

## **AN EVALUATION OF THE PLACEMENT SCHEME ON THE MPHARM DEGREE**

MAC ABBAS, JAMES BURROW AND MINDAUGAS RUDOKAS (PHARMACY)

*Abstract* – This paper examines the work-based placement scheme in UCLan’s MPharm course to determine whether or not work placement experiences benefit students on this degree programme and the extent to which this experience may contextualise the theoretical learning at the university. The aim was to identify which aspects of the placement can influence the learning process and what can be done to improve current placements. The study focused on undergraduate students and pre-registration and practising pharmacists. Data collection occurred through two types of paper based questionnaires and analysis of the data was carried out using SPSS software.

Results showed there was variability ( $P>0.05$ ) in answers between student years, especially regarding mentor feedback and the amount of time mentors spent with students. With regard to placement length, there was little difference between years, with 51% of students in general believing that placement length was currently sufficient. However, there was a significant difference ( $P<0.05$ ) between qualifications that practising pharmacists held, and their opinions regarding placement length.

Overall, both pharmacists and students reported that work-based experience is beneficial and should be continued as it helps contextualise theory with practice. Activities and assignments assist students to think critically and reflectively about their experience as well as future career choice.

*Keywords* –Placement, MPharm, UCLan, Mentoring, Pharmacy Practice.

### **Introduction**

Pharmacy programmes offered by universities in the United Kingdom provide theoretical learning consisting of lectures, tutorials and practicals. This theoretical based learning can assist students in adopting the necessary mind-set needed when practising. Although it is debatable as to how university programmes can ensure that material taught in classrooms relates to real life practice, pharmacy schools provide work placements within community, hospital, industry and academic environments to guarantee that high standards of learning in the classroom are complemented with practice to develop skills required for future careers.

According to the General Pharmaceutical Council (GPhC)(2011), Standards for Initial Education of Pharmacists, pharmacy schools must provide students with opportunities of applied experience in

interacting with patients, carers and other healthcare professionals. However, this is open to interpretation by each pharmacy school as the GPhC does not provide specific guidance on the length of placement visits. Consequently, schools are left to arrange visits to pharmacies and plan individual learning outcomes.

Placements allow students to learn and practise various clinical and communication skills which are needed to be an effective pharmacist (Shah 2004). According to McRobbie (2004) MPharm courses should concentrate more on pharmacy practice and increase students' exposure to patients. Consequently, this first exposure to practice during undergraduate years allows bridging of the gaps between theory and practice, developing competencies and skills which without placements would be difficult to implement. Furthermore, according to the General Pharmaceutical Council (2010) Student Code of Conduct, pharmacy students must 'develop professional knowledge and competence'. The placement scheme helps address this and other Code of Conduct criteria. Theoretical education does not necessarily ensure that knowledge and skills are current to maintain competence. Allowing students to learn in the work place environment gives them the opportunity to develop and apply the combination of knowledge, skills and professional judgment which may be disregarded in the classroom.

The General Pharmaceutical Council (2011) standards for the initial education of pharmacists may state that placements must be provided for students, however, whether these placements are of value to students is open for discussion, as well as the benefit or drawback to pre-registration or practising pharmacists. According to a study carried out by Orrel (2004), it was found that work placements were 'supported by employers who are recruiting, valued by students who wish to work readily, and initiated by academics who want students to experience theory in practice' (Orrel 2004, 1),

This study set out to evaluate the true value of work experience placements from the perspective of pharmacy students, pre-registration and practising pharmacists. It investigated the students' appreciation for work experiences, what makes them successful as well as where and how they may be improved.

Through questionnaires completed by pre-registration and qualified pharmacists it was assessed whether they felt competent enough at the end of the academic course to fulfil the role of a practising professional and if so whether the placement programme was a significant contributor to

this. Moreover, qualified pharmacists were included in the study as a resource to determine if there had been any improvement or change in the manner work placements are offered / delivered to undergraduates. This study also investigated the relevance of including such work placements into the university curriculum and if students were being given sufficient opportunity to demonstrate the skills needed in practice.

It was anticipated that as the majority of students progress through the years of the MPharm degree, their appreciation for work placements would increase and have a positive effect on their professional conduct. Qualified pharmacists through their own experiences would also believe that current placement schemes were beneficial to students as it exposed them to realistic scenarios demanding them to apply and develop clinical, professional and communication skills. In contrast, some students and pharmacists may view the work placement experiences as a drawback believing that placement schemes are unorganised, disturbing the daily routines and feeling that their time may be better allocated elsewhere.

### **Method**

Two types of questionnaires were designed and distributed. One for students enrolled in each of the four years of the MPharm degree at the University of Central Lancashire (UCLan). This provided an overview of the opinions of students within each year. The second questionnaire was aimed at pre-registration and qualified pharmacists to assess their own previous experiences with placements when undertaking the undergraduate programme as well as any experiences gained through mentoring students. Respondents' details were kept anonymous.

Initially constructed questionnaires were distributed to a selected pilot group. This consisted of three community pharmacists and two students from each year. Constructive criticism was given addressing concerns and positive suggestions given to make for a more appropriate questionnaire.

A final questionnaire was then produced on paper and distributed to students of each year of the (UCLan) MPharm during classes to ensure the highest volume of responses possible. The questionnaire designed for pre-registration and qualified pharmacists was distributed to pharmacies in the Lancashire area. The questionnaires were posted with a pre-paid, self-addressed envelope enclosed to return to the university.

The student questionnaire consisted of twenty questions assessing the student's demographic

characteristics, as well as their experiences with placement facilities, accompanying assignments, support from placement mentors and providing areas for participants to further comment or expand on the quantitative data. In the pharmacist questionnaire out of twenty-two questions in total, seventeen were directed to all pharmacists while an additional five were directed to pharmacists who had received undergraduates from UCLan on placements. The majority of questions were similar to the student questionnaire, to allow direct comparison between students and professionals. However, pharmacists were further questioned on what pharmacy qualification they held, whether they graduated from UCLan and whether their placement experiences influenced their choice of pre-registration location.

329 UCLan undergraduate pharmacy students completed the questionnaire: 120 first year students, 75 second years, 68 third years and 66 fourth years. The pharmacist based questionnaire was answered by 5 pre-registration and 36 qualified pharmacists (24 MPharm and 12 BSc) throughout the Lancashire area.

Statistical investigation of the data was performed using SPSS Statistics 20.0 software. Descriptive statistics such as frequencies, percentages and cross tabulations were used to analyse the data. Pearson's Chi-Squared and Fisher's Exact tests were used to determine if there was significant difference between cohorts, and Kendall's Tau test was used to determine the correlation coefficient between questions.

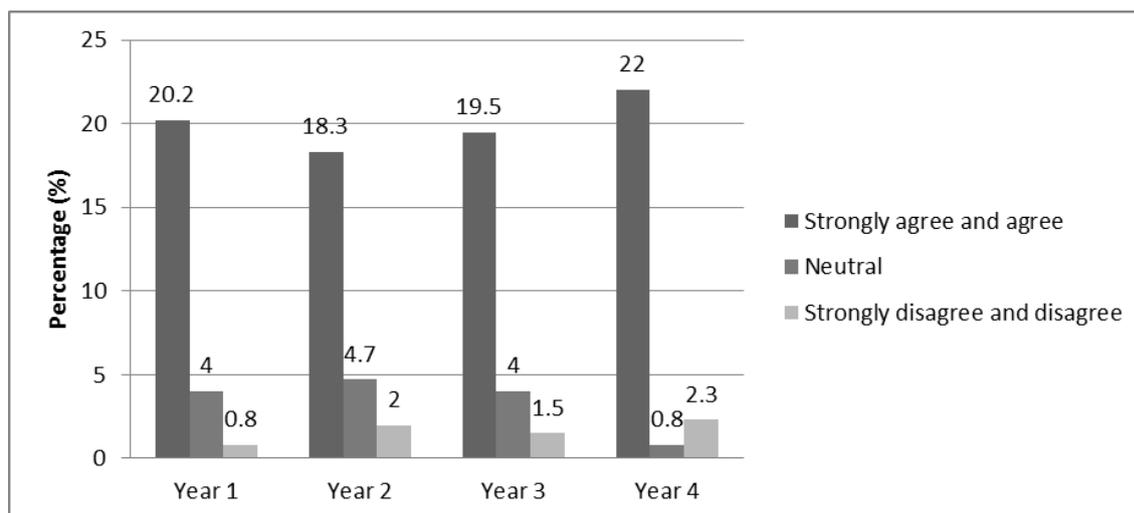
## **Results**

According to 91.8% of MPharm students, placements enhance their knowledge and should continue every year (Table 1).

**Table 1: MPharm students' and pharmacists' opinions about work placement education**

Placements	Every year	More towards later years	Removed completely	More towards early years	Every semester
Students	302 (91.8%)	22 (6.7%)	1 (0.3%)	2 (0.6%)	2 (0.6%)
Pharmacists	23 (56.1%)	17 (41.5%)	0 (0%)	1 (2.4%)	0 (0%)

86.9% of students agreed that placements allow them to put theory into practice (Graph 1).



**Graph 1: Placement work experience helps put theory into practice**

As indicated in Table 2, responses to the duration of the placement question varied throughout the years. Some first year students stated their concern that placements were not long enough (30%), whereas 48.3% of first years felt the placement length was suitable. Second year students showed a similar trend with 53.3% agreeing the length was appropriate and 25.3% stating durations were unsuitable to meet learning objectives. Third year students showed most disagreement (42.6%), with the majority believing that placements are not long enough, whereas fourth years continued the expected trend in duration approval (63.6%).

**Table 2: MPharm students' responses to the appropriateness of placement**

Student year	Likert scale	Frequency (Percent)
Year 1	Strongly agree and agree	58 (48.3%)
	Neutral	26 (21.7%)
	Strongly disagree and disagree	36 (30%)
Year 2	Strongly agree and agree	40 (53.3%)
	Neutral	16 (21.3%)
	Strongly disagree and disagree	19 (25.3%)
Year 3	Strongly agree and agree	28 (41.2%)
	Neutral	11 (16.2%)
	Strongly disagree and disagree	29 (42.6%)
Year 4	Strongly agree and agree	42 (63.6%)
	Neutral	12 (18.2%)
	Strongly disagree and disagree	12 (18.2%)

Tables 3, 4 and 5 refer to mentor influence on the overall experience. It was found that 70.8% of students agreed that the mentor was supportive in providing sufficient time during placements.

**Table 3: Students' responses regarding mentors spending sufficient time with students**

Likert scale	Frequency (percent)
Strongly agree and agree	41 (12.5%)
Neutral	55 (16.7%)
Strongly disagree and disagree	233 (70.8%)

**Table 4: Students' responses to whether mentors were engaging with student and helped to achieve the learning objectives**

Likert scale	Frequency (percent)
Strongly agree and agree	34 (10.3%)
Neutral	43 (13.1%)
Strongly disagree and disagree	252 (76.6%)

**Table 5: Students' responses whether feedback from the placement mentor was beneficial**

Likert scale	Frequency (percent)
Strongly agree and agree	32 (9.7%)
Neutral	76 (23.1%)
Strongly disagree and disagree	221 (67.2%)

Pearson Chi-Square test found that the amount of time spent with the mentor was dependent on the year ( $p < 0.05$ , Table 6).

**Table 6: Pearson Chi-Square and Fisher's Exact Test significance values for students regarding the amount of time mentors spent with them on placements**

	Value	Degree of freedom	Exact Sig.
Pearson Chi-Square	23.513a	6	.001
Fisher's Exact Test	23.421		.001

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.22.

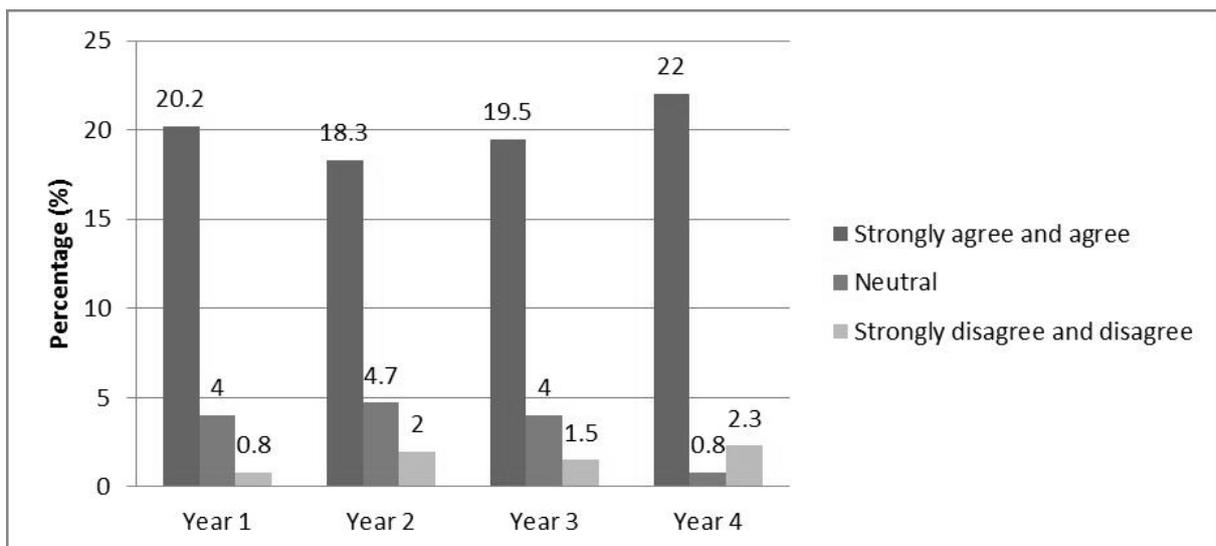
76.6% also believed that their mentor was successful in engaging with them although only 67.2% felt that feedback received was significant ( $p < 0.05$ , Table 7).

**Table 7: Pearson Chi-Square and Fisher’s Exact Test significance values for students regarding the feedback given by mentors during/after the placements**

	Value	Degree of freedom	Exact Sig.
Pearson Chi-Square	12.760a	6	.046
Fisher’s Exact Test	14.543		.022

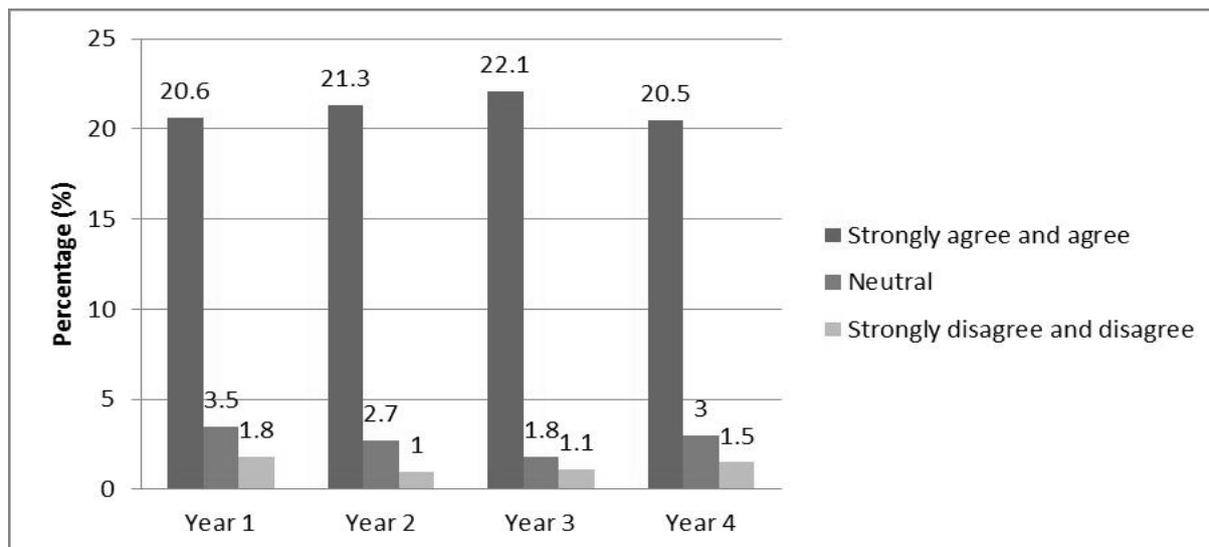
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.42.

Despite variation between years, students generally believed that learning objectives were clearly identifiable prior to attending placements (Graph 2).



**Graph 2: The learning objectives were clearly identified before going to the placement**

Kendall’s Tau test found that there was a correlation between the relevance of assignments and students having enough time to complete them (correlation coefficient 0.468); with 58% students who found the assignment relevant also feeling they had enough time to complete it.



**Graph 3: Placement influence over students' choice of pre-registration setting**

84.5% of the students stated that placements had influenced their pre-registration setting (Graph 3). This was independent of which year they were in.

58.5% of qualified and pre-registration pharmacists agreed that placement work compliments what is learned in class, with qualified pharmacists with an MPharm degree having the highest percentage of agreement (62.5%), pre-registration students with 60% and BSc and BPharm holders each having 50% agreement. However, the sample size of different qualifications varied greatly.

There was divided response as to whether duration was appropriate. 41.7% of MPharm pharmacists agreed and 37.5% disagreed. Pre-registration had the highest agreement of 60%, while BSc and BPharm qualified pharmacists again shared the same percentage of 33.3% agreement. According to Fishers Exact test, there was significant difference between the three qualifications ( $p < 0.05$ , Table 8).

**Table 8: Pearson Chi-Square and Fisher's Exact Test significance values for practising and pre-registration pharmacists regarding durations of placement**

	Value	Degree of freedom	Exact Sig.
Pearson Chi-Square	16.484a	6	.009
Fisher's Exact Test	11.561		.025

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is 0.73.

There was acceptance to the statement that the placement scheme had influenced the qualified and pre-registration pharmacists' choice in career setting. MPharm graduates showed 58.5% agreement to the statement, while 50% of BSc and 33.3% of BPharm graduates also concurred with the influence of placements.

Overall, the majority of pharmacists believed that feedback was beneficial to professional development.

Qualified MPharm pharmacists showed varied responses when asked if the placement scheme provided enough opportunities prior to pre-registration year; 45.8% were in agreement versus 37.5% who disagreed. 60% of pre-reg pharmacists agreed with the statement while 20% found this statement to be false. BSc graduates showed 33% agreement while 16.7% disagreed. Interestingly, the BPharm showed the most disagreement (83.3%) versus 16.7% who agreed that they were provided with enough experience before pre-registration.

According to the pharmacists' perspective, placements were beneficial and should be continued every year (56.1%) whereas 41.5% felt that it should be focused towards later years. The remainder (2.4%) believed it should be focused more towards earlier years.

## **Discussion**

Analysing responses received from four years of UCLan students, the belief that the placement experiences gave the opportunity to put theoretical knowledge gained in classrooms into practice was widely acknowledged. Students identified that placements highlighted the importance of Continuing Personal Development and of services such as Medicines Use Reviews. It can be difficult for students to interpret and visualise services mentioned in law and medicines management lectures unless they encounter them in a working environment. Also widely accepted was that placements should continue to be incorporated in the programme, the vast majority believing it should be in every year supporting the idea by Taylor et al. (2006) that placement experience allows students to interlink theory and practice by developing the skills to think critically and reflectively. Alternatively, twenty-two students felt that placements should be directed towards later years. The benefits of this is that placement mentors have better prepared students and potentially better structured placements due to more time and resources directed to those students. One individual believed that the placement should not be kept as part of the curriculum and two others expressed

that placements should be focused towards earlier years as university workload is less. This differed to other studies, with Langley et al. (2010) reporting that just over half of the students (n=402) wanted placements every year. Nation and Rutter (2011) also reported that the majority of students questioned preferred the placement scheme to be orientated towards later years, much different to the figure found in this study.

Some students stated that it depends upon how long placements are, in order to successfully put the theory into practice. While a third of first years believed that placements weren't long enough; many first years felt the placement was suitable as they accepted the fact they were lacking the knowledge and skills required to participate in pharmacy activities (48.3%). The general view of the placements by first years was that the one day placement was sufficient in providing insight as to how a pharmacy functions as a team but did not necessarily give the opportunity to see how some services are conducted. According to Jennifer (2009) with longer durations, students can benefit by familiarizing with the staff, environment and routines, overcoming the barriers between professionals and students in work environments. Second year students continued the trend of 53.3% reflecting the appreciation of increased durations (three days). Third year students showed most disagreement (42.6%), with the majority believing that placements are not effective enough. This was not expected as lengths were increased to five days in the third year. This disagreement was speculated to be due to the belief that students are equipped with a higher level of knowledge and require more time and opportunities to practice what they have learned. They also come to the realization that they are close to completing the degree and that they should be provided with as much work experience as possible and not be restricted to simple observation as experienced in previous years. Fourth years continue the expected trend in duration approval (63.7%) as they have an even greater knowledge and skill set. They are commonly seen as competent by mentors and are expected to understand procedures conducted in pharmacies. As a result mentors may be more inclined to challenge the students and involve them in routines. In addition to this, fourth year students undergoing placements have a better understanding of what to expect and may be more self-motivated to fill their own gaps of knowledge, better utilising the time given. According to a study by Shah (2004) some mentors (30%) also believed that the placement durations were too short and students had a lot of objectives to meet and that it was difficult finding new patients for students to practice with. Some mentors believed that they had not been given sufficient guidance by universities on what was expected of them to assist student learning.

Another contributor to effectiveness of placements is the level of mentor support and student

engagement in procedures to assist in meeting learning objectives (Royal College of Nursing, 2006). Mentors must assess student competency and background knowledge of pharmacy upon arrival in order to distribute time and tasks as they are ultimately responsible for pharmacy functions. The majority of first years felt they were engaged by mentors which help them achieve the learning objectives. This may be attributed to the fact that first year students are there to observe as they are likely to have little understanding of the pharmacist's role in pharmacy processes, but also that they have no baseline from which to determine whether feedback is of benefit or not. This leads to various expectations by the student which may or may not be addressed. Therefore, it is essential that mentors consistently interact with the student thus being able to give insight into the profession. In addition, learning objectives may not be seen as very difficult to achieve as long as both parties have an understanding of the set goals. Some students felt as if they could not engage fully in the placement, with the mentor or pharmacy environment cited as possible barriers to engagement. Particularly in the community placement, students stated that it was important to have a good interaction with mentors in order to learn new things. Although this had not always occurred, this can be as a result of the mentor and/or student being unaware of the objectives resulting in the exclusion of students from activities. Another factor is the volume of activities a field has to offer, some services provided in community pharmacies remained unseen by students due to time constraints. Some students enjoyed a fast paced environment but without sufficient opportunity to take part in the actual processes and understanding the pharmacist's role left students feeling undermined and not always receiving beneficial feedback from mentors. Work placements need to be purposeful and carefully planned, with goals reinforced by the students and supervisors understanding of aims as well as an appropriate assessment to confirm high standards of care are being taught (Washbourn 1996).

Third years showed the greatest dissatisfaction regarding mentor's assistance in meeting learning objectives, with 16.2% of those stating that they found mentor feedback not to be of benefit to them. Students at this stage are expected to have a well-founded clinical understanding of pharmacy and are encouraged to think independently. Students believed they would have benefited from more support from mentors, as they are considered crucial in maximising students' participation and learning. Without an effective mentor, students may be denied stimulating opportunities of the profession and as an alternative are restricted to routine tasks in which they already have adequate skill in (Spouse 2001). According to Washbourn (1996) feedback from mentors on the work completed by students was also considered essential to achieve and/or maintain high standards of learning. Upon completion of the placement, assignments monitor whether the student has fully

understood the learning outcomes.

Fourth year students followed a similar trend as the other years, with 68.2% stating that mentor feedback was beneficial. This may be due to past experiences and knowing what to expect on placements and better preparation by students. Many students' expectations of mentors have been altered by this stage in the programme as students have matured into independents and feel more confident in keeping up with the workload.

In regards to assignments, students stated that the reflective essay helped put a perspective on the whole pharmacy practice experience. Other students who felt the assignment was irrelevant stated that the mentoring pharmacist did not fully engage with them as regards helping them with their workbook, and that they did not understand what the objective was in completing the assignment. Regarding mentor feedback, over half of the pharmacists questioned believed that their mentor gave beneficial feedback, with one pharmacist stating that their mentor helped to clarify areas in which they were unsure and corrected them when they went wrong. The remainder were unsure of their mentor's benefit, with one pharmacist stating that the mentor was often busy and unable to spend enough time with the student to provide beneficial feedback.

Of pharmacists who believed the placement length was inadequate, some believed that the current MPharm degree was old fashioned and that pharmacy should be brought more in line with other healthcare related programmes which have a longer placement. Others stated that the placement should be longer than three days, with some stating that placements should be as long as a fortnight, allowing for a more structured placement with the opportunity to deliver experiences to the students without the time constraints. In contrast, one pharmacist stated that placements should just be half a day, as students get bored and with shorter placements, students understand the concept of time management better. Of those that believed that the placement duration was presently fine, none explained why. Potential reasons include that their time could be short due to other commitments or that placements may not have been effective for them and that they felt their time was better spent on theoretical learning.

Regarding student competency, one pharmacist said that students who were interested in hospital pharmacy were competent enough, but those who had no interest in hospital pharmacy were disengaged. Just two pharmacists from the forty-one believed that students were not competent enough, which may be due to students feeling shy in new environments, or not being certain of

what they were supposed to gain from the placement.

### **Conclusion**

The factors of placement duration, mentor engagement, relevancy of assignments and the student's self-motivation all contributed to making a placement experience successful. In order to ensure that these factors continue to produce positive outcomes; better structure by universities and preparations by both students and mentors are considered vital to educate and link the theoretical knowledge into their future practice. Students, qualified and pre-registration pharmacists demonstrated the predicted trend believing that placements add much needed value to the MPharm programme viewing it as a key tool to provide opportunities to gain and develop skills in a real pharmaceutical setting and contextualize learning.

### **References**

Allsopp, D.H., DeMarie, D., Alvarez-McHatton, P., Doone, E. 2006. 'Bridging the Gap between Theory and Practice: connecting courses with field experiences', *Teacher Education Quarterly* 33:1, 19-35.

Davies, J., Hamilton, R., Kakad, V. 2012. 'The imbalance between pre-registration training and undergraduate pharmacy student numbers', *British Pharmaceutical Students Association, BPSA* discussion paper 07/2012.

General Pharmaceutical Council. 2010. *Code of conduct for pharmacy students*. London: GPhC.

General Pharmaceutical Council. 2011. *Future pharmacists: Standards for the initial education and training of pharmacists*. London: GPhC.

Jesson, J.K., Langley, C.A., Wilson, K.A., Hatfield, K. 2006. 'Science or practice? UK undergraduate experiences and attitudes to the MPharm degree?', *Pharmacy world and science* 28:5, 278-283.

Langley, C., Jesson, J. and Wilson, K. 2010. 'Learning with other health professions in the United Kingdom MPharm degree: multidisciplinary and placement education', *Pharmacy Education* 10:1, 39-46.

McRobbie, D. 2004. 'MPharm courses should concentrate on pharmacy practice', *Pharm J*, 272:6, 802.

Nation, L., Rutter, P. 2011. 'Short communication piece on experience of final year pharmacy students to clinical placements', *Journal of Health and Social Care Improvement* 2, 1-5.

Newton, J.M., Stephen, B., Cherene, M.O. 2009. 'Journeying through clinical placements – An examination of six student cases', *Nurse Education Today* 29:6, 630-634.

Orrell, J. 2004. 'Work-integrated learning programmes: Management and educational quality', *Proceedings of the Australian Universities Quality Forum 2004*.

Royal College of Nursing. 2006. *Helping students get the best from their practice placements*. London: RCN.

Shah, R. 2004. 'Improving undergraduate communication and clinical skills: personal reflections of a real world experience', *PharmacyEducation* 4:1, 1-6.

Spouse, J. 2001. 'Bridging theory and practice in the supervisory relationship: a sociocultural perspective', *Journal of Advanced Nursing* 33:4, 512-522.

Stupans, I., Owen, S. 2009. 'Planning and scaffolding for learning in experiential placements in Australian pharmacy schools', *Asia-Pacific Journal of Cooperative Education* 10:1, 29-37.

Taylor, S., Best, D., Marriott, J., Dalton, L., Bull, R., Galbraith, K., Leversha, A., Howarth, H., Simpson, M., Rose, M. 2006. 'Pharmacy student views on preceptorship during rural placements', *Pharmacy Education* 6:4, 253-266.

Washbourn, P. 1996. 'Experiential learning: Is experience the best teacher?', *Liberal Education* 82:3, 1-10.