-risk students: those entering through widening participation, poor attenders, those entering through clearing and those with personal problems. Poor attendance need not simply be due to passive behaviour; some students require part time jobs to “make ends meet”, some may be carers or parents and some may have periods of ill health that impact upon their ability to attend. The author believes that there should be a clearer recognition of students at-risk and appropriate advisors need to be available to support these students in the development and retention.
Respondents were asked if they had failed any assessments and in which academic year they had failed them. Table 2.27 shows their responses.
Table 2-27 Students’ pass and failure rates in each academic year.

<table>
<thead>
<tr>
<th>Academic Year (n=234)</th>
<th>Failed assessment(s) n=114 (48.7%)</th>
<th>No failed assessment(s) n=120 (51.3%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total failed in Yr 1 of study</td>
<td>92 (39.3%)</td>
<td>142 (60.7%)</td>
</tr>
<tr>
<td>Male (n=88)</td>
<td>40 (45.5%)</td>
<td>48 (54.5%)</td>
</tr>
<tr>
<td>Female (n=145)</td>
<td>74 (51.0%)</td>
<td>71 (49.0%)</td>
</tr>
<tr>
<td>White (n=61) Male (n=23)</td>
<td>31 (50.8%)</td>
<td>30 (49.2%)</td>
</tr>
<tr>
<td>White Female (n=38)</td>
<td>14 (60.9%)</td>
<td>9 (39.1%)</td>
</tr>
<tr>
<td>White Female (n=38)</td>
<td>17 (44.7%)</td>
<td>21 (55.3%)</td>
</tr>
<tr>
<td>Non-white (n=172)</td>
<td>83 (48.3%)</td>
<td>89 (51.7%)</td>
</tr>
<tr>
<td>Non-white Male (n=65)</td>
<td>26 (40.0%)</td>
<td>39 (60.0%)</td>
</tr>
<tr>
<td>Non-white Female (n=107)</td>
<td>57 (53.3%)</td>
<td>50 (46.7%)</td>
</tr>
<tr>
<td>Yr 2 (n=83)</td>
<td>34 (41.0%)</td>
<td>49 (59.0%)</td>
</tr>
<tr>
<td>Failed in Yr 1</td>
<td>34 (41.0%)</td>
<td>49 (59.0%)</td>
</tr>
<tr>
<td>Yr 3 (n=80)</td>
<td>29 (36.3%)</td>
<td>51 (63.7%)</td>
</tr>
<tr>
<td>Failed in Yr 1</td>
<td>25 (31.3%)</td>
<td>55 (68.8%)</td>
</tr>
<tr>
<td>Failed in Yr 2</td>
<td>13 (16.3%)</td>
<td>67 (83.7%)</td>
</tr>
<tr>
<td>Failed in Yr 1 only</td>
<td>16 (20.0%)</td>
<td></td>
</tr>
<tr>
<td>Failed in Yr 2 only</td>
<td>4 (5.0%)</td>
<td></td>
</tr>
<tr>
<td>Failed in Yr 1 &amp; Yr 2</td>
<td>9 (11.3%)</td>
<td></td>
</tr>
<tr>
<td>Yr 4 (n=71)</td>
<td>47 (66%)</td>
<td>24 (34%)</td>
</tr>
<tr>
<td>Failed in Yr 1</td>
<td>33 (47.1%)</td>
<td>37 (52.9%)</td>
</tr>
<tr>
<td>Failed in Yr 2</td>
<td>13 (18.6%)</td>
<td>57 (81.4%)</td>
</tr>
<tr>
<td>Failed in Yr 3</td>
<td>15 (21.4%)</td>
<td>55 (78.6%)</td>
</tr>
<tr>
<td>Failed Yr 1 only</td>
<td>22 (31.4%)</td>
<td></td>
</tr>
<tr>
<td>Failed in Yr 2 only</td>
<td>4 (5.7%)</td>
<td></td>
</tr>
<tr>
<td>Failed in Yr 3 only</td>
<td>7 (10.0%)</td>
<td></td>
</tr>
<tr>
<td>Failed in Yr 1 &amp; Yr 2</td>
<td>5 (7.1%)</td>
<td></td>
</tr>
<tr>
<td>Failed in Yr 1, Yr 2 &amp; Yr 3</td>
<td>2 (2.9%)</td>
<td></td>
</tr>
</tbody>
</table>
Respondents who reported taking second attempt assessments were asked to select up to three reasons for their own personal poor performance in their assessments. Table 2.28 shows respondents’ explanations for their own poor performance.

Table 2-28 Students’ explanations for poor performance in assessments.

<table>
<thead>
<tr>
<th>Explanation for poor assessment performance</th>
<th>Rank 1 (n=113)</th>
<th>Rank 2 (n=82)</th>
<th>Rank 3 (n=73)</th>
<th>Most Ranked (n=113)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nerves on the day</td>
<td>26 (23.0%)</td>
<td>11 (13.4%)</td>
<td>7 (9.6%)</td>
<td>44 (38.9%)</td>
</tr>
<tr>
<td>Left revision to last minute</td>
<td>25 (22.1%)</td>
<td>8 (9.8%)</td>
<td>5 (6.8%)</td>
<td>33 (29.2%)</td>
</tr>
<tr>
<td>Concentrated on other exams</td>
<td>5 (4.4%)</td>
<td>12 (14.6%)</td>
<td>14 (19.2%)</td>
<td>31 (27.4%)</td>
</tr>
<tr>
<td>Didn’t enjoy the topic</td>
<td>17 (15.1%)</td>
<td>2 (2.4%)</td>
<td>6 (8.2%)</td>
<td>25 (22.1%)</td>
</tr>
<tr>
<td>Delivery of the unit was poor</td>
<td>7 (6.2%)</td>
<td>9 (11.0%)</td>
<td>5 (6.8%)</td>
<td>21 (18.6%)</td>
</tr>
<tr>
<td>Didn’t work hard enough</td>
<td>10 (8.8%)</td>
<td>18 (22.0%)</td>
<td>8 (11.0%)</td>
<td>19 (16.8%)</td>
</tr>
<tr>
<td>Too much pressure</td>
<td>3 (2.7%)</td>
<td>8 (9.8%)</td>
<td>8 (11.0%)</td>
<td>17 (15.0%)</td>
</tr>
<tr>
<td>Didn’t understand the topic</td>
<td>1 (0.9%)</td>
<td>7 (8.5%)</td>
<td>8 (11.0%)</td>
<td>16 (14.2%)</td>
</tr>
<tr>
<td>I tried to question spot</td>
<td>2 (1.8%)</td>
<td>3 (3.7%)</td>
<td>3 (4.1%)</td>
<td>8 (7.1%)</td>
</tr>
<tr>
<td>Timetable was too cramped</td>
<td>6 (5.3%)</td>
<td>3 (3.7%)</td>
<td>4 (5.5%)</td>
<td>13 (11.5%)</td>
</tr>
<tr>
<td>Other</td>
<td>9 (8.0%)</td>
<td>0 (0.0%)</td>
<td>3 (4.1%)</td>
<td>11 (9.7%)</td>
</tr>
<tr>
<td>I learned all the wrong topics</td>
<td>2 (1.8%)</td>
<td>1 (1.2%)</td>
<td>2 (2.7%)</td>
<td>5 (4.4%)</td>
</tr>
</tbody>
</table>
Respondents’ exam performances are shown in Table 2.27 and there were no significant differences between genders, ethnic backgrounds or academic year groups. However, it was apparent that significantly more students failed exams in the first year of their study compared to any other academic year (Chisquare = 123.95, P < 0.001). These findings confirm the need for study support services specifically focusing on transition to university and independent learning and that the support must be continuous throughout the academic year. Induction should be spread over the first semester/term or even over the first year as opposed to a “one-size fits all” induction week at the start of the year. Effective transition and induction programmes enhance students’ confidence for academic life and contribute to the building of a peer community.

Meanwhile more female students and white male students reported failing exams though these differences were not statistically significant, (Chi-square = 0.68, P = 0.409) and (Chi-square = 2.98, P = 0.084) respectively. These findings could be expected when more females in this study reported their workload to be heavier and confirmed their inability to cope; however this was not the case for the white male respondents in this study (Tables 2.12 and 2.14).

Assessment performance appeared to be effected by a number of factors (Table 2.28). Respondents reported nerves on the day, leaving revision too late and focusing on other subjects as the main reasons for poor exam performance. Lack of enjoyment and poor material delivery were further reasons for poor performance. These findings corroborate the need for a subject-specific study support service. Students entering higher education require a support service
aimed at two separate issues. The first to help them develop skills to enhance their learning, facilitate their transition to university and help them understand what is expected from them; it should address learning and knowledge concepts and facilitate their development into independent learners. The second must be a holistic approach, which is subject-specific, in order to support students in the complex processes of learning to learn in higher education. 65 The author believes that involvement of higher year students on the same course, in addition to academic staff, will complement this support service.

The use of study support services between respondents who had failed assessments and those who had progressed without failure of assessments was compared. Table 2.29 shows different uses of study support services between respondents who did and did not fail assessments.

<table>
<thead>
<tr>
<th>Use of Study Support Services</th>
<th>Failed Assessment(s) (n=104)</th>
<th>Did not fail assessment(s) (n=119)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes (n=88)</td>
<td>37 (35.6%)</td>
<td>51 (42.9%)</td>
</tr>
<tr>
<td>No (n=135)</td>
<td>67 (64.4%)</td>
<td>68 (57.1%)</td>
</tr>
</tbody>
</table>

The use of study support services did not have a statistically significant effect upon respondents’ exam performance (Chi-square = 1.23, P = 0.267), (Table 2.29). However, there was a positive correlation and a smaller proportion of
respondents failed in the group that had taken advantage of the UOP study support services compared to those who had not. Thus a subject-specific study support programme could have further impact upon students’ exam performances. 65

Only six respondents reported seeking support following exam failure which included going to the library, the maths café and meeting lecturers specific to the topic. A second year respondent discovered they had dyslexia which had resulted in their assessment failure in Stage 1.

2.5.10 Student mentors

Numerous studies have reported the benefits of student and peer mentors to help new students with their transition into university and support with their studies 161, 162, 260-262, however there is no research about peer mentors on MPharm courses in the United Kingdom.

Respondents to this study were asked their opinion and to comment on the future provision of MPharm student mentors to support students with their study. Moreover respondents were asked to list the advantages and disadvantages of student mentors (Tables 2.30 - 2.32).
Table 2-30 Students’ opinions of MPharm Student Mentors.

<table>
<thead>
<tr>
<th>Student Mentors Support Student Learning</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>All respondents (n=226)</td>
<td>198 (87.6%)</td>
<td>28 (12.4%)</td>
</tr>
<tr>
<td>Male (n=83)</td>
<td>71 (85.5%)</td>
<td>12 (14.5%)</td>
</tr>
<tr>
<td>Female (n=143)</td>
<td>127 (88.8%)</td>
<td>16 (11.2%)</td>
</tr>
<tr>
<td>White (n=61)</td>
<td>49 (80.3%)</td>
<td>12 (19.7%)</td>
</tr>
<tr>
<td>Non-white (n=165)</td>
<td>149 (90.3%)</td>
<td>16 (9.7%)</td>
</tr>
<tr>
<td>Failed (n=116)</td>
<td>104 (89.7%)</td>
<td>12 (10.3%)</td>
</tr>
<tr>
<td>Passed (n=110)</td>
<td>94 (85.5%)</td>
<td>16 (14.5%)</td>
</tr>
<tr>
<td>Yr 2 (n=79)</td>
<td>72 (91.1%)</td>
<td>7 (8.9%)</td>
</tr>
<tr>
<td>Yr 3 (n=79)</td>
<td>68 (86.1%)</td>
<td>11 (13.9%)</td>
</tr>
<tr>
<td>Yr 4 (n=68)</td>
<td>58 (85.3%)</td>
<td>10 (14.7%)</td>
</tr>
</tbody>
</table>

A large majority (88% of respondents, n=226) thought that MPharm student mentors would support MPharm students with their studies. There were no statistically significant differences between genders and academic year groups. On the other hand when ethnic backgrounds were compared, significantly more non-white students agreed to the benefits of having student mentors, (Chi-square = 4.08, P = 0.043). These findings were expected since more non-white
students, than white students, reported previously seeking study support from higher year students (as reported in Table 2.20).

Meanwhile only a small proportion of students suggested student mentors as an additional study support service (as reported in Table 2.25). Perhaps participants in this study did not perceive student mentors as a formal study support service or that they intended for the revision sessions and seminars to be facilitated by student mentors. Another explanation could be that students had not considered the use of student mentors until the author introduced the concept in the self-completed questionnaire. However, the majority of participants thought that mentors could support their studies.

**Table 2-31 Students’ comments about advantages of student mentors.**

<table>
<thead>
<tr>
<th>Advantages of a Student Mentor: Themes</th>
<th>Number of respondents (n=141)</th>
</tr>
</thead>
<tbody>
<tr>
<td>More approachable and already experienced Stage 1</td>
<td>96 (68.1%)</td>
</tr>
<tr>
<td>Can offer advice, guidance and support</td>
<td>66 (46.9%)</td>
</tr>
<tr>
<td>Aid transition and provide expectations</td>
<td>32 (22.7%)</td>
</tr>
<tr>
<td>Can offer hints and tips for studying</td>
<td>29 (20.6%)</td>
</tr>
<tr>
<td>Offer help</td>
<td>14 (9.9%)</td>
</tr>
<tr>
<td>Reassuring</td>
<td>11 (7.8%)</td>
</tr>
<tr>
<td>Help manage workload</td>
<td>4 (2.8%)</td>
</tr>
</tbody>
</table>

N.B. Eighty five students did not respond to this question.
Table 2-32 Students’ comments about disadvantages of student mentors.

<table>
<thead>
<tr>
<th>Themes</th>
<th>No of respondents (n=77)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentors may be too busy</td>
<td>36 (46.8%)</td>
</tr>
<tr>
<td>Mentor may be poor</td>
<td>14 (18.2%)</td>
</tr>
<tr>
<td>Just not a good idea</td>
<td>9 (11.7%)</td>
</tr>
<tr>
<td>May encourage copying and laziness</td>
<td>8 (10.4%)</td>
</tr>
<tr>
<td>Mentor may be unapproachable</td>
<td>6 (7.8%)</td>
</tr>
<tr>
<td>May result in extra worrying</td>
<td>4 (5.2%)</td>
</tr>
<tr>
<td>Waste of time</td>
<td>3 (3.9%)</td>
</tr>
<tr>
<td>Other</td>
<td>3 (3.9%)</td>
</tr>
</tbody>
</table>

N.B. 149 students did not respond to this question.

More than half of respondents provided comments about the perceived advantages of having a student mentor (63%, n=226) (Table 2.31). Almost three-quarters of those who did respond stated that higher year student mentors would be more approachable than lecturers and have a better understanding of what year one MPharm students were going through (68%, n=141). Examples of comments are listed below and academic stage shown in brackets:

“Someone who you can go to for advice; someone who has been through it before.” (Stage 4)

“Support in which more students would feel comfortable.” (Stage 4)

“Easier to speak to; won’t have too many expectations.” (Stage 3)

“Someone who has been through it and can give you advice.” (Stage 4)
“Having someone to talk to who has been through it.” (Stage 4)

A particularly important area for mentoring is the connecting link the higher year mentor has both inside and outside of the learning environment with the lower year mentee. Respondents in this study related to the mentor role as a connecting link between mentees and lecturers; helping mentees to feel more comfortable talking about any issues they may have about the transition to university life or anything about the course. Anecdotally, a mentor has recently experienced what the new students are going through and is another factor which provides that all important connecting link.

Only a third of respondents reported disadvantages of student mentors (34%, n=226) (Table 2.32). The biggest concern was that mentors would be too busy to deliver the support required and the quality of the mentor to mentee relationship could be poor. Examples of negative comments include:

“Mentor may have limited time and may not be available when you need them.” (Stage 4)

“Mentor may not be able to give enough time for the scheme to be beneficial.” (Stage 4)

“Pressure on the mentor—may find it difficult to manage time; personality clash.” (Stage 4)

“May not get along with them through the year; disapprove of methods or ways to study.” (Stage 4)
Whilst student mentoring focuses on a more experienced student helping a less experienced student to improve overall performance and provide advice, support and knowledge, a balance needs to be met with regards to the demands and time the less experienced student requires and expects from their mentor. Respondents in this study alluded to the lack of time mentors may be able to commit to the role and “might not be free when needed” (Stage 3). The key to any mentor-mentee relationship is the initial setting of ground rules and expectations from each party to ensure that the mentee does not become dependent upon their mentor. Mentors support new students’ transition into university, meanwhile encouraging independent learning from the mentee. Key components of an effective and successful mentor-mentee relationship should be mutual respect and trust, knowledge exchange, independence and collaboration.\textsuperscript{264}

2.5.11 MPharm tutorial programme

Respondents’ level of agreement with the statement: “The MPharm tutorial programme is designed to support student learning throughout your degree” is shown in Table 2.33.
Table 2-33 Students’ level of agreement with the statement “The MPharm tutorial programme is designed to support student learning throughout your degree”.

<table>
<thead>
<tr>
<th>MPharm Tutorial Programme supports Student Learning</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>All respondents (n=224)</td>
<td>118 (52.7%)</td>
<td>72 (32.1%)</td>
<td>34 (15.2%)</td>
</tr>
<tr>
<td>Male (n=84)</td>
<td>41 (48.8%)</td>
<td>26 (31.0%)</td>
<td>17 (20.2%)</td>
</tr>
<tr>
<td>Female (n=140)</td>
<td>77 (55%)</td>
<td>46 (32.9%)</td>
<td>17 (12.1%)</td>
</tr>
<tr>
<td>White (n=60)</td>
<td>33 (55.0%)</td>
<td>22 (36.7%)</td>
<td>5 (8.3%)</td>
</tr>
<tr>
<td>Non-white (n=164)</td>
<td>85 (51.8%)</td>
<td>50 (30.5%)</td>
<td>29 (17.7%)</td>
</tr>
<tr>
<td>Failed (n=117)</td>
<td>66 (56.4%)</td>
<td>37 (31.6%)</td>
<td>14 (12.0%)</td>
</tr>
<tr>
<td>Passed (n=107)</td>
<td>52 (48.6%)</td>
<td>35 (32.7%)</td>
<td>20 (18.7%)</td>
</tr>
<tr>
<td>Yr 2 (n=80)</td>
<td>49 (61.3%)</td>
<td>24 (30.0%)</td>
<td>7 (8.7%)</td>
</tr>
<tr>
<td>Yr 3 (n=79)</td>
<td>40 (50.6%)</td>
<td>33 (41.8%)</td>
<td>6 (7.6%)</td>
</tr>
<tr>
<td>Yr 4 (n=65)</td>
<td>29 (44.6%)</td>
<td>15 (23.1%)</td>
<td>21 (32.3%)</td>
</tr>
</tbody>
</table>

Statistically significant differences were observed between genders, (Chi-square 10.08, P = 0.006); and academic year groups, (Chi-square = 23.77, P < 0.001).

More than half of respondents agreed that the MPharm tutorial programme, in place at the time of this survey, supported their learning (53%, n=224) (Table 2.33). Respondents reported benefits which included:
“It enhanced my learning” (Stage 4)

“It helped with CV writing” (Stage 3)

“Helped with skills development” (Stage 2)

“Offers good pastoral care” (Stage 2)

“Good resource” (Stage 3)

Meanwhile negative comments included:

“Not all tutors are pharmacists” (Stage 3)

“The sessions do not count towards the degree mark” (Stage 4)

“Some tutors are poor” (Stage 4)

“The sessions are not course related” (stage 4)

“Apart from the 15 minute chat twice a year it is pointless” (Stage 2)

The author believes that consistency and enthusiasm from tutors are essential to deliver an effective tutorial programme. Staff need a deep understanding and experience of the programme, otherwise trust and expectation will decline and students will feel under-valued.

Statistically significant differences were observed between genders, (Chi-square 10.08, P = 0.006); and academic year groups, (Chi-square = 23.77, P < 0.001) (Table 2.33). Female students and students in the initial stages of their higher
education journey appeared to benefit more from the study support offered in the tutorial programme.

The UOP MPharm tutorial programme supported the development of students, providing them with opportunities to learn in small groups under the direction of their individual tutors. The focus of the programme was to develop subject knowledge and equip students with skills which can be used during university and thereafter. Tutors were a point of contact for effective learning and organisational support and aimed to develop and enhance study skills as well as introducing them to PDP and CPD. Timetabled tutorials decreased from Years 1 to 4 throughout the MPharm degree and this could be an explanation why more Stage 2 respondents agreed that the MPharm tutorial programme supported their learning compared to those in Years 3 and 4. One respondent commented that there were not enough tutorial sessions throughout the year:

"Have too few sessions and never really focuses on academic help"

(Stage 3)

This student did not think that the tutorial programme supported their individual academic learning despite feeling that there were not enough tutorial sessions. She did agree that student mentors could help her with her studies by handing down crucial advice.
2.6 Phase 1 Results and Discussion - Focus Groups

The data obtained in this phase of the study showed a number of concepts within themes, which were representative across the sample of students. The MPharm, within the context of each student’s experience, was central in each focus group. Two main themes emerged: the delivery of the course and how students manage their studies. Furthermore, study support was discussed in detail in each focus group and themes which emerged were the support provision from UOP and the proposed support provision by participants. Themes were organised into categories to facilitate understanding of how they related to each other. The framework of concepts, themes and categories which emerged from the data are shown in Table 2.34.
Table 2-34 Categories, themes and concepts emerging from the data.

<table>
<thead>
<tr>
<th>Category</th>
<th>Theme</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>The MPharm Course</td>
<td>Delivery of the MPharm programme</td>
<td>Contact time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lecturers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Relevance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal development</td>
</tr>
<tr>
<td></td>
<td>Managing studies</td>
<td>Workload</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Motivation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Timetable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Directed private study (DPS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coping mechanisms</td>
</tr>
<tr>
<td>Study support services</td>
<td>Support from the institution</td>
<td>Awareness and opinions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Motivation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lecturers and tutors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peers</td>
</tr>
<tr>
<td></td>
<td>Proposed study support</td>
<td>Lecturers and tutors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peers support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Student mentors</td>
</tr>
</tbody>
</table>
2.6.1 Phase 1 qualitative findings

Sections 2.6.2 - 2.6.16 include a narrative explaining and discussing the qualitative findings of Phase 1. The narrative is divided into categories and themes in order to make the explanation coherent. Within each theme, all concepts are discussed together as they are closely interrelated, as shown in the theoretical model. Separating discussion of the concepts could de-contextualise the findings. Quotes from study participants are used to illustrate the narrative and to provide examples of typical, atypical and interesting points of view, demonstrating the internal validity of the interpretation provided. The quotations were selected to illustrate a consensus view, a polarised view or a point of particular interest by virtue of a link with another theme or concept. Each quote is listed by participant reference. This narrative also considers the findings in their relation with relevant literature on teaching and learning development of MPharm students.

2.6.2 Category 1 – The MPharm Course

All participants in this study were MPharm undergraduates and two themes were identified: the delivery of the MPharm programme and how students managed their studies. Table 2.35 shows the themes and their associated concepts within category 1.
Table 2-35 Themes and concepts in the category “The MPharm Course”.

<table>
<thead>
<tr>
<th>Category</th>
<th>Theme</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>The MPharm Course</td>
<td>Delivery of the MPharm programme</td>
<td>Contact time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lecturers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Relevance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal development</td>
</tr>
<tr>
<td></td>
<td>Managing studies</td>
<td>Workload</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Motivation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Timetable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Directed private study (DPS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coping mechanisms</td>
</tr>
</tbody>
</table>

2.6.3 Theme 1 – Delivery of the MPharm programme

All participants in this study were MPharm students, in Years 2, 3 or 4, and the delivery of the MPharm had important implications impacting on the majority of other aspects related to this study. Four concepts appeared as central in relation to this theme: the delivery of lectures, the relationship students had with lecturers, students’ perceived relevance of the topics being taught and students’ own personal development.
2.6.4 Discussion of theme 1 findings

Participants in this study felt that the MPharm contact time, for lectures and workshops, had reduced year-on-year. Second year participants shared comments about fewer sessions to attend compared to their first year of study, meanwhile the amount of work required to be undertaken independently had increased:

I think it’s been a lot less than first year and first year seemed like a lot but second year seems quite...relaxed

(12:2:P)

...much more directed private study needed for this year

(11:2:P)

yea they cut out the lectures and expect us to do a lot more reading from the book

(9:2:P)

Yea I agree, like umm, there’s a lot of material covered in lectures but you need to go over...to make sure you actually know it

(8:2:P)

Third year participants reported that contact time had also decreased, however the amount of material being covered had increased and they too were expected to work independently:

I think our hours have gone down...lecture wise but there’s still DPS [directed private study]

(20:3:P)
I feel it’s strange that I seem to be in lectures less but relatively I feel I have more paper work [everyone agrees] like I have more lecture material as such, my folder is full, but I haven’t seen many people if you understand what I mean.

(21:3:P)

Meanwhile Stage 4 participants stated that they had far less contact time and a lot more free time. Despite the decrease in contact time these students claimed that the amount of work they covered and their workload was far heavier than in previous academic years:

We have much more free time this year but comparatively our workload is much heavier because a lot of things like down to us, that we have to be devoted to our life and to be self-disciplined more compared to the other years.

(27:4:P)

I think the DPS that they’ve put up is like massive articles, but I think they only want two or three lines in a huge article. When you read the article, you can’t pin point it, then you find it difficult obviously but if people can pin point, then you’re at an advantage so it’s a bit unfair I think in terms of that coz I like to waffle when I read too much…nice sometimes if they highlight the paragraphs that they want you to read or remember.

(31:4:R)
...I think it should just be study...I think like the whole purpose of going to university is lectures... lecturer is there to actually... instruct you... you know... show you how to understand something... whereas they aren’t there to teach to you... they’re not teachers... You know? So work is work at the end of the day

(26:4:R)

It was apparent that the participants in this study began their HE journey predominantly as dependant learners having been heavily supported at school. There was an increasing expectation that graduates leave university as partially supported, self-directed and independent learners. Participants discussed their own personal development and the evolving changes in the delivery of the MPharm at UOP as they progressed through the course. Higher year students received fewer direct contact hours with academics and were required to undertake more directed private study independently. Table 2.15 indicates that higher year students in this study reported the workload on the MPharm as high compared to their counterparts in lower years on the course.

The approachability and availability of lecturers also varied for participants. Some felt that lecturers were helpful, approachable and available to discuss any issues they had with regards to their studies:

... personally, I would see a lecturer just because you never know what the other students are going through anyway, as in they might be struggling themselves, or they might be busy so it’s better to just go to the lecturer really

(11:2:P)
...[go to] the individual lecturer. So like, if it’s a piece of content that you’re stuck on, then go and see the individual lecturer – they are usually quite helpful.

(30:4:P)

... I’d go to the lecturer after the lecture and ask specific questions

(10:2:P)

Meanwhile, other participants were mindful that some lecturers were more helpful, approachable and/or available than others. They discussed the different teaching styles and personalities of lecturers and determined which lecturers they would feel most comfortable approaching:

... I think it depends... it depends on the lecturer as well because I know... my tutor likes a certain style and I know that another of my lecturers doesn’t like that style at all, so they kinda conflict... so I think it just depends on what the situation is

(10:2:P)

... I wouldn’t often go to a lecturer... sometimes, because I feel like some of them aren’t approachable... or they don’t reply to your emails

(19:3:P)

... if it’s, erm, after the lecture I’d go see the lecturer, if it’s outside of the lecture, I’d ask... probably I would consult a friend

(5:2:R)
... it depends on.. what sort of question it was. If it was like ‘oh, I need to go over something more broad’ then you’d go and ask a lecturer... and like something trivial...

(7:2:R)

It appeared that reputation, in addition to first impressions, had a significant impact upon participants in this study. Students shared their encounters of lecturers with their counterparts, particularly those which were negative in nature. From very early on in the course students had drawn their own opinion of some lecturers and sometimes before they even had any personal contact with them:

I think like the word goes round... the people that don’t... are just not gonna reply to your email... I remember in first year... so many people tried to email him... you know... the word goes around and... oh, I’ll just try to find out from somewhere else...

(23:3:P)

I think some lecturers are more approachable than others so, our first protocols would be our peers but, erm, there are some sort of lecturers that you can say I’ll drop them an email, or I’ll go and see them and you know they’d be cool with that and you yourself won’t be seen as in any trouble.

But you contact some lecturers, you feel like you know what, they’d probably just, erm, think that you know I’m not working hard enough, so I’d get a bad name in their books, so it’s probably best that I don’t do that and I think... probably you find out a pattern thing of alright, do that lecturer and then that person, that unit ain’t
I don’t think I’ve ever contacted a lecturer... I’ll ask my friends or I’ll ask someone in the year above... or I’ll probably ask someone in the year above previously... I dunno I think asking lecturers is just a bit, I dunno... I don’t feel uncomfortable about it... I just don’t... I don’t feel like they would give you much or it’s almost like you... you’re worried about asking stupid questions... or... I dunno... like some... like [named lecturer] the way he lectures is like he thinks we know it already...

First impressions counted and it was apparent that negative encounters with lecturers had an unfavourable impact upon relationships where students became less inclined to approach staff members. Staff-student relationships were very important, especially during the initial stages of transition from school or college. Attitudes towards staff can be formed following an isolated incident and often quite early in a student’s university career. Most students in this study appeared to have a good relationship with lecturers and were happy asking lecturers for help. However, an isolated bad experience can overshadow all the positive opinions leaving students feeling reluctant to approach staff members:

... A lecturer that you feel confident or comfortable talking to – because some of them, they’re Just...Just rude.
I think the lecturers are more or less the last resort, only when you’ve got no other help around you

(Pilot:4:R)

Participants’ individual academic help-seeking behaviours appeared to differ depending upon the interactions they had previously experienced with academic staff. Participant 27:4:R was concerned about asking a “stupid question” and as such may have perceived help-seeking as threatening, and yet this student appeared to be a low-ranking student who had undertaken second attempt assessment(s). This participant is an example of a student who required additional support with their studies and yet was reluctant to seek the support for fear of looking stupid or admitting their inability to cope. Meanwhile, participants 10:2:P, 11:2:P and 30:4:P, who passed all assessments at first attempt, all appeared to be comfortable with the concept of seeking help from academics and probably perceived help-seeking as a positive encounter to enhance their knowledge and competence in the topic, applying a mastery orientation to their studies.265

Stage 3 participants who had undertaken second attempt assessments discussed the relevance of the course material being covered and undertaking work that was not assessed:

... yeah it’s a waste of time, I’d just get annoyed and be like I’m putting effort into this

(14:3:R)
All units have detailed unit descriptors listing the learning outcomes and assessment criteria however these students did not appear to understand the concept of formative assessment and feedback. One explanation for this behaviour could be that these students did not engage with the essay writing activity because they did not understand or realise the learning outcome that would be gained from undertaking the exercise. Harkin reported that students undertaking a course often disengage from the supporting material, especially if there is no summative assessment, due to their lack of interest and understanding of the relevance of the material. However, this could lead to students adopting a surface learning approach and failing to fully understand their chosen discipline.

In contrast, these participants who had passed without any second attempt assessments, discussed and demonstrated applying meaning and understanding of new knowledge with reference to previous relevant knowledge gained on the MPharm course:

... it’s a motivation thing... this year I find stuff more interesting and more relatable to things I’ve done before so it’s... I can sort of pin point things and it just makes it a bit easier to learn. If I find it a bit more interesting... so I decided this year to actually... to sort of... [start work earlier].
... everything is a lot more specific to what we want to do this year, it’s not just all just basic anatomy and basic... but its more specific to what we’re actually going to be doing.

...(23:3:P)

... I think [because it is more enjoyable] you want to learn it if you’re actually going to use the information you’re learning... yea definitely

...(19:3:P)

I don't really to be honest, go to anyone. I just get on with it to be honest... use the references that they say... the notes or whatever, and I just sort of take my way through the whole lot...

...(21:3:P)

These participants demonstrated a stronger intrinsic motivation than those who had undertaken second attempt assessments. They were beginning to understand the relevance of the material being covered and could inter-relate the material with topics that had been previously covered. Furthermore, they made comments that the material was interesting, more specific and thus easier to learn. They also had a tendency for more autonomy, deep learning and further personal development.

**2.6.5 Summary of theme 1 findings**

This section focused on the delivery of the MPharm programme which had a significant impact on the student experience. The delivery of lectures, individual
lecturers and the relevance of the topics being covered appeared to affect students’ opinions of the course and their ability or reluctance to seek help with their studies. There appeared to be a difference between participants, in this study, who passed all assessments at first sitting compared to those required to return for second attempt prior to progression. Students who passed all assessments at first sitting displayed a stronger mastery orientation to their studies and felt comfortable approaching lecturers for help with their studies. Meanwhile students who undertook second attempt assessments, and despite their increased need for support with material they could be struggling with, were less inclined to display help-seeking behaviours especially if they perceived the usefulness of the help provided to be poor.

The author believes that the organisation of teaching material and academic support networks are crucial to enhance students’ experience and to develop the incoming students who are predominantly heavily supported students into independent practitioners.

2.6.6 Theme 2 – Managing studies

Students’ ability to managing their studies, and the processes they undertook in order to manage them, were very important in the discussions that took place with participants in this research. All participants contributed to the discussion and realised the importance of managing their studies during their degree. Nonetheless, they each had different approaches in terms of the extent to which they managed their time. Key concepts within this theme were students’ perceived workload, their motivation to study, the academic timetable, directed
private study and the coping mechanisms students developed to manage their studies.

2.6.7 Discussion of theme 2 findings

Students’ ability to manage their studies has been found to be one of the main drivers for academic success. Time management and organisational strategies were important aspects of being successful. Students needed the ability to schedule, plan, set realistic goals and set aside blocks of time to study. Furthermore, strategies to help them select the information that needs to be understood and construct connections between the sets of information were challenging for some.

For pharmacy students in this study, managing their studies was important. Those students who passed all their assessments without any referrals or second attempt assessments appeared to adopt effective organisational strategies:

```
I think it’s mostly to do with you and the time that you put in and I think mostly time organisation coz we got our [exam] timetables really late so like... you didn’t have a lot of time like sometimes you had like literally four days

(8:2:P)
```

```
I think it’s important to start early like to do it over Easter [8:2:P agrees] so you’re not leaving it till the last minute and then you can go through exam questions and stuff

(9:2:P)
```
Me and my friends did say or we’ll try and keep up with it this year, but we haven’t really stuck to it, it’s just the timetable and everything finishes really late so... just don’t feel like revising after you’ve done all you’re lectures.

(12:2:P)

Yea, coz they [lectures] finish so late, you’re so tired at the end of the day, you don’t... plus this year cos they’ve changed the exams, they’re all in summer... it’s quite worrying because you need to make sure that you do, do work over Christmas otherwise it will pile up..

(8:2:P)

We got a lot more free gaps to do work... whereas in other years... we’ve been in 9 – 5 everyday... so when you get home, you get tired... and we finish

(19:3:P)

We have a weekly study session... Like once a week, we get together and just be like right we should do some work now... yeah we get together, we normally sit in a pub or something... and just go through mainly clinical because everyone’s scared of that like so many people failed

(23:3:P)
We got given a common drugs task and I was working in a pharmacy and it was quiet I just get on with it... something to kill the day and because I actually want to do something... and cos of gaps and stuff... I'll just go to library or Park and just make notes

(21:3:P)

The key to participants’ success in this study was early preparation for assessments and managing their time wisely between lectures when there were gaps between timetabled events. This self-motivation and approach to directed private study was important.

Meanwhile participants who were required to undertake second attempt assessments adopted poorer organisational strategies and managed their time less effectively. Students were less inclined to use the gaps between timetabled events effectively and left their assessment preparation far too late. Some students in this study found the self-directed aspects of a course quite challenging, making them feel anxious and frustrated. Similarly, some students did not manage their time effectively during gaps between lectures nor during the term leading up to the exam period:

I prefer to have like lectures say straight from like 9 to 1, instead of having like 9 to 10 and then 4 to 5... which I think it’s a bit ridiculous and also... the amount of DPS we have to do this year is the same as you guys [referring to final year students] last year but we have so many less lectures this year which I think is a but unfair as well.

(16:3:R)
I just think time plays a huge factor in that because we have like what 6 exams in the space of like a couple of weeks or whatever, you can't realistically learn everything that you've been taught for every exam

(17:3:R)

I’ve used the ASK website... it was okay...umm some bits I found a bit frustrating to navigate, like I’d know [what] I’d want to focus... I’d been told to look at something for a tutor group... and I’d try and find it, search for it and I’d look under the heading I think it’d be under, and I wouldn’t find it so then I’d have to [go] through all the [through it all again] so organisation was a bit [frustrating]

(10:2:P)

they gave us our exam timetable what 2 weeks before our exams so...

(15:3:R)

Participants 17:3:R and 15:3:R struggled to effectively plan their revision; and participant 17:3:R stated they had difficulty managing their revision for their six assessments during the two weeks assessment period. The challenges these students expressed for their assessment preparation could be a contributing factor for their poor performance and their need to undertake second attempt assessments at the end of the academic year.

The volume of directed private study overwhelmed some students and despite the gaps between lectures, some students were unable to identify the
appropriate information and construct connections among the information they
needed to learn. Examples of organising strategies include clustering, outlining
and selecting the main idea in reading passages. Weinstein and Mayer found
that raised levels of performance and achievement were “fostered by different
cognitive strategies such as, rehearsal, elaboration and organisational
strategies”. 266, 269, 270

They've literally just said it's DPS and left it to us. That's it... and I just
think it's unfair

(27:3:R)

Preparation for assessments was clearly ineffective for some participants who
undertook second attempt assessments:

I hate the fact that we actually have like three exams in one week,
that was killing me, I mean physically and mentally I don't even sleep
in that week... I just look like giant panda... when I was having that
exam, its... frustrating and... stressful cos... you know... somehow... I
mean well luckily we can... physically able to do it I mean but
somehow if you finish the exam then you got worried and you just
make it worse... it’s actually affecting your performance as well and
no matter how... I thought I will finish in a week and I can’t do it...
but I really hate that... these make the students more stressful

(24:4:R)

I would stick to my exam papers... for third year... I... I... allocated a
day... like three days for each cos I left it till last minute as always...
three days per unit... I started clinical like three days and then I got to
Students who were required to return for second attempt assessments clearly left studying to the very last minute; managing their studies and time management was a weakness.

One participant who had been required to undertake second attempt assessments explained how he made a list of things to do:

*I just have a big list on my notice board of just what needs doing and then I cross it off and I can see what’s been done and what’s left to do.*

Whilst this student displayed the organisational strategies previously mentioned, it could be that they lacked the cognitive strategies such as, rehearsal and elaboration of information in order to impact upon their performance in their assessments. Students have the primary responsibility to plan, carry out and
evaluate their learning experiences, and this self-directed approach relies upon their personal autonomy, self-management and pursuits for learning opportunities. 271

2.6.8 Summary of theme 2 findings

This section has focused on participants’ ability to manage their studies whilst at university which can have a significant impact on their experience and performance. Perceived workload, the academic timetable, directed private study and participants’ perceived academic competence appear to affect students’ help-seeking behaviours and their ability to cope with the work. Students who passed all assessments at first attempt in this study managed their time and study time more effectively than those students who undertook second attempt assessments.

2.6.9 Category 2 – Study support services

In addition to perceptions of the MPharm degree, this study gathered participants’ views on academic support services offered at UOP. Views were described in relation to two distinct themes: the academic support provided by the institution and the study support services participants proposed. Table 2.36 shows the themes within this category and their associated concepts.
2.6.10 Theme 1 – Support from the institution

All participants in this study were MPharm students at UOP and the provision of academic support had important implications for the majority of participants. Four concepts appeared as central in relation to this theme: participants’ awareness and opinions of the support services available, their motivation to access the academic support, approachability and accessibility of lecturers and tutors, and the support participants sought from their peers.

2.6.11 Discussion of theme 1 findings

Awareness and opinions of the academic support offered by UOP varied between participants in this study. Despite only 39% (n=224) of participants
accessing support services in Phase 1 of this study (Table 2.22), participants who had accessed them discussed their experiences. This Stage 2 participant had tried to access the maths café but had not appreciated that the venue of the meetings often changes:

I... I... tried the maths... I tried to find the maths café when there was one, their meeting, and I couldn’t find them, don’t know whether that’s me or them.

(4:2:R)

Thus, although this participant was aware of the academic support being offered they were unable to access the support due to the regular venue changes between sessions. Meanwhile, the varying quality of the support provided influenced participants’ decisions to return for further support or reject the service altogether:

yea.. I’ve used the maths café twice. First time was good, the guy who was helping me was really good and the second time... [pause]... I would [go again] but it... I would think it depends on who you find at that time... because it’s different people [at different sessions]

(5:2:R)

This participant did not overtly state that their second experience of the maths café was poor, however it is clear from the transcript and digital recording of the focus group, that they had very different experiences at each of the maths café sessions. They indicated that the quality and usefulness of the sessions differed because they were delivered by different tutors each time and so lacked consistency.
A couple of Stage 3 participants discussed the services available at Purple Door, in particular the support provided for CV writing:

Well my house-mate had gone to a [CV] workshop and her advice was “don’t go to the workshop” and insist... cos apparently they’re not like [that] specific, so when I went there, they did try to get me to sit in the group workshop and I was like... “Oh I’m really sorry I can’t”... so eventually I managed to get a one-to-one meeting and that was actually really helpful – she sat with me for 45 minutes and like... scribbled all over my CV and it was really good but you have to work quite hard to get that [one-to-one] meeting and they don’t like.. and they’re so booked... it’s like you have to book it quite far in advance and but if you... if you can actually get it, it’s really good.

(22:3:P)

... I went for my CV but they didn’t have any erm... interview spaces and (inaudible segment) and like one-to-one... before my deadline so I ended up not going... they couldn't give me an appointment so I haven’t actually used them...

[Moderator – Would you go again?]

I don’t know, they weren’t particularly friendly when I went in there (laughter) – she seemed quite annoyed that I came in now... she was just like it’s a bit late, you should have come in earlier.

(23:3:P)
I think... I think I probably would have been in the same boat if my house mate hadn’t said like force yourself to get a one-to-one... because obviously like if you just sit in a big group it’s about general CV writing... so like it’s going to be totally different for whatever you’re applying for so it’s just more about like layout and things like that but if you sit one-to-one they’ll actually make it specific to what you’re applying for and they know the kind of things that you need to put into it and things like that... so yeah it was useful.

(22:3:P)

These participants demonstrated a need for specificity of the nature of the support being provided. The provision of support was deemed not specific enough to their discipline of choice, in this case, pharmacy. Furthermore, their preference for one-to-one and animosity for group sessions indicates a lack of autonomy, independence and self-direction. Despite the fact that these two students had passed without referral, they still appeared to demand clear direction and to be heavily supported.

The location of the support services was important for some students:

... the problem with the university is that... I don’t know if it’s just me or some people... erm, I don’t really see the university environment as being like kind of a community. I don’t know how to explain this, I don’t know if it’s because you’ve got different departments and areas... because if we had everything at the same place, then it’s more like a community, that you see the people all the time, like at the library. If you come to lectures you go home, I do most of my lectures at home, you probably don’t need most of these things [support services] but if you have that, well, you can’t actually change that, but I think it needs to be more of a community kind of thing, where even the people from different departments, even
without going to library like, I know even at this university I don’t really go there

I think the problem with some of these places [support services] is they’re in rooms or buildings that are all kinda disjointed and all over the place [different parts of the university] and really, if they wanna support, you know, the profile, the services they are giving, then they should have people representing the services in places where people congregate, like, they could have a little stall at the library in exam times for counselling... and then they’d probably get loads of people coming to them for stress but they don’t because they sit in their rooms [in different parts of the university] and wait for you to go to them [and] they don’t...

These participants may have been prone to use the support services if they were located in the same place, e.g. at the library. The spread of different locations for each of the different academic support services could be one of the causes that minimises the chance for students to build a sense of community.

Counselling was particularly a concern for some students and the location and method of admission were discussed in depth:

I know they [support services] offer, erm, an online email counselling service... I think... at university so like if you don’t want to go to them personally, you can do it through email. I don’t know if anyone would be interested in that but at least it’s something they offer if you’re worried [about] face-to-face speaking to someone...
I want to say something about this counselling thing, I had a friend graduated from this university 2 years ago and he was an accountant. He’s an accountant now, and basically he was going through, erm, a psychological state. He went to counselling, he… well he wanted to work in [the] UK basically, and they brought [it up] in every [reference], erm, work experience underneath it. They brought [it] in everywhere in his… in his diploma [reference]. They wrote everywhere he had [been to] counselling, he had been through a psychological disorder… [everyone in focus group looks shocked] Yeah… and okay, he got the job, but it’s unfair…

[Moderator - so you don’t think that they kept it confidential in this case?]

I think it should be like in the last [resort] if they are not sure that the person is good, in mental state or not

Moderator – [so you can’t disclose it?]

Yeah. Say [if] he was ill, he was ill in everywhere [all his references], I don’t think that’s fair.

(Pilot:4:R)

[Moderator – so does that put you off from going to these extra support services because you think that if you used them…]?

I don’t know... if you are in that state what would you do? Which part you would be protesting. Maybe if you are that ill you needed help but if you are not that ill, you don’t go there because if I wasn’t that ill let’s say and I was fine, but a bit stressed like, I wouldn’t go because I’m a pharmacist like student, pharmacy student and I don’t
This student was notably concerned about accessing the counselling services in case the participation was reported or disclosed on future job applications or references. As a pharmacy student they were worried about a mental health problem being on their personal record and that it would affect their fitness to practice.

A negative perception of asking for help could prevent students who need academic help to not always seek it, because doing so may be negatively viewed as an admission of their inability to succeed without support. Payakachat et al stress the need for institutions to develop strategies to encourage students’ academic help-seeking behaviour.254

2.6.12 Summary of theme 1 findings

This section has focused on the academic support systems available at UOP which have had a significant impact on some of the students in this study. Students’ awareness and opinions of the services, the lecturers and tutors involved in the support, and their peers, influenced their decision to utilise the support available.

Encouraging academic help-seeking behaviour in pharmacy students requires enhancing their perceived academic competence, improving student and staff relationships, decreasing students’ ambivalence by engaging them more directly
in pharmacy activities and the curriculum, and encouraging students to think about their career goals.

2.6.13 Theme 2 – Proposed study support

Participants’ opinions of the academic study support service provision at UOP were mixed. Their suggestions for future study support arrangements were an important part of the discussions that took place in this research. All participants contributed to the discussion and key concepts within this theme were support from their peers and student mentors.

2.6.14 Discussion of theme 2 findings

Peer support or support from approachable lecturers were prevalent in all six focus groups. Participants discussed gaining support from students who had already been through the process i.e. higher year students, or lecturers they felt comfortable with and were enthusiastic. These need not necessarily be their personal tutors rather, someone they had confidence in and was easy to talk to:

“a support system that is run by students maybe because, erm, at least they know what you’re going through at the same time. I mean, lecturers see it from a different perspective I think. They’re looking at it from their point and it’s easy to overlook how they felt when they were students, so I think that’d be quite good – something run by students... or even something open with other lecturers [as opposed to personal tutors] coz sometimes people might not feel completely comfortable speaking to their own tutor about something.”

(30:4:P)
you need someone [a student] who is quite excited about it, quite like you know (20:3:P - who’s passionate) who really wants [to do it]

(23:3:R)

Someone, a student, you’re comfortable [with]

(20:3:R)

[someone] who you feel comfortable talking to about it [everyone agrees], a student

(23:3:R)

A lecturer or student that you feel confident or comfortable talking to

(19:3:R)

Friends and 4th years [i.e. peers in the same year or a student in a higher academic year]

(13:3:R)

Probably someone approachable [someone] I kind of talk to a lot more often... we have a new tutor this year because ours is leaving so...[student unsure if they feel comfortable talking to the new tutor]

(12:2:P)
It was apparent that not all participants had built a trusting and comfortable relationship with their personal tutors, some students talked about accessing support from other lecturers they thought were approachable, available and more enthused to offer academic support. Some participants in this study discussed the possibility of introducing a support service that could be facilitated by students. Suggestions included working with friends, either in the same academic year or sessions facilitated by students in a higher year.

These findings complemented those determined in the quantitative research undertaken (Section 2.5), which indicated that most participants in the study preferred to seek help from their peers rather than contact an academic. Furthermore, they agreed that having a mentor could support them with their studies.

Hastings et al undertook a study investigating changes in motivation of pharmacy students, at the University of Arkansas, as they progressed though the curriculum. Student motivation was categorised as either a mastery orientation i.e. a desire to develop competence and knowledge of the subject being studied; performance orientation i.e. a desire to demonstrate competence and compare performance with peers; or academic alienation i.e. no desire to develop or demonstrate competence or learn the material. Hastings et al determined that most pharmacy student commenced their studies in Stage 1
with a mastery orientation. Although the students’ goal orientation remained mastery, it shifted toward academic alienation throughout the four year course and the biggest shift was during the first academic year. ²⁶⁵

This shift in mastery orientation in Hasting et al’s study could be as a result of a number of contributing factors e.g. students were new to Arkansas City, new to the university setting, unfamiliar with the expectations of work required to undertake, Stage 1 of study may have been more science based rather than practice based which could have disillusioned some students, the initial novelty of attending a pharmacy course may have worn off and students’ mastery orientation may have been elevated at the start of the course and then reverted back to their original baseline goal orientation after the first year of study.

Hastings et al suggested that a mentoring programme could help Stage 1 students with their transition into university and assist with their study habits, stress and time management. ²⁶⁵

Whilst this PhD study did not include Stage 1 students, it was apparent that students’ mastery orientation could be shifting back as they progress through the course. Students in higher years talked about the increased workload and extra DPS they were required to undertake (sections 2.6.5 and 2.6.6). The researcher believes that the introduction of a mentor programme could help students in Stage 1 with their transition into university life and could help students develop effective study habits and time management skills.
2.6.15 Summary of theme 2 findings

This section has focused on participants’ suggestions for future academic support services for UOP students. Participants in this study suggested that support from people they feel comfortable with would be beneficial e.g. approachable lecturers, student peers or student mentors. It appears that the goal orientation of some students could shift from a mastery orientation to more of an academic alienation and the introduction of a mentor programme could help to minimise this shift and help Stage 1 students to develop effective lifelong study habits throughout the course and after graduation.

2.7 Limitation of Phase 1

This study had some limitations. It was conducted in a single school of pharmacy, which may limit generalisability to all student pharmacists in different settings and different degree programmes. However, the methods could be used to address similar issues on other degree programmes at UOP or in other institutions or schools of pharmacy and the results may provide some information to those wishing to increase their students’ academic help-seeking behaviour.

Finally, responses may have been affected by the curriculum year of each student at the time of the study.
2.8 Conclusion from Phase 1

The methods used in this study were strengthened by using information gathered during the quantitative phase to identify survey items for the qualitative phase.

MPPharm students chose to read pharmacy for both intrinsic and extrinsic reasons. Gender differences were apparent, more females chose pharmacy because they had an interest in the pharmacy profession (Chi-square = 9.45, P = 0.002), whilst males chose pharmacy because their favourite subject was science (Chi-square = 25.60, P < 0.001). Meanwhile, family and familial relationships were influential on non-white students although not significant (Chi-square = 3.65, P = 0.056), whilst white students were more influenced by gaining a job they enjoyed (Chi-square = 7.84, P = 0.005).

Students’ perceptions of workload varied considerably according to gender and ethnicity, more non-white students (Chi-square = 17.21, P < 0.001) and female students (Chi-square = 6.55, P = 0.015) reported heavier workloads. No significant differences were observed between academic year groups.

Three key support networks, students tapped into for study support, were their peers in the same academic year, lecturers and higher year students. Although, they preferred to ask for help from their peers as opposed to lecturers or students in higher years. These findings could be attributable to the close proximity and ease of access to peers or to the fear of disclosing difficulties to staff members.
Despite the number of study support services provided by UOP, engagement and uptake was limited, only 39% (n=224) of students reported using them, suggesting a combination of avoidance of help-seeking behaviours and a lack of understanding of the benefits these support services could offer.

A high proportion of students who did not seek support through the official university channels, and stated they did not need help, also reported their workload as either heavy or far too much 73% (n=30). At the same time, 70% (n=30) of these non-users reported seeking help from either their peers or students in higher years. Thus despite claiming they did not need support, they had sought help from unofficial channels i.e. their peers, confirming help-seeking avoidance from academic staff and university support services.

More students failed exams in the first year of their study, compared to any other academic year (Chi-square = 123.94, P < 0.001). Exam performance was affected by nerves on the day, leaving revision too late and focusing on other subjects. Students who accessed UOP study support services failed fewer assessments compared to those who did not, although the difference was not significant. Holistic and subject-specific study support provision which focuses on transition, induction and independent learning, could help new students with the complex processes of learning to learn in higher education.65, 242,244,259

Students’ perceptions of academic competence, helpfulness and relevance of the study support services on offer, influenced their academic help-seeking behaviours. Thus, endorsing students’ help-seeking behaviours, requires the right conditions to maximise the benefits of the support services available.
Numerous studies have reported the benefits mentors play helping new students with their transition into university and support with their studies \(^{161, 162, 260-262}\) A positive impact has also been reported for the mentors’ development, \(^{272, 273}\) however there is no literature about peer mentors on MPharm courses in the United Kingdom.

A large majority (88%, \(n=226\)) thought MPharm student mentors would support new students with their studies and that higher year student mentors would be more approachable than lecturers. Anecdotally a mentor would have recently experienced what the new students were going through and provided an important connecting link to academic staff and the institution.

Mentors were referred to as the link between new students and lecturers; helping them feel more comfortable talking about issues with transition or course related issues. Mentors were the connecting link, both inside and outside of the learning environment, with the lower year mentee. \(^{263}\) A small proportion of students (30%, \(n=234\)) made suggestions for additional study support services which UOP could provide; and over a quarter (27%, \(n=70\)) suggested higher year student mentors.

New MPharm students’ mastery orientation i.e. their desire to develop competence and knowledge, diminishes across the four academic years. \(^{265}\) Seeking academic support is a critical behaviour aiding students to achieve their goals; the introduction of a peer mentor programme could help new students to develop effective study habits and time management skills, in order to maintain their mastery orientation.
Results from this study offer evidence to support the provision of peer support, in addition to university and faculty academic support programmes, to help students display help-seeking behaviours. The introduction of a less formal study support service, like a peer mentor programme, could offer MPharm students additional support with their transition, sense of community and their academic studies.

The researcher will design and develop an MPharm student mentor programme, ready for delivery in October 2013.

Chapter 3 evaluates the MPharm Student Mentor Programme designed, developed and delivered, during the academic year 2013/2014 by the author, as a result of the findings from Phase 1 of this study.
Chapter 3: Mixed methods study to evaluate the University of Portsmouth MPharm student mentor programme.

3.1 Introduction

Chapter 2 provided an overview of Phase 1 of this research, investigating MPharm students’ study habits and concluded that the majority of participants (89%, n=232) initially approached class peers for help with their studies. Phase 2 involved the introduction and evaluation of a student mentor programme for MPharm students at the University of Portsmouth (UoP) during the 2013/2014 academic year.

Mentoring is a developmental and learning opportunity for both mentors and mentees. Peer mentors are defined as someone belonging to the same group in society as the mentees where membership is defined by status. In this case, the status is that of being a fellow-learner and not a professional teacher. The peer mentor is a more experienced individual who gains the satisfaction of sharing their experiences, knowledge and greater understanding. The mentor offers personal support and encouragement to the mentee, focuses on their individual needs to support them at a time of transition in their life and helps them manage their own learning.

The mentoring relationship is traditionally perceived as a two way relationship which can be either formal or informal, can last a short time or a long time, be societal or vocational, and can be active or passive. Mentoring can be psychosocial or career related although most studies suggest that it actually
serves both. Psychosocial mentoring involves mentor roles such as counsellor or friend and establishes the mentor as being a role model and support system for the mentee, while career-related mentoring involves mentor roles such as a coach or sponsor. In career related mentoring the mentor gives advice that helps to enhance the mentee’s professional development and performance.

Mentoring programmes can be formal, informal, structured, unstructured, optional or mandatory. Informal mentoring develops naturally through professional or social interactions occurring between potential mentees and mentors, while formal mentoring is initiated by an organisation representative who pairs the mentor to a mentee or group of mentees. Formal mentoring programmes have guidelines that govern frequency of interaction and may provide orientation training to help the mentor and the mentee to understand and be comfortable with their roles. Formal mentoring programmes may require a higher or lower facilitation depending on the level they are operating at. The MPharm Student Mentor Programme (SMP) at the University of Portsmouth (UOP) related more to that of a formal mentoring programme. Zeind et al suggest that mentoring programmes within faculties are effective because they allow junior mentees to be paired with senior members who will inform them about the organisation or institution, facilitate the socialisation process, improve their chances of success earlier on and reduce stress associated with commencing a new academic position e.g. transition from school into university. It is believed that formal mentoring is useful because it educates and supports the whole person in a way that the traditional curriculum cannot.
and Zeind et al suggest that it is beneficial to evaluate the design, support and delivery of such mentoring programmes in order to attain maximum benefits throughout the course. The MPharm mentoring programme targets new undergraduate students to aid the transition into university life where experienced students, who have undergone training, offer support to students to the year below.

According to Haines, there are four distinct periods in mentoring which include initiation, cultivation, separation and transformation. During initiation two people form a mentoring pair, aiming for a positive, enjoyable relationship that is worthwhile considering the amount of time and effort required in mentoring. The tone is set and mutual benefits, interests and ground rules are identified. Cultivation is considered the primary stage of learning and development and if the initiation phase is successful, then the mentee will learn from the mentor. This stage involves frequent and meaningful interaction and the mentor may share with the mentees, lessons attained from their own personal experience and expertise. The separation stage marks the end of the relationship which can be because there is nothing more to learn or the mentee may wish to establish an independent identity. If the decision to end the relationship is not mutual, then this stage may be stressful for one or both parties. Mentees may feel betrayed, abandoned or unprepared for the separation, while mentors may feel betrayed or exploited if mentees have stopped seeking their support. During the transformation or redefinition stage, both mentor and mentee continue a relationship which evolves into a collegial relationship or social friendship. At this stage the mentor’s focus is not on the mentee’s
developmental needs, but instead may establish new mentoring relationships with other mentees and the former mentee may also become a mentor for new mentees. Mentoring can be distinguished from other academic relationships like supervising and teaching in that there is reciprocity between the mentor and mentee and that there is the identity transformation by each party.

Phase 1 of this research identified that MPharm students turned to their peers for learning support before requesting support from lecturers. Furthermore, respondents in Phase 1 thought that having a mentor could help their performance and transition into university.

Mentoring has proven to be successful in many other contexts and disciplines, and mentors develop new skills and qualities, whilst gaining the satisfaction from developing the next generation of mentors. However, this has not been demonstrated for pharmacy students in the United Kingdom. This study aims to provide robust evidence of its potential usefulness in an MPharm undergraduate setting.

In order to gather the necessary data, the following research questions were used:

1. What do MPharm students think of the student mentor programme?
2. What is the experience for students involved with a student mentor programme?
3. What effect does a student mentor programme have on pharmacy undergraduates?
4. What opportunities does a student mentor programme offer to make graduates more employable?

3.2 Methodology – Phase 2

As previously mentioned in Section 2.2, research methodology constitutes a whole range of strategies and procedures, which must be appropriate to help answer the research questions posed. Thus, the processes used to undertake the research must be tailored to fit the subject or topic being studied.

The second phase of this PhD study was the introduction and evaluation of the MPharm student mentor programme (SMP). A mixed methods approach, using a descriptive and interpretative study, was undertaken to explore and evaluate students’ opinions and experiences from the SMP.

A short presentation was made by the author to Stage 1 MPharm students during a lecture at the end of their academic year, March 2013. The author asked for volunteers to be mentors for Stage 1 MPharm students during the academic year 2013/2014. Thirty four students volunteered, twenty female and fourteen male, and during Stage 2 of their MPharm i.e. 2013/2014, they acted as mentors for Stage 1.

The mentors were all Stage 2 MPharm students and were required to attend a one-day training session with the author to ensure they understood their role as a mentor. These students did not require to have any previous mentoring experience, the only requirement was that they had completed and passed Stage 1 of the MPharm course.
Each Stage 2 mentor was randomly allocated two or three Stage 1 MPharm students, by drawing their names from a bag. The Stage 1 MPharm students, the mentees, were allocated in their personal tutor groups and mentors attended the timetabled personal tutorials to meet with their mentees. Personal tutors were asked to allocate the first 15-20 minutes of each tutorial for mentors to talk with their mentees. During the first tutorial, mentors were encouraged to swap contact details e.g. email addresses or telephone numbers, to enable mentees to contact them with any queries, questions or concerns they had about the course or their transition into university. Mentors would then attend as many tutorials as was feasible dependent upon their own academic timetables and the needs and requests from their own mentees. The SMP was entirely student-led and Stage 1 mentees were encouraged to contact and arrange to meet with their mentors whenever they had a query or concern.

3.3 Research methods and approaches

Chapter 2 Section 2.3 discusses in detail the research methods and approaches considered for the second phase of this PhD study. Quantitative and qualitative research were considered in addition to positivism, post-positivism, constructivism, paradigms and mixed methods approaches.

3.4 Methodological approach to this study

Similar to Phase 1, a mixed methods approach was deemed appropriate to achieve a comprehensive data collection for Phase 2. Chapter 2 Section 2.4 fully explains the methodological approach in more detail.
3.4.1 Self-completed questionnaire

The first stage of Phase 2 used a fixed and objective quantitative research method. The researcher wished to gather large amounts of factual data about the MPharm SMP. The quantitative approach was conducted using a piloted self-completed questionnaire to capture numerical data which could be statistically analysed. The questionnaires were distributed during lectures in the first academic term, October 2014, to MPharm students involved in the SMP (i.e. Stage 2 MPharm students who were previously Stage 1 mentees in academic year 2013/14 and Stage 3 MPharm students who were Stage 2 mentors in 2013/14). Stages 1 and 4 MPharm students were not eligible to complete the questionnaire since they had not taken part in the student mentoring programme in 2013/14. Distribution during lecturers was selected to capture as many MPharm students as possible in one venue.

A copy of the final, piloted mentee questionnaire and mentor questionnaire appear in Appendix 7 and Appendix 8 respectively. As in Phase 1, the questionnaires were piloted with 20 volunteer MPharm undergraduates, 10 mentees for the mentee questionnaire and 10 mentors for the mentor questionnaire, to establish both face and content validity. See Section 2.4.1 for a detailed explanation of the questionnaire design process undertaken.

3.4.2 Questionnaire data analysis

Following the pilot, questionnaires were distributed as explained in Section 3.4.1 and the data from the self-completed questionnaires were analysed using
Microsoft Excel 2013; see Section 2.4.2 for a detailed explanation of the analysis process undertaken. Some statistical inferences were drawn, see Section 3.5.

### 3.4.3 Qualitative study of MPharm students’ opinions of the SMP

The second stage of Phase 2 of this PhD study involved an explorative qualitative study. See Section 2.4.3 for a detailed explanation of the qualitative study undertaken.

### 3.4.4 Focus group design

The conduct of the focus groups was exactly as that used in Phase 1, i.e. semi-structured to adapt to the emerging views of participants, see Section 2.4.4.

Piloting was conducted with six volunteer Stage 3 MPharm undergraduate students, who had been mentors in 2013/2014, recruited from the target population of study. The author approached students during lectures in October 2014 and asked for 6 volunteers to pilot the focus group. The first six volunteers were selected. Few changes to the original focus group schedule were required and responses from the pilot were included in the final analysis.

A copy of the focus group schedule used in Phase 2 of the study appears in Appendix 9.

### 3.4.5 Focus group delivery

See Section 2.4.5 for details of the focus group delivery undertaken in Phase 2 of this PhD study.
3.4.6 Recruitment of focus group subjects

See Section 2.4.6 for details of the recruitment process used for focus group subjects.

Stage 2 respondents, who were mentees in 2013/2014, discussed their experiences from a mentee’s perspective. Meanwhile, Stage 3 respondents, who were mentors in 2013/2014, discussed their experiences from a mentor’s perspective.

Following piloting a further five focus groups were carried out:

- Two focus groups with mentees (four mentees per focus group, eight mentees in total),

- Three focus groups with mentors (six or seven mentors per focus group, twenty-six mentors in total including the pilot).

A participant code was allocated to each student i.e. 4:me referred to student number 4 who was a mentee and 20:mr referred to student number 20 who was a mentor. Participant demographics and code details can be found in Appendix 10.

3.4.7 Semi-structured focus group conduct

The focus group plan, focus group delivery, structured focus group analysis method and the analytical strategy for Phase 2 of this PhD study were the same as those for Phase 1; see Section 2.4.7 for a detailed explanation.
3.5 Phase 2 Results and Discussion – mentee and mentor self-completed questionnaires

3.5.1 Response rates

There were 125 Stage 2 MPharm undergraduates in October 2014, referred to as the sample population, who had been mentees in Stage 1 of the MPharm programme in 2013/14. The number of participants who completed the mentee questionnaire, known as the response rate, was 62 (49.6%). The higher the response rate the more representative of the sample population and a response rate approximating 60% or above should be a researcher’s goal. 231, 232 See Section 2.5.1 for details about response rate and validity and reliability.

The genders and ethnicity of the sample population are illustrated in Tables 3.1 and 3.2.

Table 3-1 Genders of MPharm undergraduate mentees at UOP during 2013/2014.

<table>
<thead>
<tr>
<th>Females (%)</th>
<th>Male (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>69 (55.2%)</td>
<td>56 (44.8%)</td>
<td>125 (100%)</td>
</tr>
</tbody>
</table>
Table 3-2 Ethnicity of Stage 1 MPharm undergraduates at UOP during 2013/2014.

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>43 (34.4%)</td>
</tr>
<tr>
<td>Asian</td>
<td>48 (38.4%)</td>
</tr>
<tr>
<td>Other</td>
<td>16 (12.8%)</td>
</tr>
<tr>
<td>Black</td>
<td>12 (9.6%)</td>
</tr>
<tr>
<td>Chinese</td>
<td>3 (2.4%)</td>
</tr>
<tr>
<td>Mixed</td>
<td>3 (2.4%)</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
</tr>
</tbody>
</table>

Genders and ethnic backgrounds of MPharm undergraduates who completed the mentees’ questionnaire are shown in Tables 3.3 and 3.4 respectively.

Table 3-3 Genders of respondents to the self-completed questionnaire distributed to mentees of the student mentor programme at UOP.

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Female n=69 (%)</th>
<th>Male n=56 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 (2014/2015)</td>
<td>30/69 (43.5%)</td>
<td>28/56 (50.0%)</td>
</tr>
</tbody>
</table>

N.B Four students did not respond to this question.
Table 3-4 Ethnicity of respondents to the self-completed questionnaire distributed to mentees of the student mentor programme.

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>26 (46.4%)</td>
</tr>
<tr>
<td>Asian</td>
<td>19 (33.9%)</td>
</tr>
<tr>
<td>Black</td>
<td>7 (12.5%)</td>
</tr>
<tr>
<td>Chinese</td>
<td>3 (5.4%)</td>
</tr>
<tr>
<td>Mixed</td>
<td>1 (1.8%)</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
</tr>
</tbody>
</table>

N.B Six students did not respond to this question.

The genders of respondents were similar to that of the sample population, and there was no significant differences between the sample population and the responders (Chi square = 0.529, P = 0.4692). Meanwhile more white students responded to the questionnaire and the difference observed was significant (Chi square = 11.065, P = 0.01138).

All thirty four Stage 2 volunteer mentors from 2013/14 agreed to complete the mentor self-completed questionnaire. Tables 3.5 and 3.6 illustrate the genders and ethnicities of the mentors of the UOP student mentor programme (SMP) respectively.
Table 3-5 Gender of mentors of UOP SMP during 2013/14

<table>
<thead>
<tr>
<th></th>
<th>Females (%)</th>
<th>Male (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22 (64.7%)</td>
<td>12 (35.3%)</td>
<td>34 (100%)</td>
</tr>
</tbody>
</table>

Table 3-6 Ethnicities of mentors of UOP SMP during 2013/14

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>15 (46.9%)</td>
</tr>
<tr>
<td>Asian</td>
<td>6 (18.8%)</td>
</tr>
<tr>
<td>Black</td>
<td>10 (31.3%)</td>
</tr>
<tr>
<td>Chinese</td>
<td>1 (3.1%)</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
</tr>
</tbody>
</table>

N.B Two students did not respond to this question.

Questions 3 to 7, on the mentees’ questionnaire (see Appendix 7), used a Likert scale to rate the degree to which respondents agreed or disagreed with the statements. Respondents were offered a choice of five responses with a neutral point being neither agree nor disagree.

Likert-type scales were developed in 1932 by Rensis Likert to measure respondents’ attitudes; a typical Likert scale is either a 5-point or 7-point ordinal scale used by respondents. As previously mentioned, the scale is used to rate the
degree to which respondents agree or disagree with a statement. Analysis of Likert scale data often involves using numbers to rate each response e.g. Strongly agree is 5 points whilst strongly disagree is 1 point.

In the ordinal scale used in Phase 2 of this study respondents could agree, disagree or remain neutral with the statements, but the differences in magnitude between responses is not necessarily equal. Furthermore, if responses are clustered at the strongly agree and the strongly disagree end of the scale, the calculated mean could appear as neutral when in fact this is not the case and the data is incorrectly characterised. It is common to witness this clustering of extremes in studies investigating trainee evaluations of experience, where the experience could be popular with one group and yet perceived as unhelpful or unnecessary by others. Educators and researchers have suggested that using means alone is of limited value and researchers should also calculate the mode and interquartile range. Mode is the number which appears most often in the set, and standard deviation (SD) is the spread of values from the mean or expected value and an interquartile range is a measure of where the bulk of the values lie.

The data in this study were ordinal; thus the mean could not be accurately defined. Response categories in the Likert scale were combined so that strongly agree and agree were one category, strongly disagree and disagree were a second category and finally neutral was the third category. Using the three categories the chi-square statistical test was run.
Table 3.7 and Figure 3.1 illustrate the degree to which mentee respondents agreed or disagreed with the statements.

**Table 3-7 The degree to which mentee respondents agreed or disagreed with the statements in questions 3 to 7 (n=62)**

<table>
<thead>
<tr>
<th></th>
<th>SA</th>
<th>Agree</th>
<th>N</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. MPharm students in my year support each other.</td>
<td>13</td>
<td>32</td>
<td>11</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(21%)</td>
<td>(52%)</td>
<td>(18%)</td>
<td>(7%)</td>
<td>(2%)</td>
</tr>
<tr>
<td>4. I get help from MPharm students in my year.</td>
<td>15</td>
<td>35</td>
<td>9</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(24%)</td>
<td>(56%)</td>
<td>(15%)</td>
<td>(3%)</td>
<td>(2%)</td>
</tr>
<tr>
<td>5. I feel uneasy exposing gaps to MPharm students in my year.</td>
<td>2</td>
<td>19</td>
<td>17</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(3%)</td>
<td>(31%)</td>
<td>(27%)</td>
<td>(32%)</td>
<td>(6%)</td>
</tr>
<tr>
<td>6. I feel encouraged by lecturers to ask questions.</td>
<td>3</td>
<td>19</td>
<td>22</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>(5%)</td>
<td>(31%)</td>
<td>(35%)</td>
<td>(18%)</td>
<td>(11%)</td>
</tr>
<tr>
<td>7. I am able to get help from MPharm students in HIGHER years.</td>
<td>4</td>
<td>23</td>
<td>17</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(6%)</td>
<td>(37%)</td>
<td>(27%)</td>
<td>(23%)</td>
<td>(6%)</td>
</tr>
</tbody>
</table>

SA = strongly agree
N = neutral
D = disagree
SD = strongly disagree
Std dev = standard deviation
Significantly more students felt able to ask their peers for help (Question 4) compared to asking students in higher years (Question 7), (Chi square = 11.571, P < 0.001) or their lecturers (Question 6), (Chi square = 28.923, P < 0.001). Although a higher proportion of respondents preferred to approach higher year students than lecturers, the difference observed was not significant (Chi square = 2.343, P = 0.6729).

**Figure 3-1 The degree to which mentee respondents agreed or disagreed with the statements in questions 3 to 7 (n=62)**

![Figure 3-1](image-url)
3.5.2 Sense of community

Table 3.7 shows that respondents in Phase 2 of this study felt supported by their peers and able to ask them for help, and Figure 3.1 confirms that 73% felt supported by their peers and 80% were able to ask their peers for help (n=62).

Fewer respondents felt able to get help from MPharm students in higher academic years and Figure 3.1 confirms that less than half of respondents (43%) actually felt able to ask higher year students for help. Despite the fact that more students selected agree against this statement, there was a widespread selection across all five options. In fact, significantly more students felt able to ask their peers for help compared to asking students in higher years (Chi square = 11.571, P < 0.001), (Table 3.7). Thus, respondents in this study appear to be more comfortable approaching their peers in the same academic year before those in higher academic years.

Meanwhile only about a third of respondents (34%) felt uncomfortable admitting to having gaps in their understanding of the course to their peers and at the same time, only 36% of respondents felt encouraged by lecturers to ask questions, which could explain why they felt better supported, and happier approaching, their peers for help.

Students in this study appeared to have developed a connectedness and trust between their peers and, to some extent, with higher year students and Rovai defined this interactivity amongst peers as a sense of community. However, there was a reluctance for respondents in this study to approach lecturers directly and this could be due to the increased class size or student diversity.
compared to their previous schools or colleges. 76, 77 Picciano and Braxton referred to the transition from school or college to university and mentioned the larger class sizes and limited one-to-one interactions with academics as a reason why some students struggled with this transition and sense of belonging to the institution. 76, 77

Gender differences between the degree to which mentee respondents agreed or disagreed with the statements in Questions 3 to 7 are illustrated in Table 3.8 and Figures 3.2 and 3.3.
<table>
<thead>
<tr>
<th></th>
<th>FEMALE (n=30)</th>
<th>MALE (n=28)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SA</td>
<td>Agree</td>
</tr>
<tr>
<td>3. MPharm students in my year support each other.</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>(23%)</td>
<td>(43%)</td>
</tr>
<tr>
<td>4. I get help from students in my year.</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>(23%)</td>
<td>(50%)</td>
</tr>
<tr>
<td>5. I feel uneasy exposing gaps to MPharm students in my year.</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>(7%)</td>
<td>(33%)</td>
</tr>
<tr>
<td>6. I feel encouraged by lecturers to ask questions.</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>(0%)</td>
<td>(27%)</td>
</tr>
<tr>
<td>7. I am able to get help from students in HIGHER years.</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>(3%)</td>
<td>(33%)</td>
</tr>
</tbody>
</table>

Both females and males preferred to seek help from their peers than ask higher year students (Chi square = 8.148, P = 0.0043) and (Chi square = 11.018, P = 0.0009) respectively. At the same time, significantly more males, than females, felt they could approach their peers for help (Chi square = 3.869, P = 0.0492).
Figure 3-2 Degree to which female respondents agreed or disagreed with the statements in questions 3 to 7 (n=30)

Figure 3-3 Degree to which male respondents agreed or disagreed with the statements in questions 3 to 7 (n=28)
The majority of both male (n=28) and female (n=30) respondents felt supported by (86% and 66% respectively) and able to seek help from (92% and 73%), their peers. Although more male respondents felt supported by the peers, there was no significant difference between genders (Chi square = 2.870, P = 0.0903). Meanwhile significantly more male respondents, than female respondents, felt they could approach students in their academic year for help with the studies (Chi square = 3.869, P = 0.0492), (Table 3.8). It could be that male respondents in this cohort of students felt a greater sense of community amongst their peers compared to their female counterparts. At the same time, more male students felt able to ask higher year students for help (54% compared to 36%), and yet no significant difference was observed (Chi square = 2.673, P = 0.1958).

Both female and male respondents in this study were more likely to seek help from their peers than ask students in higher years and the differences observed were significant, (Chi square = 8.148, P = 0.0043) and (Chi square = 11.018, P = 0.0009) respectively, (Table 3.8).

Meanwhile more female respondents felt uneasy exposing gaps in their understanding to their peers (40%) compared to males (29%), however no significant difference was observed between genders (Chi square = 0.837, P = 0.3601). Furthermore, fewer female students felt encouraged by lecturers to ask questions (27%) compared to their male counterparts (47%) but the difference was not significant (Chi square = 2.449, P = 0.1176). The differences between mentee respondents’ ethnicity and the degree to which they agreed or disagreed with the statements in Questions 3 to 7 are illustrated in Table 3.9.
Table 3-9 Differences between mentee respondents’ ethnicity and the degree to which they agreed or disagreed with the statements in questions 3 to 7 (n=56)

<table>
<thead>
<tr>
<th></th>
<th>WHITE (n=26)</th>
<th></th>
<th>NON WHITE (n=30)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SA</td>
<td>Agree</td>
<td>N</td>
<td>D</td>
</tr>
<tr>
<td>3. MPharm students support each other.</td>
<td>7</td>
<td>14</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>(27%)</td>
<td>(54%)</td>
<td>(12%)</td>
<td>(8%)</td>
</tr>
<tr>
<td>4. I get help from MPharm students in my year.</td>
<td>7</td>
<td>16</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>(27%)</td>
<td>(62%)</td>
<td>(4%)</td>
<td>(8%)</td>
</tr>
<tr>
<td>5. I feel uneasy exposing gaps to MPharm students in my year.</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>(4%)</td>
<td>(23%)</td>
<td>(23%)</td>
<td>(42%)</td>
</tr>
<tr>
<td>6. I feel encouraged by lecturers to ask questions.</td>
<td>1</td>
<td>11</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>(4%)</td>
<td>(42%)</td>
<td>(27%)</td>
<td>(19%)</td>
</tr>
<tr>
<td>7. I am able to get help from MPharm students in HIGHER years.</td>
<td>1</td>
<td>11</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>(4%)</td>
<td>(42%)</td>
<td>(27%)</td>
<td>(23%)</td>
</tr>
</tbody>
</table>

N.B Six students did not disclose their ethnicity.

Both white and non-white respondents preferred to seek help from their peers than students in higher years (Chi square = 10.575, P = 0.0012) and (Chi square = 8.531, P = 0.0035) respectively.
The majority of both white (n=26) and non-white (n=30) respondents felt supported by (81% and 70% respectively) and able to seek help from (89% and 80%), their peers. More white students felt supported by their peers (Chi square = 0.861, P = 0.3533) and able to seek help from them (Chi square = 0.739, P = 0.3899); however no significant differences were observed. At the same time, similar proportions of white (46%) and non-white (43%) respondents felt able to seek help from students in higher years.

Both white and non-white respondents in this study were more likely to seek help from their peers than ask students in higher years and the differences observed were significant, (Chi square = 10.575, P = 0.0012) and (Chi square = 8.531, P = 0.0035) respectively, (Table 3.9). Thus a sense of community appeared to have developed within peer groups as opposed to across peer groups.

Meanwhile more non-white respondents felt uneasy exposing gaps in their knowledge to their peers (40%) compared to their white counterparts (27%) and at the same time fewer non-white (27%) than white (44%) respondents felt encouraged by lecturers to ask questions, but the differences observed between ethnicities were not significant, (Chi square = 1.063, P = 0.3026) and (Chi square = 2.304, P = 0.129) respectively.

3.5.3 What is a mentor?

Respondents to both mentee and mentor questionnaires, were asked to describe what they understood by the term mentor and what characteristics or skills make a good mentor. Content analysis was undertaken to analyse the answers
which permitted a quantitative analysis of this qualitative data. See Table 2.1 in Section 2.4.7.3 for a more detailed explanation of content analysis.

Similar themes were identified, by both mentees and mentors, from the data describing the term mentor: someone to go to for support, someone with experience, someone in a higher academic year and someone to look up to. The same key themes were identified, by both mentees and mentors, describing the characteristics and skills of a mentor: good communication skills, friendly, empathetic, helpful, knowledgeable, organised and confident.

Tables 3.10 and 3.11 illustrate the number of times each theme was mentioned.

**Table 3-10 Themes identified from respondents' understanding of the term mentor.**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of mentees who described the theme (n=62)</th>
<th>Number of mentors who described the theme (n=34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Someone to go to for support</td>
<td>49 (79.0%)</td>
<td>32 (94.1%)</td>
</tr>
<tr>
<td>Someone with experience</td>
<td>12 (19.4%)</td>
<td>7 (20.6%)</td>
</tr>
<tr>
<td>Someone in a higher academic year</td>
<td>4 (6.5%)</td>
<td>2 (5.9%)</td>
</tr>
<tr>
<td>Someone to look up to</td>
<td>2 (3.2%)</td>
<td>2 (5.9%)</td>
</tr>
<tr>
<td>A role model</td>
<td>1 (1.6%)</td>
<td></td>
</tr>
<tr>
<td>Someone who is easier to talk to than a lecturer</td>
<td></td>
<td>3 (8.8%)</td>
</tr>
</tbody>
</table>
The majority of respondents, 79% mentees (n=62) and 94% mentors (n=34), stated that mentors should be someone that they could turn to for support. The literature confirms this finding and described a mentor as someone who offered personal support and encouragement to the mentee, focused on the individual needs of the mentee to support them at a time of transition in their life and helped them manage their own learning. 275-279

**Table 3-11 Themes identified about characteristics and skills that make a good mentor**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of mentees who described the theme (n=62)</th>
<th>Number of mentors who described the theme (n=34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good communication skills</td>
<td>30 (48.4%)</td>
<td>20 (58.8%)</td>
</tr>
<tr>
<td>Friendly</td>
<td>28 (45.2%)</td>
<td>14 (41.1%)</td>
</tr>
<tr>
<td>Empathetic</td>
<td>22 (35.5%)</td>
<td>7 (20.6%)</td>
</tr>
<tr>
<td>Helpful</td>
<td>18 (29.0%)</td>
<td>9 (26.5%)</td>
</tr>
<tr>
<td>Knowledgeable</td>
<td>10 (16.1%)</td>
<td>5 (14.7%)</td>
</tr>
<tr>
<td>Organised</td>
<td>8 (12.9%)</td>
<td>2 (5.9%)</td>
</tr>
<tr>
<td>Confident</td>
<td>8 (12.9%)</td>
<td>5 (14.7%)</td>
</tr>
</tbody>
</table>

Respondents identified seven themes to describe the characteristics and skills a mentor should display. The two most prevalent themes mentioned by both mentees and mentors were good communication skills (48% and 59% respectively) and being friendly (45% and 41% respectively). The literature states that a mentor is a more experienced individual who shared their experiences, knowledge and understanding with their mentees. 275-279 The author believes
that having good communication skills is likely to contribute to a mentor’s ability
to share their experiences and knowledge.

Similar findings were determined in Phase 1 of this study when respondents
discussed student support systems available at UOP. Respondents in Phase 1, see
Section 2.5.7, stated that they would be more likely to access support systems
that were “clear and easy to understand” and individuals there were “friendly
and happy to help”. It appears that the social integration with the support
available was equally as important as the academic integration. Students in both
Phase 1 and Phase 2 of this study preferred support which was empathetic to
their needs, where the support was communicated well and the people
providing the support were friendly. Students perceived the mentoring role in
Phase 2 in a similar way to the support systems available at UOP in Phase 1.

3.5.4 Contact with mentor and mentees

Mentees and mentors were asked if they had made contact with their allocated
mentors and mentees respectively. The level of contact with each is illustrated in
Table 3.12.

<table>
<thead>
<tr>
<th>Contact with mentor or mentee</th>
<th>Number of mentees (n=60)</th>
<th>Number of mentors (n=34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>28 (46.7%)</td>
<td>32 (94.1%)</td>
</tr>
<tr>
<td>No</td>
<td>32 (53.3%)</td>
<td>2 (5.9%)</td>
</tr>
</tbody>
</table>

N.B. Two mentees did not answer this question.
More mentors reported meeting with their mentees compared to the number of mentees who met with their mentors and the difference was significant (Chi square = 21.165, P < 0.001).

There was a clear discrepancy between the two and it could be that the mentees perceived contact as face-to-face and the mentors perceived it as either face-to-face or via an electronic media e.g. email or Facebook. It should also be noted that each mentor was allocated up to three mentees and whilst they may not have had direct contact with all three of their mentees they could have been in contact with one or two of their mentees and hence responded yes to this question when in fact there were some mentees that they did not have any contact with.

The number of times mentors and mentees had contact also varied considerably and Table 3.13 illustrates the number of times respondents reported contact or meetings with their mentors/mentees.
Table 3-13 Number of times mentors and mentees had contact with their prospective mentees and mentors

<table>
<thead>
<tr>
<th>Number of times contact was made</th>
<th>Number of mentees who had contact with their mentor (n=28)</th>
<th>Number of mentors who had contact with their mentee (n=32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12 (42.9%)</td>
<td>4 (12.5%)</td>
</tr>
<tr>
<td>2</td>
<td>7 (25.0%)</td>
<td>9 (28.1%)</td>
</tr>
<tr>
<td>3</td>
<td>2 (7.1%)</td>
<td>4 (12.5%)</td>
</tr>
<tr>
<td>4</td>
<td>3 (10.7%)</td>
<td>2 (6.3%)</td>
</tr>
<tr>
<td>5</td>
<td>2 (7.1%)</td>
<td>3 (9.4%)</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>1 (3.1%)</td>
</tr>
<tr>
<td>10</td>
<td>1 (3.6%)</td>
<td>1 (3.1%)</td>
</tr>
<tr>
<td>Many (no. not stated)</td>
<td>1 (3.6%)</td>
<td>2 (6.3%)</td>
</tr>
<tr>
<td>Weekly (no. not stated)</td>
<td></td>
<td>1 (3.1%)</td>
</tr>
<tr>
<td>Throughout the year (no. not stated)</td>
<td></td>
<td>2 (6.3%)</td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
<td>3 (9.4%)</td>
</tr>
</tbody>
</table>

Almost half (43%) of mentee respondents who had contact with mentors (n=28), reported only one meeting. Only two of these mentee respondents (n=12), described their relationship as helpful; the remaining ten described it as limited or non-existent due to the lack of contact. Meanwhile those mentee respondents who had more contact with their mentor, appeared to develop a better relationship with them and described it as friendly, helpful and good. Respondents in this study described a good mentor as someone who was friendly and helpful, see Table 3.11, and when mentees and mentors had an
opportunity to meet more than once they appeared to develop such a relationship. Furthermore, four different students who met with their mentors on five or more occasions made the following statements:

“Helpful and encouraging about the MPharm course.” (5 meetings)

“Helped with lab reports.” (5 meetings)

“She was very nice, we got on well and she always made sure I was coping with exams.” (10 meetings)

“She has become more of a friend than a mentor. I talk to her generally as well as when I need help and meet up with her for general chats to catch up” (Many)

Mentors’ relationships with their mentees varied considerably, and similar to those of the mentees, relationships appeared to depend upon the number of times they had met with their mentees. Those who met on fewer than three occasions described their relationships as limited, distant or quite formal. Meanwhile mentors who met with their mentees on three of four occasions throughout the year described the relationship as good but they did not always meet up with all of their mentors. Meanwhile, five different mentors who reported regular contact with their mentees, i.e. five or more occasions, described their relationships as very good and were far more descriptive and some of their comments are listed below:
“I helped my mentees as much as possible and had a friendly relationship.” (5 meetings)

“We formed a good relationship, it was open, where they were able to ask questions.” (Throughout the year)

“We were friends, we supported each other academically or with any queries.” (7 meetings)

“A strong friendship, advice given in both directions.” (At least weekly)

“I think it was a good relationship. I gave them advice on how I studied when I struggled and sent them resources. I also gave them advice.” (Throughout the year)

The initial introduction of the UOP SMP required mentors to make the initial contact with their mentees during the first personal tutorial of the academic year. Following on from this initial meeting, Stage 1 mentees were expected to contact their mentors if and when they needed help. At the same time mentors were encouraged to drop-in to the Stage 1 personal tutorials throughout the academic year, provided their academic timetable was free, and personal tutors were asked to give the mentors and mentees about 15-20 minutes to discuss any issues or concerns between them.

This arrangement worked for some mentoring relationships, as seen from the positive comments already listed. However, the impromptu arrangements
appeared to hinder other mentoring relationships, and comments from eleven different mentors included:

“Almost non-existent as their personal tutor did not let me give out my email to them. I spoke to them if I saw them in the cafe” (Number of meetings not disclosed)

“Contacted me once with a question, they know I am there if they need any more help, but I don’t want to force them if they are ok.” (2 meetings)

“They didn’t reply to my emails.” (No meetings)

“Our relationship was limited, I emailed them twice, but they didn’t need me.” (No meetings just emailed them twice)

“I was looking forward to the role but my mentees didn’t want to meet or get help.” (1 meeting)

Mentors in these instances either had limited access to their mentees in the personal tutorials or they relied heavily upon their mentees making contact if they needed the support. If mentees did not make contact, or respond to mentors’ emails, the mentors appeared to accept that their mentees did not need help and did not try alternative methods, such as suggesting they meet for a chat over coffee.
Phase 1 of this research study determined that help-seeking behaviours of individual students varied widely. Students with an interest in the subject or a personal goal to gain as much knowledge as possible, were more likely to demonstrate help-seeking behaviours. In contrast, students who felt under pressure to perform, or did not want to expose their knowledge gaps for fear of looking foolish or weak, were more likely to avoid seeking help. Similar findings were determined in the literature.\textsuperscript{245-250, 254} It could be that those mentees reluctant to expose or admit to gaps in their knowledge were less inclined to seek help from their mentors. Furthermore, it could be that mentees were not completely aware of the workload expectations of the MPharm and from the lecturers, thus were unsure of the support they realistically needed in order to help with their transition on to the course and into university.

### 3.5.5 Benefits of having or being a mentor

Mentee respondents were asked if they felt that having a higher year mentor had been of benefit to them. At the same time all mentors were asked if they felt that they had benefitted from undertaking the mentoring role. Table 3.14 shows the proportion of students who found the mentor relationship beneficial.

**Table 3-14 Number of students who felt having a mentor, or being a mentor, was beneficial**

<table>
<thead>
<tr>
<th>Having or being a mentor was beneficial</th>
<th>Number of mentees (n=60)</th>
<th>Number of mentors (n=34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>13 (21.7%)</td>
<td>32 (94.1%)</td>
</tr>
<tr>
<td>No</td>
<td>47 (78.3%)</td>
<td>2 (5.9%)</td>
</tr>
</tbody>
</table>

N.B. Two mentees do not answer this question
More mentors said that they benefitted from the mentoring relationship and the difference was significant (Chi square = 45.6497, P = 0.00).

Students who reported no contact with their mentor, or met them on fewer than three occasions, also felt that they had not benefitted from having a mentor (85%, n=60). Reasons mentioned were students felt they didn’t need a mentor, mentors did not put in any effort and the mentoring programme lacked structure. Those students who had met on three or more occasions with their mentors felt that having a mentor was beneficial and examples of statements four different students are listed below:

“Helped me to learn and understand things that I could not during the lecture.”

“Helped me settle into university as moving away from home is quite scary.”

“I doubted myself a lot when I started this course but she was encouraging.”

“Nice to have someone else to talk to.”

In contrast the majority of the mentors felt that they had benefitted from undertaking the mentoring role (94%, n=32) and felt that this was an additional opportunity to help them prepare for their future role in pharmacy (71%, n=32). The most prevalent of benefits cited by mentors was the development of their communication skills (56%, n=32).

Table 3.15 illustrates the perceived impact of the mentoring role on mentors’ skills development.
Table 3-15 perceived impact of the mentoring role on mentors’

skills development

<table>
<thead>
<tr>
<th>Skill developed from mentoring role</th>
<th>Number of mentors who benefitted (n=30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation for role in pharmacy</td>
<td>23 (76.7%)</td>
</tr>
<tr>
<td>Communication</td>
<td>18 (60.0%)</td>
</tr>
<tr>
<td>Organisation</td>
<td>7 (23.3%)</td>
</tr>
<tr>
<td>Looked good on Curriculum Vitae</td>
<td>5 (16.7%)</td>
</tr>
<tr>
<td>Helped reflect on own learning</td>
<td>5 (16.7%)</td>
</tr>
<tr>
<td>Improved advice giving</td>
<td>5 (16.7%)</td>
</tr>
<tr>
<td>Improved problem solving</td>
<td>4 (13.3%)</td>
</tr>
<tr>
<td>Leadership</td>
<td>4 (13.3%)</td>
</tr>
<tr>
<td>Confidence</td>
<td>3 (10.0%)</td>
</tr>
<tr>
<td>Empathy</td>
<td>3 (10.0%)</td>
</tr>
</tbody>
</table>

Mentees and mentors were asked if they felt this opportunity had a positive impact on their exam performance at the end of Stages 1 and 2 respectively.

Table 3.16 illustrates the perceived impact of the mentoring role on students’ exam performances.
Table 3-16 Perceived impact of mentoring on mentees’ and mentors’ exam performances

<table>
<thead>
<tr>
<th>Did mentoring role improve exam performance?</th>
<th>Number of mentees (n=60)</th>
<th>Number of mentors (n=31)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>4 (6.7%)</td>
<td>10 (32.2%)</td>
</tr>
<tr>
<td>No</td>
<td>44 (73.3%)</td>
<td>14 (45.2%)</td>
</tr>
<tr>
<td>Don’t know</td>
<td>12 (20.0%)</td>
<td>7 (22.6%)</td>
</tr>
</tbody>
</table>

N.B. Three mentors did not answer this question

Only 7% of mentees and 32% mentors felt the SMP had a positive impact on their exam performance and a significant difference was observed (Chi-square = 10.28, P = 0.001). However there were numerous benefits cited by mentors (Table 3.15) on the skills they developed as a result of the role. Being a mentor is a very practical as well as an academic role and involves both social and academic integration. The mentoring role clearly offers MPharm students additional opportunities to develop essential transferable skills despite only having a perceived positive impact on exam performance for only a third of mentors in this study.

3.5.6 Settling in to university and the MPharm

Very few mentee respondents (n=62) thought having a mentor helped them to settle into university (8%) or on to the MPharm course (10%); however the few students, who agreed their mentors helped them settle in, had each met with their mentors on more than two occasions.
This study confirmed that in order for a relationship and trust to develop between the mentor and mentee, there was a need for several meetings or interactions to take place before this could occur. Mentees who benefitted most from having a mentor reported having more contact with their mentors than those mentees who benefited least. The SMP at Portsmouth required mentors to make the initial contact with their mentees during the first tutorial at the beginning of the academic year. Further meetings were then student-led and relied upon mentees contacting their mentors using electronic media e.g. Emails, text or Facebook, when they felt they needed any support or guidance. It could be that mentees did not feel able or confident to make the initial contact with their higher year mentors. Tables 3.7 to 3.9 in this study show data which confirm that students in this study were more confident turning to their peers in the same academic year rather than students in a higher year. Thus a more formal, structured or timetabled student mentoring programme could overcome this barrier and encourage help-seeking behaviours from the mentees.

The majority of students in this study agreed that a more structured and timetabled mentoring programme was more likely to help students settle into university (72% n=62 mentees and 94% n=34 mentors). They also agreed a more structured programme would help students settle on to the MPharm 77% mentees (n=60) and 94% mentors (n=34). Respondents stated that a more structured approach would have greater impact because it would encourage better attendance and mentees would be able to meet with their mentors at more regular intervals. Having the mentoring sessions timetabled on what students already perceive to be, a busy schedule could increase the number of
interactions between mentors and mentees. Furthermore, the increased contact between mentors and mentees could help to develop Stage 1 students’ help-seeking behaviours early on in the MPharm course, thus overcoming some of the barriers identified in Phase 1 of this study. A structured approach could help to develop a positive impact upon mentees’ perceptions of the mentoring programme and their transition into university life and on to the MPharm.
3.6 Phase 2 Results and Discussion – Focus Groups

The data obtained in this phase of the study showed a number of concepts within themes. Participants’ perception of the SMP was central in each focus group and two main themes emerged: the characteristics of the mentor and the support provision within the SMP. The development of the mentor was discussed in detail in focus groups with mentors and themes which emerged were the professional and personal development of the mentors. Themes were organised into categories to facilitate understanding of how they related to each other. The framework of concepts, themes and categories which emerged from the data are shown in Table 3.16.

Table 3-17 Categories, themes and concepts emerging from the data

<table>
<thead>
<tr>
<th>Category</th>
<th>Theme</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Student Mentoring Programme (SMP)</td>
<td>Characteristics of the mentor</td>
<td>Leader</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Role Model</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resourceful</td>
</tr>
<tr>
<td></td>
<td>Support</td>
<td>Experience on the course</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Friend/Peer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Barriers</td>
</tr>
<tr>
<td>Development of the Mentor</td>
<td>Professional</td>
<td>Transferable skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Employability</td>
</tr>
<tr>
<td></td>
<td>Personal</td>
<td>Gaining Knowledge</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gaining confidence</td>
</tr>
</tbody>
</table>
3.6.1 Phase 2 qualitative findings

Similar to the qualitative findings discussed in Section 2.6.2 to 2.6.16, Sections 3.6.2 to 3.6.19 include a narrative explaining and discussing the qualitative findings of Phase 2. The narrative is divided into categories and themes to make the explanation coherent. All concepts are discussed together within each theme since, as illustrated in the theoretical model, they are closely interrelated and separating discussion of the concepts could de-contextualise the findings. Study participants’ quotes are used to illustrate the narrative and provide examples of typical, atypical and interesting points of view, demonstrating the internal validity of the interpretation provided. 218 The quotations were selected to illustrate a consensus view, a polarised view or a point of particular interest by virtue of a link with another theme or concept. Each quote is listed by participant reference. This narrative also considers the findings in their relation with relevant literature on teaching and learning development of students.

3.6.2 Category 1 – The student Mentoring Programme (SMP)

All participants in this study had participated in the SMP, either as a mentor or a mentee and two themes were identified: the characteristics of the mentor and the support provision within the SMP. Table 3.17 shows the themes and their associated concepts within category 1.
### Table 3-18 Themes and concepts in the category “The Student Mentoring Programme”.

<table>
<thead>
<tr>
<th>Category</th>
<th>Theme</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Student Mentoring Programme (SMP)</td>
<td>Characteristics of the mentor</td>
<td>Leader</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Role Model</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Attributes</td>
</tr>
<tr>
<td></td>
<td>Support</td>
<td>Experience of the course</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Friend/Peer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Barriers</td>
</tr>
</tbody>
</table>

#### 3.6.3 Theme 1: Characteristics of the mentor

All the participants in this study agreed on the importance of the mentor possessing certain characteristics in order for the SMP to run as effectively as possible. This theme is a key finding of this study and three concepts appeared fundamental in relation to this issue: leader, role model and resourcefulness.
3.6.4 Discussion of theme 1 findings

Participants in this study described a good mentor as someone students could turn to for help. Mentors were described as either leaders or role models who set an example and helped new students to settle on to the MPharm course and into university:

... it’s like a point of guidance, you’re like a role model or guide to younger students or new students, and what questions they may have or any problems they may have you can offer your experiences that you’ve already gone through, you play that informal role to them.

(14:mr)

[someone] to provide support to the first years... show them that you know you can get through first year it’s not as scary as it seems at the start of the year... just to be there for them and just be a friend that they can email if they’re struggling... and their friends don’t know ... that they could feel comfortable enough to email us and you know ask for our help, just knowing that you know they can always get an answer from someone.

(8:me)

... like a leader so that you can give them the guidance. So you have to have gone through it yourself to be able to guide them.

(20:mr)
I see a mentor as someone who you look up to, so like a leader, someone that can lead you and guide you as well.

(12:mr)

A friendly face to someone, so if someone is struggling, if someone who can be a friend that’s not like a teacher role, and can be seen as a friend and someone who’s gone through the same experience but isn’t superior to you in any way and someone just kind of you can go to if you’re stuck for any reason kind of academic or otherwise

(6:me)

... sort of like a role model...

(28:mr)

I don’t think it’s about teaching particularly just support like a supportive role

(5:me)

Mentors have been described in the literature as role models and people who guide their mentees along the continuum of their learning journey. Furthermore, mentors have been reported to observe and give individual feedback to their mentees to help them identify and develop their strengths and weaknesses. Peer-mentors used in higher education, for developmental processes, need to be suitably experienced, have recently travelled the path of the mentees and have the ability to guide and support their mentees on their educational journey. Mentors should facilitate learning and encourage their
mentees to work it out for themselves as opposed to teach or re-teach new ideas and topics. Participants in this study recognised the facilitation role of the mentor:

A mentor... to help them and like... facilitate learning without actually teaching the work... basically not teaching... try and help them work things out together as a group and like discuss...

(3:me)

Someone that helps facilitate learning... not a teacher... but someone there to help guide a first year with their learning or with adapting to university life

(2:me)

A cross-sectional study of mentoring for twenty-two second year medical students in Australia had similar findings. They recognised that the mentor was a good role model for first year students, facilitating their personal and professional development.

One mentor, in this study, clearly understood and explained the importance of their role to facilitate and not just simply give her mentees the answer:

I was really trying to understand the fine balance between guiding someone and not helping someone to the extent that you’re doing the work for them... when I started with my mentees they did a lab report that we did last year and you know sometimes just reading their work and I’m like “Oh my God this is so bad” and I just feel like doing it for them but it’s not the correct way to do it.

(15:mr)
A mentor need not have all the answers; rather, they need to have the ability to facilitate student learning and encourage their mentees to determine the solutions for themselves. The importance is getting the balance right and not helping the mentees too much. Mentors must resist the temptation to simply provide the answers resulting in heavily supported mentees and use their skills to facilitate and signpost their mentees to develop them into self-directed learners.  

Participants were also asked to describe the characteristics expected of a good mentor and stated a good mentor should be someone who possessed attributes such as empathy, good communication skills, knowledge of the MPharm course, motivated to support other students and being organised:

<table>
<thead>
<tr>
<th>Approachable, it’s not good if they [mentees] feel like they can’t approach you.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(16:mr)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>...like a coach... really trying to get the best out of that person... listening to them, helping them to find out what their strengths and weaknesses are... help them to be the best they can be.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(15:mr)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>...they have the knowledge and training and expertise to help you in terms of your own growth and development</th>
</tr>
</thead>
<tbody>
<tr>
<td>(24:mr)</td>
</tr>
</tbody>
</table>
Definitely confidence and knowing that stuff or having the confidence to relay information to somebody else. Because you could well be an extremely clever person but not have the confidence to be able to express that to somebody else, so having that initially is a good trait I would say... and approachable as well.

(13:mr)

...[good] leadership skills and a passion to support

(12:mr)

I think someone who is willing to give their support as well. You have to be willing. You can’t just sign up and say that’s the end of it.

(30:mr)

I think they have to be extremely patient and understanding and most importantly... actually have to want to do it... can’t just... can’t just do it for the CV, like slap it on your CV...

(1:me)

I think you have to be sort of like a good problem solver, sometimes your mentee will bring like things they are going through to you and they may just not understand it in their head and it’s always good to get to the root of the problem so that then you can find the best solution.

(15:mr)
Similar findings were determined from the quantitative study of Phase 2, see Tables 3.10 and 3.11. The list of characteristics identified by participants in this study were very similar to the professional attributes required from pre-registration pharmacist trainees. Health Education England published the professional attributes framework for pre-registration pharmacist trainees in 2017, in response to the restructure of their pre-registration pharmacist recruitment processes. Nine professional attributes are expected from pre-registration pharmacist trainees (see Appendix 11). It appeared that MPharm students in this study perceived that the mentoring role requires similar professional attributes.

3.6.5 Summary of Theme 1 findings

This section has focused on the characteristics of the mentor from both mentees’ and mentors’ perspectives. Early conceptualisations of mentoring relationships focused on the psychosocial support provided by the mentor to the mentee and the career development opportunities and provision for the mentee. Later conceptualisations of the mentoring relationship focused more on the leadership and role model function mentors could play; whereby mentors’ behaviours were carefully observed and imitated by their mentees. Participants in this study perceived the mentor as a leader and role model.
Furthermore, professional attributes were key concepts raised by participants and perceived as important characteristics for a mentor.

### 3.6.6 Theme 2 – Support

Support was very important in the discussions that took place with the participants in this research. All participants contributed to the discussions and realised the importance of the provision of support with the transition into university and on to the MPharm degree course. Key concepts within this theme were mentors’ previous experiences of the MPharm degree course, the relationship between the mentees and their mentors and some of the barriers identified.

### 3.6.7 Discussion of theme 2 findings

Participants in this study felt that an important role of mentors was to offer support to their mentees. The literature defined the mentor as someone who offered support and encouragement to a mentee. The mentor focused on the needs of the mentee at a time of transition in their life and helped them to manage their learning and the change in their circumstances. 275-279 One mentor described the importance of emotional support as well as the academic support that mentors can provide their mentees:

> We used to talk... giving advice and emotional support as well, just [being] there every time. [We were both] actually in the choir as well so it was a coincidence... helped out with some coursework... just supporting [and] helping, telling... this lecturer is like that and stuff like that

(12:mr)

223
The mentors in this study shared the reasons they volunteered for the role and support and help with transition into university and on to the MPharm course were frequently mentioned. They reflected upon their own previous experience of the MPharm course and thought it would help their mentees to settle in. They could be a friendly and approachable peer that Stage 1 students could turn to for support:

*It really impressed on me that it’s something that you should do because I just like to help someone else to just come to university and... because they had no idea what was happening and you could just be a friendly face. Help them get support and I like to actually help them with everything so that is why I became a mentor.*

(21:mr)

*I chose to be a mentor because of that feeling of giving something back.*

(16:mr)

*[It was] my first time out of my country, so I was really scared I was terrified. I was hearing funny news about pharmacy being really hard, really challenging, you’re not going to make it, and you’re going to fail. I was so scared, I was like God! Then I went to class, it was really difficult for me to meet up with people. I don’t really get to talk to people... I’m like an introvert. If people don’t talk to me I wouldn’t talk I just kept my mouth shut. So getting to class at first, for the first week there was nobody for me to talk to, nobody, I didn’t talk to anyone, it was partly my fault too. I was just scared I was like*
I don’t know how I am going to survive here. So I was thinking that if I had a mentor if I had somebody that was going to guide me, you know, it would have made it easier for me settle here. That’s just why I became a mentor to make it easier for other people to settle in, not have a bad experience because I remember my first Freshers’ Fayre I was just crying, I cried for four hours it was just terrible. Yeah (11:mr)

I think for me it’s because when I started in Portsmouth University me… I did pharmacology before I transferred to pharmacy… I was kind of thrown in at the deep end… kind of didn’t know where to go and it was through that that I decided to help others not to have to go through that struggle... it gives someone like the first steps so that they can walk on their own. (20:mr)

I made a lot of mistakes in my first year, so just to make sure that someone else doesn’t go through the same route I did last year. (22:mr)

I like helping people... and I made a lot of mistakes in first year... I can help them improve as well. (26:mr)

it’s a chance to meet new people and make more friends and give them advice because I didn’t really do as much revision as I should have done last year so, to help them out. (25:mr)
Participants understood the mentor role as one which gave mentors an opportunity to pass on their own personal and recent experience of the MPharm course. Mentoring was understood to be a role that provided mutual support and encouragement for both the mentee and mentor. A core attribute of mentoring was the reciprocal relationship between the mentor and mentee where both parties contributed to and benefited from the relationship, as opposed to a one-way exchange of information. Mentors in this study chose to undertake the role because they wanted to help new students with their transition on to the course. Some mentors undertook the role by their own personal desire to help others succeed, i.e. focused on others. Statements that support this included:

- *I chose to be a mentor because of that feeling of giving something back.*
  (16:mr)

- *I like helping people.*
  (24:mr)

- *I learnt a lot in first year that I never expected to need to know coming up from school. So I just felt it would be a good idea to pass that on to somebody else as well.*
  (23:mr)
At the same time, other mentors undertook the role for their own fulfilment to see the impact their support had upon their mentees or for their own personal benefit, i.e. self-focused. Statements that support this included:

I think it definitely needs to be considered. You knew you have a CV and it obviously helps with it. So I think that was a lot peoples driving points [to be a mentor]

(30:mr)

I got into it to be able to improve my social skills because I realised that it is very important in the field of the [pharmacy] profession that we have decided to get into. Being able to communicate with people on a regular basis, making them feel comfortable, make them, you know, feel that they can trust you with certain information is very very important and I think it is a skill worth developing and yeah I thought... well it’s part of the reason why I should like get into this [being a mentor]

(19:mr)

Meanwhile, some mentors displayed both other-focused and self-focused orientations since they wanted to help their mentees, got pleasure from seeing them do well and/or wanted to gain favourably from the opportunity:

I quite like the idea of helping people out and helping them learn so to try to help those people succeed maybe and see them like, it’s always nice to see happy people so if they succeed they’re probably happy.

(10:mr)
I did it for my own benefit and for other people’s as well... I knew I would gain confidence and gain skills in speaking to people and also broaden my knowledge on what I knew by speaking to other people about it. So as much as it was to help other people, coz that is what I would like to do, it is also to help me and possibly to have something to put on a CV.

These findings are similar to those of Allen et al, who undertook a qualitative inquiry of mentors’ perspectives of their role as a mentor. Semi-structured interviews were performed with twenty seven mentors and a multistep content analysis procedure was carried out to analyse the qualitative data. Allen et al determined thirteen themes in total and the two key themes identified were other-focused and self-focused.

This research study, and that of Allen et al, identified that other-focused mentors had a desire to help their mentees and to pass on information that they had previously gained. Meanwhile, self-focused mentors had more of a desire to develop themselves or to feel self-gratification for a doing a good job and seeing their mentees succeed. Thus, mentoring appeared to be motivated by factors related to improving the experiences and well-being of others as well as by factors related to improving the well-being of self, i.e. that of the mentor. Furthermore, mentoring also provided mentors with a sense of intrinsic satisfaction.
Participants in this study understood the mentor role as an opportunity to pass on previous experiences to the mentees. In addition to recognising the benefits of the role from an academic perspective, participants also highlighted the importance of the relationship between the mentors and mentees:

...I also think it is important to establish the fact that a mentor is meant to be a friend.... A person should be able to freely communicate with you and share experiences with you...for me the mentor scheme is not just about helping people with their academic work it goes beyond the academic field to social aspects of things...

(19:mr)

...I would share my experiences with them. So I think we’re friends ... we’re friends with quite a professional relationship as well.

(15:mr)

I have a friendly relationship with all of the ones that have kept in contact. They’ll ask questions and query me about things, again it’s just coming back to being a friendly and calming relationship, without directly giving them the answers, helping them to learn in their own way.

(24:mr)

It appears that participants in this study perceived the mentoring role as a less formal role compared to that experienced with a tutor or lecturer. Mentors were perceived as a friend or a peer as opposed to someone more senior or with authority. Both mentors and mentees described the mentoring role in this way:

I also think it is important to establish the fact that a mentor is meant to be a friend

(19:mr)
You have to be a friend

(20:mr)

Someone who is reached easily and able to be friendly...

(5:me)

...a friendly face to someone so if someone is struggling, someone who can be a friend that’s not like a teacher role and you can be seen as a friend and someone who has gone through the same experience

(6:me)

As a friend to get [new students] used to university life... literally just a friend in second year.

(7:me)

You’d rather someone who is maybe on your wavelength... not exactly the same age or anything but someone who can speak to you like on a friendlier basis?

(1:me)

Participants in this study also identified some of the barriers which compromised the mentor-mentee relationship and the smooth operation of the student mentoring programme. One participant in particular was concerned about the barriers he perceived with cross gender relationships:
...I had three girls, all three mentees were girls. They might not feel comfortable to approach a guy like me for example. I don’t think that they were actually that confident to approach someone like me...Because I know a lot of girls, a lot of guys might not be comfortable talking to the opposite sex... girls sometimes feel more comfortable talking to girls and guys might feel more comfortable talking to guys...

Previous early literature has alluded to concerns and barriers to initiating cross gender mentoring relationships compared to same gender relationships.\textsuperscript{309, 310} However, more recent literature contradicted this finding and concluded that associations between gender match and relationship processes were inconclusive.\textsuperscript{311} The author believes that this is less of a concern in the twenty-first century and many organisations and initiatives have successful cross-gender mentoring relationships.

The lack of structure and availability of mentors was a concern for a number of participants which compromised the SMP and mentor-mentee relationships. The SMP was launched as a student-led programme and required mentors to access their mentees via the Stage 1 tutorial programme and for mentees to make direct contact with the mentors when they felt they needed support or help with their studies or transition. It was apparent that these arrangements were having a negative impact upon the SMP. Mentees were particularly frustrated about the lack of direct contact with, and from, their mentors:
I didn’t really see my mentor often so it didn’t really make a massive difference to my first year really, I met up with him once [after the initial meeting in the tutorial session] but I was the only one out of our group that turned up, so we didn’t really talk about much and yeah it just didn’t really make a massive impact

(4:me)

I didn’t meet up with my mentor from the first year, she came in [to the tutorial] the first time she introduced herself erm then she took everyone’s email addresses but didn’t actually email any of us. So we didn’t have any way of contacting her at all so that was where it ended

(5:me)

I didn’t see my mentor last year, I literally saw them for the introductory thing where they gave us contact details and then we never saw them again and they never contacted us. I felt like I didn’t really want to contact them, like they didn’t really want me to contact them. So I didn’t get anything out of it basically

(6:me)

In these particular cases, mentors met with their mentees at the first timetabled tutorial session for Stage 1 and exchanged contact details and yet no further contact appeared to take place. These mentees appeared to rely upon the mentor making the initial contact and were reluctant to take the initiative and seek help from these higher year students. The SMP was developed and
launched as a tool for mentees to contact their mentors when they needed help, however few mentees were contacting their mentors after their initial meeting during the personal tutorial. The quantitative analysis of Phase 2 of this PhD study determined similar findings; mentees were more comfortable approaching their peers for help with their studies, rather than students in higher years, see Tables 3.7 to 3.9.

The first impression displayed by a mentor had a negative impact on the relationship experienced by the following mentee:

```
My year two mentor she um didn’t really um help, or really we only met up once and it was just an introduction thing, there was no like you know support there... she gave off the feeling that she didn’t want to be there, she didn’t want to do it, she was forced into doing it so we kind of agreed amongst ourselves that she wasn’t, she wouldn’t, want us to contact her so we didn’t want to bother her, so that’s why you know, we didn’t have any contact at all.
(7:me)
```

Similar to the findings from Phase 1, where first impressions clearly impacted upon the relationships between lecturers and students, this negative encounter had a detrimental impact upon the relationship between this mentee and their mentor. Furthermore, this mentee, together with her peers in the same tutorial group, concluded that their mentor was not interested in offering them the support that the SMP was intended to offer and so as a collective did not engage with the process.

Mentors had similar opinions about the first time they met with their mentees:
The initial [meeting] is very important because it’s like the foundation; if you don’t get on initially then nothing else is going to follow from that.

(29:mr)

I think the most important aspect of the scheme is the first meeting really. It has to be good I mean however it is organised it has to be really good…the mentor and the mentees, you know, build that relationship once that relationship is established then I think that it will be more productive over the course of the year. (Others agree) so I think that is what needs a bit of work.

(19:mr)

Everything is built on that foundation, and if it’s a poor one it’s just going to fall.

(30:mr)

Another mentee had met their mentor at the first Stage 1 tutorial session and had made contact, via email, with a question about text books:

During one of our tutor groups with our tutor, I think we had three mentors that came in they introduced themselves, said “Hi” and then it was literally just five minutes…then they left and our tutor told us he was going to email us their emails in case we want to contact them. I did contact mine, just asking about books and everything cos I had no idea, and then I think he replied, and after that nothing like they didn’t try and, you know even, email us themselves telling us if you need any help if you want to meet up…so after that we didn’t hear from them all year, like I forgot I had a mentor basically. So I just you know, I didn’t really benefit [from]
anything, just [asked] that one question but I guess I could have really asked anyone, so I just wish you know, it would have been better.

(8:me)

Mentees were reluctant to make contact with their mentors and were relying upon their mentors to take the lead on this. Mentees were expecting the mentors to contact them to ask if they needed help.

Meanwhile mentors were experiencing similar opinions of their mentees:

I think the communication side of things aren’t going as well... when we actually make the effort to go and see them... they are not prepared to contact you to ask you for help. If you are there for them in a specific setting they will ask you but if you are not there and you only approach them through email, text message or Face Book they really are not prepared to make the effort, or that step... [It’s] the initial communication because once you are there, they are all for having help, but it’s the initial step into making the communication or making an arrangement [to meet] where as people don’t [communicate] but usually don’t reply to emails.

(13:mr)

It’s to an extent up to the mentee what they make of the mentoring process and for us as mentors there is only so much we can do so we are saying you can take the horse to the lake but you can’t make the horse drink the water.

(18:mr)

I have emailed them and they just haven’t responded, so....

(9:mr)
These mentors were expecting their mentees to take the initiative and if mentees did not respond to their emails or ask directly for help, the mentor-mentee relationship failed. Cull undertook a qualitative study, using structured interviews, to determine factors which create positive mentor-mentee relationships. One of the key factors that influenced the success of the relationship was the frequency of the meetings between mentors and mentees. In particular, the mentors in Cull’s study were able to determine if the process was working or not based on the relationship moving closer or becoming distant. If the mentors were continually chasing up the mentees or the mentees were avoiding to meet, then the relationship was unlikely to work. Similar findings have been determined in this research study with MPharm mentors and mentees and one mentor articulated it this way:

What we [mentors and mentees] get out of it is dependent on how much the mentees put into it. If they aren’t interested we [mentors and mentees] won’t get anything out of it.

(30:mr)

Face-to-face interactions were a more appropriate method for mentors and mentees to interact with each other. The reliance upon electronic media like Emails, texts and Facebook proved to be less effective when it came to asking for help or making arrangements to meet. This mentor explained his feelings about this very clearly:

If you can put a face to the name then it will be more easier to, you know, try and get in touch with, or you might even meet the person on the campus just like on a regular day and it becomes more
Face-to-face interaction was also an appropriate means for offering emotional support and helping students to develop confidence. 308 MPharm participants in this study benefitted from face-to-face mentoring sessions whilst the use of electronic media e.g. Emails, text or Facebook, failed to motivate most students to meet with their mentors. Further discussion about face-to-face sessions are discussed later in this section.

Other mentors felt that the lack of awareness and support, from the Stage 1 personal tutors, of SMP impacted negatively upon the process:

<table>
<thead>
<tr>
<th>It’s also the tutors responsibility as well because my tutor just like when we went to meet our mentees [for the first time], she was like “say hi” and then leave whereas some other people got the time to spend with their mentees so it’s all dependent on the sort of erm tutor you have as well.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(9:mr)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>From mine, and [another mentor’s] experience, our initial “meet” was completely dominated by our tutor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(30:mr)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>My [personal] tutor just literally sat there and was picking the questions they [the mentees] were asking us, so they literally going like this is the question what advice would you give them and I was thinking why don’t you let them ask the questions? ... I just think</th>
</tr>
</thead>
<tbody>
<tr>
<td>(18:mr)</td>
</tr>
</tbody>
</table>

informal and you can deal with a better relationship through that.  

(19:mr)
Meanwhile, some personal tutors appeared to understand the concept of the SMP, providing time within the tutorial session for mentors to get to know their mentees and some left the room:

*In our tutor group, the teacher [tutor] just left the room. I expected that they [would] want to know about what I’ve been through in first year….*

(31:mr)

*My one, the tutor, just left, she came and said “oh, these are the people; I’ll just leave you to it” and then she came back and ended it, that was it.*

(29:mr)

*It’s quite dependent on the actual [personal] tutor… a lot of people that have had the tutor leave the room have a better relationship with their mentees.*

(27:mr)

The quality of the limited interaction mentors had with their mentees was poor due to the presence of the personal tutors, and mentors felt that the SMP would benefit if academic staff were not in the room:

*Some tutors push their ideas and ideals onto people, we should have a session where it’s just us three mentors and our group and just let them ask us questions and if there is nothing to be said then fair enough then ask us individually if you want to because that’s more*
beneficial to them than it is to have a tutor there the whole time... I wouldn’t have the tutor there.

(18:mr)

If I was in their shoes [the mentees’] I would be a bit uncomfortable about the whole thing [if the personal tutor was present] but fortunately... he had a session [the tutorial] and after that he left the class for us to sort of interact with each other so we really had a very good first session and I was able to... have a very good conversation with my mentees and I think it was based on that first successful session that our relationship has grown.

(19:mr)

I think with regards to information, when we first met up with the mentees it wasn’t the same experience for every tutor group. Some lecturers stayed in the room so mentees didn’t feel as open with their concerns. I think if they [personal tutors] all receive the same information to leave the room that would be certainly better for the programme.

(24:mr)

Suggestions to further develop and improve the SMP included adding more structure to the sessions and to add them to the academic timetable:

Have timetabled sessions. So students would meet with their mentors [without personal tutors] once every three weeks... [have] two mentors to a group of about twenty [Stage 1] students

(10:mr)
Making it student led, instead of having lecturers involved. The problem with it at the moment is finding the time to do it [the mentoring] because it is not part of the course, it is not implemented into the timetable, so that is the main problem where communication and time comes in. So next year... make it part of the timetable.

(13:mr)

[but] not timetabled session with the tutors... just... students... so the mentors and mentees and no other academic staff around so that you have got as much time as you need to introduce yourselves.

(13:mr)

I think the whole mentoring scheme here isn’t very developed, so the whole meeting up with mentors and things wasn’t very, it wasn’t regimented last year at all so we didn’t feel that we could approach them because they didn’t necessarily know them. We weren’t introduced to them in a formal way, it was, we could meet up with them if we wanted to

(13:mr)

In addition to adding the mentoring sessions to the timetable, participants felt it was important that the content of the mentoring sessions were organised and relevant in order to maintain interest from the mentees:

Email [mentees] in advance and ask them if there’s anything they would like to cover, if there’s anything they are stuck on if there’s anything they want to talk about specifically and then... come up
with a plan, email them again now and say what is going to be
covered and I think that [would] encourage quite a few people that
weren’t necessarily going to turn up... because they realise it’s gonna
be beneficial.

(6:me)

I think one thing we spoke again was finding out from the lecturers
like what is coming up next for the first years. Like when they have
calculations, we already have calculations next. We knew what to
like tell them in our session

(12:mr)

A timetabled and structured approach to the SMP could improve the experiences
for both mentors and mentees. The feeling, from one mentor, was that mentees
did not fully appreciate what the mentor had to offer:

I don’t think they really know what we do and why we are there.
That’s the impression I got off of mine. It was kind of like when I’m
there they’ll ask me a question that they want to know but I don’t
think they knew they could ask me those before I told them.

(32:mr)

Furthermore, mentees may gain a deeper understand of the benefits which
could be gained from engaging with the programme. Similar findings were
discussed in Phase 1 of this research study, where engagement with support
networks was more likely if they were easily available, accessible, useful and
relevant. 252,253,254
Timetabled face-to-face mentoring sessions were more likely to help mentees gain a better understanding of the role of the mentor, giving a good impression of their mentors’ capabilities and mentors could explain how their mentees could benefit. The use of electronic media could still be used to arrange topics to discuss in sessions as discussed by mentee (6:me) above.

Finally, the allocation of mentors to mentees was raised by some of the mentors:

[mentees] have been allocated a mentor... maybe give an option of choosing their own mentor [but] a lot of people [may] feel shy to choose their own mentor. I think given [mentees] the option either... would you like to be allocated a mentor [or] would you like a choice to go meet some mentors and choose one?

(17:mr)

I expected my mentees to want me... So I expected them to want to be mentored. Some of them feel like you are in their space, they didn’t sign up to be mentored so they don’t really want you. But then I have another student who is not my mentee who wanted to be mentored so I ended up sort of like mentoring someone else who was not signed up to me as my mentee you get what I mean. So some of them don’t really want to be mentored and its fine so they shouldn’t really be signed up for it.

(29:mr)

There’s nothing worse than having to talk to someone who doesn’t really want to be there who seems like they have better things to do than talk to you.

(23:mr)
These mentors thought that mentees should be given a choice about having a mentor and should sign up to be mentored, since some mentees did not engage with the process. Furthermore, if they wanted a mentor they could choose their own mentor. However, the researcher believes that all Stage 1 MPharm students should be allocated a mentor initially. Findings from Phase 1 of this study indicated that students who needed the academic support due to poor performance, and workload management, were less likely to seek support (see Section 2.5.7). It could be that those students who avoid help-seeking could also avoid selecting a mentor, thus all Stage 1 MPharm students should be allocated a mentor which would include those students who prefer to avoid help-seeking behaviours.

3.6.8. Summary of Theme 2 findings

This section has focused on the support provision for mentees from mentors whilst at university which can have a significant impact on students’ transition into university. Mentors were either other-focused or self-focused and all participants realised the importance of the provision of support from a mentor to help mentees with their transition. Mentors were perceived as a peer or friend and someone that new students felt comfortable approaching for support with their transition into university and their studies on the MPharm.

Despite the positive experiences discussed between participants there were some barriers identified. The main concern was the lack of structure and organisation of the SMP; personal tutors did not fully understand the requirements of the SMP; and both mentors and mentees relied upon each other
to keep contact. Mentees may have been ill-equipped to take responsibility for their own learning as a result of their school education system, where teachers have been known to take on most of the responsibility for motivating their students. 80

Participants stated that they wanted sessions to be timetabled and planned to achieve the most benefit from the scheme. Cull expressed that it is essential that both mentors and mentees wanted to have the mentoring relationship in the first place. 312 A mentoring relationship was unlikely to develop and thrive if there was a lack of communication or follow up from either party. 312 There needed to be a connection or bond between the mentor and their mentees because if neither has gained anything out of the process then they would simply be going through the motion and the SMP could become a chore. Furthermore, an environment that permitted the development of mutual freedom of expression, respect and trust between them, was more likely to have a positive impact upon the mentoring relationship and mentees should experience the benefits of having a mentor they can turn to. Thus face-to-face mentoring sessions were more likely to succeed than a programme that relied upon, or was heavily supplemented, by the use of electronic media. The disadvantages of solely using electronic media included (though not limited to) a slower development of the mentoring relationship, an increased likelihood of miscommunication and variability in written communication skills.
These barriers could be overcome if the SMP timetabled face-to-face sessions so that mentees and mentors meet regularly at a scheduled time, in a classroom without an academic member of staff present.

3.6.9 Category 2 – Development of the Mentor

In addition to characteristics of the mentor, this study gathered participants’ views on the developmental benefits gained from undertaking the mentoring role. Views were described in relation to two distinct themes: the personal development of the mentors and their professional development. Table 3.18 shows the themes within this category and their associated concepts.

Table 3-19 Themes and concepts in the category “Development of the mentor”.

<table>
<thead>
<tr>
<th>Category</th>
<th>Theme</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of the Mentor</td>
<td>Personal</td>
<td>Gaining knowledge</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gaining confidence</td>
</tr>
<tr>
<td></td>
<td>Professional</td>
<td>Transferable skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Employability</td>
</tr>
</tbody>
</table>

3.6.10 Theme 1 – Personal

All mentor participants in this study contributed to the discussions relating to the personal development of mentors during the SMP. Two key concepts appeared as central in relation to this theme: the knowledge gained and confidence gained as a result of undertaking the mentoring role.
3.6.11 Discussion of theme 1 findings

Mentors were given the opportunity to reflect upon their own personal experience from the mentoring role. A number of mentors acknowledged that they had reinforced their subject knowledge from being able to explain the material to their mentees:

- **Being able to answer their questions tests your own knowledge, like do you really know the stuff, that can do more than just repeat back what the lecturer has said.**
  
  (23:mr)

- **I knew I would gain confidence and gain skills in speaking to people and also broaden my knowledge on what I knew by speaking to other people about it. So as much as it was to help other people, coz that what’s I would like to do, it is also to help me**
  
  (13:mr)

- **Having the knowledge to pass to people. Being knowledgeable about what you are going to tell people.**
  
  (11:mr)

- **It makes you come up with ways of explaining things to people so when mine ask a question about a certain lecture I sort of try to explain it but I did it in a different way and they understood it.**
  
  (32:mr)

These findings were consistent with a literature search undertaken by Beltman and Schaeben. They determined that mentors were often learning as much
from their mentees, as the mentees were learning from their mentors. Ehrich defined mentoring as a two-way or reciprocal process as it always benefits the mentor in some way or another. Furthermore, mentors could become co-learners within the mentor-mentee relationship as proposed by Kram and Hall in Lankau and Scandura. MPharm mentors in this PhD study were reinforcing their knowledge gained from Stage 1 as result of explaining the subject matter to their mentees:

*We have all got some of the characteristics but just as much as we are trying to help the mentees, they are also helping us because we are developing our skills and these characteristics we talk about and we are developing just as much as they are.*

(17:mr)

In addition to gaining and confirming knowledge, mentors also discussed their increased confidence as a result of undertaking the mentoring role:

*Gaining like confidence in speaking to people. I think being a mentor and speaking to people face to face like, it just improves the skills and you need that to be a pharmacist as well so, I think gaining confidence is my main one*

(13:mr)

*I think communication skills and the confident side. Yeah you feel you can talk to people much more easily than you could in your first few weeks of first year. The experience improves your career, when you speak to patients or things like that you feel more confident, and confidence when you speak to people gives the impression that you know what you are talking about.*

(10:mr)
I think it [being a mentor] builds on your own confidence as well because when you meet them [the mentees] it’s just you and three or four strangers really and you just introduce yourself and talking to them can be a bit daunting initially

(24:mr)

I think it’s like when I go to their tutor groups I talk to my mentees but then there’s also like loads of other people as well that I talk to so it’s helped like talking to big groups because I haven’t really done it before and I didn’t really know I was going to and then I was there and we were like in a big group. So yea it’s helped with like confidence, talking to lots of people at once.

(33:mr)

[I gained in] confidence. I know it’s not much of a skill but as a result in [of being a mentor, saw] an increase in confidence....

(17:mr)

It [being a mentor] makes you more confident in a way. Talking to different types of people.

(28:mr)

Beltman and Schaeban conceptualised mentoring as a mutually beneficial relationship between the mentor and the mentee. 273 Although most research has focused on the outcomes for mentees, rather than for mentors, studies have shown that participating in mentoring provides mentors with confidence and enhances self-esteem. 273, 308, 313, 315-317
3.6.12 Summary of theme 1 findings

This section has focused on the personal development of the MPharm mentors. Participation in mentoring appeared to impact positively upon how mentors in this study approached their own work, it provided an opportunity for them to improve their own knowledge of the subject matter and developed their confidence.

Further examples of personal development included communication skills, listening skills, problem solving and decision making; these are discussed in Section 3.6.18 because mentors used these examples to demonstrate their professional development. To avoid duplication of these findings in this thesis the author thought it more appropriate to discuss them in more detail in the later section mentioned.

3.6.13 Theme 2 –Professional

All mentor participants in this study contributed to the discussions relating to the professional development of mentors during the SMP. Two key concepts appeared as central in relation to this theme: the development of transferable skills and the effects participation in mentoring had upon mentors’ perceived employability.
3.6.14 Discussion of Theme 2 findings

Mentors were given the opportunity to reflect upon their participation in the mentoring role. There was a considerable amount of discussion about the transferable skills they felt that mentoring had helped them to develop. Participation in the mentoring role provided these mentors with the opportunity to develop their time management and organisational skills:

More organised because I like to keep hold of everything to be very resourceful because, if they ask me for something or I haven’t sort of got it and I don’t know where it is... it makes them think why am I bothering... [it’s made me] more organised just for me anyway

(18:mr)

Time management skills; have to keep like a diary to meet them I don’t want to miss it so it’s getting me to be a bit more organized than I was.

(26:mr)

Further discussions revealed that mentors felt they had gained better communication skills and more confidence in their level of communication as a result of their role:

Communication skills and being organised as well because you need to organise times to meet up and then just listening as well, listening to what they have to say.

(25:mr)
I think communication skills and the confident side. Yeah you feel you can talk to people much more easily than you could in your first few weeks of first year. This experience improves your career, when you speak to patients, like that you feel more confident, and confidence when you speak to people gives the impression that you know what you are talking about.

(10:mr)

The job [pharmacist role] basically entails you being able to, you know, communicate properly with a patient in order to get the right information to help, you help them [the mentees], so I improved in communication skills

(19:mr)

It [mentoring] makes you come up with ways of explaining things to people so when mine [mentees] ask a question about a certain lecture I sort of try to explain it but I did it in a different way and they understood it. So I suppose it [mentoring] helps with communication in the future when we do become pharmacists.

(32:mr)

Furthermore, these mentors also reflected upon how they could improve their own practice using their communication skills later in their professional careers as pharmacists. The following mentor compared their role to counselling patients:
You can definitely draw parallels between mentoring and counselling or giving lifestyle advice or anything like that.

 Lopez-Real and Kwan undertook a large scale evaluation of the mentoring scheme at the Faculty of Education at the University of Hong Kong. 272 A questionnaire was distributed to all mentors asking if mentoring had enhanced their professional development; 259 mentors responded and 181 (70%) of them considered that mentoring had been of benefit to them in some way. More than half of the mentors, who had benefitted (54%, n=181), mentioned mentoring helped them to learn through self-reflection; commenting that mentoring made them reflect on their own teaching when someone was trying to learn from them.

The MPharm mentors in this study were compelled to think about how they communicated with their mentees and showed empathy towards them. The following comments illustrated this perception:

You learn to put yourself in other people’s position a bit more if that makes sense. So their problems you can kind of, well I know we can relate to them because we did it last year but it’s also about listening and trying to help them in any way you can which I think is quite good for the course itself.

A professional requires professionalism so it [being a mentor] teaches you how to be professional and how to be able to approach people in that manner as well.
Responsibility. Being responsible for another person to evolve is something that makes you a better person. I think in terms of being responsible, I am a bit more responsible, knowing that it is not just an ordinary relationship that you’re building with the person. You are helping the person go through the course, this is very important. The person is going through first year pharmacy which is the course that the person has chosen to do to have a career so it is as much important to the person as anything else really and I think being a part of that whole thing is something that weighs down on [you] and you, are like ok you, have to do this properly, you can’t play about with this really.

(19:mr)

There is also evidence that, once having embarked on reflection and analysis of their mentoring role, this process would continue after they had graduated from university and into their professional careers. Mentors discussed using the skills they had gained when communicating with pharmacy staff and patients:

I think because we are learning to listen and giving advice so that is going to be relevant as a pharmacist because you’re going to listen to what your patient is saying and you are also going to problem solve and see how you can help them.

(16:mr)

When you are qualified it’s about training your staff around you in a way that is similar to the way you are training your mentees, not necessarily training, but helping them out with learning and I think the confidence will actually come out when talking to patients I think would be beneficial point.

(10:mr)
In particular, mentors thought their role provided them with an opportunity to enhance their employability. The following mentor had limited experience working in a pharmacy and was able to use examples from her mentoring role to complete her work placement application form:

It’s probably something you will do anyway as a pharmacist as well because you are going to be having people coming in, you are going to be...I’d like to relate mentoring to counselling. If people come I want this and that, you would have to take time out to speak to them about contraindications and stuff. And also a lot of applications that you fill in, if you’re a mentor, you will realise there is things that you have gained in mentoring. When you have filled those applications you can put a lot of it in. because I did an application, I haven’t worked in a pharmacy for a long time, and doing the mentoring I was able to give examples of what I have been doing in mentoring and there was loads. So it does really help out.

(31:mr)

Furthermore, the mentoring role provided an opportunity for mentors to develop their problem solving and decision making skills.

Two people might have the same problem, but a different solution might work for each one of them, so it’s about being versatile with your solution. Because I’ve had people that had the same problem but have wanted two different outcomes so I guess in practice that will help as well because you have someone come in saying they had that the other day but that solution might not work for that person.

(14:mr)
I think different people come with different problems. Apart from just listening, it’s about responding in the most appropriate way. So all my mentees, they are all very different people and I treat them all differently, so I guess it’s the same with patients as well, when they come in you have to recognise that each patient is different and not generalise and think every patient is the same. So listening and responding to them, it’s about responding to that problem they have and guiding them.

Mentors demonstrated an appreciation that not all patients were the same, even those with the same medical condition.

Chapter 1 Section 1.1 of this thesis explained the changing role of the pharmacy profession and identified more efficient ways of working to utilise the professional and clinical skills of the pharmacist. Mentors in this study identified that their mentoring role had provided them with an additional opportunity to develop some of these skills.

3.6.15 Summary of Theme 2 findings

This section focused on the professional development of the MPharm mentors. Mentors reflected upon their own experiences as new university students and their own personal growth and development. In particular there was a positive impact upon mentors’ perceived time management, communication, decision making and problem solving skills. Mentors also felt a sense of responsibility, by inspiring others and being a good role model. Furthermore, by getting an insight
into their mentees’ issues and concerns, the mentors developed empathy with their mentees.

3.7 Limitations of Phase 2

Similar to Phase 1 of this study, Phase 2 also had some limitations. It was conducted in a single school of pharmacy, which may limit generalisability to all student pharmacists in different settings and different degree programmes. Furthermore, only eight mentees volunteered to take part in the focus groups, compared to twenty-six mentors, and responses may have been affected by the curriculum year of each student at the time of the study.

3.8 Conclusion from Phase 2

The methods used in Phase 2 of this study were strengthened by using information gathered during the quantitative phase to identify survey items for the qualitative phase. The focus group discussions of perceived benefits and drawbacks of the MPharm student mentoring programme were supported by the survey results.

The benefits attained from having and being a mentor were positive influences upon academic and personal performance as well as an effect upon future professional working relationships and performance.

The majority of male and female mentees felt supported by their peers and significantly more male students felt they could approach students in their academic year for help with the studies (Chi square = 3.869, P = 0.0492). At the
same time, more male students felt able to ask higher year students for help, though the difference was not significant.

Regardless of gender or ethnicity, mentees felt more comfortable approaching peers in their own year for academic support as opposed to students in higher years. Thus a connectedness and trust had developed between peers and, to some extent, with higher year students and Rovai defined this interactivity amongst peers as a sense of community. 74

Meanwhile, there was a reluctance from some respondents to approach lecturers directly which could be due to the increased class size or student diversity compared to their previous schools or colleges. 76, 77

Mentees and mentors had similar opinions of what characteristics made a good mentor, good communication skills and being friendly were most cited by both. The same findings were determined in Phase 1 of this study, which concluded that students wanted support that was “clear and easy to understand” from people who were “friendly and happy to help”.

Experiences of the student mentoring programme varied considerably for mentees and mentors; in particular there were clear discrepancies between reported levels of communication, mentors reported significantly more meetings than their mentees (Chi square = 21.165, P < 0.01).

Each mentor was allocated up to three mentees and whilst they may not have had direct contact with all their mentees they could have been in contact with
one or two and responded they had made contact when in fact there were some mentees absent at the time.

Mentoring relationships were poorest with the fewest of meetings; the more meetings arranged the better the experience reported from both mentees and mentors. The impromptu arrangements of the SMP, which relied upon mentors attending personal tutorials and mentees to email their mentors, compromised the success of the programme. Some personal tutors were less accommodating of the SMP in the tutorial sessions which also affected the experiences for both mentees and mentors.

Significantly more mentors reported greater benefits from the experience than mentees (Chi square = 45.6497, P < 0.01). Benefits included additional opportunities to develop transferable skills in preparation for their future roles in pharmacy. The number of meetings impacted upon the mentoring relationship, mentees who met with mentors on three or more occasions, reported a smoother transition into university life and on to the course

The SMP relied upon mentees contacting their mentors when they needed help, however few mentees were contacting mentors after their initial meeting during the personal tutorial. The quantitative analysis in Phases 1 and 2 determined students were more comfortable approaching peers for help, rather than students in higher years.

Students suggested the SMP should be timetabled and structured, which would overcome this issue. A core attribute of mentoring is the reciprocal relationship
between the mentor and mentee \(^{307}\) where both parties contribute to and benefit from the relationship, as opposed to a one-way exchange of information.

Participants wanted sessions to be timetabled and planned to achieve the most benefit from the scheme. It was also essential that both mentors and mentees wanted to have the mentoring relationship in the first place. \(^{312}\) A mentoring relationship was unlikely to develop if there was a lack of communication and connection between them. Face-to-face interactions were a more appropriate method for mentors and mentees to converse with each other and were an appropriate means for offering emotional support and helping students to develop confidence. \(^{308}\) Non-face-to-face interactions led to a slower development of the mentoring relationship.

These findings suggest that the MPharm student mentoring programme at the University of Portsmouth has the potential to have a positive impact for both mentors and mentees if it were to have a more rigorous structure.

Furthermore, the programme identified similar findings to that of Svinicki and McKeachie, confirming that working with others could be more dynamic and motivating than working alone. \(^{318}\) Lave and Wenger used the term ‘communities of practice (CoP) to define “groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly”. \(^{128}\) \(^{319}\) The small groups of individuals in a CoP encourage each other to enhance their own and each other’s learning with the purpose of sharing ideas and responding to others, whilst enhancing their thinking and deeper understanding of the subject being discussed. Meanwhile, O’Donnell proposed that the
opportunity to work with peers promoted individuals’ abilities to restructure their knowledge and understanding of concepts. Whilst Baxter identified that group work facilitated critical discussion of ideas and topics, which enhanced individuals’ problem solving and conceptual understanding. See sections 4.1.1 and 5.2 for further discussion about communities of practice.

Informed with the findings from Phase 2 in Chapter 3, and the concept of communities of practice, the researcher will design, develop and introduce a structured peer mentor scheme in October 2014 and all Stage 1 MPharm undergraduates will be allocated a peer mentor. In order to provide the proposed mentoring programme with its own identity the author will refer to the more structured programme as Peer Assisted Learning (PAL) and mentors will be referred to as PAL leaders.

Chapter 4 evaluates the MPharm Peer Assisted Learning programme, designed, developed and delivered, during the academic years 2014/2015 and 2015/2016 by the author.
Chapter 4: Mixed methods study to evaluate the University of Portsmouth MPharm peer assisted learning scheme.

4.1 Introduction

Chapter 3 provided an overview of Phase 2 of this research, an evaluation of the University of Portsmouth MPharm student mentor programme. Phase 3 involved the introduction and evaluation of a peer-mentor programme called Peer Assisted Learning for MPharm students at the University of Portsmouth (UoP) and this is reported in this chapter.

In 1973 Dr. Deana Martin developed the American Supplemental Instruction (SI) model at the University of Missouri, Kansas City. SI was a programme that utilised regular study sessions where students compared notes and developed study skills. Its purpose was to increase retention and grades within targeted historically difficult courses and to increase graduation rates in students. 322

In the early 1990s the SI model was adapted for use in the UK and renamed peer assisted learning (PAL). They were introduced in the UK to reduce the drop-out rates of students and to encourage a student-centred approach to education. PAL was introduced in the chemistry department of the University of Manchester in 1995 and in 1997 a similar scheme was introduced in the University of Manchester Institute of Science and Technology (UMIST). The PAL sessions were led by trained third and fourth year student volunteers on the same course and these PAL leaders encouraged group learning. The evidence indicated that first year undergraduate students who regularly attended PAL achieved better
outcomes in their examinations than non-participants, and suggested that there were many benefits from being a PAL leader.\textsuperscript{323}

The University of Manchester was recognised internationally as the UK national benchmark for peer learning and in April 2009 became the National Centre for Peer Learning.

PAL did not replace any form of interaction between staff and students but instead they provided additional opportunity for all students to interact with their peers in collaborative study groups within the context of their discipline. PAL supported the student experience both academically and socially, providing an opportunity for peer interaction and fostering a greater sense of community. PAL aimed at benefiting all students, regardless of academic competency.

PAL provided a safe environment for students to discuss ideas, share problems and resolve questions in a setting that supplements the core curriculum. Trained higher year undergraduate students, known as PAL leaders, worked in pairs to facilitate regular study groups of 15-20 Stage 1 undergraduate students. The leaders studied the same course, and were considered to be more approachable and more familiar with the course from a student’s perspective, than lecturers on the course. These peers could also empathise with the new learning experiences the year one undergraduate student faced when commencing the new academic course of study.\textsuperscript{324}

The study sessions were intended to promote collaborative learning through exploratory discussion and provide an opportunity for leaders to share their experiences. Discussions were based on existing course materials. Some peer
learning programmes were embedded within a unit or module which in the past may have been challenging for former students. Study sessions focused on the course material delivered within a unit or module. 325 Meanwhile, other peer learning programmes were not usually restricted to just one unit or module. They accommodated and encouraged discussions which were student-led; thus Stage 1 undergraduate students were permitted to select the topics they wished to explore during the study session.326

The main thing to remember about PAL is that topics discussed during the study sessions had already been delivered in the curriculum to the Stage 1 undergraduates and leaders did not deliver or teach any new material. The study sessions were supplementary to teaching, structured, purposeful and organised, whilst being informal and friendly and encouraged undergraduate students to work inter-dependently and co-operatively to increase their own understanding. 326 Stage 1 undergraduate students were encouraged to compare notes, clarify the information, ask questions and seek verification of ideas. The study sessions offered an opportunity to consolidate knowledge and gain deeper conceptual understanding of the subject.

4.1.1 The concept of Communities of Practice

The author proposes that the more structured approach of the MPharm PAL programme could be considered as a community of practice. The concept aims to empower the students over their own learning, to build a learning community amongst the students and to enhance the learning support for the new students starting at UOP. Hord and Sommers described the components of CoP as a :
A CoP can evolve naturally when members with a common interest in a particular area come together to discuss the topic. At the same time, a CoP can be deliberately created with the goal of gaining knowledge related to a specific topic, similar to that proposed for the new MPharm PAL programme. It is through the process of sharing experiences and information with the other members that enables members to learn from each other. A CoP provides members with an additional opportunity to develop both personally and professionally; members who form a CoP share a common interest and a desire to learn from and contribute to the community with their variety of experiences. Three characteristics of a CoP have been proposed: a domain of knowledge, a notion of community and a practice. The domain is the topic or interest, the community refers to the members of the CoP who engage in the activity and the practice is the repertoire, strategies, ideas and results of the shared interactions of the community.

Figure 4.1 illustrates the three inter-related characteristics of a community of practice (CoP).
The purpose of a CoP is to provide a way for members to share tips and best practices, ask questions and support each other. Membership is dependent on expertise and at least one of the members, in this case the PAL leaders, should have some recent experience performing in the role or subject area of the CoP.
The MPharm PAL programme will bring together experienced Year 2 PAL leaders with new students providing an opportunity to share their experiences, practices and knowledge. The concepts of CoP are further discussed in Section 5.2.

PAL has proven to be successful in many contexts and disciplines; for example, a study of a medical students’ PAL programme designed to target a specific area of study found that it was beneficial in enhancing the students’ theoretical knowledge, improved communication skills and increased performance and enhanced personal development.324

However, the benefits of peer learning have not been specifically demonstrated for pharmacy students in the United Kingdom. Phase 3 of the research aimed to provide robust evidence of its usefulness in an MPharm undergraduate setting. The research explored students’ opinions and experiences of PAL; the effect PAL had upon students; and the opportunities PAL offered for students.

In order to gather the necessary data, the following research questions were used:

1. What do MPharm students think of the peer assisted learning programme?
2. What is the experience for students involved with the peer assisted learning programme?
3. What effect does a peer assisted learning programme have on pharmacy undergraduates?
4. What opportunities does a peer assisted learning programme offer to make graduates more employable?
4.2 Methodology – Phase 3

As previously mentioned in Section 2.2, research methodology constitutes a whole range of strategies and procedures.

The third and final phase of this research study was the introduction of an MPharm peer-mentor programme. The author visited neighbouring Brighton and Bournemouth universities and met with their peer learning co-ordinators to learn about and compare the different peer learning programmes being delivered. Brighton University used a peer learning programme which was attached to challenging units or modules \(^{325}\) whilst Bournemouth University had a peer learning programme aimed at targeting all students for all units as opposed to being attached to a single unit or module. \(^{326}\) Using the findings from Phases 1 and 2 of this current study, it was determined that a more flexible approach to peer learning, similar to that delivered at Bournemouth, would meet the needs of UOP MPharm undergraduates. MPharm students reported a preference for study support that was relevant to their learning needs; PAL offered an unrestrictive approach permitting Stage 1 students to select the topics they wished to discuss, as opposed to PASS which was usually attached to a challenging subject, unit or module. PAL was a student-led programme which encouraged discussion between Stage 1 undergraduate students. Sessions were facilitated by higher-year students, called PAL leaders, usually from the same course. Stage 1 students selected the topics they wished to explore during study sessions and the PAL leaders encouraged collaboration of knowledge and facilitate discussion.
Stage 1 MPharm students were contacted by the author via email, following the end of year assessment progression board in July 2014, and asked for volunteers to be PAL leaders for Stage 1 MPharm students during the academic year 2014/2015. Fourteen students volunteered, and during Stage 2 of their MPharm i.e. 2014/2015, they acted as PAL leaders for Stage 1.

A training day was delivered to all PAL leaders, by the author, at the start of the new term. PAL leaders completed practical activities and role play sessions to help them to develop their facilitation and leadership skills. The training focused on the importance of facilitation and redirecting questions to encourage new students to collaborate, answer each other’s questions and develop a self-directed learning approach. It was made clear, by the author, that PAL leaders were not there for new students to rely upon for providing the answers.

Following the training day, PAL leaders were randomly allocated, by drawing their names from an opaque cloth bag, into pairs or trios with Stage 1 PAL groups. PAL groups incorporated two personal tutor groups, approximately twenty Stage 1 students in total. Tutor groups 1 and 2 were paired together, groups 3 and 4, groups 5 and 6 and so on. During 2014/2015, there were twelve personal tutor groups, thus six PAL groups were formed in total.

PAL sessions were delivered every three weeks in the Developing Lifelong Learning unit. This unit focused on developing students’ study skills with a particular emphasis on encouraging and supporting effective self-directed learning and also incorporated the school tutorial programme. PAL leaders met, in timetabled sessions, with their PAL groups four times before Christmas and
four times before Easter. Any additional meetings were arranged between PAL leaders and groups.

New MPharm students received a lecture from the author and two PAL leaders explaining the purpose of the PAL programme during Induction Week. Academic staff and personal tutors were asked to encourage their tutees to attend the PAL sessions and pens advertising the PAL programme were issued to every new MPharm students in Stage 1.

All PAL leaders met with the author immediately after every PAL session, or within twenty fours, for a debrief. PAL leaders shared what went well and less well in their sessions and discussed ways in which they could enhance or improve their sessions. The debrief was student-led, similar to that of a PAL session, where leaders were encouraged to answer each other’s queries as opposed to the author simply providing them with solutions.

This whole process was repeated for another year in 2015/16. Stage 1 MPharm students were contacted via email, following the end of year assessment progression board of July 2015, and asked for volunteers to be PAL leaders for Stage 1 MPharm students during the academic year 2015/2016. Twelve students volunteered, and during Stage 2 of their MPharm i.e. 2015/2016, they acted as PAL leaders for Stage 1. Random allocation was undertaken similar to that for 2014/15 PAL groups and leaders.
4.3 Research methods and approaches

See Chapter 2 Section 2.3 for details of the research methods and approaches considered for the third phase of this PhD study.

4.4 Methodological approach to this study

Similar to Phases 1 and 2, a mixed methods approach was deemed appropriate to achieve a comprehensive data collection for Phase 3. See Chapter 2 Section 2.4 for a full explanation of the methodological approach in more detail.

A fixed and objective quantitative research method was deemed appropriate for the first stage in Phase 3 to gather large amounts of factual data about the MPharm PAL programme from the PAL mentees and PAL leaders. A self-completed questionnaire was designed and piloted by the author consisting of both closed and open questions.

4.4.1 Self-completed questionnaire

The quantitative approach was conducted using a piloted self-completed questionnaire to capture numerical data which could be statistically analysed. The questionnaires were distributed during lectures in the first academic term of October 2015 and October 2016, to MPharm students involved in PAL (i.e. Stage 2 MPharm students who were previously new students in Stage 1). Stages 1, 3 and 4 MPharm students were not eligible to complete the questionnaire since they had not taken part as new students of PAL. Distribution during lectures was selected to capture as many MPharm students as possible in one venue.
A copy of the final, piloted PAL mentee questionnaire appears in Appendix 12. As in Phases 1 and 2, the questionnaire was piloted with 10 volunteer MPharm undergraduates, to establish both face and content validity. See Section 2.4.1 for a detailed explanation of the questionnaire design process undertaken.

At the same time, all twenty-six students who had volunteered to be PAL leaders were asked to complete a PAL leader questionnaire, designed by the author, in order to gather data about PAL from PAL leaders’ perspectives. A copy of the final, piloted PAL leader questionnaire appears in Appendix 13.

### 4.4.2 Questionnaire data analysis

Amendments, following the pilots, were minimal spelling and grammatical errors; no changes were required with regards to the questions being asked. Following the pilots questionnaires were amended and distributed as explained in Section 4.4.1 and the data from the self-completed questionnaires were analysed using Microsoft Excel 2013; see Section 2.4.2 for a detailed explanation of the analysis process undertaken. Some statistical inferences were drawn, see Section 4.5.

### 4.4.3 Qualitative study of MPharm PAL leaders’ opinions of PAL

The second stage of Phase 3 involved an explorative qualitative study. One-to-one interviews with PAL leaders were conducted for exploration of PAL leaders’ individual personal experience of the research topic. Advantages of this approach permitted flexibility, the use of follow up responses, the facility to make comparisons between different PAL leaders, and the freedom to explore in
more detail leaders’ opinions and views. See Section 2.4.3 for a detailed explanation of the qualitative study undertaken.

### 4.4.4 One-to-one interview design

The overall conduct of the one-to-one interview was semi-structured as opposed to structured, to adapt to the emerging views of participants. This flexible approach minimised imposing prior frames of reference from the researcher and the effect of predetermined responses. See Chapter 2, Section 2.4.3 for a detailed explanation of the qualitative study undertaken.

### 4.4.5 One-to-one interview delivery

The conduct of the one-to-one interviews was exactly as that used in Phases 1 and 2 focus groups, i.e. semi-structured to adapt to the emerging views of participants, see Section 2.4.4.

Piloting was conducted with one volunteer student who had been a PAL leader. The author contacted all PAL leaders and asked for a volunteer to undertake a pilot one-to-one interview. The first volunteer was selected.

Two main questions were used to gather insights into PAL leaders’ perspectives of PAL:

1. Tell me why you volunteered to be a PAL leader.

2. How have you benefited from being a PAL leader?
4.4.6 Recruitment of one-to-one interview subjects

Students who had previously been Stage 2 PAL leaders discussed their experiences from a leader’s perspective.

Following piloting a further twenty five one-to-one interviews were carried out.

A participant code was allocated to each PAL leader i.e. PL2 referred to PAL leader number 2 and PL20 referred to PAL leader number 20. Participant demographics and code details can be found in Appendix 14.

4.4.7 Semi-structured one-to-one interview conduct

The one-to-one interview plan, one-to-one interview delivery, structured one-to-one interview analysis method and the analytical strategy for Phase 3 were the same as those for Phases 1 and 2; see Chapter 2, Section 2.4.7 for a detailed explanation.
4.5 Phase 3 Results and Discussion – PAL mentee questionnaire

4.5.1 Response rates

112 Stage 1 MPharm undergraduates participated in the PAL programme during 2014/15 and 107 during 2015/16; thus a total of 219 participated and this is referred to as the sample population. The number of completed questionnaires returned is referred to as the response rate; 182 (83%) completed questionnaires were returned. The higher the response rate the more representative of the sample population are the data. See Chapter 2, Section 2.5.1 for details of response rate and validity and reliability. The genders of the PAL mentee sample population is illustrated in Table 4.1.

<table>
<thead>
<tr>
<th>Females (%)</th>
<th>Male (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>133 (60.7%)</td>
<td>86 (39.3%)</td>
<td>219 (100%)</td>
</tr>
</tbody>
</table>

Table 4-1 Genders of MPharm undergraduates involved in PAL

Genders of MPharm undergraduates who completed the PAL mentee questionnaire is shown in Table 4.2.
Table 4-2 Genders of MPharm undergraduates involved in PAL and completed the questionnaires (n=182)

<table>
<thead>
<tr>
<th></th>
<th>Females (%)</th>
<th>Male (%)</th>
<th>Total (n=181)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>119 (65.7%)</td>
<td>62 (34.3%)</td>
<td>181 (100%)</td>
</tr>
</tbody>
</table>

N.B. 1 participant did not answer this question

The genders of respondents were similar to that of the sample population, and there was no significant difference between the sample population and responders (Chi-square = 1.07, P = 0.301), thus the data were representative of the sample population in this respect.

4.5.2 Attendance at PAL sessions

Respondents’ level of attendance varied and is illustrated in Table 4.3

Table 4-3 Number of students who attended PAL sessions.

<table>
<thead>
<tr>
<th>Number of PAL sessions attended</th>
<th>Number of MPharm undergraduates (n=168)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>17 (10.1%)</td>
</tr>
<tr>
<td>1-3</td>
<td>56 (33.3%)</td>
</tr>
<tr>
<td>4</td>
<td>8 (4.8%)</td>
</tr>
<tr>
<td>5-7</td>
<td>56 (33.3%)</td>
</tr>
<tr>
<td>8</td>
<td>31 (18.5%)</td>
</tr>
</tbody>
</table>

N.B. 2 students did not answer this question and 12 were unsure of their level of attendance.
More than half of respondents (52%, n=168) reported attending more than half of the eight PAL sessions, see Table 4.3. These were referred to as good attenders; students who attended fewer than 5 sessions were referred to as poor attenders of PAL. Students were asked to provide reasons why they chose not to attend some of the PAL sessions. Table 4.4 illustrates good and poor attenders of PAL and Table 4.5 presents their reasons for non-attendance.

**Table 4-4 Number of good and poor attenders of PAL sessions.**

<table>
<thead>
<tr>
<th>Number of PAL sessions attended</th>
<th>Number of MPharm undergraduates (n=168)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good attenders (5 to 7 PAL sessions)</td>
<td>87 (51.8%)</td>
</tr>
<tr>
<td>Poor attenders (0 to 4 PAL sessions)</td>
<td>81 (48.2%)</td>
</tr>
</tbody>
</table>

N.B. 2 students did not answer this question and 12 were unsure of their level of attendance.

**Table 4-5 Reasons for non-attendance at PAL sessions**

<table>
<thead>
<tr>
<th>Reasons for non-attendance of PAL</th>
<th>Number of MPharm undergraduates (n=148)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sessions were at inconvenient times</td>
<td>55 (37.2%)</td>
</tr>
<tr>
<td>I preferred to study alone</td>
<td>42 (28.4%)</td>
</tr>
<tr>
<td>I did not need any additional help that PAL could offer me</td>
<td>26 (17.6%)</td>
</tr>
<tr>
<td>I was unaware of any PAL sessions</td>
<td>6 (4.1%)</td>
</tr>
<tr>
<td>I did not know what PAL was</td>
<td>4 (2.7%)</td>
</tr>
<tr>
<td>Other</td>
<td>30 (20.3%)</td>
</tr>
</tbody>
</table>

N.B. 31 students reported attending every PAL session and so did not answer this question and 3 other students did not answer this question.
Other reasons for non-attendance included (the number of students who mentioned each reason is illustrated in the brackets): PAL was not compulsory (6), the sessions were not helpful (7), sessions were timetabled too early in the morning (2), students had transferred from pharmacology (4), students were repeating the academic year (3) or students were unwell (2).

4.5.3 Academic benefits of PAL

The potential academic benefits of PAL were explored and students’ individual perceptions of the benefits are illustrated in Table 4.6.

<table>
<thead>
<tr>
<th>Chosen Response</th>
<th>Number of respondents (n=181)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled me to improve my knowledge of the subject content of my course</td>
<td>71 (39.2%)</td>
</tr>
<tr>
<td>Helped me understand my course topics in more depth</td>
<td>47 (26.0%)</td>
</tr>
<tr>
<td>Enhanced my confidence with my course</td>
<td>54 (29.8%)</td>
</tr>
<tr>
<td>Helped me to manage my workload</td>
<td>38 (21.0%)</td>
</tr>
<tr>
<td>Increased my motivation at university</td>
<td>33 (18.2%)</td>
</tr>
<tr>
<td>Helped me understand how to meet my course expectations</td>
<td>69 (38.1%)</td>
</tr>
<tr>
<td>PAL sessions supported my learning of the topics covered in my course lectures or workshops</td>
<td>60 (33.1%)</td>
</tr>
<tr>
<td>None of the above</td>
<td>19 (10.5%)</td>
</tr>
</tbody>
</table>

N.B. 1 student did not respond to this question
These findings suggest that attendance of PAL sessions had perceived academic benefits for some students. PAL at UOP helped over a third of students to consolidate their knowledge (39%), understand course expectations (38%) and supported their learning (33%). Thus PAL enabled these students to gain a deeper conceptual understanding of course material.

4.5.4 Drawbacks of PAL

Despite the positive impact reported there were also some perceived drawbacks to PAL. Content analysis was undertaken, to analyse students’ answers, which permitted a quantitative analysis of this qualitative data. See Table 2.1 in Chapter 2, Section 2.4.7.3 for a more detailed explanation of content analysis. Three themes were identified: lack of organisation, PAL was unhelpful and timings of the PAL sessions were inconvenient. Table 4.7 illustrates their comments.
Table 4-7 Participants’ perceived drawbacks of PAL sessions.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of students who described the theme (n=48)</th>
<th>Examples of comments students made</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of organisation</td>
<td>24 (50.0%)</td>
<td>“Sometimes students don’t offer topics for discussions, so the sessions are disjointed”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“May be of benefit to make sure there are topics which everyone knows will be talked about”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“No set activities – spend most of the time deciding what to do”</td>
</tr>
<tr>
<td>PAL was unhelpful</td>
<td>21 (43.8%)</td>
<td>“I felt the PAL leaders were unhelpful”.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“After a few sessions it just didn’t help me enough”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I didn’t feel I could engage with the PAL leaders; it felt I wouldn’t benefit from it”</td>
</tr>
<tr>
<td>Timings of PAL sessions</td>
<td>3 (6.3%)</td>
<td>“Not at convenient times”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Having it as the only timetabled thing in the day; as it is not compulsory - discourages attendance”</td>
</tr>
</tbody>
</table>

N.B. Only 48 students answered this question

The main drawback of PAL was the lack of organisation and preparation prior to the PAL sessions. Students mentioned that topics of discussion were not always planned prior to the PAL session. One student thought it was the responsibility of the PAL leaders to decide what to cover:
“When PAL leaders have not arranged anything to go through”.

Similar to the SMP, initially introduced in October 2013, Stage 1 MPharm students were expected to determine the subject topics for discussion during the PAL sessions. Table 4.8 illustrates the number of students who suggested topics for their PAL sessions.

<table>
<thead>
<tr>
<th>Students selected the topic for discussion</th>
<th>Number of MPharm students (n=169)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>89 (52.7%)</td>
</tr>
<tr>
<td>Sometimes</td>
<td>51 (30.2%)</td>
</tr>
<tr>
<td>No</td>
<td>29 (17.1%)</td>
</tr>
</tbody>
</table>

N.B. 13 students did not answer this question

Only 53% (n=169) of students reported they had control of the topics discussed in PAL sessions. New students may have been unfamiliar with course material and did not know which topics they lacked knowledge of, or perhaps PAL leaders were taking the lead on this and making the decisions without giving their PAL mentees an opportunity to select a topic for discussion. It was important that PAL leaders gave all new students the opportunity to decide what to discuss during PAL sessions, so that their academic requirements and queries were fully addressed.
Another student appeared to expect PAL leaders to tell them exactly what to write in their coursework and as such reported that the sessions were unhelpful:

“Sometimes they are quite vague with their coursework help, since they are unable to tell us exactly what to write so it seems like there is no point asking”.

PAL was introduced at UOP to facilitate Stage 1 MPharm students’ transition onto the course and into university. PAL leaders were specifically trained to facilitate collaborative discussion between the new students and told not to simply provide the new students with the answers (see Section 4.2). The aim of PAL was to enable new students to develop a self-directed, independent learning approach and move away from the heavily supported, dependant approach quite often instilled at school and colleges. ²⁸⁰,²⁷¹

4.5.5 Students’ opinions of their PAL leaders

Effective facilitation from PAL leaders was essential to ensure provision of a co-curricular supplementary learning support to help new students maintain their interest in course topics and their aspiration to gain as much knowledge about course topics as possible i.e. their mastery orientation (see Section 2.5.9). ²⁴⁷,²⁶⁵ Question 12 asked PAL mentees to reflect upon their PAL leaders’ abilities to encourage them to participate in PAL session discussions, to share their experiences and encourage them to compare notes. Table 4.9 illustrates their responses.
A large proportion of students (73%, n=179) stated that PAL leaders shared their own experiences of Stage 1; however the number of students who were encouraged to participate in group discussion (31%, n=179) was significantly lower (Chi-square = 62.98, P < 0.001). PAL was launched to bring new students together and encourage collaborative discussion about their transition into university and the MPharm; PAL leaders were recruited to facilitate the discussions and guide new students to finding the answers to the queries for themselves.

Only about a third of PAL mentees (31%, n=179) stated they were encouraged to participate in group discussion and the impact of this opportunity was compared to those who were not encouraged to undertake such group discussions. Table 4.10 compares the impact group discussions had upon students’ confidence with the MPharm course.
Table 4-10 Number of students encouraged to participate in group discussion and their enhanced confidence with the MPharm course.

<table>
<thead>
<tr>
<th>Enhanced confidence</th>
<th>Encouraged to participate</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
<td>Disagree</td>
<td>Total</td>
</tr>
<tr>
<td>Agree</td>
<td>25 (44.6%)</td>
<td>28 (22.8%)</td>
<td>53</td>
</tr>
<tr>
<td>Disagree</td>
<td>31 (55.4%)</td>
<td>95 (77.2%)</td>
<td>126</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>123</td>
<td>179</td>
</tr>
</tbody>
</table>

N.B. 3 students did not answer both these questions

Although only a third of students stated they were encouraged to participate in group discussion, it transpired that discussion of this kind had overall a significant and positive impact upon their confidence with the MPharm course, (Chi-square = 8.84, P = 0.003). Table 4.10 illustrates that when students were encouraged to participate in discussion, 45% (n=56) felt confident about the course, compared to only 23% (n=123) of those who were not encouraged to participate in this way.

Tables 4.11 – 4.16 illustrate the impact of group discussion on students’ understanding of course topics, management of workload, motivation, course expectations, knowledge and learning gain.
Table 4-11 Number of students encouraged to participate in group discussion and their understanding of course topics.

<table>
<thead>
<tr>
<th>Understanding of course topics</th>
<th>Encouraged to participate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Agree</td>
<td>22 (39.3%)</td>
</tr>
<tr>
<td>Disagree</td>
<td>34 (60.7%)</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
</tr>
</tbody>
</table>

Group discussion had a significant impact upon students' understanding of course topics, (Chi-square = 7.14, P = 0.008).

Table 4-12 Number of students encouraged to participate in group discussion and their workload management.

<table>
<thead>
<tr>
<th>Helped manage workload</th>
<th>Encouraged to participate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Agree</td>
<td>18 (32.1%)</td>
</tr>
<tr>
<td>Disagree</td>
<td>38 (67.9%)</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
</tr>
</tbody>
</table>

Group discussion had a significant impact upon students' workload management, (Chi-square = 5.80, P = 0.016).
Table 4-13 Number of students encouraged to participate in group discussion and their motivation.

<table>
<thead>
<tr>
<th>Increased motivation</th>
<th>Encouraged to participate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Agree</td>
<td>16 (28.6%)</td>
</tr>
<tr>
<td>Disagree</td>
<td>40 (71.4%)</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
</tr>
</tbody>
</table>

Group discussion had a significant impact upon students’ motivation, (Chi-square = 5.57, P = 0.018).

Table 4-14 Number of students encouraged to participate in group discussion and understanding of course expectations.

<table>
<thead>
<tr>
<th>Understand course expectations</th>
<th>Encouraged to participate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
</tr>
<tr>
<td>Agree</td>
<td>29 (51.8%)</td>
</tr>
<tr>
<td>Disagree</td>
<td>27 (48.2%)</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
</tr>
</tbody>
</table>

Group discussion had a significant impact upon students’ understanding of course expectations, (Chi-square = 6.03, P = 0.014).
Table 4-15 Number of students encouraged to participate in group discussion and their learning.

<table>
<thead>
<tr>
<th>Supported my learning</th>
<th>Encouraged to participate</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
<td>Disagree</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>24 (42.9%)</td>
<td>35 (28.5%)</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>32 (57.1%)</td>
<td>88 (71.5%)</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>123</td>
<td>179</td>
<td></td>
</tr>
</tbody>
</table>

Although group discussion appeared to improve students’ learning, the difference was not significant, (Chi-square = 3.61, P = 0.057).

Table 4-16 Number of students encouraged to participate in group discussion and their knowledge gain.

<table>
<thead>
<tr>
<th>Improved knowledge</th>
<th>Encouraged to participate</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
<td>Disagree</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>26 (46.4%)</td>
<td>44 (35.8%)</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>30 (53.6%)</td>
<td>79 (64.2%)</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>123</td>
<td>179</td>
<td></td>
</tr>
</tbody>
</table>

Although group discussion appeared to improve students’ knowledge gain, the difference was not significant, (Chi-square = 1.84, P = 0.176).

These findings indicated that engagement in group discussion during PAL sessions had an appreciably significant positive impact on new students’ transition on to the MPharm. Furthermore, students gained a better awareness
of course expectations and direction; thus confirming the important role PAL leaders played with effective, facilitation of PAL sessions. This additional opportunity for Stage 1 students to discuss their experiences and knowledge with peers could also have a positive impact on overall academic performance (see Section 4.5.6).

4.5.6 Impact of PAL on assessment

The impact of PAL on students’ perceived level of preparedness for, and overall performance in, assessments was determined. Tables 4.17 and 4.18 illustrate the impact PAL had upon students’ perceived preparedness and performance in assessments, respectively.

Table 4-17 Students’ perceived preparedness for assessments as a result of PAL.

<table>
<thead>
<tr>
<th>Better prepared for assessments as a result of PAL</th>
<th>Number of students (n=173)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>81 (46.8%)</td>
</tr>
<tr>
<td>No</td>
<td>31 (17.9%)</td>
</tr>
<tr>
<td>Not sure</td>
<td>61 (35.3%)</td>
</tr>
</tbody>
</table>

N.B. 9 students did not answer this question
Table 4-18 Students’ perceived impact of PAL on their overall assessment performance.

<table>
<thead>
<tr>
<th>Improved assessment performance as a result of PAL</th>
<th>Number of students (n=172)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>66 (38.4%)</td>
</tr>
<tr>
<td>No</td>
<td>44 (25.6%)</td>
</tr>
<tr>
<td>Not sure</td>
<td>62 (36.0%)</td>
</tr>
</tbody>
</table>

N.B. 10 students did not answer this question

Almost half of students’ (47%, n=173) thought PAL had improved their preparedness for assessments and 38% (n=172) thought PAL had a positive impact on their assessment performance. Furthermore, the level of attendance at PAL sessions had a positive impact upon students’ perceptions of preparedness and performance in their assessments. Table 4.19 illustrates the impact of attendance levels upon preparedness and assessment performance.
Table 4-19 Students’ perceived impact PAL had upon their preparedness and performance in assessments

<table>
<thead>
<tr>
<th>Students’ perceptions of the effect PAL has upon preparedness and performance in assessments</th>
<th>Number of good attenders of PAL (n=87)</th>
<th>Number of poor attenders of PAL (n=74)</th>
<th>Attendance unknown (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ perceived preparedness for assessments and PAL attendance levels (n=173)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>58 (66.7%)</td>
<td>16 (21.6%)</td>
<td>7 (58.3%)</td>
</tr>
<tr>
<td>No</td>
<td>7 (8.0%)</td>
<td>24 (32.4%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Not sure</td>
<td>22 (25.3%)</td>
<td>34 (45.9%)</td>
<td>5 (41.7%)</td>
</tr>
<tr>
<td>Students’ perceived performance in assessments and PAL attendance levels (n=172)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>48 (55.2%)</td>
<td>15 (20.3%)</td>
<td>3 (25.0%)</td>
</tr>
<tr>
<td>No</td>
<td>9 (10.3%)</td>
<td>31 (41.9%)</td>
<td>4 (33.3%)</td>
</tr>
<tr>
<td>Not sure</td>
<td>29 (33.3%)</td>
<td>28 (37.8%)</td>
<td>5 (41.7%)</td>
</tr>
</tbody>
</table>

N.B. some students did not answer both questions.

Good attenders of PAL = attendance at more than four PAL sessions

Poor attenders of PAL = attendance at four or less PAL sessions

Attendance at PAL had a significant positive impact upon students’ perceived preparedness for assessments, (Chi-square = 34.91, P < 0.001). A greater proportion of good attenders of PAL i.e. more than 4 sessions, felt better
prepared for their assessments compared to those who attended fewer sessions.

Furthermore, 81% (n=31) of students, who attended all eight PAL sessions, thought they were better prepared for assessments as a result of attending PAL. Similar findings were determined when comparing attendance with assessment performance. Attendance at PAL had a significant positive impact upon students’ perceived performance in their end of year assessments, (Chi-square = 28.66, P < 0.001). Good attenders thought they performed better in assessments compared to poor attenders of PAL.

Attendance of PAL also enhanced the academic benefits mentioned in Section 4.5.3. Table 4.20 illustrates the impact of PAL attendance upon academic benefits.
Table 4-20 Academic benefits gained and level of PAL attendance.

<table>
<thead>
<tr>
<th>Chosen Response (n=167)</th>
<th>Number of good attenders of PAL (n=87)</th>
<th>Number of poor attenders of PAL (n=80)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled me to improve my knowledge of the subject content of my course</td>
<td>Yes (39%) 44 (50.6%)</td>
<td>21 (26.3%)</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>No (61%) 43 (49.4%)</td>
<td>59 (73.7%)</td>
<td>102</td>
</tr>
<tr>
<td>Helped me understand my course topics in more depth</td>
<td>Yes (26%) 31 (35.6%)</td>
<td>13 (16.3%)</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>No (74%) 56 (64.4%)</td>
<td>67 (83.7%)</td>
<td>123</td>
</tr>
<tr>
<td>Enhanced my confidence with my course</td>
<td>Yes (30%) 39 (44.8%)</td>
<td>9 (11.3%)</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>No (70%) 48 (55.2%)</td>
<td>71 (88.7%)</td>
<td>119</td>
</tr>
<tr>
<td>Helped me to manage my workload</td>
<td>Yes (21%) 27 (31.0%)</td>
<td>10 (12.5%)</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>No (79%) 60 (69.0%)</td>
<td>70 (87.5%)</td>
<td>130</td>
</tr>
<tr>
<td>Increased my motivation at university</td>
<td>Yes (18%) 25 (28.7%)</td>
<td>5 (6.3%)</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>No (82%) 62 (71.3%)</td>
<td>75 (93.7%)</td>
<td>137</td>
</tr>
<tr>
<td>Helped me understand how to meet my course expectations</td>
<td>Yes (38%) 43 (49.4%)</td>
<td>21 (26.3%)</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>No (63%) 44 (50.6%)</td>
<td>59 (73.7%)</td>
<td>103</td>
</tr>
<tr>
<td>PAL sessions supported my learning of the topics covered in my course lectures or workshops</td>
<td>Yes (34%) 37 (42.5%)</td>
<td>19 (23.8%)</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>No (66%) 50 (57.5%)</td>
<td>61 (76.2%)</td>
<td>111</td>
</tr>
</tbody>
</table>

N.B. 3 students did not answer this question and 12 students did not report their attendance levels.

Good attenders of PAL = attendance at more than four PAL sessions
Poor attenders of PAL = attendance at four or less PAL sessions

291
Tables 4.6 and 4.20 illustrate the levels of perceived academic benefits of PAL for students. Although the number of students who reported academic benefits was low, it was apparent that good attenders of PAL reported greater academic benefits compared to poor attenders of PAL. There were significant differences observed between good attenders and poor attenders of PAL for all seven academic benefits. A larger proportion of good attenders thought PAL enabled them to improve their knowledge (Chi-square = 10.37, P = 0.001); understand course topics in more depth (Chi-square = 8.07, P = 0.005); enhanced their confidence (Chi-square = 22.94, P < 0.001); helped them manage their workload (Chi-square = 8.30, P = 0.004); increased their motivation (Chi-square = 14.30, P < 0.001); understand course expectations (Chi-square = 9.47, P = 0.002) and supported their learning of topics covered on the course (Chi-square = 6.60, P = 0.010), compared to the poor attenders of PAL.

These results suggest that attending a certain number of PAL sessions may be required to gain a noticeable benefit from the programme. Similar findings came from a study undertaken in 2011, at the School of Engineering, Lund University, Sweden. They evaluated 762 students’ assessment performance against levels of Supplemental Instruction (SI) attendance. The authors determined a clear positive relationship between student success in the course and SI attendance rates. 329

4.5.7 Social and transitional support of PAL

Attendance rates at PAL also effected students’ transition into university, Table 4.21 illustrates students’ transition against attendance rates at PAL.
The level of social and transitional support associated with PAL was low overall, however the greatest impact was reported from those students who were good attenders. Significant differences were observed, between good and poor attenders, for the effect PAL had upon their ability to adjust to university life (Chi-square = 5.84, P = 0.0156) and their overall improved experience at university (Chi-square = 16.44, P < 0.001). Meanwhile, PAL had limited impact upon new students’ opportunity to meet new people and make new friends (Chi-square = 2.70, P = 0.100) and their adjustment to living away from home (Chi-square = 0.36, P = 0.547).
PAL at Portsmouth focused on supporting students’ academic transition into university and on to the MPharm; this could explain why few students reported that PAL helped them make friends and adjust to living away from home. Table 4.22 illustrates the development of student social skills as a result of PAL.

### Table 4-22 Development of social skills against attendance of PAL

<table>
<thead>
<tr>
<th>Chosen Response (n=165)</th>
<th>Number of good attenders of PAL (n=86)</th>
<th>Number of poor attenders of PAL (n=79)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved my social skills</td>
<td>Yes (24%) 26 (30.2%)</td>
<td>13 (16.5%)</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>No (76%) 60 (69.8%)</td>
<td>66 (83.5%)</td>
<td>126</td>
</tr>
<tr>
<td>Improved my ability to communicate with others</td>
<td>Yes (31%) 30 (34.9%)</td>
<td>19 (24.1%)</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>No (69%) 56 (65.1%)</td>
<td>60 (75.9%)</td>
<td>116</td>
</tr>
<tr>
<td>Improved my confidence</td>
<td>Yes (28%) 38 (44.2%)</td>
<td>9 (11.4%)</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>No (72%) 48 (55.8%)</td>
<td>70 (88.6%)</td>
<td>118</td>
</tr>
</tbody>
</table>

N.B. 17 students did not answer these questions

Less than a quarter of students thought PAL improved their social skills (24%) and less than a third thought it improved their communication (31%) and confidence (28%). It was apparent that good attenders benefited more than poor attenders and the differences observed were significant for their social skills (Chi-square = 4.33, P = 0.037) and confidence (Chi-square = 18.07, P < 0.001).
These results further suggest that regular attendance at PAL sessions may provide students with additional opportunities to improve their social skills and confidence, which in turn could contribute to their ability to meet new people and make new friends.

4.5.8 Learning strategies of PAL

MPharm PAL mentees were also asked to confirm if attending PAL helped them to develop learning strategies that would help them throughout their course. Table 4.23 illustrates the number of good attenders and poor attenders who thought PAL had helped them to develop learning strategies, which could help them throughout their course.
Table 4-23 Number of students who thought PAL helped them
develop learning strategies.

<table>
<thead>
<tr>
<th>Chosen Response (n=166)</th>
<th>Number of good attenders of PAL (n=87)</th>
<th>Number of poor attenders of PAL (n=79)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved the techniques I used to learn alone</td>
<td>Yes (31%) 36 (41.4%)</td>
<td>17 (21.5%)</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>No (69%) 51 (58.6%)</td>
<td>62 (78.5%)</td>
<td>113</td>
</tr>
<tr>
<td>Enhanced my study skills e.g. note taking or revision techniques</td>
<td>Yes (19%) 23 (26.4%)</td>
<td>9 (11.4%)</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>No (81%) 64 (73.6%)</td>
<td>70 (88.6%)</td>
<td>134</td>
</tr>
<tr>
<td>Developed my ability to work in a group</td>
<td>Yes (22%) 28 (32.2%)</td>
<td>10 (12.7%)</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>No (78%) 59 (68.8%)</td>
<td>69 (87.3%)</td>
<td>128</td>
</tr>
<tr>
<td>I was more organised as a result of attending PAL</td>
<td>Yes (16%) 20 (23.0%)</td>
<td>8 (10.1%)</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>No (84%) 67 (77.0%)</td>
<td>71 (89.9%)</td>
<td>138</td>
</tr>
<tr>
<td>I was better prepared for effective study as a result of PAL</td>
<td>Yes (31%) 37 (42.5%)</td>
<td>10 (12.7%)</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>No (69%) 50 (57.5%)</td>
<td>69 (87.3%)</td>
<td>119</td>
</tr>
</tbody>
</table>

N.B. 16 student did not answer this question

The number of students who reported gaining learning strategies from PAL was low; however there were significant differences observed between good and poor attenders of PAL. A larger proportion of good attenders thought PAL improved their ability to work alone (Chi-square = 7.51, P = 0.006); enhanced their study skills (Chi-square = 6.02, P = 0.014); ability to work in groups (Chi-square = 8.94, P = 0.003); their organisation skills (Chi-square = 4.88, P = 0.027);
and better prepared them for effective study (Chi-square = 18.20, P < 0.001), compared to poor attenders of PAL.

The low responses could suggest that PAL sessions had focused more upon showing students what they needed to learn, and may have been more effective had they focused upon the skills and concepts students needed for how they learn. PAL leaders were not recruited as experts in the subject but rather to act as a guide. Their role was to model learning strategies through developing processes and activities that enabled the Stage 1 students to learn actively and collaboratively.

Students’ gain in learning strategies had a further impact upon their perceptions of preparedness for assessments. Table 4.2 illustrates students’ perceived preparedness for assessments with their learning strategy gains.
Table 4-24 Students perceived preparedness for assessments with their learning strategy gain.

<table>
<thead>
<tr>
<th>Learning strategy</th>
<th>Number of students who felt better prepared for assessments (n=173)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (n=81)</td>
</tr>
<tr>
<td>Improved the techniques I used to learn alone</td>
<td></td>
</tr>
<tr>
<td>Yes (n=55)</td>
<td>35 (63.6%)</td>
</tr>
<tr>
<td>No (n=118)</td>
<td>46 (39.0%)</td>
</tr>
<tr>
<td>Enhanced my study skills e.g. note taking or revision techniques</td>
<td></td>
</tr>
<tr>
<td>Yes (n=35)</td>
<td>23 (65.7%)</td>
</tr>
<tr>
<td>No (n=138)</td>
<td>58 (42.0%)</td>
</tr>
<tr>
<td>Developed my ability to work in a group</td>
<td></td>
</tr>
<tr>
<td>Yes (n=40)</td>
<td>28 (70.0%)</td>
</tr>
<tr>
<td>No (n=133)</td>
<td>53 (39.8%)</td>
</tr>
<tr>
<td>I was more organised as a result of attending PAL</td>
<td></td>
</tr>
<tr>
<td>Yes (n=29)</td>
<td>24 (82.8%)</td>
</tr>
<tr>
<td>No (n=144)</td>
<td>57 (39.6%)</td>
</tr>
<tr>
<td>I was better prepared for effective study as a result of PAL</td>
<td></td>
</tr>
<tr>
<td>Yes (n=55)</td>
<td>44 (80.0%)</td>
</tr>
<tr>
<td>No (n=118)</td>
<td>37 (31.4%)</td>
</tr>
</tbody>
</table>

N.B. 9 students did not answer this question
Although the number of students who reported gaining learning strategies through PAL, were low, it appears that gaining such strategies had a positive impact upon their perceived preparedness for assessments. A greater proportion of students who reported gaining learning strategies from PAL, felt better prepared for their assessments compared to those who did not gain learning strategies. A significantly larger proportion of students who reported improved study techniques to work alone (Chi-square = 9.16, P = 0.002); enhanced study techniques (Chi-square = 6.29, P = 0.012); ability to work in groups (Chi-square = 11.23, P < 0.001); improved organisation skills (Chi-square = 18.07, P < 0.001); and better prepared for effective study (Chi-square = 35.65, P < 0.001), also felt better prepared for assessments as a result of attending PAL. Whereas fewer students felt better prepared for assessment if they also reported limited gain of learning strategies.

A greater focus upon the practical approaches to study and revision strategies, from the PAL leaders during PAL sessions, could have had a positive impact upon students’ perceived preparedness for their assessments.

4.5.9 Learning environment of PAL

PAL sessions were timetabled so new students could meet with higher year students, Stage 2 PAL leaders, to share ideas, discuss any problems and resolve questions. Students were asked to what extent they agreed that PAL was either a safe or supportive environment. Tables 4.25 and 4.26 illustrate students’ opinions of the safe and supportive learning environments of PAL respectively.
Table 4-25 Students opinions of the safe learning environment of PAL

<table>
<thead>
<tr>
<th>Chosen response</th>
<th>Number of students (n=164)</th>
<th>Number of students who either agreed or disagreed (n=164)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>18 (11.0%)</td>
<td>158 (96.3%)</td>
</tr>
<tr>
<td>Agree</td>
<td>80 (48.8%)</td>
<td></td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>60 (36.6%)</td>
<td></td>
</tr>
<tr>
<td>Somewhat disagree</td>
<td>2 (1.2%)</td>
<td>6 (3.7%)</td>
</tr>
<tr>
<td>Disagree</td>
<td>1 (0.6%)</td>
<td></td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>3 (1.8%)</td>
<td></td>
</tr>
</tbody>
</table>

N.B. 18 students did not answer this question

Table 4-26 Students opinions of the supportive learning environment of PAL

<table>
<thead>
<tr>
<th>PAL offers a supportive environment</th>
<th>Number of students (n=164)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>125 (76.2%)</td>
</tr>
<tr>
<td>Sometimes</td>
<td>33 (20.1%)</td>
</tr>
<tr>
<td>No</td>
<td>6 (3.7%)</td>
</tr>
</tbody>
</table>

N.B. 18 students did not answer this question

The majority of students agreed that PAL offered both a safe (96.3%) and supportive (96.3%) environment to discuss their ideas, share problems and resolve their questions. PAL at UOP was launched to provide study support which was open, friendly and supportive where students could openly discuss topics of their choice, feel safe to share their own ideas and problems, and ask for clarification. The concept was designed to encourage help-seeking behaviours.
where new students felt comfortable exposing the gaps in their knowledge. Similar studies of PAL have wielded similar findings.\(^{329-331}\)

It could be the more intimate smaller class size of the PAL sessions contributed to students’ confidence to engage in open group discussion compared to the bigger class sizes experienced in lectures; the most significant changes for new students entering university is the increased class sizes where they feel a sense of anonymity and isolation compared to school and college.\(^{68,70}\)

PAL was a timetabled, non-compulsory programme introduced to offer a safe and supportive environment for new students. At the same time PAL sessions were intended to be an enjoyable experience so that new students would want to attend; there was no sanction for students who chose not to attend. Table 4.27 illustrates the number of students who enjoyed attending PAL.

**Table 4-27 Number of students who enjoyed attending PAL.**

<table>
<thead>
<tr>
<th>PAL was enjoyable</th>
<th>Number of students (n=164)</th>
<th>Number of students who either agreed or disagreed (n=164)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>14 (8.5%)</td>
<td>135 (82.3%)</td>
</tr>
<tr>
<td>Agree</td>
<td>58 (35.4%)</td>
<td></td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>63 (38.4%)</td>
<td></td>
</tr>
<tr>
<td>Somewhat disagree</td>
<td>19 (11.6%)</td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>8 (4.9%)</td>
<td>29 (17.7%)</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>2 (1.2%)</td>
<td></td>
</tr>
</tbody>
</table>

N.B. 19 students did not answer this question

The majority of students thought PAL was enjoyable.
4.5.10 Students’ attendance and opinions of their PAL leaders

Question 15 asked students about their opinions of their PAL leaders (Appendix 12) and Table 4.28 illustrates students’ opinions of PAL leaders against their attendance rates.

Table 4-28 Students opinions of PAL leaders against their attendance rates.

<table>
<thead>
<tr>
<th>Chosen Response about PAL leaders (n=166)</th>
<th>Number of good attenders of PAL (n=86)</th>
<th>Number of poor attenders of PAL (n=80)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>They organised sessions that met everyone’s needs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (37%)</td>
<td>42 (48.8%)</td>
<td>21 (26.3%)</td>
<td>63</td>
</tr>
<tr>
<td>No (63%)</td>
<td>44 (51.2%)</td>
<td>59 (73.7%)</td>
<td>103</td>
</tr>
<tr>
<td>I felt supported by the leaders</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (30%)</td>
<td>35 (40.7%)</td>
<td>15 (18.8%)</td>
<td>50</td>
</tr>
<tr>
<td>No (70%)</td>
<td>51 (59.3%)</td>
<td>65 (81.2%)</td>
<td>116</td>
</tr>
<tr>
<td>PAL leaders helped me feel confident to ask questions in the sessions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (42%)</td>
<td>49 (57.0%)</td>
<td>20 (25.0%)</td>
<td>69</td>
</tr>
<tr>
<td>No (58%)</td>
<td>37 (43.0%)</td>
<td>60 (75.0%)</td>
<td>97</td>
</tr>
<tr>
<td>PAL leaders created an effective learning environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (24%)</td>
<td>31 (36.0%)</td>
<td>7 (8.8%)</td>
<td>38</td>
</tr>
<tr>
<td>No (76%)</td>
<td>55 (64.0%)</td>
<td>73 (91.2%)</td>
<td>128</td>
</tr>
</tbody>
</table>
Few students felt that PAL sessions were organised to meet everyone’s needs (37%, n=166), felt supported by their PAL leaders (30%, n=166) or that PAL created an effective learning environment (24%, n=166). Low esteem could be a contributing factor in non-attendance because PAL leaders appeared to be regarded more highly by those students who were good attenders. A higher proportion of good attenders thought PAL leaders organised sessions for everyone’s needs (Chi-square = 8.98, P = 0.003); felt supported by their PAL leaders (Chi-square = 9.49, P = 0.002); thought their PAL leaders helped them feel confident to ask questions in the PAL sessions (Chi-square = 17.45, P < 0001); and thought their PAL leaders created an effective learning environment (Chi-square = 17.50, P < 0001) compared to poor attenders of PAL. However, the proportion of students who felt this way was still low.

4.5.11 Impact of organised PAL sessions

Tables 4.7 and 4.28 illustrated that one of the main drawbacks of the PAL sessions in this study was the lack of organisation prior to each PAL session. The impact of being organised upon the academic benefits of PAL was determined. Responses from students who agreed their PAL leaders organised sessions that met everyone’s needs and those who thought they did not, were compared with the perceived academic benefits of PAL. Tables 4.29 to 4.33 illustrate the academic benefits compared to the perceived level of organisation from PAL leaders.
Table 4-29 Students' perceived preparedness for assessments against PAL leaders' organisation of PAL sessions.

<table>
<thead>
<tr>
<th>Better prepared for assessments</th>
<th>PAL leaders organised sessions that met everyone’s needs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes, felt more organised</td>
<td>No, did not feel more organised</td>
</tr>
<tr>
<td>Yes</td>
<td>44 (55.0%)</td>
<td>36 (45.0%)</td>
</tr>
<tr>
<td>No/Not sure</td>
<td>23 (25.0%)</td>
<td>69 (75.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>105</td>
</tr>
</tbody>
</table>

(Chi-square = 16.20, P < 0.001)

Table 4-30 Students' improved knowledge of the subject against PAL leaders' organisation of PAL sessions.

<table>
<thead>
<tr>
<th>Improved knowledge of the subject</th>
<th>PAL leaders organised sessions that met everyone’s needs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes, felt more organised</td>
<td>No, did not feel more organised</td>
</tr>
<tr>
<td>Yes</td>
<td>35 (50.0%)</td>
<td>35 (50.0%)</td>
</tr>
<tr>
<td>No</td>
<td>32 (29.1%)</td>
<td>78 (70.9%)</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>113</td>
</tr>
</tbody>
</table>

(Chi-square = 8.00, P = 0.005)

Table 4-31 Students' gain in understanding of course topics against PAL leaders' organisation of PAL sessions.

<table>
<thead>
<tr>
<th>Helped students understand their course topics</th>
<th>PAL leaders organised sessions that met everyone’s needs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes, felt more organised</td>
<td>No, did not feel more organised</td>
</tr>
<tr>
<td>Yes</td>
<td>28 (59.6%)</td>
<td>19 (40.4%)</td>
</tr>
<tr>
<td>No</td>
<td>39 (29.3%)</td>
<td>94 (70.7%)</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>113</td>
</tr>
</tbody>
</table>

(Chi-square = 13.60, P < 0.001)
Table 4-32 Students' enhanced levels of confidence against PAL leaders' organisation of PAL sessions.

<table>
<thead>
<tr>
<th>Enhanced confidence with the course</th>
<th>PAL leaders organised sessions that met everyone's needs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes, felt more organised: 29 (54.7%)</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>No, did not feel more organised: 24 (45.3%)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>Yes, felt more organised: 38 (29.9%)</td>
<td>127</td>
</tr>
<tr>
<td></td>
<td>No, did not feel more organised: 89 (70.1%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>180</td>
</tr>
</tbody>
</table>

(Chi-square = 9.84, P = 0.002)

Table 4-33 Students' perceived understanding of course expectations against PAL leaders' organisation of PAL sessions

<table>
<thead>
<tr>
<th>Helped understand course expectations</th>
<th>PAL leaders organised sessions that met everyone's needs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes, felt more organised: 33 (47.8%)</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>No, did not feel more organised: 36 (52.2%)</td>
<td></td>
</tr>
<tr>
<td>No/Not sure</td>
<td>Yes, felt more organised: 34 (30.6%)</td>
<td>111</td>
</tr>
<tr>
<td></td>
<td>No, did not feel more organised: 77 (69.4%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>180</td>
</tr>
</tbody>
</table>

(Chi-square = 5.38, P = 0.020)

Students who attended PAL sessions, which they perceived to be better organised by their PAL leaders, appeared to benefit far greater than those who felt their PAL leaders were not organised. Significant differences were observed (Tables 4.29 to 4.33); PAL sessions which were better organised made more students feel better prepared for their assessment, improved their subject knowledge, increased their understanding of topics, enhanced their confidence and helped them understand course expectations. Thus confirming the
importance for topics and activities during PAL sessions to be planned in advance of PAL sessions.

These findings confirm that PAL offered similar benefits to that of communities of practice (CoP). One of the key characteristics of a CoP is the shared topic of interest, referred to as the domain. PAL leaders who organised the session topic prior to the PAL session created a common ground and a sense of identity. The domain encouraged PAL members to contribute and participate and guided their learning. Furthermore, PAL provided a forum for the community, the Year 1 students, to share their learning both across subject areas and across academic stages on the MPharm course.

4.5.12 PAL leader skills

Students were asked to list all the skills they thought their PAL leaders displayed during their PAL session. At the same time the students were also asked to list any further skills they would have liked their PAL leaders to have had. Content analysis was undertaken to analyse their answers which permitted a quantitative analysis of this qualitative data. See Table 2.1 in Section 2.4.7.3 for a more detailed explanation of content analysis. Table 4.34 illustrates the skills students listed their PAL leaders displayed during their PAL sessions. Table 4.35 illustrates the skills students would have liked their PAL leaders to have demonstrated.
<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of students (n=71)</th>
<th>Example comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal skills/approachable</td>
<td>56 (78.9%)</td>
<td>“Great interpersonal skills”, “Patience”, “Understanding”, “Good social skills”, “People skills”, “Kind”, “Honest”, “Fair”, “Easily approachable”, “Friendly”, “Good people skills”, “Easy to talk to”, “Easy to ask questions”.</td>
</tr>
<tr>
<td>Communication skills</td>
<td>47 (66.2%)</td>
<td>“Good at communicating”, “Able to communicate well within a group”, “Communication skills”, “Ability to speak to a large group of people and help”, “Listen to our problems/questions”, “Great listening skills”, “Good listeners”</td>
</tr>
<tr>
<td>Confidence</td>
<td>29 (40.8%)</td>
<td>“Confident”, “Confidence”, “I think they are confident”, “Confidence in speaking”.</td>
</tr>
<tr>
<td>Facilitation/leadership skills</td>
<td>24 (33.8%)</td>
<td>“Good facilitator”, “They encouraged us to ask any questions we had, and also asking us what to talk about”, “Aware of problems and how to solve them”, “Able to share experiences”, “Leadership”, “Team leader”, “Great leadership skills”</td>
</tr>
<tr>
<td>Experienced/knowledgeable</td>
<td>20 (28.2%)</td>
<td>“Experience of the course”, “They have past experience of coursework and reports therefore give good advice at the sessions”, “Experience of year 1 MPharm”, “Previous knowledge/experience”, “Knowledge of the course”, “Good knowledge on assessment criteria”.</td>
</tr>
<tr>
<td>Motivational skills</td>
<td>20 (28.2%)</td>
<td>“Motivating”, “Encouraging”, “Engaging”, “Enthusiasm”, “Passionate”, “Made sessions interesting”, “They were really good in enabling conversation in the room and making the whole thing enjoyable”.</td>
</tr>
<tr>
<td>Helpful/supportive</td>
<td>19 (26.8%)</td>
<td>“Helpful”, “Help to consolidate certain knowledge”, “Help individuals with anything they needed”, “Willing to help”, “Supportive”, “Attentive and supportive”, “Dedicated”.</td>
</tr>
<tr>
<td>Organised</td>
<td>16 (22.5%)</td>
<td>“Engaging”, “Made sessions interesting”, “Really good in enabling conversation in the room and making the whole thing enjoyable”, “Organisation skills”, “Organised”, “Planning”, “Prepared”.</td>
</tr>
</tbody>
</table>

N.B. Only 71 students answered this question.
Table 4-35 Skills students listed which they wanted their PAL leader to demonstrate.

<table>
<thead>
<tr>
<th>Code</th>
<th>Number of students (n=46)</th>
<th>Example comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation</td>
<td>19 (41.3%)</td>
<td>“Fully organise the sessions”, “To be more organised”, “I think they need to be better organised when preparing material for the session”, “Organise sessions before hand”, “Better organisation, be able to plan a more structured session”, “Timekeeping”</td>
</tr>
<tr>
<td>Facilitation</td>
<td>15 (32.6%)</td>
<td>“Leadership skills”, “Being able to encourage teamwork”, “More confident to lead group”, “More assertion”, “Involve everyone in the group”, “Not talking over each other”, “More hands on approach to helping with work”.</td>
</tr>
<tr>
<td>More focused</td>
<td>8 (17.4%)</td>
<td>“Explain topics in detail. Show us how to do topics/learn better”, “Help more with individual studies”, “Better at explaining and cover topics we actually needed help with”, “Prepare for online tests and labs”.</td>
</tr>
<tr>
<td>Engaging</td>
<td>3 (6.5%)</td>
<td>“Engage the students more”, “Enthusiasm”</td>
</tr>
<tr>
<td>Contactable</td>
<td>3 (6.5%)</td>
<td>“Use Facebook or Whatsapp more we only had emails”, “Check up on us during the week”, “Communicate more outside PAL sessions”</td>
</tr>
<tr>
<td>Interpersonal skills</td>
<td>2 (4.3%)</td>
<td>“Friendliness”, “More social”</td>
</tr>
</tbody>
</table>

N.B. Only 46 students answered this question.
Similar themes were identified in both Phases 1 and 2 of this research; see Chapter 2 Section 2.5.7 and Chapter 3 Section 3.5.3. In Phase 1, students wanted support that was “clear and easy to understand” and from individuals who were “friendly and happy”. At the same time, in Phase 2, they listed good communication skills, friendly, empathetic, helpful, knowledgeable, organised and confidence as skills and characteristics they wanted mentors to display. The third and final phase of this study, (see Table 4.34) determined that interpersonal skills, communication skills and confidence were the most commonly cited themes listed by students about their PAL leaders. Meanwhile, Table 4.35 confirmed that students wanted better organisation and facilitation from their PAL leaders. These findings suggest that better organisation and facilitation could have a positive impact upon the academic benefits from attending PAL sessions. Tables 4.10 to 4.16 illustrated that students with PAL leaders who facilitated sessions, which encouraged them to engage in group discussion, better understood course topics, managed their workload well, felt more motivated and better understood course expectations compared to those students whose PAL leaders did not facilitate group discussion. Similarly, Tables 4.29 to 4.33 illustrated that students who attended better organised and planned PAL sessions felt significantly more prepared for assessments and they too gained the academic benefits stated above.

### 4.5.13 Approachability of PAL leaders

Tables 4.25 and 4.26 confirmed that PAL sessions offered a safe and supportive environment for new students to seek support. Further investigation determined
the approachability of PAL leaders compared to academic staff members. PAL mentee students were asked the degree to which they agreed or disagreed with the following statement:

“I preferred to ask a PAL leader certain questions as opposed to asking a member of university staff”

Table 4.36 illustrates the degree to which students agreed or disagreed with this statement.

Table 4-36 The degree to which students agreed to the statement “I preferred to ask a PAL leader certain questions as opposed to asking a member of university staff”

<table>
<thead>
<tr>
<th>Chosen response</th>
<th>Number of students (n=167)</th>
<th>Number of students who either agreed or disagreed (n=164)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>21 (12.6%)</td>
<td>147 (89%)</td>
</tr>
<tr>
<td>Agree</td>
<td>74 (44.3%)</td>
<td></td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>52 (32.1%)</td>
<td></td>
</tr>
<tr>
<td>Somewhat disagree</td>
<td>11 (6.6%)</td>
<td>20 (11%)</td>
</tr>
<tr>
<td>Disagree</td>
<td>4 (2.4%)</td>
<td></td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>5 (3.0%)</td>
<td></td>
</tr>
</tbody>
</table>

N.B. 15 students did not answer this question

The majority of students (89%, n=167) preferred to ask their PAL leaders certain questions as opposed to a staff member. Students who reported being encouraged to engage in group discussion, all stated they would prefer to ask their PAL leader (100%, n=56), compared to students who were not encouraged
to engage in group discussion (82%, n=113). Furthermore, significantly more good attenders felt this way compared to poor attenders (Chi square = 4.724, p = 0.0297). These findings were supported by the literature, where permitting students to engage and learn openly and freely, within the safe, supportive environment of PAL, minimised the power imbalance that often occurred between staff and students. 332-334

Similar findings were determined in Phase 2 of this study, where some students were reluctant to approach lecturers directly and felt more comfortable discussing their knowledge gaps with their peers and students in higher years, see Chapter 3, Section 3.5.2.

**4.5.14 Challenges and improvements for PAL**

MPharm students suggested ways in which the PAL programme could be improved and content analysis was undertaken to analyse their answers; see Table 2.1 in Section 2.4.7.3 for a more detailed explanation of content analysis. Table 4.37 illustrates students’ suggestions for improvements to PAL.
<table>
<thead>
<tr>
<th>Code</th>
<th>Number of students (n=74)</th>
<th>Example comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better structure</td>
<td>37 (50.0%)</td>
<td>“More structure/guidelines on what PAL sessions would be discussing. Different sessions were doing different things”, “Have a structure for the session. Stick to a set timetable of what to cover throughout the year”, “More structured and organised”.</td>
</tr>
<tr>
<td>Timetabling</td>
<td>11 (14.9%)</td>
<td>“Set at more convenient times for students (midday instead of evening)”, “Find a better time slot”, “Not at 9am/early in the morning”, “Change the times so students are more likely to attend”</td>
</tr>
<tr>
<td>Support specific</td>
<td>10 (13.5%)</td>
<td>“More specific support on topics”, “Just be more goal orientated”, “Cover topics we need help with” “Bring more course materials”, “PAL sessions before to help with pre-workshop activities”.</td>
</tr>
<tr>
<td>Better facilitation</td>
<td>10 (13.5%)</td>
<td>“Encourage others to be involved in discussions”, “Everyone is equal perspective”, “Get PAL leaders to come up with more interesting and useful ways to get people to work in groups. Encourage students to answer each other’s questions”, “More encouragement to seek academic advice to discuss with peers”, “Get feedback to reflect on PAL session”</td>
</tr>
<tr>
<td>Communication outside of PAL</td>
<td>2 (2.7%)</td>
<td>“Emails from PAL leaders and contact information” “Try and communicate more outside PAL session”</td>
</tr>
<tr>
<td>PAL for Year 2</td>
<td>2 (2.7%)</td>
<td>“Bring PAL back for 2nd year students” “PALS should be available for 2nd years”</td>
</tr>
<tr>
<td>Direct teaching</td>
<td>2 (2.7%)</td>
<td>“Being able to help us directly rather than guiding us” “Actually teach students how to do something instead of trying to get everyone to work on it e.g. mathematical calculations”</td>
</tr>
</tbody>
</table>

N.B. Only 74 students answered this question.
Although this study identified substantial evidence of the benefits of PAL, there were also some challenges and drawbacks that hampered its successful implementation. PAL sessions lacked a coordinated plan and structure; PAL leaders’ inability to model effective facilitation strategies for all groups; and PAL leaders’ inability to effectively engage all students in group discussion. Table 4.37 lists suggestions made for improving future PAL programmes in order to overcome some of these challenges.
4.6 Phase 3 Results and Discussion – PAL leader questionnaire

4.6.1 Response rates

Twenty six previous PAL leaders were asked to complete the leader questionnaire (Appendix 13), following one reminder via email, seventeen questionnaires were completed and returned, resulting in a response rate of 65%.

4.6.2 Skills achieved from undertaking the PAL leader role

Question 2 of the PAL leader questionnaire (Appendix 13), listed skills for leaders to select if being a PAL leader had helped them to achieve that particular skill. Table 4.38 illustrates the skills leaders thought they had achieved.

<table>
<thead>
<tr>
<th>Chosen response</th>
<th>Number of PAL leaders (n=17)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved my ability to communicate with others</td>
<td>15 (88.2%)</td>
</tr>
<tr>
<td>Improved my personal confidence</td>
<td>13 (76.5%)</td>
</tr>
<tr>
<td>Helped me work more effectively in a team</td>
<td>11 (64.7%)</td>
</tr>
<tr>
<td>Developed my understanding of previous course material</td>
<td>10 (58.8%)</td>
</tr>
<tr>
<td>Enhanced my ability to plan my time effectively</td>
<td>10 (58.8%)</td>
</tr>
<tr>
<td>Improved my job prospects</td>
<td>8 (47.1%)</td>
</tr>
<tr>
<td>Improved my organisation skills</td>
<td>7 (41.2%)</td>
</tr>
<tr>
<td>Enhanced my professional skills</td>
<td>6 (35.3%)</td>
</tr>
<tr>
<td>Enhanced my learning skills</td>
<td>5 (29.4%)</td>
</tr>
<tr>
<td>Helped me better understand course material</td>
<td>3 (17.6%)</td>
</tr>
</tbody>
</table>
Previous literature reports that the leader role provided students with the opportunity to develop communication, teamwork and organisation skills. The majority of PAL responding leaders (n=17) in this study reported improved communication skills (88%), improved confidence (76%) and effective teamwork (65%). Meanwhile, fewer PAL leaders reported improved organisation (41%) skills. PAL sessions at Portsmouth required planning prior to the PAL sessions. PAL leaders were required to contact their PAL mentees to identify the topics and subject matter to be covered in PAL sessions before the sessions took place. Findings from the PAL mentee questionnaire, in Phase 3, determined that few new students thought their PAL sessions were either planned or organised prior to the session (see Tables 4.7 and 4.28), which could explain why few PAL leaders thought their role helped them develop their organisation skills. Furthermore, a greater number of Stage 1 students who reported their PAL leaders as organised also gained more academic benefits and felt better prepared for assessment, compared to those students with less organised PAL leaders. PAL leaders were also asked to what extent they agreed with the statements listed in Question 3 (Appendix 13). Table 4.39 illustrates the findings.
Table 4-39 The degree to which PAL leaders agreed with the statements.

<table>
<thead>
<tr>
<th>Chosen response to statements (n=17)</th>
<th>St.A</th>
<th>A</th>
<th>SA</th>
<th>SD</th>
<th>D</th>
<th>St.D</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can use the skills I have developed as a result of becoming a PAL leader when I am a pharmacist</td>
<td>2</td>
<td>13</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(12%)</td>
<td>(76%)</td>
<td>(12%)</td>
<td>(0.0%)</td>
<td>(0.0%)</td>
<td>(0.0%)</td>
</tr>
<tr>
<td>I have been supported by the PAL supervisor as a PAL leader</td>
<td>8</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(47%)</td>
<td>(41%)</td>
<td>(12%)</td>
<td>(0.0%)</td>
<td>(0.0%)</td>
<td>(0.0%)</td>
</tr>
<tr>
<td>I have met new people and made new friends as a PAL leader</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(24%)</td>
<td>(47%)</td>
<td>(18%)</td>
<td>(12%)</td>
<td>(0.0%)</td>
<td>(0.0%)</td>
</tr>
<tr>
<td>Overall, becoming a PAL leader has been an enjoyable experience</td>
<td>7</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(41%)</td>
<td>(59%)</td>
<td>(0.0%)</td>
<td>(0.0%)</td>
<td>(0.0%)</td>
<td>(0.0%)</td>
</tr>
</tbody>
</table>

St.A = strongly agree
A = agree
SA = somewhat agree
SD = somewhat disagree
D = disagree
St.D = strongly disagree

All responding PAL leaders agreed with the statements, except two leaders who felt this opportunity did not give them an opportunity to meet new people or make friends.
PAL leaders agreed that the skills developed from their role were transferable to their future roles as pharmacists. Communication, confidence and teamwork are all skills required in the workplace. Being a PAL leader provided students with additional opportunities at university to develop such skills. A report from Aston University, which evaluated peer mentoring at six different HE institutions, determined similar findings where peer mentors thought their role helped enhance their employability skills. 337

4.6.3 Perceived benefits from being a PAL leader

PAL leaders were asked to list any benefits they thought they had gained from undertaking their PAL leader role. Similar to Phases 1 and 2, content analysis was undertaken to analyse their answers which permitted a quantitative analysis of this qualitative data. See Table 2.1 in Section 2.4.7.3 for a more detailed explanation of content analysis. Three themes were identified: confidence, transferable skills and career benefits. Table 4.40 illustrates their comments.
Table 4-40 Benefits gained from undertaking the PAL leader role.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of respondents (n=9)</th>
<th>Example comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td>4 (44.4%)</td>
<td>“Become more confident talking to a group”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I feel much more confident with talking to students from all years of pharmacy”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Improves confidence”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“It’s helped me become more confident in communicating with other people”</td>
</tr>
<tr>
<td>Transferable skills</td>
<td>3 (33.3%)</td>
<td>“Improved my responsibility”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Learnt to think on my feet in planning exercises”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Learned new computer skills”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Getting to know and work with peers from my year. Feeling part of a team/family with all other PAL's”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“It improved my communicational skills”</td>
</tr>
<tr>
<td>Career benefits</td>
<td>2 (22.2%)</td>
<td>“Skills gained will be relevant to future roles as a pharmacist”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Looks good on CV”</td>
</tr>
</tbody>
</table>

N.B. Only 9 students answered this question

4.6.4 Reasons for volunteering to be a PAL leader

PAL leaders were asked to state the reasons why they volunteered to undertake the role. Content analysis was undertaken to analyse their answers and three themes were identified: to help the new students, improve their own curriculum vitae and improve their own skills. Table 4.41 illustrates their comments.
Table 4-41 PAL leaders’ reasons for volunteering to undertake their role.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of respondents (n=17)</th>
<th>Example comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>To help first year students</td>
<td>14 (82.4%)</td>
<td>“I wanted to help the first years develop knowledge”, “To pass on skills and experiences gained from first and second year to students in 1st year”, “To share my ideas and what I've been through with others and help 1st years to get through what I had to go through last year.”, “Since PAL helped me so much last year. If I didn't become a PAL leader I'd feel that I am putting students at a disadvantage”, “I wanted to help the first year students settle in”</td>
</tr>
<tr>
<td>Improve my CV</td>
<td>4 (23.5%)</td>
<td>“Looks good on CV”, “It would also look good on my CV”</td>
</tr>
<tr>
<td>Improve my skills</td>
<td>4 (23.5%)</td>
<td>“Become more confident talking in a group”, “Improves confidence”, “Improve my communication skills”, “Improve ability to lead groups and group work in general”, “Improve my team building”, “To show that I'm dedicated to the MPharm degree, I'll do above and beyond what is asked to improve my skills and other people's skills”</td>
</tr>
</tbody>
</table>

The most frequently expressed reason students volunteered to be PAL leaders (n=17) was to help others (82%). A small proportion of students stated they
wanted to improve their own skills (24%) and thought it would improve their future prospects as it would look good on their *curriculum vitae* (24%). Similar findings were determined in Phase 2 (see Section 3.6.8), when students were asked why they chose to be a mentor. Students gave reasons which focused upon others i.e. they wanted to give something back and help others; self-focused i.e. they wanted to improve their own skills or prospects; and some reasons were a combination of the two.²⁹⁶

**4.6.5 Improvements to the PAL programme**

The final question in the PAL leader questionnaire (Appendix 13) asked leaders to suggest any improvements that would further help students benefit from PAL. Similar to all the other open-ended questions in this questionnaire, content analysis was undertaken to analyse their answers and two themes were identified: better organisation and planning of subject matter to be discussed; and the timetable slot for PAL. Table 4.42 illustrates their comments.
Table 4-42 Suggested improvements to PAL.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of respondents (n=13)</th>
<th>Example comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation</td>
<td>9 (69.2%)</td>
<td>“To have a structure for the session. To stick to a set timetable of what to cover throughout the year”, “Specific aims and objectives for each session”, “Have more of an overall structure/guidelines on what PAL sessions would be discussing each session. Different PAL sessions were doing different things”</td>
</tr>
<tr>
<td>Timetable</td>
<td>4 (30.8%)</td>
<td>“Less inconvenient timetabled sessions”, “Have slot when first years more inclined to come”, “Have PAL sessions more frequently”</td>
</tr>
</tbody>
</table>

N.B. 4 students did not answer this question.

Phase 2 of this research identified similar drawbacks in the student mentoring scheme (Section 3.6.8) where suggestions for improvement included better structure and organisation of the sessions and for SMP sessions to be timetabled. PAL sessions were on students’ timetables and yet PAL leaders reported that unless the sessions were in the middle of the day or next to other events on the timetable, attendance was low.
4.7 Phase 3 Results and Discussion – PAL leader one-to-one interviews

The data obtained in this phase of the research showed a number of concepts within themes. PAL leaders’ reasons for volunteering to undertake the role were central in each one-to-one interview and two main themes emerged: personal gain and helping others.

The benefits gained from being a leader were also discussed with each PAL leader and themes which emerged were transferable skills and professionalism.

Themes were organised into the two categories to facilitate understanding of how they related to each other. The framework of concepts, themes and categories which emerged from the data are shown in Table 4.43.
Table 4-43 Categories, themes and concepts emerging from the data

<table>
<thead>
<tr>
<th>Category</th>
<th>Theme</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reasons for being a PAL mentor</td>
<td>Personal gain</td>
<td>Enhance employability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal satisfaction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skills development</td>
</tr>
<tr>
<td>Helping others</td>
<td></td>
<td>Give something back</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sense of belonging</td>
</tr>
<tr>
<td>Benefits from being a PAL leader</td>
<td>Transferable skills</td>
<td>Organised</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Confidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Communication</td>
</tr>
<tr>
<td>Professionalism</td>
<td></td>
<td>Employability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Interprofessional</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Patients contact</td>
</tr>
</tbody>
</table>
4.7.1 Phase 3 qualitative findings

Similar to the qualitative findings discussed in Phases 1 and 2, Sections 4.7.1 to 4.7.15 include a narrative explaining and discussing the qualitative findings in Phase 3.

4.7.2 Category 1 – Reasons for being a PAL leader

All participants in this part of the study had previously been PAL leaders; two themes emerged for the reasons they chose to undertake the role: personal gain and helping others. Themes will be discussed in combination since all PAL leaders discussed both themes when providing reasons for them undertaking the PAL leader role.

4.7.3 Theme 1 and Theme 2: Personal gain and helping others

Students volunteered to undertake the PAL leader role for their own personal gain and three concepts appeared fundamental in relation to this: enhanced employability, personal satisfaction and skills development. Helping others was also considered an important factor for undertaking the PAL leader role. Three concepts appeared fundamental in relation to helping others: giving something back, helping with transition and a sense of belonging.

4.7.4 Discussion of Theme 1 and Theme 2 findings

PAL leaders reflected upon their own personal gain from undertaking the role and stated they thought this opportunity would be looked upon favourably for future job applications. In addition to enhancing their curricula vitae and
developing their skills, PAL leaders also wanted to have the fulfilment of supporting the new students and helping them with their transition into university and on to the MPharm:

I have nothing I can write on my CV and also, it’s great getting to know year one [students], because when I was year one I was like, I wish I knew year twos or someone above me, to give me that extra little bit of help, because pharmacy aint easy. I was like, oh my god, but, I think it’s great for them to know that they have year twos as well to help them out... also it looks good on your CV, and that’s the main thing, because nowadays it’s so competitive, that I don’t have anything to say as well, but I’m glad I did it, it’s not just for that (laughs nervously) but yeah...

(PL1)

Um to be honest I thought it would look good on my CV which was the main factor, and um I think it would be nice to like share... and like help them as well. And um like in school I was learning leader as well, so I thought it would be something similar to that.

(PL15)

These PAL leaders’ main motives for volunteering was for their own benefit. PL1 reflected upon her own experience as a first year and mentioned how it would have been helpful to have known a student in a higher year; however she frequently alluded to the fact that undertaking the PAL leader role was good for her curriculum vitae and said “… and that’s the main thing,.” PL 15 also stated that “it would look good on my CV which was the main factor”. PL1 mentioned how competitive pharmacy was and then quickly back tracked and said “… it’s
not just for that”, followed by a nervous laughter in an attempt to redeem herself. Despite indicating motives, which focused upon the benefits for other, for undertaking the role, it was apparent that their main reason for choosing to undertake the role was self-focused in order to enhance their future job applications. Allen et al, reported similar findings when undertaking semi-structured interviews with student mentors. 296

Meanwhile, other mentors who wanted to boost their curricula vitae, also wanted to help students with their transition on to the course and into university:

'It looks good on your CV and because I just wanted to get to know people in the other years really I think it’s nice to be able to walk around and know people and also because I would’ve liked it in the first year. So I think it’s nice to be able to provide it for someone else make them feel more comfortable and also cuz I think it helped me gain confidence kinda thing, so I feel if I have to do it, I had to stand up in front of people, then I’d gain from it as well.

Just makes you feel good doesn’t it if you feel like you’ve actually helped them understand something or they give you good feedback or something like that that you feel like oh! Like you’ve actually done something with your day to benefit other people rather than just yourself.

(PL11)
I’ve been a mentor at my sixth form before and I found it was something that helped me kind of recap my learning, I also quite like helping people, but mainly just so I could, because I felt like I struggled with my first year a bit. I didn’t know where to go if I was stuck cuz lecturers wouldn’t help you with coursework and things. I... I wanted to be able to offer that to someone properly I suppose.

(PL12)

These PAL leaders’ main motives for volunteering was to help new students. PL11 mentioned “it looks good on your CV”, but then went on to talk about getting to know people in other academic years and offering something that she never had when she was a first year student. In particular she mentioned how helping others made her feel “makes you feel good... you’ve actually done something with your day to benefit other people rather than just yourself”.

PL12 discussed the benefits she gained from a mentoring role at school because she was able to recap her learning of previous work. In addition she wanted to give something back, since she had struggled during her first year at university and stated she “wanted to be able to offer that to someone”.

One leader thought the role would give them an opportunity to revisit their own studies from Stage 1:

To help others and also it makes me revisit stuff from first year and it stops you forgetting everything, but benefits others as well.

(PL19)
Participants in this stage of Phase 3 had previously been part of either the Student Mentor Programme during Stage 1 of their MPharm course 2013-2014, or the first launch of the PAL programme during Stage 1 of the course in 2014-2015. Some leaders referred to their experiences of the SMP and PAL programmes when discussing their motives for volunteering as PAL leaders. Some PAL leaders volunteered because they had experienced a good mentor/leader:

Well, first of all it looks good on a CV, but erm apart from that because I benefitted from the second years [mentors] that I knew, like they played a big role cuz they helped me with like the neuroscience workshop that we had to fill in the questionnaires and assessments and everything so I thought if I become a PAL leader, I can help the first years and their first year will be easier because they have to pass first year to get to second year so it’ll be a shame to fail first year which is meant to be the easiest, so I thought if I become a PAL leader and I help them the way the second years [mentors] helped me, they could move on, and then obviously tackle the rest of the years.

(PL3)

It [PAL] actually offer you help... as in if you were to speak to one of your lecturers it would be quite hard to get into contact with them so... whereas with your PAL leader it would like just over the phone, quickly just text them could you help me on this question for this topic and they will be there for you. So basically I just wanted to help the first years in making sure they were comfortable in this and that.

(PL20)
[PAL] was on my timetable, first of all I wasn’t really sure what it was to start with, and then my first session obviously it became apparent that there was second years and I thought it was a really, that they were really friendly and really approachable and it gave me the incentive to go back. It was just obvious that they done it last year so it was really fresh in their heads, they were nice sessions to attend so I kept going. I want, I like looking up to older peers, I just wanted to be in that position [a PAL leader] when I was in year one as a PAL tutee just kind a like the idea of it, like being able to share your experiences with the first years and hope you can help a little bit.

(PL18)

These PAL leaders benefited from having higher year students to turn to and as a result wanted to give something back and provide new students with similar support. PL18 mentioned how he aspired to be like his PAL leaders. He looked up to his leaders and “wanted to be in that position”, thus demonstrating both self and other-focused motives for volunteering to do the role.

Meanwhile some PAL leaders chose to volunteer because their previous mentors had been poor:

I felt like they [the mentors] were only doing it because it looked good on their CV rather than actually caring about why you are doing it. Because of the bad experience I had, I thought you know what this can really be good and can really help people I wish I don’t know I had this experience of it so I thought may be might be beneficial to instead of me criticizing and saying it wasn’t very good like helping to change it or like to make it better

(PL20)
[My mentor] didn’t really seem that bothered at all so... so it was just not a very good experience... because of the erm... the failed mentoring scheme from last year, I thought it might be handy for the current year one, as it might improve where they stand with their grades and help them move forward into year 2 smoothly so they know what they’re doing

(PL7)

Although these PAL leaders reported a less supportive experience from their mentors, they clearly demonstrated approaches which focused on others and chose to undertake the PAL leader role to help the new Stage 1 students settle in to university and on to the MPharm course.

One PAL leader mentioned how she felt the role would help her in her pharmacy career; she listed all the skills she thought she could gain and this was why she wanted the opportunity to undertake the role:

I wanted to help people out, if I could at least help one person then I’d do it... As well as I like talking to people and I think that if I enter into community pharmacy it’s got a lot to do with communication, this would also benefit me and help me become more confident. You’re talking to a big group as well, I work with two other girls [PAL leaders] so as well team work. I think it just helps out a lot in a pharmacy as well you would be working with other people and you know, getting organised, organising session, having like an hour time management, it has a lot of benefits like that.

(PL14)
4.7.8 Summary of Theme 1 and 2 findings

This section has focused on the reasons MPharm students chose to volunteer as PAL leaders. Similar to the findings in Phase 2, PAL leaders were other-focused and/or self-focused and all participants realised the importance of helping the new Stage 1 students with their transition into university and on the MPharm course. Previous experiences of the SMP or PAL programme did not appear to impact negatively upon students’ choice to undertake the role. Some participants reported volunteering because they had benefited greatly from having a mentor/PAL leader. Meanwhile, those who reported a poorer experience felt they could make a difference and also volunteered. Finally, one leader identified the skills she could gain as a result of undertaking the role.

4.7.9 Category 2 – Benefits from being a PAL leader

In addition to the motives for being a PAL leader, this stage of Phase 3 gathered participants’ perceived benefits from undertaking the PAL leader role. Benefits were described in relation to two distinct themes: transferable skills and professionalism.

4.7.10 Theme 1: Transferable skills

All PAL leader participants in this study contributed to the discussions relating to the benefits gained as a result of undertaking their role. Three key concepts appeared as central in relation to this theme: organised, confidence and communication skills (see Table 4.43).
4.7.11 Discussion of Theme 1 findings

PAL leaders acknowledged skills they had gained as a result of undertaking their role, in particular they discussed how volunteering had helped them with how they approached their own studies:

> I have definitely become more confident so um I am able to give a presentation um for like pharmacy practice or medicines patients. I know how to give a presentation, before it used to be like holding a piece of paper and reading it out, but now I know that you have to move and you have to engage with the audience, ask questions... they have definitely taught me to go into deeper research so I can help them as well. So when they ask me a question I can research it, so when they ask me a question and I don’t understand it I say “let me get back to you” and I would research further than my notes so I am able to understand enough to help them.

(PL13)

> I think it’s made me think about my own way I learn and how when I’m giving out advice on learning techniques and working out exercises to do with the PAL group. I realised I need to also improve on myself because I may be saying this is a good idea for someone and I personally find it useful but I may not be doing it that much. For example writing out diagrams and mind maps, things like that, I will recommend it but personally I didn’t do much in first year in that regards but this year I’ve been doing a lot more because I’ve been thinking about how I’m learning and understanding, it also makes me a lot more willing to contact tutors and lecturers

(PL8)
PAL leaders learned as much from undertaking their role, as their PAL mentees learned from their leaders. Similar findings were determined in Phase 2 where the mentors were often learning as much from their mentees, as the mentees were learning from their mentors and these findings were consistent with the literature. 273, 313, 314

Furthermore, leaders reported better organisation skills as a result of PAL:

I think it’s taught me to be a bit more organised as well, since obviously there are a couple of sessions throughout the term, um you know we need to manage our time as well um so it’s just taught me you know to have a plan for everything maybe just write like to do lists, try and find time for everything and just become more organised with my own work, with my studying you know and getting reports in on time and yeah stuff like that.

(PL14)

I cannot tell you how much more organised I am, like last year I was.. I don’t wanna say last minute because I’m never a kinda last minute kinda girl, but oh my god, time management is completely changed, because you have to do lesson plans, and with that I’ve kinda changed with everything I do, like now I have to do lists with everything... and I’m just so much more organised in my time and there are things I have to get done and prioritising my events. That’s one thing I really didn’t expect, I didn’t expect that we had to do lesson plans and stuff like that, once I got in to the hang of it that I have to be prepared, for things, it changed me completely.

(PL5)
PAL leaders reported that the organisation of their time and workload had benefited as a result of their role. They focused more upon how they had personally benefited and how they managed their time as opposed to how they organised and planned the PAL sessions. This could explain why few PAL mentees reported that PAL sessions were organised and planned to meet everyone’s needs (Table 4.28). Furthermore, suggestions for improvements to PAL included better organisation of PAL session (Tables 4.35 and 4.37).

In addition to improved organisation skills, PAL leaders also reflected upon their confidence as a result of their role:

*I’m definitely more confident now to speak, because I hated, in fact loathed, speaking in public and at the front of a room... I just couldn’t talk at the front, so now I’m more like open, I remember the training session like [the trainer] was like ‘oh you will speak’ and I probably coulda killed him and then I hated it. But, now I’m more comfortable... I can go to the front... It’s made me a bit more like, not as chickened [anxious] to try things*

(PL5)

*I’ve gained experience in talking to people, maybe more confident especially. Talking to a larger group of people as well and organising the PAL sessions, you get skills from that.*

(PL10)
More confident… that’s one of the main things, if you saw me I was one of those shy girls, I don’t really talk to many people, I [would] literally just sit on my own [as a PAL leader] right now I got to work with [two other leaders] and I never even heard of them. If I didn’t go to PAL, I wouldn’t have met all these other people that I met on the course, so that was a big thing for me. Just gaining confidence, and also getting to know a bit more people within pharmacy as well, that was really beneficial, and yeah, and making more friends as well, I think it’s more about the confidence thing. It got me out there, got me interactive.

(PL1)

These mentors particularly benefited because their PAL leader role required them to stand up and speak out and yet they lacked the confidence to do this prior to volunteering. PL5 was especially reluctant to stand up and speak out and described the PAL leader training where the trainer asked her to speak out. PL 1 explained how quiet and shy she was before embarking on this new role. The PAL leader role appeared to take some students out of their comfort zone and to undertake tasks that they initially felt uncomfortable doing. However, by showing resilience and determination these students overcame their anxieties and benefited from the whole experience.

Further skills gained from the PAL leader role was communication skills:

It’s really helped in gaining confidence and communication skills.

(PL13)
It’s improved my communication skills because I couldn’t stand in front of a group of people and give a presentation but now it’s like PAL has become a part of, shall I say, my life... I don’t mind getting up and talking to them or getting the attention of people to share something... it has improved my confidence, I can stand in front of them now and talk.

(PL3)

It’s helped me with my organisational skills and talking [communicating] to a group of people, presenting things and learning different ways [to explain things], through different group activities. I think that’s been quite beneficial. It’s made me think about how I present myself.

(PL6)

It’s helped develop my confidence when talking to new people. I’m quite shy so I have to talk to them and get them involved so then it gets me used to talking to people and then I can use that in other situations as well.

(PL6)

Leaders PL13 and PL8 reported a better understanding of their course content, this method of confirming previous experience enhanced their self-confidence. Confidence was a frequently cited personal attribute to develop as a result of the PAL process; probably not surprising given the nature of tasks and/or activities leaders were required to perform and the associated attributes that develop as a consequence. Leaders were expected to prepare materials in advance of sessions.
and some dealt with students’ issues or concerns during the sessions themselves which could have enhanced their problem-solving and time-management skills.

Furthermore, PAL leaders planned their activities in and around their own work schedules and also attended PAL debrief meetings after each PAL session. They were required to arrive on time, work with the other PAL leader(s) in their group and manage timings within each session including opening and closing the sessions appropriately. Stage 1 students were expected to set the agenda but leaders needed to have a contingency plan in case they arrived with nothing to discuss. PAL sessions needed to be flexible to accommodate the needs of the Stage 1 students and leaders needed to respond to their varying needs within each session, which also served to develop their flexibility and adaptability.

Mentors in Phase 2 described similar personal benefits from their role (see Section 3.6.18).

4.7.12 Summary of Theme 1 findings

This section focused on the transferable skills PAL leaders gained from undertaking their voluntary role. Leaders reflected upon their skills prior to the role and as a result of embarking upon the role. In particular there was a positive impact upon leaders’ perceived organisation, confidence, communication and their approaches to their own personal studies.

4.7.13 Theme 2: Professional

All PAL leaders in this part of the study contributed to discussions relating to their professional development during the PAL programme. Three key concepts
appeared as central to this theme: impact upon their employability, inter-professional relations and patient contact (see Table 4.43).

4.7.14 Discussion of Theme 2 findings

PAL leaders identified benefits gained that they could use in their professional careers as pharmacists. Some leaders reflected on how this opportunity improved how they would communicate with their patients:

Confidence is good because I’ll be interacting with new patients or people every single day wouldn’t I? They’ll be coming in contact. If I didn’t have PAL I would be one of those little pharmacists that just gives you prescriptions and be like ‘ahh take one a day’ or whatever, but sometimes it’s nice to have that little bit of extra confidence and talk to them. Get to know them. Especially when you’re asking if they’re coming in with a condition, and then getting to know them a bit more asking them more questions I think that’s the main thing that’s really helped. It’s just getting to talk and understand them, because before I would never talk to anyone... I would be one of those people that just stays out of everything, so PAL has got me out there, made me more confident and talk, I think that’s one of the main thing.

(PL1)

I think it’s good because they [Stage 1 students] ask you questions and then you get used to giving answers in different ways until they understand it. That’ll be good in consultations with the public, when you talk to people about their medications or lifestyle advice.

(PL9)
A pharmacist has to always communicate with people about [their] medicines, they have to teach them about how to take their medicines, about any adverse side effects or any like specific instructions. Being a PAL leader you are always talking to people, you are always helping them and I think just the more practise of that the more confident you will become as a pharmacist. As a pharmacist if you’re not confident and if you’re not certain in what you’re saying then the patient is not going to trust you, and then they won’t take their medicines properly so I think it’s really helped in gaining confidence and communication skills.

(PL13)

As a pharmacist you communicate with patients and you never know patients until you meet them, so me meeting the first years and then trying to gain their trust. A patient doesn’t talk to you until they trust you. So I think me being able to gain their trust now, I know how to approach people and convince them to believe in what I’m saying.

(PL3)

In addition to improved interactions with patients, PAL leaders also discussed interactions with colleagues and other health professionals:

It’s good because you’re developing listening and talking skills so that’s important when you’re talking to say your other colleagues like doctors, nurses and other professional people also your patients. So you can listen to their concerns. Also leadership, so if you wanted to be in a managerial role you know you’ve got the required skills for that, for those jobs. Also it makes you a more well-rounded person, so you can tackle any job I guess

(PL7)
[I also gained] teamwork, because I have to work with another PAL leader to run a PAL session. [When] I work anywhere I’ll have to work with other people, so if it’s the sales person or any other staff that works in the pharmacy. My PAL colleague tells me what he thinks is right, we share ideas, so it’s not just me or just him, the two of us coming together and compromising and stuff. I think it will help me if I become a pharmacist one day because then I don’t know everything so if other people tell me stuff I know how to put it together with what I have to make everything the best.

(PL3)

They [PAL sessions] have made me more of a team player I think, especially as we don’t work by ourselves, we work with another [PAL leader] It means we have to be organised between the two of us, we still acquire a lot of work and we have to learn how to split it, to each other’s strengths and weaknesses. That’s quite good cuz as a pharmacist you’re working as a team in a pharmacy and you may be in charge of a team and have to help manage and facilitate their [staff] learning... I think the skills you pick up are quite useful for a pharmacist, as well as communication skills being able to have a conversation can be useful in talking to patients.

(PL8)

One PAL leader felt that this experience would help should he be required to support pharmacy graduates or newly qualified pharmacists:
In 10 years’ time, as a pharmacist and then a senior pharmacist, the newcomers the people that come in, I will be able to help them more, to settle in and help them with stuff they don’t understand. It’s a tough step so I’ll try and get them motivated and help them settle in properly. I will be able to help the new pharmacist, the newly qualified pharmacist, help them with their learning and help them settle in and stuff and if they struggle with anything I can help them as well. Make sure they settle in properly… come in on time and if they have any problems they can actually come to me as well. So I say that’s a benefit.

(PL15)

PAL leaders also appreciated the responsibility of their role and were able to put it into perspective the need for professionalism when they were responsible pharmacists:

I think time management would be crucial, you can’t be late especially if you’re opening up a pharmacy you’re always going to have to be early. As a pharmacist as well as organisation, you’re dealing with drugs and people’s lives here. It’s really important. I think that’s really important and that [being a PAL leader] would really help me further on in my career.

(PL14)

You have to address them [PAL mentees] in such a way that they are still people and people do struggle with things from time to time... They might give the impression they got everything under control but when you dig a little deeper, it might be that they think they have it under control but no, they might have misread a topic or they don’t
completely understand something, so the PAL scheme helps me to communicate... Particularly with the healthy lifestyle advice, we had a workshop dealing with a COPD patient and one of the things we had to try and encourage her to do, was to stop smoking but she’s a patient who’s been smoking for 20plus years so how do you tell somebody who’s already got a condition that’s caused by smoking, to stop smoking? You kind of have to encourage them without being patronising, so it’s working on my communication skills.

(PL2)

PAL leaders perceived their role would make them more employable, because it would be looked upon favourably by employers. One leader felt that the role would make her stand out from the rest. She perceived her PAL leader role as a unique opportunity that provided her with additional skills to enhance her employability:

*It looks good on your CV of course, it makes you stand out as well from other people, you’ve done something different. It’s not just about getting work experience at a pharmacy, you’ve done something different, unique, if that makes sense it’s not the same as everyone else, so it makes you look different so that was quite good.*

(PL1)
4.7.15 Summary of Theme 2 findings

This section focused on the professional development of the PAL leaders. Similar to the findings in Phase 2, PAL leaders felt that they benefited both personally and professionally from undertaking the voluntary role. In particular, PAL gave leaders an opportunity to develop their transferable skills such as confidence, communication and organisation. PAL leaders also felt a sense of responsibility and could foresee how they would use their skills and knowledge from their role in their future pharmacy professions.

4.8 Limitations of Phase 3

Similar to Phases 1 and 2 of this study, Phase 3 also had some limitations. It was conducted in a single school of pharmacy, which may limit generalisability to all student pharmacists in different settings and different degree programmes.

In the quantitative stage of the study, students were asked to state the number of PAL sessions they had attended during Stage 1 of their MPharm degree course, thus relying upon their recall and honesty in answering this question. Furthermore, responses may have been affected by the curriculum year of each student at the time of the study.

Finally, it was not clear why only seventeen of the twenty-six mentors completed and returned the PAL leader questionnaire. One email was sent, by the author, to all PAL leaders reminding them to complete and hand in their questionnaires, perhaps a more personal approach may have improved results.
4.9 Conclusion from Phase 3

The methods used in Phase 3 were strengthened by using information gathered during the quantitative phase to identify survey items for the qualitative phase. The one-to-one student interviews exploring reasons students chose to volunteer and perceived benefits of their role were supported by the survey results and findings determined in Phase 2. Answers for all research questions in Phase 3 were determined and the key findings were as follows.

Attendance at PAL sessions was good and just over half of respondents (52%, n=168) reported attending more than half of the PAL sessions. The main reason for non-attendance was the inconvenient time that PAL sessions appeared on the timetable (37%, n=148) and the main drawback of PAL sessions was the lack of organisation and planning of content to cover (50%, n=48).

Students’ experiences of PAL were dependent upon the PAL leaders facilitating the sessions. Those who were encouraged to participate in group discussions benefitted significantly more than those students who were not encouraged to do so (P < 0.05), and reported an understanding of course topics, workload management, motivation and an understanding of course expectations. Indicating a positive impact from group discussion.

Good attenders of PAL i.e. more than 4 out of 8 PAL sessions, felt better prepared for assessment and thought they had performed better in their assessments as a result of attending PAL (P < 0.001). This could be because good attenders reported improved knowledge; in-depth understanding of course topics; enhanced confidence; better workload management; increased
motivation; understanding course expectations and supported learning of course topics compared to poor attenders of PAL.

A positive impact was reported by more good attenders than poor attenders upon their transition and experiences of university, improved social skills and confidence as a result of attending PAL. More good attenders also thought PAL improved their learning independence; study skills; group working; organisation skills; and better prepared for effective study. These results suggest that attending a certain number of PAL sessions may be required to gain a noticeable benefit from the PAL programme.

Students who reported that their PAL leaders organised sessions to meet everyone’s needs felt better prepared for assessment, improved subject knowledge, increased understanding of topics, enhanced confidence and understood course expectations. Thus confirming the importance of advanced planning by leaders before facilitating their PAL sessions.

Students thought PAL was a safe (96%, n=164), supportive (76%, n=164) and enjoyable (83%, n=164) environment to learn. Furthermore, 89% (n=167) preferred to ask a PAL leader certain questions as opposed to asking a member of university staff. Suggested improvements to the PAL programme included a better structure and organisation within the PAL sessions prior to each session.

PAL leaders undertook their role in order to help the new students with their transition, to give something back and to pass on their skills and experience. They also stated self-focused reasons such as enhancement of their *curricula vitae* and gaining transferable skills.
PAL provided leaders with an additional opportunity to develop skills and perceived that their role could make them more employable. This unique opportunity permitted students to develop skills and knowledge which contribute to achieving the GPhC standards for pharmacy professionals. PAL leaders reported working in partnership with other leaders; communicating effectively; behaving in a professional manner; demonstrating leadership.
Chapter 5: Overall Discussion and Conclusion

5.1 Overview

Phases 1, 2 and 3 each undertook a mixed methods approach, which provided the researcher with an opportunity to check the findings from one method i.e. the questionnaires, against the findings from another method i.e. the focus groups and interviews. This permitted the researcher to feel confident that the findings were accurate by seeking convergence, corroboration and correspondence of results from the different methods. The mixed methods approach also enhanced the findings by providing a fuller and more complete picture of the subjects being investigated. The data produced from the different methods were complementary and provided alternative perspectives of the subjects compared to that resulting from a mono-method study. The advantages and disadvantages of this approach are further discussed in Section 5.3.

Phase 1, in Chapter 2, used a quantitative questionnaire and six focus groups to target MPharm students in Stages 2, 3 and 4. Each was used to explore: why students chose to study pharmacy, their experiences of the study support services at UOP, the effect such services had upon them, and where they turned to for academic support. Two hundred and thirty-four students responded to the questionnaire, this sample was representative of the target population, and thirty-five students participated in the focus groups.

Phase 2, in Chapter 3, used a quantitative questionnaire and six focus groups targeting Stages 2 and 3 students to explore their opinions of the student mentor
programme from both mentees’ and mentors’ perspectives. Sixty-two mentees and thirty-four mentors responded to the questionnaire, this sample was representative of the target population. Meanwhile, thirty-four students, eight mentees and twenty-six mentors, participated in the focus groups.

Phase 3, in Chapter 4, used a quantitative questionnaire and one-to-one interviews targeting students who had been involved in the Peer Assisted Learning programme to explore opinions of PAL from both PAL mentees’ and PAL leaders’ perspectives. One hundred and eighty-two PAL mentees and seventeen PAL mentors responded to the questionnaire, this sample was representative of the target population, and twenty-six PAL mentors were interviewed.

In Phase 1 students demonstrated both intrinsic and extrinsic motivations for choosing to study pharmacy, suggesting that respondents were motivated by several factors. Female students were either interested in the profession of pharmacy, wanted to help people or opted for pharmacy after failing to get on to a medical or dental course. Meanwhile male students said science was their favourite subject or opted for pharmacy after failing to get on to a medical or dental course.

Intrinsic and extrinsic orientations were also demonstrated by students who chose to volunteer as student mentors or PAL leaders in Phases 2 and 3. Some volunteers were focused upon helping others and exhibited intrinsic motives; they wanted to help new students with their transition into university and the MPharm. Meanwhile, some were more self-focused and exhibited extrinsic
motives because they wanted to enhance their *curricula vitae* and use this opportunity to develop their transferable skills.

Students’ academic help-seeking behaviours in Phase 1 varied. Official university academic support services were accessed more by students who had passed their end of year assessments without the need for second attempt, compared to those who were required to take second attempt assessments. Students who undertook second attempt assessments appeared less able to perceive or admit they needed help compared to students who progressed without second attempt. Additionally, they appeared to have an inability to act on a determined need and/or perceived the study support services available to be of little benefit. Academic help-seeking is a complex self-regulatory behaviour; an adaptive process within which students alter their coping strategies according to their workload or subject challenges. Students, in this study, needed to identify when they needed support, who they could approach for the support, be willing to ask for the support in the first place and have a collaborative or harmonious relationship with the person or service they chose to seek support from. It could be that students, who reported taking second attempt assessments, had a lower perceived academic competence which could have been a contributing factor to their inability to seek help from academic support services.

In Phase 1, the three main unofficial channels for academic study support that students stated were: their peers, higher year students and lecturers. Students had a preference for support that was “clear and easy to understand”, “easily accessible”, from people who were “friendly and happy” and that was “specific
to their course”. Non-use was affected by negative perceptions of usefulness and relevance of the support provision to their individual needs.

Phase 2 respondents reported similar preferences; significantly more students felt more comfortable asking their peers for support compared to higher year students and lecturers; a larger proportion of respondents preferred to approach higher year students than lecturers, but the difference observed was not significant. Meanwhile, respondents in Phase 3 preferred asking their PAL leaders questions before approaching lecturers.

Phase 1 identified a need for a student mentoring programme (SMP) to help new students with their transition into university and on to the MPharm course. Evaluation of the SMP, in Phase 2, identified a need for a more structured timetabled programme where new students could meet with their higher year peers without the presence of an academic staff member. The PAL programme was evaluated in Phase 3 and benefits for both Stage 1 students and PAL leaders were identified. In order to gain a noticeable benefit from the PAL programme, Stage 1 students needed to attend over half of the PAL sessions.

PAL focused on autonomous extrinsic motivation i.e. students had the freedom to make their own choices about the topics they wanted to cover, together with external direction from the PAL leader but without a controlling element. This finding suggests that students are more likely to engage and achieve a higher quality of learning. \( ^{95, 105} \) When this occurs students not only feel competent but also self-determined, as they carry out extrinsically valued activities.
Finally, PAL brought MPharm students with the same interest and goal together and they engaged in a process of collective and collaborative learning i.e. a community of practice. This peer learning process provided a supportive network that helped enhance students’ communication, teamwork, collaborative and interpersonal skills.

5.2 Communities of Practice

Communities of practice (CoP) are defined as “groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly.”

Wenger described the structure of a CoP as consisting of three interrelated terms: 'mutual engagement', 'joint enterprise' and 'shared repertoire'. The findings from this PhD research confirm that the MPharm PAL programme at UOP enabled the students to form a community of practice.

The PAL students participating in the community reached a mutual agreement establishing norms and building collaborative and supportive relationships. These relationships were the connections which bound the members of the community, i.e. the members of the PAL sessions, together.

PAL members also established a joint enterprise, which can also be referred to as the interactions which took place between members. The PAL students created a shared understanding of what connected them together and this connection was the topic(s) of interest within the MPharm programme.
Finally, the CoP formed as a result of PAL developed a shared repertoire, which can be referred to as the common resources produced and used by the members of the PAL community. It was these resources that contributed to the interactions and domain of the PAL CoP.

Wenger claimed that learning was central to human identity, in particular learning as social participation where individuals were active participants within communities of practice. In this context, PAL enabled members form a CoP bringing a group of individuals together to experience and share their knowledge through engaging in and contributing to the practices of their communities.

As already mentioned in Section 4.1.1 the structural characteristics of a community of practice are a domain, a community and a practice. These three characteristics were essential for the MPharm PAL community of practice (CoP) to succeed.

The domain was the topic or subject of interest that was shared by the PAL group, it created a common ground and a sense of identity. The domain encouraged members to contribute and participate and guided their learning. PAL provided a forum for the community to share their learning both across subject areas and across academic stages on the MPharm course.

The community was comprised of MPharm PAL students who shared activities, engaged, discussed and interacted around the domain. They shared information and experiences to help each other. The PAL programme convened the Community of Practice for regular PAL sessions, at least four times per academic term.
Finally, practice was the strategies, ideas and results of the shared interactions of the community i.e. the MPharm students developed and maintained their shared knowledge. PAL built its community around sharing and learning about the best practice in student support. Stage 1 MPharm students were invited to contribute to the PAL sessions by selecting topics to be discussed and shared during the PAL sessions. Meanwhile, PAL leaders facilitated the discussions.

There were many strengths to this approach of learning. A CoP was formed by a group of Stage 1 MPharm students endeavouring to learn the same thing by working together, sharing, researching and discussing their knowledge for themselves, under the facilitation of friendly and approachable PAL leaders.

What differentiated these CoP, and PAL sessions, from just a lecture or classroom exercise was that a lecturer was not directly providing the information but the students were responsible for creating their own understandings of the topic.

The results exhibited a fundamental positive social aspect from PAL whereby students met with higher year students, to enhance their confidence at university and improve their overall university experience.
5.3. Critique of the study

5.3.1. Methodology

An explanation and critique of the research strategy is provided in Sections 2.3 and 2.4.

The researcher ensured that the principles of qualitative enquiry were carefully followed and as such the data should be seen as valid and a true reflection of participants’ perspectives on the issues of interest. Furthermore, the research was strengthened by attention to negative cases and using different methods of data collection.

However, participants may have answered the questions differently from what they actually thought; they may have wished to show their opinions and experiences in a positive light; or felt worried about revealing inadequate practice by course lecturers, mentors or leaders. They may have also felt reluctant to admit to academic difficulties or topics in which they were lacking knowledge. In order to overcome this, it was emphasised that the purpose of the research was to bring about change that would help students develop, improve their knowledge and aid transition into university and the MPharm.

5.3.2 Positionality of the researcher

It is recognised that the results could be subject to bias due to the positionality of the researcher, since the researcher can be regarded as a stakeholder in the PAL programme.
The researcher is an experienced MPharm senior lecturer, with eighteen years’ experience and is a year tutor. She also has additional postgraduate teaching qualifications which gives her the necessary experience, insight and skills-set to plan, design, and conduct and interpret the data.

An objective approach was conducted throughout, to minimise bias; particular effort was made not to discuss with potential participants any of the issues under study prior to, or between, the research interviews. Throughout the data collection and analysis particular care was taken, by the researcher, not to let her personal feelings for individual staff, students or UOP to interfere with the conduct of the research. The researcher endeavoured to be aware of her own opinions and was careful not to impose her views on the participants or the analysis, and instead focussed on remaining neutral to the views expressed by study subjects to ensure that the analysis emerged from the data collected and not the researcher’s preconceived ideas. Thus by thinking reflexively throughout the entire research process, the researcher reduced the risk of being misled by her own experiences and interpretations.

5.4 Overall Conclusion

The following main conclusions can be drawn after evaluating students’ study habits, where they turn for support and the recently introduced Peer Assisted Learning programme.

For MPharm students in this study, managing their studies was important. Those who passed end of year assessments without the need for second attempt adopted more effective organisational strategies than their peers who failed
assessments. They commenced their revision much earlier in the academic year and utilised the gaps in their timetable between lectures more effectively for study.

MPharm students predominantly accessed support from unofficial channels e.g. their peers and higher year students, before seeking academic support from the official university support services. Furthermore, students who failed assessments at first attempt or were averse to exposing the gaps in their knowledge, were more likely to avoid help-seeking behaviours. This finding identified a need to introduce a support service that targeted all students regardless of their help-seeking behaviours.

Opinions of study support services impacted upon students’ likelihood of using them. If a study support service was looked upon favourably i.e. if they were deemed useful, accessible and relevant, they were more likely to be accessed.

Students’ mentoring relationships varied; those who met face-to-face, and on more occasions with their mentors, reported more benefits from their mentoring relationships compared to those who used electronic media or had fewer face-to-face meetings. A perceived drawback of the mentoring programme was it did not appear on students’ timetables and the relationship was very much Stage 1 mentee-led. It was apparent that some Stage 1 students were either reluctant or ill-equipped to seek support from their mentors. Meanwhile mentors relied upon their mentees to make contact and as a result for many students the mentoring relationship never fully developed.
The Peer Assisted Learning programme was timetabled to enable face-to-face contact between Stage 1 students and their Stage 2 PAL leaders. All Stage 1 students were allocated to a PAL group in order to target all students and capture those with help-seeking avoidance behaviours.

New students found PAL sessions useful; attending a certain number of PAL sessions were required to gain a noticeable benefit from the PAL programme, in this study attendance at more than half of the PAL sessions appeared to make a positive difference for Stage 1 students. The student-led approach of PAL provided new students with a safe and supportive environment for study and contributed to their transition into university.

The supportive network gained from PAL can be compared to Communities of Practice. PAL provided a forum for the community of MPharm students to share their learning, knowledge and experiences at regular timetabled sessions. Stage 1 MPharm students, selected topics to be discussed and shared during the PAL sessions and PAL leaders facilitated the discussions.

PAL leaders benefitted from undertaking their role and reported academic benefits and personal benefits such as confidence, communication skills, teamwork, leadership and professional benefits. Employability draws on attributes that are developed and used in multiple settings and the student-led approach of PAL provided an additional opportunity for students to enhance their employability.
Chapter 6: Recommendations for future practice and research

6.1 Future practice

It is important to acknowledge that there is limited research about the benefits of peer learning within a UK context and that most of that which has been published is based on the Australian or American models.

Structure and organisation of the PAL sessions were common and important themes to emerge from the research. Mentees, mentors and PAL leaders suggested methods to improve the structure and organisation PAL sessions. Some new Stage 1 students had an inability to determine when they needed support and the nature of the support they required. It is recommended that PAL leaders are supported by academic PAL supervisors to identify activities which are relevant, purposeful and appropriately challenging in order to engage and involve all members of their PAL group.

Furthermore, technological advances and the widespread use of the virtual learning environment have reduced the need for students to take notes during lectures, which could impact upon their assessment preparation. More and more assignments are submitted and marked on-line which could compromise the quality and quantity of feedback provision. Activities planned for PAL sessions may need to incorporate the use of electronic devices to access students’ notes and assignments, rather than sharing and updating written notes, in order to
help new students with their transition into university and assessment preparation.

Peer Assisted Learning benefitted both new students and the PAL leaders; the researcher will disseminate these findings to other courses in the school, faculty and university in order to benefit more students at UOP and enable a larger-scale research study into the impact of PAL for students. UOP aims to provide students with an excellent experience in order to gain the knowledge, skills and attributes to be successful in a global workforce. PAL is an opportunity for students to demonstrate some of these attributes.

Further dissemination will also be undertaken at Teaching and Learning conferences e.g. Higher Education Academy and Pharmacy Education conferences. The benefits gained in particular by PAL leaders contribute to the development of transferable skills and standards required from pharmacy professionals.

This study relied upon new students’ recall for the number of PAL sessions they attended and their perceived preparedness and performance in assessments. Future practice will instruct PAL leaders to keep an accurate register of attendance and an investigation comparing accurate levels of attendance with students’ performance in assessments will be undertaken.
6.1.1 Implementation of a Peer Assisted Learning Programme

PAL at Portsmouth came into being as part of a PhD research study and core elements remain crucial regardless of where the programme will be disseminated.

- PAL leaders are trained for their role. This takes place over two days at the beginning of the academic year, preferably prior to Induction Week.

- PAL leaders must be allocated to a specified tutor group in order to develop a close link i.e. a community.

- PAL is course specific, i.e. PAL leaders support students from their own course and attend to matters course specific as well as some non-course related matters e.g. housing.

- PAL is about the realisation of co-operative learning. PAL leaders do not teach.

- Regular PAL debriefs with PAL leaders after each PAL session is essential to identify any issues. PAL leaders are the most important group, their involvement is vital.

- PAL is co-ordinated by at a course level by at least one member of the teaching team. As the programme develops it is recommended to co-ordinate PAL more centrally e.g. from the library or an academic skills unit.
• PAL is available to students on a regular basis, at a pre-determined time and location, through the academic year. Effective timetabling is key, ideally between lectures to encourage good attendance.

• PAL is student-centred and encourages contribution from the course teaching team in order to address core aspects of the course. Encourage the course teaching team to assist PAL leaders by providing teaching schemes and assessment briefs.

• Promotion of PAL by the course teaching team is encouraged.

Figure 6.1 illustrates the author’s recommended timeline for the implementation of PAL.
<table>
<thead>
<tr>
<th>Activity</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>June</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course team meet to discuss interest in utilising PAL on course</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Leader liaise with relevant management team to notify them of interest in running PAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School decides which course to implement PAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Determine number of sessions required throughout year e.g. weekly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timetable PAL sessions for September onwards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School agrees funds to run PAL (pay leaders or not?)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify PAL leader numbers required (minimum 2 per PAL group)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAL co-ordinator (or central PAL team if applicable) meet with course teaching team to explain purpose of PAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree if PAL targeting specific unit or a more flexible approach</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appoint a course PAL contact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raise profile of PAL with Year 1 to recruit leaders for Sept start</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design and distribute PAL leader application forms to Year 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notify successful applicants and inform of training sessions/dates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching staff to formulate directed activities for PAL sessions, particularly early on in the year.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAL co-ordinator to check timetabling of PAL sessions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact new PAL leaders with introductory information about PAL and confirm attendance at PAL training.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAL leader training, preferably before Induction Week</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assign PAL leaders to tutor groups post training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAL leaders meet with tutor groups throughout year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAL leader debriefs with PAL co-ordinator throughout year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation of PAL throughout year and at end of year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.2 Research

This PhD study targeted mentees, mentors and PAL leaders directly; collected both quantitative and qualitative data, and determined their individual experiences and benefits gained. Meanwhile, previous literature reporting benefits to PAL leaders, and mentors, have been often secondary to the primary aim of exploring the benefits of peer learning to Stage 1 participants. 341

Further research targeting the skills PAL leaders gain is recommended, since that which does exist is based almost exclusively on a qualitative perspective; 335 evaluative, quantitative research is limited. 342, 343

The mixed methods approach used in this work has enabled an in-depth exploration of UOP students’ study habits and their perceptions of peer learning.

Further impact-evaluation research of the benefits of PAL, to new students and PAL leaders, could lead to a change in university policy; PAL should become a valued priority for resourcing and more embedded into institutions’ cultures.

Following dissemination of the findings of this PhD study at UOP, it is expected that PAL will continue to grow and reach out to more students across the university. A larger quantitative study can be undertaken to identify the benefits of PAL for both attendees and leaders.

Further research is needed to determine whether the various claims can be generalised outside their specific contexts and more importantly, to ensure ongoing improvements in training and in PAL programme design and delivery.
References


39. Revised learning outcomes for the initial education and training of pharmacists [Internet]. London: General Pharmaceutical Counsil; 2013 [cited 2014 February 06].


75. Wilcox P, Winn S, Fyvie-Gauld M. It was nothing to do with the university, it was just the people: the role of social support in the first-year experience of higher education. Studies in Higher Education. 2005;30(6):707-22.


122. Nasser N. Final year MPharm project: Students' aspirations and motivations to study pharmacy at the University of Portsmouth [Dissertation]. 2012.


148. Capstick S, Green J, Beresford R. Choosing a course of study and career in pharmacy - student attitudes and intentions across three years at a New Zealand School of Pharmacy. Pharmacy Education. 2007;7(4):359-73.


184. Noyce N. Portsmouth School of Pharmacy and Biomedical Sciences, School Manager. Personal Communication. 02 November 2012.


234. Rennison S. Student engagement with formal lectures on the MPharm programme at the University of Portsmouth, DPharm thesis: Portsmouth; 2011.


279. Mannion C. Mentoring – Centre for Postgraduate Pharmacy Education. Essex: Pansophix Online; 2011.


Appendix 1. Illustration of the University of Portsmouth four year MPharm programme
Appendix 2. Questionnaire sent to stages 2, 3 and 4 MPharm students in phase 1 of the study
Dear Student,

This questionnaire is part of a postgraduate project to ascertain the number of students that use the study support systems made available to them at the University of Portsmouth, and to determine if there is a correlation between usage of support services and academic attainment.

1. What is your gender? □ Male □ Female

2. What is your ethnicity?

<table>
<thead>
<tr>
<th>Asian or Asian British</th>
<th>Mixed</th>
<th>Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Bangladeshi</td>
<td>□ White Asian</td>
<td>□ Chinese</td>
</tr>
<tr>
<td>□ Indian</td>
<td>□ White Black African</td>
<td></td>
</tr>
<tr>
<td>□ Pakistani</td>
<td>□ White Black Caribbean</td>
<td></td>
</tr>
<tr>
<td>□ Other Asian background</td>
<td>□ Other Mixed Background</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Black or Black British</th>
<th>White</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ African</td>
<td>□ British</td>
<td>□ Any other group</td>
</tr>
<tr>
<td>□ Caribbean</td>
<td>□ Irish</td>
<td></td>
</tr>
<tr>
<td>□ Other Black background</td>
<td>□ Other White Background</td>
<td></td>
</tr>
</tbody>
</table>

3. Why did you choose to study pharmacy? (Please rank in order up to 3 reasons, 1 as the highest)

□ I am interested in the subject of pharmacy.
□ My parents/family wanted me to.
□ Science was my favourite subject at school.
□ I want a job I know I will enjoy.
□ I have pharmacists in my family.
□ I want to help people.
□ I want to be guaranteed a job after university.
□ I got in through clearing.
□ I failed to get into medicine/dentistry etc.
□ I want to make a difference to healthcare.
□ Other, please specify……………………………………………………………………………………………
4. What is your personal opinion of the workload on the MPharm?

☐ Far too much, I struggle to cope  
☐ Heavy but I can just cope  
☐ Just about right, I am coping well  
☐ Not enough work to do  
☐ Workload? The course is too easy

5. When you have needed help with your studies, where do you go, whom do you turn to? (Please rank in order up to 3 reasons, 1 as the highest)

☐ Lecturers 
☐ Personal Tutor 
☐ Friends of the MPharm in your year
☐ Parents/family  
☐ Friends on other courses  
☐ Higher year students on the MPharm
☐ Other, please specify ........................................................................................................

6. Which of the following study support services at Portsmouth University are you aware of? Tick all that apply.

☐ Academic Skills Unit (ASK)  
☐ Science Learning Support Tutor  
☐ English for Academic Purposes (EAP)  
☐ Maths Cafe  
☐ Library  
☐ Information Services (IS)

7. Have you ever needed to use any of the study support services listed in question 6?

☐ Yes   ☐ No

If no, go to question 9.
8. Use the table below to rate the services you have used.

<table>
<thead>
<tr>
<th>Support Service</th>
<th>Rating 1 to 5 (1=Excellent to 5=Poor)</th>
<th>How did you first hear about it? See options below this table and choose one option only (1 to 7)*</th>
<th>Advantages of the service</th>
<th>Disadvantages of the service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Skills Unit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science Learning Support Tutor Dr Simon Gamble</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English for Academic Purposes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maths Café</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library Help and Support e.g. literature searches</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information Services (IS) e.g. learning how to use software</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Options:

1. Induction week in 1st year
2. Word of mouth
3. Leaflet
4. Poster
5. Presentation in a lecture
6. Internet
7. Tutor
8. Other, please specify in the table above
9. If you were aware of these services but have not used them yet, is there a particular reason why this is?  
☐ Yes  ☐ No

If yes to Question 9, please specify the service and reasons

.................................................................................................................................................................
.................................................................................................................................................................

10. What other support services do you think would be useful and why?

.................................................................................................................................................................

Do you think that using the study support systems available could lower the chance of failing exams/having referrals?  ☐ Yes  ☐ No

12. Have you ever failed an exam and been required to take referral(s) during your course of study?  
☐ Yes  ☐ No

If yes, please specify which academic year(s) you were in when you undertook the referral(s). Please tick all that apply:

☐ 1  ☐ 2  ☐ 3

If no, please go to Question 15.

13. Why do you think you had referrals? (Please rank in order up to 3 reasons, 1 as the highest)

☐ Didn’t enjoy the topic  ☐ Delivery of the unit was poor
☐ Left revision to last minute  ☐ Didn’t understand the topic
☐ I tried to question spot  ☐ Too much pressure
☐ Didn’t work hard enough  ☐ I learned all the wrong topics
☐ Nerves on the day  ☐ Timetable was too cramped
☐ Concentrated more on other exams

☐ Other, please specify

.................................................................................................................................................................

14. If you had referrals, did you use any of the study support systems available before or after sitting them?

☐ Before. Please specify which one(s) ........................................................................................................

☐ After. Please specify which one(s) ........................................................................................................
15. Do you think having a student mentor from a higher year on the MPharm could support you with your studies? □ Yes □ No

Please explain your answer.................................................................................................................................................................
........................................................................................................................................................................................................

16. What do you think are the advantages or disadvantages of having a student mentor?
........................................................................................................................................................................................................
........................................................................................................................................................................................................

17. Please state how strongly you agree or disagree with the following statement:

‘The MPharm tutorial program is designed to support student learning throughout your degree.’

☐ Strongly agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly disagree

Please explain why you feel that way..................................................................................................................................................
........................................................................................................................................................................................................

18. If you have any further comment you wish to make about the support services at Portsmouth University, please state them here:

........................................................................................................................................................................................................
........................................................................................................................................................................................................

Thank you for your cooperation, Helen Hull (helen.hull@port.ac.uk)

Now please hand this completed questionnaire to the lecture.
Appendix 3. Focus group schedule used in phase 1 of the study
Thank you all for coming today to help me gather data for my study.

The university has a number of support systems it offers all students to help them cope at university, and I am investigating students’ awareness of these support systems.

Before I start I just need to remind you to speak clearly and one at a time as I am recording this session to transcribe later.

To get started I just need each of you to say your name clearly and just talk for about 20 seconds about what you did at the weekend. This will help me to recognise your voice when I listen to the recordings later.

Ok – I’ll start. I am………………………..and this week end I  
…………………………………………

(allow all to say name and talk for max 20 secs)

Thank you for that. So let’s start.

1. When you needed help with your studies where did you go, who did you turn to?

2. EITHER None of you have had referrals – why do you think that is? How did you approach your studies?  
   OR  
   You have all had at least one referral since you have been at UOP. Why do you think you had referrals? What happened?

3. There are a number of UOP support services available to all students (not just for MPharm students). What UOP support systems are you aware of?
4. Take a look at the support systems available on this sheet. Which ones have you heard of? What do you know about them? What opinions do you have about any of them? Which ones have you used?

5. Now you know a bit about the UOP support systems, would they be something you would consider using for support in future? Which ones in particular?

6. What other support systems would you personally like UOP to provide?

7. What is the best way to advertise UOP support systems to students? How would you like to hear about them?

Thank you for your time, please can you just confirm that you are all still happy for me to anonymise and use your comments in my study.
Appendix 4. Focus group participant demographics in phase 1
Focus group participant demographics in phase 1

<table>
<thead>
<tr>
<th>Participant Number</th>
<th>Gender</th>
<th>Age</th>
<th>Ethnicity</th>
<th>Year Group</th>
<th>Passed without referrals (P) or with referrals (R)</th>
<th>Participant Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F</td>
<td>21</td>
<td>British-White</td>
<td>2</td>
<td>R</td>
<td>(1:2:R)</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>21</td>
<td>British-White</td>
<td>2</td>
<td>R</td>
<td>(2:2:R)</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>32</td>
<td>Other-White</td>
<td>2</td>
<td>R</td>
<td>(3:2:R)</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>22</td>
<td>British-White</td>
<td>2</td>
<td>R</td>
<td>(4:2:R)</td>
</tr>
<tr>
<td>5</td>
<td>M</td>
<td>37</td>
<td>African-Black</td>
<td>2</td>
<td>R</td>
<td>(5:2:R)</td>
</tr>
<tr>
<td>6</td>
<td>M</td>
<td>20</td>
<td>Other-Asian</td>
<td>2</td>
<td>R</td>
<td>(6:2:R)</td>
</tr>
<tr>
<td>7</td>
<td>M</td>
<td>20</td>
<td>British-White</td>
<td>2</td>
<td>R</td>
<td>(7:2:R)</td>
</tr>
<tr>
<td>8</td>
<td>F</td>
<td>20</td>
<td>Indian-Asian</td>
<td>2</td>
<td>P</td>
<td>(8:2:P)</td>
</tr>
<tr>
<td>9</td>
<td>F</td>
<td>20</td>
<td>British-White</td>
<td>2</td>
<td>P</td>
<td>(9:2:P)</td>
</tr>
<tr>
<td>10</td>
<td>F</td>
<td>20</td>
<td>Irish-White</td>
<td>2</td>
<td>P</td>
<td>(10:2:P)</td>
</tr>
<tr>
<td>11</td>
<td>M</td>
<td>21</td>
<td>Pakistani-Asian</td>
<td>2</td>
<td>P</td>
<td>(11:2:P)</td>
</tr>
<tr>
<td>12</td>
<td>F</td>
<td>20</td>
<td>Pakistani-Asian</td>
<td>2</td>
<td>P</td>
<td>(12:2:P)</td>
</tr>
<tr>
<td>13</td>
<td>M</td>
<td>21</td>
<td>Irish-White</td>
<td>3</td>
<td>R</td>
<td>(13:3:R)</td>
</tr>
<tr>
<td>14</td>
<td>M</td>
<td>20</td>
<td>Indian-Asian</td>
<td>3</td>
<td>R</td>
<td>(14:3:R)</td>
</tr>
<tr>
<td>15</td>
<td>F</td>
<td>20</td>
<td>Indian-Asian</td>
<td>3</td>
<td>R</td>
<td>(15:3:R)</td>
</tr>
<tr>
<td>16</td>
<td>F</td>
<td>21</td>
<td>Indian-Asian</td>
<td>3</td>
<td>R</td>
<td>(16:3:R)</td>
</tr>
<tr>
<td>17</td>
<td>F</td>
<td>22</td>
<td>Indian-Asian</td>
<td>3</td>
<td>R</td>
<td>(17:3:R)</td>
</tr>
<tr>
<td>18</td>
<td>M</td>
<td>21</td>
<td>British-White</td>
<td>3</td>
<td>R</td>
<td>(18:3:R)</td>
</tr>
<tr>
<td>19</td>
<td>F</td>
<td>22</td>
<td>British-White</td>
<td>3</td>
<td>P</td>
<td>(19:3:P)</td>
</tr>
<tr>
<td>20</td>
<td>F</td>
<td>21</td>
<td>Other</td>
<td>3</td>
<td>P</td>
<td>(20:3:P)</td>
</tr>
<tr>
<td>21</td>
<td>M</td>
<td>21</td>
<td>British-White</td>
<td>3</td>
<td>P</td>
<td>(21:3:R)</td>
</tr>
<tr>
<td>22</td>
<td>F</td>
<td>21</td>
<td>British-White</td>
<td>3</td>
<td>P</td>
<td>(22:3:P)</td>
</tr>
<tr>
<td>23</td>
<td>F</td>
<td>23</td>
<td>Other-Mixed</td>
<td>3</td>
<td>P</td>
<td>(23:3:P)</td>
</tr>
<tr>
<td>24</td>
<td>F</td>
<td>23</td>
<td>Chinese</td>
<td>4</td>
<td>R</td>
<td>(24:4:R)</td>
</tr>
<tr>
<td>26</td>
<td>M</td>
<td>25</td>
<td>Irish-White</td>
<td>4</td>
<td>R</td>
<td>(26:4:R)</td>
</tr>
<tr>
<td>27</td>
<td>F</td>
<td>21</td>
<td>British-White</td>
<td>4</td>
<td>R</td>
<td>(27:4:R)</td>
</tr>
<tr>
<td>28</td>
<td>M</td>
<td>21</td>
<td>Chinese</td>
<td>4</td>
<td>R</td>
<td>(28:4:R)</td>
</tr>
<tr>
<td>29</td>
<td>M</td>
<td>22</td>
<td>Indian-Asian</td>
<td>4</td>
<td>R</td>
<td>(29:4:R)</td>
</tr>
<tr>
<td>30</td>
<td>F</td>
<td>22</td>
<td>Indian-Asian</td>
<td>4</td>
<td>P</td>
<td>(30:4:P)</td>
</tr>
<tr>
<td>31</td>
<td>F</td>
<td>22</td>
<td>Other-Asian</td>
<td>4</td>
<td>P</td>
<td>(31:4:P)</td>
</tr>
<tr>
<td>32</td>
<td>F</td>
<td>22</td>
<td>British-White</td>
<td>4</td>
<td>P</td>
<td>(32:4:P)</td>
</tr>
<tr>
<td>33</td>
<td>M</td>
<td>22</td>
<td>African-Black</td>
<td>4</td>
<td>P</td>
<td>(33:4:P)</td>
</tr>
<tr>
<td>34</td>
<td>F</td>
<td>21</td>
<td>Indian-Asian</td>
<td>4</td>
<td>P</td>
<td>(34:4:P)</td>
</tr>
<tr>
<td>35</td>
<td>M</td>
<td>24</td>
<td>Indian-Asian</td>
<td>4</td>
<td>P</td>
<td>(35:4:P)</td>
</tr>
</tbody>
</table>
Appendix 5. Focus group consent forms for phase 1
PARTICIPANT CONSENT FORM

STUDY TITLE: An investigation into MPharm students’ study habits and where they turn to for study support

PHBMEC Reference No: Please initial each box if content

1. I confirm that I have read and understood the attached information sheet for the above study. I confirm that I have had the opportunity to consider the information, ask questions and that these have been answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

3. I understand that the results of this study may be published and/or presented at meetings, and may be provided to research sponsors (Give the name of the Company/Organisation here, or remove the research sponsor reference if not applicable). I give my permission for my anonymous data, which does not identify me, to be disseminated in this way.

4. Data collected during this study could be requested by regulatory authorities. I give my permission to any such regulatory authority with legal authority to review the study to have access to my data, which may identify me.

5. I agree to the data I contribute being retained for any future research that has been approved by a Research Ethics Committee.

6. I agree to take part in this study.

7. I consent for audio recordings of any focus groups or interviews to be taken during the experiment for analysis and for any quotes I make to be used in presentations and publications (with my identity anonymised).

Name of Participant: Date: Signature:

Name of Person taking Consent: Date: Signature:
Appendix 6. University of Portsmouth School of Pharmacy and Biomedical Sciences, Science Faculty Ethics Committee letter
Mrs Helen Hull  
University of Portsmouth  
School of Pharmacy and Biomedical Sciences  
St. Michael’s Building  
White Swan Road  
Portsmouth PO1 2DT

FAVOURABLE OPINION (Ref. SFEC 2013-011)

Protocol Title: ‘An evaluation of the MPharm student mentor scheme at the University of Portsmouth’.

Date Reviewed: 8th April 2013

Dear Mrs Hull,

Thank you for submitting your protocol for ethical review and for the clarifications provided.

I am pleased to inform you that your application has been given a favourable opinion by the Science Faculty Ethics Committee (SFEC). Please notify us in the future of any substantial amendments that may be required and send us a final study report.

Good luck with the study.

Heleña Herrera

Dr Helena Herrera  
School of Pharmacy and Biomedical Sciences,  
Science Faculty Ethics Committee

CC -  
Dr Chris Markham – Chair of SFEC  
Dr Jim House – Vice Chair of SFEC  
Holly Shawyer – Faculty Administrator
FORM UPR16
Research Ethics Review Checklist

Please include this completed form as an appendix to your thesis (see the Postgraduate Research Student Handbook for more information)

Postgraduate Research Student (PGRS) Information

PGRS Name: Helen Sarah Hull
Department: PHDM
First Supervisor: Professor David Brown
Student ID: up135644
Start Date: October 2011

Study Mode and Route:
- Part-time [X]
- Full-time [ ]
- MPhil [ ]
- PhD [ ]
- ND [ ]
- Professional Doctorate [ ]

Title of Thesis:
An investigation of MPharm Students’ Study Habits and an evaluation of the Peer Assisted Learning Programme at the University of Portsmouth

Thesis Word Count: 76,237

If you are unsure about any of the following, please contact the local representative on your Faculty Ethics Committee for advice. Please note that it is your responsibility to follow the University’s Ethics Policy and any relevant University, academic or professional guidelines in the conduct of your study.

Although the Ethics Committee may have given your study a favourable opinion, the final responsibility for the ethical conduct of this work lies with the researcher(s).

UKRIO Finished Research Checklist:
(If you would like to know more about the checklist, please see your Faculty or Departmental Ethics Committee reps or see the online version of the full checklist at: http://www.ukr.io/what-we-do/code-of-practice-for-research/)

a) Have all of your research and findings been reported accurately, honestly and within a reasonable time frame?
   YES [X] NO [ ]

b) Have all contributions to knowledge been acknowledged?
   YES [X] NO [ ]

c) Have you complied with all agreements relating to intellectual property, publication and authorship?
   YES [X] NO [ ]

d) Has your research data been retained in a secure and accessible form and will it remain so for the required duration?
   YES [X] NO [ ]

e) Does your research comply with all legal, ethical, and contractual requirements?
   YES [X] NO [ ]

Candidate Statement:

I have considered the ethical dimensions of the above named research project, and have successfully obtained the necessary ethical approval(s)

Ethical review number(s) from Faculty Ethics Committee (or from NRES/SCREC):
SFEC 2013-011

If you have not submitted your work for ethical review, and/or you have answered ‘No’ to one or more of questions a) to e), please explain why this is so:

UPR16 – August 2015

[Signature]
Appendix 7. Questionnaire sent to Stage 1 MPharm mentees of the student mentoring programme in phase2
Dear Student,

This questionnaire is part of a postgraduate project to evaluate the student mentoring programme from mentees’ perspectives.

1. What is your gender? □ Male □ Female

2. How would you describe your ethnicity?

□ Asian
□ Black
□ Chinese
□ Mixed
□ White
□ Other ...........................................................................................................

3. I feel that MPharm students in my year support each other.

□ Strongly agree
□ Agree
□ Neutral
□ Disagree
□ Strongly disagree

4. I feel able to get help from MPharm students in my year.

□ Strongly agree
□ Agree
□ Neutral
□ Disagree
□ Strongly disagree

5. I feel uneasy exposing gaps in my understanding to MPharm students in my year.

□ Strongly agree
□ Agree
□ Neutral
□ Disagree
□ Strongly disagree
6. I feel encouraged by lecturers to ask questions.

☐ Strongly agree
☐ Agree
☐ Neutral
☐ Disagree
☐ Strongly disagree

7. I feel able to get help from MPharm students in HIGHER years.

☐ Strongly agree
☐ Agree
☐ Neutral
☐ Disagree
☐ Strongly disagree

8. Please describe what you understand by the term mentor.

.............................................................. .............................................................. .............................................................. .............................................................. ..............................................................

9. What characteristics or skills do you think make a good mentor?

.............................................................. .............................................................. .............................................................. .............................................................. ..............................................................

10. Did you contact your Year 2 student mentor last year?

☐ Yes ☐ No

If yes, how many times?..............................................................

11. Describe the relationship you had with your Year 2 mentor last year.

.............................................................. .............................................................. .............................................................. .............................................................. ..............................................................

12. Did you benefit from having a Year 2 mentor last year?

☐ Yes ☐ No
13. Please explain how the MPharm SMP benefited you or why you think it did not benefit you.

........................................................................................................................................
........................................................................................................................................

14. Did the MPharm SMP help you settle more easily into university life?

☐ Yes  ☐ No

15. Why do you think this is the case?

........................................................................................................................................
........................................................................................................................................

16. Did the MPharm SMP help you settle more easily on to the MPharm course?

☐ Yes  ☐ No

17. Why do you think this is the case?

........................................................................................................................................
........................................................................................................................................

18. Do you think having a mentor helped you perform better in your end of year exams?

☐ Yes  ☐ No

19. How could we improve the MPharm SMP so that Year 1 MPharm students can benefit from it?

........................................................................................................................................
........................................................................................................................................
20. I think a more structured mentoring programme will help MPharm students settle into university life.

☐ Yes  ☐ No

21. Why do you think this way?

......................................................................................................................................................
......................................................................................................................................................

22. I think a more structured mentoring programme will help MPharm students settle on to the MPharm course.

☐ Yes  ☐ No

23. Why do you think this way?

......................................................................................................................................................
......................................................................................................................................................

Thank you for your cooperation, Helen Hull (helen.hull@port.ac.uk)
Now please hand this completed questionnaire to the lecturer
Appendix 8. Questionnaire sent to Stage 2 MPharm mentors of the student mentoring programme in phase 2
Dear Student,

This questionnaire is part of a postgraduate project to evaluate the student mentoring programme from the mentors’ perspectives.

1. What is your gender?  
☐ Male  ☐ Female

2. How would you describe your ethnicity?  
☐ Asian  
☐ Black  
☐ Chinese  
☐ Mixed  
☐ White  
☐ Other...........................................................................................................................................

3. Please describe what you understand by the term mentor.  
.........................................................................................................................................................
.........................................................................................................................................................

4. What characteristics or skills do you think make a good mentor?  
.........................................................................................................................................................
.........................................................................................................................................................

5. Did you contact your Year 1 mentees last year?  
☐ Yes  ☐ No

If yes, how many times?.........................................................................................................................

6. Describe the relationship you had with your Year 1 mentees last year.  
.........................................................................................................................................................
.........................................................................................................................................................

7. Did you enjoy being a mentor?  
☐ Yes  ☐ No
8. What did you enjoy or not enjoy about the mentor role?
............................................................................................................................................................................................
............................................................................................................................................................................................
9. Do you think you benefitted from being a mentor last year?
☐ Yes ☐ No

10. Why do you think this way?
............................................................................................................................................................................................
............................................................................................................................................................................................

11. Did the mentor role help to prepare you for your future role as a pharmacist?
☐ Yes ☐ No

12. Why do you think this way?
............................................................................................................................................................................................
............................................................................................................................................................................................

13. Did mentoring help you perform better in your Year 2 end of year exams?
☐ Yes ☐ No

14. How could we improve the MPharm SMP so that mentors can benefit from it?
............................................................................................................................................................................................
............................................................................................................................................................................................
15. I think a more structured programme will help MPharm students settle into university life.

☐ Yes ☐ No

16. Why do you think this way?

................................................................................................................................................
................................................................................................................................................

17. I think a more structured programme will help MPharm students settle on to the MPharm course.

☐ Yes ☐ No

18. Why do you think this way?

................................................................................................................................................
................................................................................................................................................

Thank you for your cooperation, Helen Hull (helen.hull@port.ac.uk)

Now please hand this completed questionnaire to the lecturer
Appendix 9. Focus group schedule used in phase 2 of the study.
FOCUS GROUP QUESTIONS (PHASE 2)

Thank you all for coming today to help me gather data for my study.

I developed and launched the MPharm student mentoring programme in September 2013 and I wish to investigate your opinions of the programme.

Before I start I just need to remind you to speak clearly and one at a time as I am recording this session to transcribe later.

To get started I just need each of you to say your name clearly and just talk for about 20 seconds about what you did at the weekend. This will help me to recognise your voice when I listen to the recordings later.

Ok – I’ll start. I am......................and this weekend I ....................

(allow all to say name and talk for max 20 secs)

Thank you for that. So let’s start.

1. What do you understand by the term mentor?
2. What characteristics do you think make a good mentor?
3. TO MENTORS ONLY - Why did you choose to be a mentor?
4. How would you describe your mentoring relationship with your mentor or mentees?
5. How have you benefitted from the student mentor programme?
6. TO MENTORS ONLY - Do you think your role will benefit you as a future pharmacist, of so, how?
7. If you could change anything about your experience of the student mentor programme what would it be?

Thank you for your time, please can you just confirm that you are all still happy for me to anonymise and use your comments in my study.
Appendix 10. Focus group participant demographics in phase 2.
<table>
<thead>
<tr>
<th>Participant Number</th>
<th>Gender</th>
<th>Mentor (mr) or mentee (me)</th>
<th>Participant Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F</td>
<td>Mentee</td>
<td>1:me</td>
</tr>
<tr>
<td>2</td>
<td>M</td>
<td>Mentee</td>
<td>2:me</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>Mentee</td>
<td>3:me</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>Mentee</td>
<td>4:me</td>
</tr>
<tr>
<td>5</td>
<td>F</td>
<td>Mentee</td>
<td>5:me</td>
</tr>
<tr>
<td>6</td>
<td>F</td>
<td>Mentee</td>
<td>6:me</td>
</tr>
<tr>
<td>7</td>
<td>F</td>
<td>Mentee</td>
<td>7:me</td>
</tr>
<tr>
<td>8</td>
<td>F</td>
<td>Mentee</td>
<td>8:me</td>
</tr>
<tr>
<td>9</td>
<td>M</td>
<td>Mentor</td>
<td>9:mr</td>
</tr>
<tr>
<td>10</td>
<td>M</td>
<td>Mentor</td>
<td>10:mr</td>
</tr>
<tr>
<td>11</td>
<td>F</td>
<td>Mentor</td>
<td>11:mr</td>
</tr>
<tr>
<td>12</td>
<td>F</td>
<td>Mentor</td>
<td>12:mr</td>
</tr>
<tr>
<td>13</td>
<td>F</td>
<td>Mentor</td>
<td>13:mr</td>
</tr>
<tr>
<td>14</td>
<td>M</td>
<td>Mentor</td>
<td>14:mr</td>
</tr>
<tr>
<td>15</td>
<td>F</td>
<td>Mentor</td>
<td>15:mr</td>
</tr>
<tr>
<td>16</td>
<td>F</td>
<td>Mentor</td>
<td>16:mr</td>
</tr>
<tr>
<td>17</td>
<td>M</td>
<td>Mentor</td>
<td>17:mr</td>
</tr>
<tr>
<td>18</td>
<td>M</td>
<td>Mentor</td>
<td>18:mr</td>
</tr>
<tr>
<td>19</td>
<td>M</td>
<td>Mentor</td>
<td>19:mr</td>
</tr>
<tr>
<td>20</td>
<td>F</td>
<td>Mentor</td>
<td>20:mr</td>
</tr>
<tr>
<td>21</td>
<td>M</td>
<td>Mentor</td>
<td>21:mr</td>
</tr>
<tr>
<td>22</td>
<td>F</td>
<td>Mentor</td>
<td>22:mr</td>
</tr>
<tr>
<td>23</td>
<td>M</td>
<td>Mentor</td>
<td>23:mr</td>
</tr>
<tr>
<td>24</td>
<td>M</td>
<td>Mentor</td>
<td>24:mr</td>
</tr>
<tr>
<td>25</td>
<td>F</td>
<td>Mentor</td>
<td>25:mr</td>
</tr>
<tr>
<td>26</td>
<td>M</td>
<td>Mentor</td>
<td>26:mr</td>
</tr>
<tr>
<td>27</td>
<td>M</td>
<td>Mentor</td>
<td>27:mr</td>
</tr>
<tr>
<td>28</td>
<td>F</td>
<td>Mentor</td>
<td>28:mr</td>
</tr>
<tr>
<td>29</td>
<td>F</td>
<td>Mentor</td>
<td>29:mr</td>
</tr>
<tr>
<td>30</td>
<td>M</td>
<td>Mentor</td>
<td>30:mr</td>
</tr>
<tr>
<td>31</td>
<td>F</td>
<td>Mentor</td>
<td>31:mr</td>
</tr>
<tr>
<td>32</td>
<td>F</td>
<td>Mentor</td>
<td>32:mr</td>
</tr>
<tr>
<td>33</td>
<td>F</td>
<td>Mentor</td>
<td>33:mr</td>
</tr>
<tr>
<td>34</td>
<td>M</td>
<td>Mentor</td>
<td>34:mr</td>
</tr>
</tbody>
</table>
Appendix 11. Professional attributes framework for pre-registration pharmacist trainees.
Professional attributes framework for pre-registration pharmacist trainees.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Behavioural Indicator</th>
</tr>
</thead>
</table>
| **Person-Centred Care**                        | 1.1 Demonstrates empathy and seeks to view situation from the individuals' perspective  
1.2 Places the person who is receiving care first, in everything they do (NHS V1)  
1.3 Accurately assesses, takes into account and is sensitive to the person's current and longer-term expectations, needs, situation and their wider social circumstances (NHS V2 & 4)  
1.4 Shows genuine interest in, and compassion for, the individual; makes them feel valued (NHS V4)  
1.5 Works collaboratively with individuals, empowering and guiding every person to make an informed choice in their care (NHS V1) |
| **Communication and Consultation Skills**       | 2.1 Adopts approach, language or communication style for audience and across a variety of contexts  
2.2 Identifies and interprets non-verbal cues from others  
2.3 Effectively uses non-verbal communication  
2.4 Seeks confirmation of understanding when communicating, clarifying where necessary  
2.5 Elicits accurate and relevant information from individuals  
2.6 Provides accurate and clear information and advice to people receiving care and colleagues  
2.7 Instils confidence in others through communication style  
2.8 Effectively builds rapport with individuals; asks open questions and facilitates a two-way dialogue  
2.9 Breaks down complex information in a way that can be easily understood by others  
2.10 Actively listens to others; is focussed and attentive to what they have to say (NHS V4)  
2.11 Exhibits suitable levels of confidence and assertiveness when communicating; able to influence appropriately  
2.12 Ensures has the relevant information before communicating |
| **Problem Solving, Clinical Analysis and Decision Making** | 3.1 Applies clinical knowledge in the practising environment; draws all knowledge together and builds upon what have learnt to benefit the person receiving care  
3.2 Demonstrates proactiveness and persistence when seeking a solution, whilst also demonstrating awareness of when sufficient information has been obtained  
3.3 Knows where to find and access information, or seeks to find out when uncertain  
3.4 Undertakes a holistic approach to problem solving and decision making, integrates and assimilates information about the individual from difference sources to ensure a person-centred outcome (NHS V1) |
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Behavioural Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Self-directed Learning and Motivation</td>
</tr>
<tr>
<td></td>
<td>4.1 Demonstrates curiosity, commitment and a desire to learn</td>
</tr>
<tr>
<td></td>
<td>4.2 Shows enthusiasm and passion for the role</td>
</tr>
<tr>
<td></td>
<td>4.3 Takes ownership for identifying own learning gaps and development needs; records progress/development activities and stays up to date</td>
</tr>
<tr>
<td></td>
<td>4.4 Seeks, and acts upon, advice, support and feedback to assist their own learning and development (NHS V3)</td>
</tr>
<tr>
<td></td>
<td>4.5 Undertakes reflective practice; analyses and evaluates how they may have done something differently or what went well</td>
</tr>
<tr>
<td></td>
<td>4.6 Demonstrates awareness and acknowledgement of own limitations and boundaries in relation to knowledge and competence</td>
</tr>
<tr>
<td></td>
<td>4.7 Is a self-starter; demonstrates proactivity, initiative and willingness to take on opportunities and learn</td>
</tr>
<tr>
<td></td>
<td>4.8 Is driven to achieve the highest standards of care and strives for excellence (NHS V3 &amp; 5)</td>
</tr>
<tr>
<td>5</td>
<td>Multi-Professional Working and Leadership</td>
</tr>
<tr>
<td></td>
<td>5.1 Understands, values and respects all roles (including their own) within the immediate and wider team, as well as team members’ skill sets and knowledge</td>
</tr>
<tr>
<td></td>
<td>5.2 Willing and able to facilitate others’ learning through sharing own knowledge/experience and/or supporting others when learning</td>
</tr>
<tr>
<td></td>
<td>5.3 Builds and maintains meaningful and trusting relationships with team members and other healthcare professionals outside of the immediate team (NHS V1)</td>
</tr>
<tr>
<td></td>
<td>5.4 Demonstrates an awareness of other team members’ workloads and pressures and adapts their interactions accordingly</td>
</tr>
<tr>
<td></td>
<td>5.5 Works collaboratively; provides assistance, support and guidance to other members of the team for the benefit of the person receiving care (NHS V1)</td>
</tr>
<tr>
<td></td>
<td>5.6 Provides constructive feedback for both individual development and continuous improvement (NHS V5)</td>
</tr>
<tr>
<td></td>
<td>5.7 Motivates and leads others; acts as a role model</td>
</tr>
<tr>
<td></td>
<td>5.8 Demonstrates willingness and ability to actively learn from others</td>
</tr>
<tr>
<td>Attribute</td>
<td>Behavioural Indicator</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>6 Quality Management and Organisation</td>
<td>6.1 Is accurate in their work and undertakes quality assurance processes, demonstrating excellent attention to detail (NHS V3)</td>
</tr>
<tr>
<td></td>
<td>6.2 Keeps accurate and comprehensive records (e.g. notes, labelling) for the purposes of ensuring safe and effective care</td>
</tr>
<tr>
<td></td>
<td>6.3 Good self-management, organises own time effectively to meet the required standards</td>
</tr>
<tr>
<td></td>
<td>6.4 Able to prioritise; understands the importance of tasks and deadlines</td>
</tr>
<tr>
<td></td>
<td>6.5 Takes a methodical, ordered and structured approach to their work to ensure the delivery of high quality care</td>
</tr>
<tr>
<td></td>
<td>6.6 Uses information technology appropriately to effectively manages and organise work</td>
</tr>
<tr>
<td>7 Professional Integrity and Ethics</td>
<td>7.1 Works within the law, ethical guidelines, and regulations, including confidentiality, consent and safeguarding</td>
</tr>
<tr>
<td></td>
<td>7.2 Takes responsibility for self and is accountable for ones' own actions or lack of actions</td>
</tr>
<tr>
<td></td>
<td>7.3 Demonstrates honesty and trustworthiness (NHS V2)</td>
</tr>
<tr>
<td></td>
<td>7.4 Is open and honest about the mistakes they have made or when things have gone wrong</td>
</tr>
<tr>
<td></td>
<td>7.5 Is reliable and dependable in carrying out work duties and responsibilities</td>
</tr>
<tr>
<td></td>
<td>7.6 Recognises and values equality and diversity, treating everyone with courtesy, dignity and respect (NHS V2 &amp; 6)</td>
</tr>
<tr>
<td></td>
<td>7.7 Is prepared to challenge poor practice or behaviours, or speak up when observes errors or oversights</td>
</tr>
<tr>
<td>8 Resilience and Adaptability</td>
<td>8.1 Responds well to change, and is willing to initiate change where appropriate</td>
</tr>
<tr>
<td></td>
<td>8.2 Agile; able to quickly adapt to changes in roles, demands or environment</td>
</tr>
<tr>
<td></td>
<td>8.3 Demonstrates resilience; able to bounce back from difficult situations, setbacks or challenges</td>
</tr>
<tr>
<td></td>
<td>8.4 Manages own emotions during interactions with others and does not allow emotions to influence decisions</td>
</tr>
<tr>
<td></td>
<td>8.5 Remains calm, and is able to work effectively, in high pressured situations</td>
</tr>
<tr>
<td>9 Pharmacy in Practice</td>
<td>9.1 Understands and appreciates pharmacy workflow and dynamics of clinical practice</td>
</tr>
<tr>
<td></td>
<td>9.2 Understands the broader pharmacy landscape, its position and interaction with the wider healthcare context and the progression of a person’s journey through this</td>
</tr>
<tr>
<td></td>
<td>9.3 Demonstrates an awareness of the business and financial responsibilities within healthcare</td>
</tr>
</tbody>
</table>
Appendix 12. Questionnaire sent to Stage 1 PAL mentees in phase 3
Peer Assisted Learning (PAL) Questionnaire: Year 1 PAL

Mentee

This questionnaire is part of a postgraduate project to evaluate the Peer Assisted Learning programme, please answer the following questions based on your experience as a ‘Peer assisted learning’ student in your first year at university.

1. What is your gender?
   - [ ] Male
   - [ ] Female

2. How many PAL sessions did you attend in Year 1? (There were 8 PAL sessions in total – please tick below)

   - [ ] 0
   - [ ] 1-3
   - [ ] 4
   - [ ] 5-7
   - [ ] 8
   - [ ] I am not sure

   If you did not attend all 8 PAL sessions in Year 1 please explain why, using the options below (Tick all that apply)
   - [ ] Sessions were at inconvenient times
   - [ ] I preferred to study alone
   - [ ] I did not need any additional help that PAL could offer me
   - [ ] I was unaware of any PAL sessions
   - [ ] I did not know what PAL was
   - [ ] Other (please state reasons in the box below)

3. Which of the following did attending PAL sessions help you achieve? (Tick all that apply)
   - [ ] Enabled me to improve my knowledge of the subject content of my course
   - [ ] Helped me understand my course topics in more depth
   - [ ] Enhanced my confidence with my course
   - [ ] Helped me to manage my workload
   - [ ] Increased my motivation at university
   - [ ] Helped me understand how to meet my course expectations
   - [ ] PAL sessions supported my learning of the topics covered in my course lectures/workshops
   - [ ] None of the above
   - [ ] I did not attend any PAL sessions
4. Please state any ways in which you feel PAL sessions were **UNHELPFUL**

5. Did you or your year one peers decide what was discussed in PAL sessions?
   - □ Yes
   - □ No
   - □ Sometimes

6. Were you better prepared for university assessments as a result of attending PAL sessions?
   - □ Yes
   - □ No
   - □ Not sure

7. Do you believe you performed better in university assessments as a result of attending PAL sessions?
   - □ Yes
   - □ No
   - □ Not sure

8. Which of the following has PAL helped you achieve? (Tick all that apply)
   - □ Improved the techniques I used to learn alone
   - □ Enhanced my study skills; e.g. note taking or revision techniques
   - □ Helped develop my ability to work in a group
   - □ I was more organised as a result of attending PAL
   - □ I was better prepared for effective study as a result of PAL
   - □ None of the above

9. Which of the following did PAL help you with? (Tick all that apply)
   - □ To adjust to university life
   - □ To meet new people and make new friends
   - □ PAL improved my overall student experience
   - □ To adjust to living away from home in Portsmouth
   - □ None of the above

10. Which skills did PAL help you improve upon? (Tick all that apply)
    - □ My social skills
    - □ My ability to communicate with others
    - □ My personal confidence
    - □ None of the above
11. Choose the ONE statement that best reflects your own understanding of a PAL leader:

- [ ] They aim to re-teach the course material
- [ ] They teach new information not covered within lectures or workshops
- [ ] They can replace the teaching of the curriculum by lecturers
- [ ] They facilitate group discussion for students to explore answers to problems together
- [ ] They are experts in topic areas and will answer academic questions for you
- [ ] None of the above

12. Choose the statements that best reflect the PAL sessions you attended (Tick all that apply)

- [ ] PAL leaders encouraged me to participate in group discussion
- [ ] PAL leaders shared their own experiences
- [ ] I was encouraged to compare notes with other students in PAL sessions
- [ ] None of the above

13. Please list the skills your PAL leaders had:


14. Please list the skills you would have liked your PAL leaders to have:


15. Which of the following applied to your PAL leaders? (Tick all that apply)

- [ ] They organised sessions that met everyone’s needs
- [ ] I felt supported by the leaders
- [ ] PAL leaders helped me feel confident to ask questions in the sessions
- [ ] PAL leaders created an effective learning environment
- [ ] None of the above

16. To what extent do you agree with this statement: “I preferred to ask a PAL leader certain questions as opposed to asking a member of university staff”

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Somewhat agree</th>
<th>Somewhat disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

444
17. To what extent do you agree with this statement: “PAL study sessions were a safe environment, where I could discuss my ideas, share problems and resolve my questions”

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Somewhat agree</th>
<th>Somewhat disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

18. Did PAL sessions provide a supportive environment?

☐ Yes  ☐ No  ☐ Sometimes

19. To what extent do you agree with this statement: “Overall I found PAL sessions an enjoyable learning experience”

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Somewhat agree</th>
<th>Somewhat disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

20. Please rate the formality of the PAL sessions you attended

<table>
<thead>
<tr>
<th>Very formal</th>
<th>Formal</th>
<th>Somewhat formal</th>
<th>Somewhat informal</th>
<th>Informal</th>
<th>Very informal</th>
</tr>
</thead>
</table>

21. Suggest what improvements to PAL sessions you feel would further help students benefit from PAL

Thank you for taking the time to fill out this questionnaire, your opinions are important to us. Please now return your questionnaire to the lecturer.
Appendix 13. Questionnaire sent to Stage 2 PAL leaders in phase 3
Peer Assisted Learning (PAL) Questionnaire: Year 2 – PAL Leader

This questionnaire is part of a postgraduate project to evaluate the Peer Assisted Learning programme, please answer the following questions based on your experience as a ‘Peer assisted learning’ leader

1. What is your gender? □ Male □ Female

2. Which of the following has becoming a PAL leader helped you achieve? (Tick all that apply)
   - Improved my ability to communicate with others
   - Enhanced my professional skills
   - Helped me work more effectively in a team
   - Developed my understanding of previous course material
   - Helped me better understand my current course material
   - Improved my personal confidence
   - Improved my job prospects
   - Enhanced my learning skills
   - Improved my organisation skills
   - Enhanced my ability to plan my time effectively
   - None of the above

3. Please rate the extent to which you agree with the following statements:

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Somewhat agree</th>
<th>Somewhat disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can use the skills I have developed as a result of becoming a PAL leader when I am a pharmacist</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have been supported by the PAL supervisor as a PAL leader</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have met new people and made new friends as a PAL leader</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall, becoming a PAL leader has been an enjoyable experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

447
4. Please list any other ways you have benefitted from becoming a PAL leader


5. Please state your reasons for becoming a PAL leader


6. Please suggest any improvements to PAL sessions you feel would further help students benefit from PAL

Thank you for taking the time to fill out this questionnaire.

Please now return your questionnaire to the lecturer.
Appendix 14. One-to-one interview participant demographics in phase 3.
One-to-one PAL leader interview participants in phase 3.

<table>
<thead>
<tr>
<th>Participant Number</th>
<th>Gender</th>
<th>PAL Year</th>
<th>Participant code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F</td>
<td>2014-15</td>
<td>PL1</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>2014-15</td>
<td>PL2</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>2014-15</td>
<td>PL3</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>2014-15</td>
<td>PL4</td>
</tr>
<tr>
<td>5</td>
<td>F</td>
<td>2014-15</td>
<td>PL5</td>
</tr>
<tr>
<td>6</td>
<td>F</td>
<td>2014-15</td>
<td>PL6</td>
</tr>
<tr>
<td>7</td>
<td>F</td>
<td>2014-15</td>
<td>PL7</td>
</tr>
<tr>
<td>8</td>
<td>M</td>
<td>2014-15</td>
<td>PL8</td>
</tr>
<tr>
<td>9</td>
<td>F</td>
<td>2014-15</td>
<td>PL9</td>
</tr>
<tr>
<td>10</td>
<td>F</td>
<td>2014-15</td>
<td>PL10</td>
</tr>
<tr>
<td>11</td>
<td>F</td>
<td>2014-15</td>
<td>PL11</td>
</tr>
<tr>
<td>12</td>
<td>F</td>
<td>2014-15</td>
<td>PL12</td>
</tr>
<tr>
<td>13</td>
<td>F</td>
<td>2014-15</td>
<td>PL13</td>
</tr>
<tr>
<td>14</td>
<td>F</td>
<td>2014-15</td>
<td>PL14</td>
</tr>
<tr>
<td>15</td>
<td>M</td>
<td>2015-16</td>
<td>PL15</td>
</tr>
<tr>
<td>16</td>
<td>F</td>
<td>2015-16</td>
<td>PL16</td>
</tr>
<tr>
<td>17</td>
<td>M</td>
<td>2015-16</td>
<td>PL17</td>
</tr>
<tr>
<td>18</td>
<td>M</td>
<td>2015-16</td>
<td>PL18</td>
</tr>
<tr>
<td>19</td>
<td>F</td>
<td>2015-16</td>
<td>PL19</td>
</tr>
<tr>
<td>20</td>
<td>F</td>
<td>2015-16</td>
<td>PL20</td>
</tr>
<tr>
<td>21</td>
<td>F</td>
<td>2015-16</td>
<td>PL21</td>
</tr>
<tr>
<td>22</td>
<td>M</td>
<td>2015-16</td>
<td>PL22</td>
</tr>
<tr>
<td>23</td>
<td>F</td>
<td>2015-16</td>
<td>PL23</td>
</tr>
<tr>
<td>24</td>
<td>M</td>
<td>2015-16</td>
<td>PL24</td>
</tr>
<tr>
<td>25</td>
<td>F</td>
<td>2015-16</td>
<td>PL25</td>
</tr>
<tr>
<td>26</td>
<td>M</td>
<td>2015-16</td>
<td>PL26</td>
</tr>
</tbody>
</table>