# Does the use of a university lecturer as a visiting tutor support learning and assessment during physiotherapy students' clinical placements? A survey of higher education institution providers

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**Abstract**

Objectives

To establish the rationale for using a lecturer as a visiting tutor, and to identify the activities undertaken during clinical placements to support student learning and assessment in practice.

Design

A secure electronic survey was used to incorporate qualitative and quantitative data collection procedures.

Setting

Thirty-three higher education institution (HEI) providers of physiotherapy education in the UK, registered with the Chartered Society of Physiotherapy.

Participants

UK HEI physiotherapy placement coordinators.

Main outcome measures

A questionnaire was used to examine HEI perceptions. A pilot focus group consultation informed the questionnaire content. Surveys were analysed based on the proportion of responses to closed questions on an adapted Likert scale, with further thematic analysis of open questions.

Results

All 25 respondents (25/33, 76%) indicated their provision of support for students and clinical educators throughout their clinical placements. 'Face-to-face' engagement during the placement visit was viewed as essential to guide the clinical educator to provide a consistent approach to learning and assessment strategies; ensuring cohesion between theoretical and clinical components of the curriculum was viewed as a core objective by visiting academic tutors. However, the emergent themes highlighted key differences between HEIs' perspectives of what this support for clinical placement learning should entail.

Conclusions

The majority of HEIs endorse the use of a lecturer as a visiting tutor to inform and maintain the standard of learning and assessment within the clinical placement. However, the value of this interaction requires confirmation via other stakeholders, and exploration of other forms of non-face-to-face support processes warrant further investigation.

**Keywords**
Clinical education;
Placements;
Physiotherapy;
Support;
Workplace learning;
Visiting tutor

## Introduction

Clinical education is an integral component of all health professional undergraduate programmes [1], and its importance to physiotherapy curricula is supported at national and international levels [2] and [3]. Higher education institutions (HEI) are required, in partnership with their placement providers, to support learning in practice [4] and [5]. One such support mechanism is the common use of university lecturers as visiting tutors (LVT) during student placements [6].

This visit during a student's placement is well-established practice across the university health sector. However, the amount of staff time and travel costs, due to widespread geographical placement locations, has created an ongoing debate relating to the value for money of such practice [6] and [7]. Such economic pressure has led to reduced frequency of 'face-to-face' visits with consideration of alternative technological approaches such as video conferencing [6] and [8], although these non-direct approaches are less able to support emotionally-based communications [6].

Today's students are recruited into higher education, often having had minimal contact with the health sector until they enter the clinical environment. Learning in clinical settings provides students with opportunities to integrate their theoretical knowledge with practical and professional skills [9]. Placements socialise students into workplace communities at increasingly higher levels of performance and responsibility under the guidance of qualified practitioners [10] and [11]. However, such learning is not without potential difficulties, and has been identified as a source of student stress [12]. While most clinical settings are student friendly, others are less so [13] and [14], and the literature indicates that students may only be accepted into some clinical settings under sufferance [15] and [16]. The multifaceted and uncertain learning situations in a wide range of settings can prove a real challenge for many students, which may, in part, be due to clinical educators adopting different styles of teaching and approaches to learning [17].

The challenging, multidimensional role of a clinical educator – involving maintaining their clinical responsibilities while facilitating learning opportunities when supporting student learning in practice – requires recognition and support [18] and [19]. Despite the fact that professional and regulatory bodies require HEIs to provide clear information about the support networks available, including named contacts for all students [2] and [5], many clinical educators are unaware of the wider support mechanisms available to them and their students [20]. Clinical educators are expected to direct the development of the student's clinical skills by engaging them in critical thinking and reflection on practice [21] to develop their clinical reasoning [22]. Subtle shifts in HEI perspectives on curriculum design and philosophies of learning and teaching may not be clearly articulated to practice settings [9], resulting in a lack of congruence between the understood roles in learning and teaching [23] and [24]. A disconnect between educator and student conception of their roles may

have a negative impact on the organisation of teaching and learning in workplace education [9]. The assumption that experienced clinicians will easily move into roles as clinical educators is unrealistic without both formal and informal education [24] and [25], suggesting that support for students could be subject to variation in the clinical setting [26].

Whether or not inclusion of the LVT contributes to the optimisation of student learning and ongoing development of clinical educators has not been researched from the physiotherapy perspective, although its value is assumed to be of significance [2], [7] and [27]. A visit from a familiar lecturer can improve satisfaction for students and placement providers [28], presenting a 'constant' in the student educational experience. It also offers students an opportunity to seek information on their progress, and to deal with academic issues or specific placement problems [27] with an informed professional who could offer a different perspective due to not being involved directly in the placement [28].

The value of workplace education for healthcare students is unquestioned, with planned clinical learning experiences providing opportunities for integration and application of theoretical knowledge and skills, which are crucial to developing the professional social skills essential to becoming an effective member of the health team [16]. However, the contribution of the LVT as a support mechanism for physiotherapy students during this multifaceted and complex activity has not been explored.

An online search to access the Directory of Open Access Journals, ERIC, IEEE Proceedings, Informa, MEDLINE, PubMed Central, SciVerse Science Direct, Wiley Online Library and UBRIA ePapers was initially conducted and updated using the following keywords: clinical education; placements; physiotherapy; workplace learning; and visiting tutor and support.

The aim of this study was to investigate how UK HEI providers of physiotherapy education use the LVT to support workplace learning. The objectives were to establish the HEI rationale for using the LVT during physiotherapy clinical placements, and to identify the activities undertaken by the LVT during the visits.

**Methods**

A pilot focus group, formed from the five HEI physiotherapy education providers within the North West (NW) region of England, informed the content of the questionnaire. A secue electronic questionnaire was distributed to all UK HEI physiotherapy education providers to survey their use of the LVT during clinical placements. The questionnaire requested the views of each HEI via their 'placement coordinator', with questions asked to help interpret the context of their placements and to elicit the activities undertaken by the LVT (Appendix B, see online supplementary material).

A Likert-type scale was used to ascertain the frequency with which activities were performed, and participants were asked to offer a rationale for activities undertaken. An important assumption was that there is a relationship between the lecturers' perceived view of their role (the purpose) and the activities (the process) they undertake whilst engaged in a placement visit.

Ethical clearance was gained from both universities. Participants were recruited via the Chartered Society of Physiotherapy e-mail circulation list of all HEI members of the National Placement Education Forum [29]. A 'return request' email was sent 10 days after the questionnaire was distributed.

An information sheet was included in the preamble to the questionnaire; informed consent was assumed via participant completion of the questionnaire. The questionnaire was password protected and contained in a secure environment to ensure confidentiality. Unique identifiers, allocated to each participant, ensured anonymity. Quantitative and qualitative data were generated and evaluated.

**Results**

A response rate of 25/33 (76%) was achieved from the initial circulation. No additional responses were generated from the follow-up e-mail request. Ninety-six percent of respondents (Table 1) indicated the provision of support for students and clinical educators as a key activity within the placement, with some stressing the value of the LVT being known to the student to enhance pastoral support:

'Using a LVT is the best way to deliver pastoral support for students, the best way to support educators and facilitate the best/most appropriate methods and models of supervision.' [R.17]

*Table 1.*
*Higher education institution use of activities to support learning and assessment in practice.*

One HEI (4%) did not use an LVT. Their key support mechanisms were web-based communications and a telephone call mid-way through the placement:

'We used to do a half-way visit and the majority of times the visit seemed like a waste of time as the clinicians and students were managing without mediation or university input.' [R.08]

Five common themes emerged from the qualitative data to justify the use of an LVT (Table 2).

*Table 2.*
*Themes identified by responding higher education institutions to justify their use of a lecturer as a visiting tutor.*

Pastoral and academic support for students

One to three episodes of academic contact per student placement was typical, with 84% of HEIs viewing the 'face-to-face' placement visit as the core activity to support the student. For 68% of HEIs, the usually scheduled 'face-to-face' meeting was most useful mid-way through the placement,

Table 1.

Higher education institution use of activities to support learning and assessment in practice.

| Activity | Always *n* (%) | Usually *n* (%) | Occasionally *n* (%) | Never *n* (%) |
|---|---|---|---|---|
| **Provide advice/feedback and support to the student** | 19 (76) | 2 (8) | 2 (8) | 2 (8) |
| **Provide advice/feedback and support to the clinical educator** | 17 (68) | 4 (16) | 2 (8) | 2 (8) |
| **Assist the student with problem solving** | 4 (16) | 8 (32) | 11 (44) | 2 (8) |
| **Evaluate the student's achievement** | 9 (36) | 6 (24) | 6 (24) | 4 (16) |
| **Moderate the student's assessment** | 7 (28) | 5 (20) | 6 (24) | 7 (28) |
| **Assist the clinical educator in assessing the student** | 3 (12) | 6 (24) | 11 (44) | 5 (20) |
| **Observe the student with a patient** | 0 (0) | 2 (8) | 14 (56) | 8 (36) |

Table 2.

Themes identified by responding higher education institutions to justify their use of a lecturer as a visiting tutor.

| Common theme | Sample statement |
|---|---|
| **Pastoral and academic support for students** | To discuss and support the student's learning, to encourage the student to reflect on their learning, to help the student overcome any issues they may have with their learning, and to support the educator in providing appropriate and effective learning experiences/opportunities [R.23] |
| **Educational support for clinical educators** | To support the educator in providing appropriate and effective learning opportunities [R.1] |
| **Moderation of the assessment process** | To moderate the student's assessment to guide the action plan for the student to progress their learning [R.01] |
| | Moderation and quality assurance of assessment processes [R.25] |
| **Reinforcement of the partnership between the higher education institution and the placement provider** | Lecturers have knowledge of the programme, expertise in teaching and learning, and are able to moderate marks and can build solid links between the academic and clinical environments [R.24] |
| **To enable lecturers to keep up to date with clinical practice** | It keeps the lecturer up to date with current clinical practice and issues [R.04] |
| | As the majority of our lecturers no longer hold a clinical post, it keeps them in touch with the NHS environment [R.10] |

NHS, National Health Service.

to evaluate and assist with student learning once the placement was established. The value of the LVT being known to the student was stressed by some HEIs to act as a conduit for 'any issues relating to communication with the educator' and to enhance pastoral support:

'The student has had time to settle in and the educator has had time to see how the student is progressing and responding to feedback.' [R.21]

All respondents identified a strategy, with an emphasis on 'action plans', to support learning within the workplace for struggling students. Specific student support procedures were invoked for students 'at risk of failing' the placement:

'Students will be offered further face-to-face contacts, action plans will be put in place agreed by the educator, student and visiting tutor, and the tutor will maintain close links and communication with both the student and the educator.' [R.12]

Educational support for clinical educators

All responding HEIs encouraged their clinical educators to view their placement-specific web pages for ongoing updates, news and discussions. E-mail was used routinely to establish contact prior to placement, and for routine planning such as arranging placement visit appointments or organising reasonable adjustments where needed for disabled students who gave permission for their disability to be disclosed to the placement site. Eighty-four percent of HEIs always or usually used a 'face-to-face' discussion to guide the clinical educator to provide a consistent approach to learning and assessment:

'As the lecturers obviously teach the content of the course, they are in the best position to pass the 'reasoning' behind what is taught to the educators.' [R.10]

Moderation of the assessment process

The findings indicated an even split between those who always or usually moderate student assessment (48%) and those who occasionally or never moderate student assessment (52%):

'This opportunity for formative assessment allows time for action plans to be drawn up and acted upon, giving an opportunity to influence and moderate the assessment process.' [R.25]

'At the start, the feeling is the tutor/student should not have any problems or know what they may need. At the end, no changes can be made. Therefore we visit in the middle, primarily to give pastoral support.' [R07]

Reinforcement of the partnership between the HEI and the placement provider

For many, the face-to-face visit provided an opportunity for lecturers to reinforce links between the academic and clinical environments:

‘Fosters strong relationships between university and placement provider, to maintain pastoral support, academic support, assessment links between practice and HEI quality assurance.’ [R.04]

To enable lecturers to maintain contact with clinical practice

As some lecturers no longer hold clinical posts, it was suggested that the LVT could increase their awareness of clinical or political issues/developments within the practice setting:

‘One way of ensuring that lecturers keep up with current practice/service delivery.’ [R.23]

Overall, variable visiting strategies were identified. Most HEIs used the whole academic team to visit students on placement, but kept the same LVT or ‘link contact tutor’ for each placement provider to maintain continuity and to ensure adherence to university policies and procedures.

**Discussion**

As anticipated, the results indicate consensus amongst HEIs supporting their current practice, with strong endorsement of the use of the LVT. The LVT served as a link between academic and clinical arenas, assisting student learning by facilitating the transformation of curriculum-based knowledge into professional practice and clinical understanding. The LVT role was to support the clinical educator and team [30], as the quality of learning experiences are highly dependent not only on the clinical educator's clinical knowledge, but on their pedagogical understanding and communication skills [21], which directly affect the student's development of clinical reasoning [22]. In response to the placement challenges identified in the literature [12], [13], [14], [15] and [16], HEIs rationalise that using the same LVT for each placement provider, or the student's academic personal tutor for each placement, supported the view that a ‘constant’ familiar face was best placed to provide support with communication issues or student pastoral needs [28].

The assumption that the role (purpose) of the LVT (Table 2) would be reflected in the activities (process) undertaken by the LVT (Table 1) identified a degree of mismatch. Although most HEIs indicated that student academic support was a core activity, a significant proportion did not regularly evaluate student achievement or assist students with problem solving. This could imply that HEIs may consider that facilitated problem solving and analysis of some placement-related issues might be better achieved via the use of post-placement academic written assignments.

With respect to support of clinical educators, over half did not find it necessary to rationalise the educator's thoughts and decision making to moderate or assist in the student's assessment. This possibly indicated a perception that previous support, provided via educator training and student pre-placement preparation, was sufficient to allow clinical educators and students to conceptualise their roles; however, the evidence [23] and [24] suggests that, in practice, there can be a lack of congruence between these adopted educational roles.

This suggests that, nationally, there is a lack of common understanding and therefore a non-standardised approach to the support of students and clinical educators. However, a standardised response was indicated in terms of the failing student. The additional support strategies for 'failing' students endorsed in the literature [31] were adopted by all HEIs, with 92% observing their students in direct patient contact if there were competence issues.

In response to these identified difficulties, HEIs encouraged clinicians to become accredited clinical educators [32], which adds a further quality mechanism to promote a shared understanding of HEI expectations and the learning and assessment philosophy for students within the workplace [4]. As a national initiative, this would encourage a standardisation of approaches across the sector.

The perception that web-based communication was the key support mechanism for information exchange challenges the suggestion that the LVT is vital to reinforce the partnership between HEI and placement provider by effectively communicating key messages to enhance the quality of education supplied [7]. However, HEIs viewed the LVT as a key component of the monitoring system for placement quality and effectiveness, as the communication opportunities provided by the face-to-face visit afforded a 'real-time' opportunity for updating staff on curricular change and educational philosophy, facilitating a sharing of ideas with clinical educators. This prompts the question of whether such enhanced communication could be achieved via alternate means, such as via clinical educator events [5], which could potentially reach a wider audience and create a forum for information sharing and collaborative interpretation of HEI workplace education philosophy, curriculum, and university policies and procedures [28].

Although videoconferencing dialogue is reported to be less able to support emotionally-based communications [6], using the student's personal tutor to communicate via telephone with the clinical educator was reported to be as effective as using the LVT. It could be argued that both approaches would allow the opportunity for two-way communication relating to curriculum issues and discussion pertaining to the student's performance. Building a constant relationship with a placement provider would also allow quality assurance issues to be addressed, with any action planning to be developed and monitored over a period of time. However, from the responses provided, it was apparent that this approach is not standard practice for all HEIs. It is currently unclear whether there is standardisation across the practices of individual visiting tutors; this question will be addressed in the next stage of this project, when clinical educators and students will report on their experiences of the LVT process.

Knowledge of current clinical and political agendas is important for HEI lecturers to educate the professionals of the future, but it appears unlikely that the visit would facilitate clinical updating for lecturers who are no longer in practice. Although enhanced HEI awareness of clinical and political developments within practice would contribute to clinical governance agendas and the safeguarding of high standards of clinical care [33], whether or not the clinical placement visit is the best forum for such clinical updating to occur is another subject open to question.

**Conclusion**

There was HEI consensus that incorporating a lecturer visit to the clinical site for a 'face-to-face' discussion with the clinical educator and student has many advantages. It was the preferred practice to support workplace learning, although different approaches appeared to be undertaken. Pastoral support of students was viewed as important, although it was unclear how many students required it. Support for learning and assessment was also stressed, but contrasting information relating to the face-to-face visit activities undertaken (Table 1) suggested that different approaches could be used effectively. It is proposed that good pre-placement preparation for both students and educators

allowed HEIs to reduce their input into problem solving and assessment during the face-to-face visit (Table 2), which, it could be argued, adds to the HEI debate relating to the value for money of current visiting practice [6] and [7].

Promotion of open communication and regular viewing of HEI placement-specific web pages for ongoing updates, news and discussions could minimise the need for face-to-face visits as a strategy to build solid links between the academic and clinical environments. As a good proportion of HEIs were happy to entrust the clinical educator with developing student problem solving and evaluating their achievement in relation to clinical assessment, there could be scope to support a move to more cost-effective alternative technological approaches such as video conferencing [6] and [8]. In this scenario, a lecturer or personal tutor visit to the placement would only be indicated should emotive issues become apparent, to provide appropriate pastoral support, or in the case of the student at risk of poor achievement or failure of placement objectives.

Given the variety of activities carried out across the HEIs, with many examples of good practice based on the free comments provided, a standardised protocol would enhance quality and ensure that a minimum standard of appropriate support is provided for both students and clinical educators during clinical placements. Whether contact is delivered via the LVT or other technologies, quality assurance should be monitored and maintained via placement evaluation and regular audit of placement providers against the Health and Care Professions Council's Standards of Education and Training [5].

The support provided by the HEI to enhance learning and assessment in the clinical environment is an essential service that should be maintained. Although the majority of HEIs endorse the use of an LVT to support this process, the value of the LVT requires confirmation via other stakeholders, and exploration of other forms of non-face-to-face support processes warrants further investigation. Exploration of the views of clinical educators and students will constitute the next stage of this research process, in the hope that the findings may influence procedural conformity across HEIs to raise the quality of support in workplace education to a recognised minimum standard [4].

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References

[1]
C. Hobbs, E. Henley, J. Higgs, V. Williams

Clinical education program strategies for challenging times

Focus Health Prof Educ, 2 (2000), pp. 1–17

[2]
Chartered Society of Physiotherapy

Learning and development principles for CSP accreditation of qualifying programmes in physiotherapy

Chartered Society of Physiotherapy, London (2010) Available at: http://www.csp.org.uk/documents/learning-development-principles [accessed 25.01.15]

[3]
World Confederation for Physical Therapy Policy Statement

Education

World Confederation for Physical Therapy, London (2011) Available at: http://www.wcpt.org/policy/ps-education [accessed 25.01.15]

[4]
Chartered Society of Physiotherapy

Learning and development principles for CSP accreditation of qualifying programmes in physiotherapy

Chartered Society of Physiotherapy, London (2010) Available at: http://www.csp.org.uk/documents/learning-development-principles [accessed 25.01.15]

[5]
Health and Care Professions Council

Standards of education and training

Health Professions Council, London (2009) Available at: http://www.hcpc-uk.org/assets/documents/1000295EStandardsofeducationandtraining-fromSeptember2009.pdf [accessed 25.01.15]

[6]
T. Taylor

Video conferencing vs. talking face to face: is video suitable for supportive dialogue?

Int J Ther Rehabil, 18 (2011), pp. 330–340

[7]
H. Martin

Do placement visits offer value for money?

Br J Occup Ther, 68 (2005), pp. 186–187

[8]
S. Collins, P. Gutridge, A. James

Virtual placement visits: videoconferencing and placement contacts

Soc Work Educ, 18 (1999), pp. 83–94

[9]
C. Kell, L. Jones

Mapping placement educators' conceptions of teaching

Phys Ther, 93 (2007), pp. 273–282

[10]
P. Bryant, S. Hartley, W. Coppola, A. Berlin, M. Modell, E. Murray

Clinical exposure during clinical method attachments in general practice

Med Educ, 37 (2003), pp. 790–793

[11]
P. Lekkas, T. Larsen, S. Kumar, K. Karen, L. Nyland, L. Chipchase, et al.

No model of clinical education for physiotherapy students is superior to another: a systematic review

Aust J Physiother, 52 (2007), pp. 19–28

[12]
J. Walsh, C. Feeney, J. Hussey, C. Donnellan

Sources of stress and psychological morbidity among undergraduate physiotherapy students

Physiotherapy, 96 (2010), pp. 206–212

[13]
C. Beadnell

Nurse education: our health depends on it

Aust Nurs J, 13 (2006), pp. 25–27

[14]
M.J. Johnstone, O. Kanitsaki, T. Currie

The nature and implications of support in graduate nurse transition programs: an Australian study

J Prof Nurs, 24 (2008), pp. 46–53

[15]
D. Jackson, J. Mannix

Clinical nurses as teachers: insights from students in their first semester of study

J Clin Nurs, 10 (2001), pp. 270–277

[16]
C. Dickson, J. Walker, S. Bourgeois

Facilitating undergraduate nurses' clinical practicum: the lived experience of clinical facilitators

Nurse Educ Today, 26 (2006), pp. 416–422

[17]
E. Molloy, D. Clarke

The positioning of physiotherapy students and clinical supervisors in feedback sessions

Focus Health Prof Educ, 7 (2005), pp. 79–90

[18]
S. Watson

Mentor preparation: reasons for undertaking the course and expectations of the candidates

Nurse Educ Today, 24 (2004), pp. 30–40

[19]
J. Higgs, L. McAlister

Being a clinical educator

Adv Health Sci Educ, 12 (2007), pp. 187–199

[20]
J. McKimm, C. Jollie

Educational supervision, personal support and mentoring

(2003) Available at: http://www.faculty.londondeanery.ac.uk/e-learning/feedback/files/Educational_supervision_and_personal_support.pdf [accessed 25.01.15]

[21]
V. Lambert, M. Glacken

Clinical education facilitators: a literature review

J Clin Nurs, 14 (2005), pp. 664–673

[22]
S. Ryan, J. Higgs

Teaching and learning clinical reasoning

J. Higgs, M. Jones, S. Loftus, N. Christensen (Eds.), Clinical reasoning in the health professions (3rd ed.), Elsevier, Amsterdam (2008)

[23]
C. Delany, P. Bragge

A study of physiotherapy students' and clinical educators' perceptions of learning and teaching

Med Teach, 31 (2009), pp. e402–e411

[24]
J. Strohschein, P. Hagler, L. May

Assessing the need for change in education practices

Phys Ther, 82 (2002), pp. 160–172

[25]
N.J. Girard

Expert to novice again

Assoc Perioper Regist Nurs J, 78 (2003), pp. 365–366

[26]
Quality Assurance Agency for Higher Education

UK quality code for higher education. Part B. Assuring and enhancing academic quality. Chapter B4: Student support, learning resources and careers education, information, advice and guidance

Quality Assurance Agency for Higher Education, Gloucester (2011) Available at: http://www.qaa.ac.uk/publications/information-and-guidance/uk-quality-code-for-higher-education-chapter-b4-enabling-student-development-and-achievement [accessed 25.01.15]

[27]
H. Gillespie

Benefits of visiting OT students during fieldwork placements

Br J Ther Rehabil, 4 (1997), pp. 307–331

[28]
I. Burns, I.M. Paterson

Clinical practice and placement support: supporting learning in practice

Nurse Educ Pract, 5 (2005), pp. 3–9

[29]
Chartered Society of Physiotherapy

National practice education forum

Chartered Society of Physiotherapy, London (2012) Available at: http://www.csp.org.uk/icsp/practice-education-co-ordinators-he [accessed 28.11.12]

[30]
A. Bleakley

Broadening conceptions of learning in medical education: the message from team working

Med Educ, 40 (2006), pp. 150–157

[31]
F. Luhanga, O. Yonge, F. Myrick

Precepting an unsafe student: the role of the faculty

Nurse Educ Today, 28 (2008), pp. 227–231

[32]
Chartered Society of Physiotherapy

Accreditation of clinical educators scheme

Chartered Society of Physiotherapy, London (2004) Available at: http://www.csp.org.uk/publications/csp-accreditation-clinical-educators-ace-scheme [accessed 28.11.12]

[33]
E. Chandraharan, S. Arulkumaran

Clinical governance

Obstet Gynaecol Reprod Med, 17 (2007), pp. 222–224