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Managing Multiple Students on Clinical Placement via Peer Learning: The Hull Evaluation-Appraisal-Student-Integrated (EASI) Model

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Cover Page Footnote

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Managing Multiple Students on Clinical Placement via Peer Learning: The Hull Evaluation-Appraisal-Student-Integrated (EASI) Model

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Abstract

There is a national shortfall of student Allied Health Professional (AHP) clinical placement availability in the United Kingdom. Debate exists regarding ways to improve this situation against the backdrop of National Health Service (NHS) pressures. Historically, clinical educators have adopted a one clinical educator to one student (1:1) model. AHP clinicians perceive various barriers regarding the implementation of peer learning placement models where multiple students (two or more) are assigned to one clinical educator.

A means to address the perceived barriers to adopting a peer learning placement model has been gained from unstructured interviews, conference feedback, questionnaires, and a literature review.

Assimilation of this information has resulted in the development of a peer learning model named the Hull Evaluation-Appraisal-Student-Integrated (EASI) model. This combines tools developed from other peer learning models with bespoke tools that have been developed to address barriers perceived by clinical educators and students. The Hull EASI model emphasizes a team approach for enhancing students' educational experience rather than it being the sole responsibility of the clinical educator. It was piloted within a physiotherapy musculoskeletal (MSK) outpatient setting.

The Hull EASI model will undergo further development and evaluation, including in the inpatient setting and with other AHP professions. It will continue to evolve in response to local demands.

Introduction

Global shortages of Allied Health Professionals (AHP) pose difficulties for staff in managing and delivering clinical services (Demo, Fry, Devine, & Butler, 2015). Health Education England (HEE) have responded to national shortages by funding an additional 10,000 student nurses, midwives, and AHPs between 2017 and 2020, recommending a required increase of over 4,000 AHP placements nationally during 2020–21 (HEE representative, 2021 personal communication, 19th April). Accommodating increasing numbers of students into placements can exert pressure on clinicians in addition to the daily challenges experienced in delivering effective services (CSP, 2014; CSP, 2017).

The 1:1 model (one student to one clinical educator) has traditionally been favoured over peer learning models (multiple students to one clinical educator) in terms of clinician satisfaction and work-based productivity (Ladyshewsky,

Barrie, & Drake, 1998). However, if AHPs continue to predominantly deliver 1:1 learning models, the national demand to increase placements will not be met and will ultimately fail to raise workforce numbers to predicted required levels. To meet this need, alternative models that balance a sustainable increase in clinical placements, whilst maintaining the wellbeing of clinicians, need to be identified and adopted at speed. The ability for clinicians to research a new model, and train staff to implement this, requires time not readily available in the NHS. Against the backdrop of clinical pressures and clinical placement expansion, there is a significant possibility that clinicians' wellbeing gets overlooked with detrimental consequences (Ohman, Hagg, & Dahlgren, 2005).

The Hull EASI model was developed to make it easier for clinicians to repeatedly adopt a peer learning model without impacting clinician wellbeing. It sought to ease the barriers staff reported when supporting two or more students pre-COVID-19, to be evidence-based where possible, and to be easy to access and implement. Where evidence was not forthcoming, the new model would have to respond innovatively to address the demands outlined. This paper describes its development and construct.

Development of the Hull EASI Model

In 2018, staff attending a monthly forum for a musculoskeletal (MSK) outpatient team were asked to share their thoughts on taking more students in pairs, moving away from a traditional 1:1 model. The meeting consisted of non-registered and registered AHPs, representing a wide diversity of experiences across clinical practise and student supervision. All comments were captured in the notes for the meeting. The comments were explored in order to develop greater understanding of any underlying themes that were being conveyed. The underlying themes were subjectively interpreted by the author.

Two of the authors (L. A. and A. H.) attended "Placements of the Future," a day conference in April 2018 hosted by Sheffield Hallam University. A variety of educational models for student placements were presented. Six presentations significantly impressed the first author. The thoughts arising from these presentations are identified in Table 1. The author informally took note of attendees' comments heard throughout the day, including "no time for the rest of the team," "no time for non-clinical work," "supporting students can be draining personally," "compared to previous generations, students now undertake little or no self-directed learning," and "who is responsible for their learning—the educator or the student?" Two resources were shared at this event: the conceptual model developed by Sevenhuysen et al. (2014) promoting peer learning student placements, and the Lekkas et al. (2007) paper verifying that no model of supervision is superior to another.

Table 1
First impressions identified by the author

Presentations and speakers	Inspiring content	First author's thoughts
N. A. France & S. Dale: What Makes a Successful Placement	• Predominance of research published from Australia. • 2:1 may not be valued by students. • Sharing educator role can be difficult.	• Inspired interest in Australian research findings. • Recognised difficulties were similar to those shared in MSK team meeting.
Dr. H. Cheung: Quality Assurance and Strategic Development of Our Future Workforce	• Identified the imminent changes to the National Education and Training Survey, including asking students to comment on the quality of teamwork perceived on placement.	• Considered how delivering 1:1 placement support may impact a student's perception of team activity and what alternatives were required.
J. Mitchell: Extended Scope Placements	• Long arm supervision experiences.	• Considered benefits of this as a method for an educator to support students without overseeing them day to day.
C. Cook: 2:1 Placement Model	• Planning required to deliver a 2:1 placement. • Lessons learnt: importance of setting boundaries. • Described how two students could jointly see one patient.	• Considered how to address practical limitations that could hinder delivery of 2:1 placement.
N. Matchett: Assistant Practice Place Educator Course	• Unregistered staff can help clinical educators.	• Considered how unregistered staff could engage in effective placement delivery.
N. Matchett & D. Langford: Alternative Supervision Models 4:1	• Lessons learnt: how to maintain effective team communication. • Benefits of peer learning and peer support.	• Considered how useful a team communication sheet was to hand over information in the absence of a physical meeting. • Considered how to offset benefits of peer working against educator wellbeing.

Comments from MSK team and day conference

The author assimilated comments relating to perceived barriers from both the MSK team meeting and day conference into subjective themes. Table 2 presents these themes and the perceived impact expressed by clinicians when considering the transition to a 2:1 model.

Table 2
Perceived barriers to the transition to a 2:1 model

Perceived barrier	Impact
Quality of education	Taking more students may impact the ability to deliver quality education. Further time may be required to increase competence that previously could have been achieved in placement, affecting students beyond qualification.
Logistics	Possibility of limited cubicle capacity, computer access, and seating.
Time limitations	A reduction in time available for non-clinical duties, reduced time for supporting or teaching other staff, and less time on clinical reflection when a student is shadowing due to answering questions in depth or reframing the scenario to aid understanding.
Clinical capacity	Capacity can be reduced during placements and replaced with teaching time. This can increase further if a student requires more support. There can be an increase in clinical demand after placement when staff are required to absorb students' caseloads.
Obligation	In order to deliver the best placement experience, clinical educators engage frequently with students, prioritising the students' needs over their own. Clinical educators reported believing a student's outcome in placement is a direct reflection of their ability to teach, instruct, and clinically reason.
Specialities	Clinicians reported stress when trying to juggle the management of a clinical caseload and students' educational needs while maintaining standards of patient care. Clinicians develop an intuitive assessment and treatment pattern over time based on heuristics and repetitive clinical experiences. In order to impart this, they need to unpick their own thinking patterns, which can be physiologically and psychologically fatiguing as well as time consuming.
Motivation to learn	Clinicians reported there was an increasing expectation from students that educators should direct and structure student learning throughout the placement instead of students taking ownership of their learning needs.
Stress	Clinicians reported experiencing increased stress levels from all the above issues and feeling overwhelmed when contemplating how to address them.

Following assimilation of themes and considerations, presented in Tables 1 and 2, three key principles were formulated to address clinicians' concerns.

Structuring role sharing:

- Equitably share placement duties amongst a team to reduce perceptions that educators are exclusively responsible for delivering a student's learning during placement;
- structure effective communication channels to avoid compromising student learning when role sharing; and
- enable flexible role sharing sympathetic to current health care working patterns.

Evidence learning with tools:

- Encourage student ownership of learning by requiring a student to provide evidence of their weekly learning and reflect on this to identify their learning goals;
- make every experience a learning experience, ensuring a variety of tools for students to proactively capture what learning has occurred, evidence it, and share with their peer to consolidate it;
- reduce time completing Higher Education Institute (HEI) paperwork—the author perceived that appraising evidence presented to demonstrate the learning goals achieved was more efficient than a student and an educator taking time to recall learning;
- make a student's thinking process visible for an educator in the absence of opportunities to observe a student's clinical reasoning; and
- structure down time to enable educators to step back from an unspoken obligation of engaging with students continually.

Supporting peer learning:

- Structure the learning environment to facilitate peer learning;
- use tools to elicit the benefits of peer learning;
- place value on peer learning and its benefits so, when appropriate, it is favoured as an alternative to seeking 1:1 knowledge transmission from senior clinicians (Kell & Jones, 2007); and
- create a culture of peer learning amongst current staff, as well as students (future colleagues).

These principles addressed the majority of issues raised by clinicians for supporting 2:1 placements, and they are presented in Table 3.

Consolidation of Model

The first author undertook further work to consolidate the benefits of the three principles into a format that could be easily accessed and utilised by clinicians, teams, and students.

Structuring role sharing

To equitably share placement duties amongst a team, the educator role was split into its two components of appraising and completing paperwork (educator role), and teaching the application of skills and evaluating learning (mentor role). By developing separate educator and mentor roles that could be flexibly supported by multiple staff, it was believed that the challenges reported in other studies, regarding a need for different behaviours and attitudes when one person is expected to alternate between the two roles, would be overcome. Such challenges, including remaining objective and unbiased, can have negative effects on the teaching-learning relationship (Lempp & Seale, 2004; Meyer, Louw, & Ernstzen, 2019).

University paperwork is completed by the educator who ultimately decides whether the student has fulfilled the required learning objectives. In a weekly 1–2-hour session, a student presents their evidence of learning to the educator alongside the feedback from the mentor and team.

The mentor supports both students at least 40% of the week, providing the necessary educational guidance. The mentor needs to hold sufficient experience to support and evaluate the students' learning. The mentor feeds back their own clinical evaluation to the educator.

Table 3
Elements of perceived barriers addressed by Hull EASI model

Perceived barrier	**Structuring role sharing**	**Evidencing learning with tools**	**Supporting peer learning**
Quality of education	Share student's learning across team. Multiple team members delivering feedback could identify negative behaviours and biased opinions.	Tools structure knowledge acquisition, making learning and thinking visible. Tools clarify and objectify required learning and evaluation of every experience.	Structure learning environment to support and elicit the benefits of peer learning.
Logistics		Students could spend time away from clinical environment using tools to consolidate their knowledge.	
Time limitations	Duties are shared equitably amongst team. Clarity of duties enables efficient use of time and time away from students.	Utilising tools to prepare evidence and identify learning needs ready for discussion aids the effective and efficient use of appraisal time.	Structuring discussions could accelerate identification of learning needs, reducing repetition and increasing efficiency and effectiveness of 1:1 teaching time.
Clinical capacity	Potential for students to move between different team members, reducing dependence on a single clinician.	Tools facilitate constructive learning outside the clinical environment. Problems potentially identified by end of first week.	Clinical 1:1 teaching time no longer sole aspect of learning.
Obligation	Sharing roles reduces perceived pressure that student's outcome from placement is reflective of a single clinician's ability to practise and teach.	Learning is owned by the student. Tools objectify and evidence required learning.	Enculturates peer learning for students and teams, as well as supporting self-, team-, and mentor-led learning.
Specialities	Flexibility to support students at different times.	Learning made visible. Facilitates deconstruction of ingrained complex thinking routines.	

Motivation to learn	Students encounter variety of learning experiences across breadth of team.	Students take ownership of their learning needs by evaluating and presenting evidence.	Value placed on peer learning by experiencing benefits.
Stress	Responsibilities shared.	Learning objectified.	Peer learning can reduce student stresses.

Knowledge transmission exclusively from educator to student is a traditional expectation of placement learning (Kell & Jones, 2007). The roles of the mentor and educator could share this construct. However, defining the minimum duration for fulfilling these roles provides clarity for all involved that student education does not rest solely with the educator, and learning is more than knowledge acquisition (Vygotsky, 1978). All team members have knowledge and skills worthy of sharing, which enables students to pool knowledge and experience from multiple resources (MacGregor, 1990), encouraging a mutual respect for the ideas and opinions of others (Sheridan, 1989).

A structured mentor to educator feedback form was required that was simple and quick to complete, delivered the right breadth of information, could be effectively and rapidly interpreted by the educator, and was standardised for students attending from any HEI. Resources reviewed included the learning assessments for BSc and MSc physiotherapy courses at 10 HEIs allocating students to the author's department, the Chartered Society for Physiotherapy (CSP) and Health Care and Professions Council (HCPC) standards, and the Australian Assessment of Physiotherapy Practice (APP) tool. From this, a form was created that covered all required aspects in a logical and succinct manner. The form is stored electronically and password protected. This is viewed by the educator during the student's appraisal, and a copy is given to the student to keep.

To enable a rounded picture of the student's practise to be obtained, and to recognise the value team members contribute to student development, the team also needed an effective and structured way of sharing their weekly evaluation with the educator. From the day conference, a presenter was contacted and asked to share their team feedback form used in a 4:1 model. A variation of this was used as the basis for the team feedback sheet. Responsibility for completing this documentation is shared. This sheet is stored electronically and password protected.

The team sheet was also an appropriate platform to communicate relevant student-related information in the absence of verbal handovers. All involved agreed that a space for staff to identify when an absence of leave for a student was agreed on and by whom, or when a phone call from an absent student was received was invaluable.

As feedback is potentially received from all members of the team, a much wider perspective of student performance is available for the educator at appraisal rather than depending on the perceptions, or assumptions, of one person. Delivering an appraisal in an unthreatening and democratic environment supports the freedom to express one's own thoughts and challenge the ideas of others (Brookfield, 1986; Johnson & Johnson, 1986; Lempp & Seale, 2004; Sheridan, 1989). This could decrease the risk of any bias significantly

influencing the appraisal from evidence supplied by those evaluating or appraising the student (Croskerry, Singhal, & Mamede, 2013a; Croskerry, Singhal, & Mamede, 2013b; Lempp & Seale, 2004; O'Sullivan & Schofield, 2018; O'Sullivan & Schofield, 2019). It allows an educator to ask a student to explain any apparent issues arising or discrepancies in the evidence provided. Doing so permits a student to understand how others interpret their actions or conduct, allowing potentially uncomfortable experiences to be professionally managed with further learning achieved. Having this information objectively presented enables challenging and sensitive conversations to be facilitated appropriately by the educator and reduces the psychological and emotional effort of engaging in that conversation for all.

Flexible role sharing is required to efficiently utilise staff availability made complex by the ever-changing working patterns experienced in the NHS.
The role of mentor or educator could be fulfilled by one member of a team throughout the placement or shared with other staff, even changing on a weekly basis.

The educator's role is potentially accomplished in a 1–2-hour session per week. This enables educators to support students when they have limited capacity to contribute throughout a placement as well as to support outside their speciality at short notice.

Whilst the educator must be up to date with educator training, the mentor role does not. This enables the formal use of staff with significant experience to actively support students who are prevented by regulations from becoming educator trained (i.e., exercise practitioners or unregistered staff). Staff ready to be educator trained can gain experience in supporting students as a mentor. New educators can consolidate their evaluating or appraising skills either as mentor or educator.

Teams are important in the development of students as reflected in the National Education and Training Survey (NETS) that sought to understand the quality of teamwork students witnessed. Teams are collaborative learning environments where all are active participants on a daily basis, creating new knowledge and sharing experiences. Whipple (1987) identified that within a collaborative environment, knowledge is held within the community rather than within the individual. The Hull EASI model shares the responsibility for day-to-day student learning with all team members, including registered practitioners, unregistered staff, managers, and the extended team (e.g., the multidisciplinary team and affiliated staff in the same profession). The model facilitated this by explicitly identifying the time when either the team or mentor were expected to assist.

A tick sheet to facilitate planning of the placement was created. It provides confirmation of who is delivering each role per week, of who is delivering student inductions and when, that the feedback sheets for each student have been generated and password protected, and that induction packages have been read and understood by the team. This sheet aids sharing of duties and provides clear standardised communication to facilitate the planning of role sharing, which could be potentially complex and time consuming.

An induction pack was created for staff and students, providing an overview of the model and the three concepts, standardised information on the tools used, and the premises required to implement the Hull EASI model.

Evidence learning with tools

The learning goals for BSc and MSc physiotherapy courses at 10 HEIs allocating students to the author's department at that time were reviewed to identify the scope of learning that tools would be required to evidence.

Tools were checked against the following assessment and learning frameworks to identify whether they could effectively contribute to learning as well as supply evidence: Bloom's taxonomy of learning (1956), Webb's depth of knowledge framework (2005), structuring of autonomous learning (Bruffee, 1987; Perkins, 1999), integrating concepts of sequential learning (Fitts & Posner, 1967), and skill acquisition (Brenner 1982; Dreyfus & Dreyfus, 1980). In some cases, tools were modified to achieve this.

Tools used in the author's department for documenting professional development were reviewed and adapted to be relevant for pre-registration use. Sevenhuysen et al.'s 2013 paper identified tools that could be used to formally structure peer learning for students in placement. Some of these tools could evidence specific learning goals (Kneebone, Nestel, Vincent, & Darzi, 2007; Wolpaw & Papp, 2003) and elicit peer learning. Where no tools were found, the author created them. See Table 4 for a description of the tools used in the pilot.

Table 4
Description of tools

Feedback sheet Sevenhuysen et al., 2013	Performance-based comments, given or received, documented by students.
Peer behaviour observations Sevenhuysen et al., 2013; Dalton, Keating, & Davison, 2009; Parker & Kersner, 1998	Performance-based comments documented by a student to note that a specific peer behaviour was observed.
SNAPPS Sevenhuysen et al., 2013; Wolpaw & Papp, 2003	A learner-centred tool for clinical education consisting of six steps. Completed jointly by students.
Complexity risk matrix Sevenhuysen et al., 2013; Kneebone et al., 2007	A tool to map complexity and risk, or prioritisation, in clinical situations. Completed jointly by students.
Meet the team sheets	A tool to promote development of professional communication skills.
Scripting sheets, peer review sheets Secomb, 2008; Dalton, Keating, & Davison, 2009; Parker & Kersner, 1998	Structured tools to assist analysis and evaluation of clinical practise and to develop feedback skills. Completed by observing peer in joint sessions.
Reflection sheets Gibbs, 1998; Dye, 2011	A structured tool to assist reflective practice. Completed independently.
Clinical reasoning sheets	A structured tool to assist clinical reasoning. Completed jointly or independently.

Clinical observations sheet	A structured tool completed when observing clinical practice and shared with peer.

When presented with the students' evidence, alongside mentor and team feedback sheets, the educator is supplied with specific and relevant objective information to appraise the students' learning goals, regardless of the HEI's assessment structure. Appraising with evidence presented in this way can lead to a reduction in overall time spent on the task, which was highlighted as a stressor during student placements (Table 2; Ohman et al., 2005; Sevenhuysen et al., 2014). Appraising presented evidence could be more effective and accurate than basing appraisal exclusively on informal narratives.

The process for students to gather evidence, identify learning needs, and evaluate what to present for appraisal places into context the requirement by HCPC to evidence clinical practise for registration renewal purposes. Experiencing the breadth of tools used in the model enables a student to recognise multiple ways of evidencing complex higher thinking and professional soft skills.

Supporting peer learning

Peer learning refers to students learning with and from each other without implied authority to any individual. It is based on the principle that adults learn by connecting previous experiences to new learning, and that they therefore benefit from explaining their ideas to others and by participating in activities in which they can learn from their peers (Sevenhuysen, Farlie, Keating, Haines, & Molloy, 2015). The emphasis is on the learning process, including the emotional and psychological support that learners offer each other, as much as the learning task itself.

Sevenhuysen et al.'s 2013 paper and feedback from clinicians at the day conference on student learning and communication when implementing 4:1 and 2:1 models indicated that the benefits of peer learning were far beyond that of merely increasing placement capacity. Sustainably supporting more than one student on placement would positively contribute to addressing the shortfall in current placement provision in England. However, peer learning doesn't automatically occur because more than one person is present at the same point of learning. To structure peer learning, the Hull EASI model utilised tools Sevenhuysen et al. (2013) identified as supporting peer learning. Induction packs for staff and students were created to manage expectations about peer learning, to address frequently asked questions, to highlight the requirement for timetabling peer learning into the working week, and to identify how the use of the tools could elicit and structure peer learning.

To promote peer feedback as a valued learning resource, peer evidence was required to be shared at the weekly appraisal. Peer review sheets were adapted to specifically capture peers' thoughts on generating different approaches, and the pros and cons of this, rather than seeking constructive criticism of practise.

Developing the EASI model in response to initial feedback

The Hull EASI model was piloted twice within an MSK outpatient setting. A brief questionnaire, using a Likert scale and open-ended question design, was e-mailed to the two clinical educators and four students following completion of

their placements. The questions explored satisfaction with the model in terms of its perceived educational significance, level of support offered, the value of peer learning, and whether any additional positives or stressors were experienced. Three of the four students (75%) and both of the educators (100%) returned their questionnaires.

Feedback from the initial pilots indicated correlation with published findings on the benefits of peer learning. Evidence for this is presented in Table 5.

Table 5
Educator and student feedback with supporting evidence for peer learning

Educator or student response	**Supporting evidence**
"The students were very proactive with completing reflections, clinical reasoning forms, and peer reviewing each other. This I feel accelerated their development." [Educator's response]	• Peer learning creates an active learning environment (Slavin, 1978) for developing higher-level thinking skills and achieving greater accomplishments. • It enables retention of information for longer than learning in an individual competitive system (MacGregor, 1990; Manis, 2012; SkØien, Vagstol, & Raaheim, 2009; Totten, Sills, Digby, & Russ, 1991; Webb, 1980). • It results in an increased interest in the subject matter through shared engagement in the learning process (Kulick & Kulick, 1979).
"Moving away from a more passive style of learning has allowed the students to acknowledge their weaknesses and areas for improvement and action these in a more proactive manner. In clinical terms, this allowed students to gain greater independence in a faster timescale." [Educator's response]	• Peer learning enables inadequate strategies to be identified and overcome by trying different methods and refining them in response to feedback (Ericsson, Krampe, & Tesch-Römer, 1993; Gibbs, 1998; Kolb, 1984; Mezirow, 1990), therefore scaffolding and extending learning (Benner, 1982; Dreyfus & Dreyfus, 1980; Fitts & Posner, 1967; Vygotsky, 1978).
"I was able to take a more active role in observations, which provided my peer with more constructive feedback, which in turn helped them and me in future scenarios." [Student response]	• Peer working encourages common enquiry in learning and the freedom to constructively challenge one another and critically think, developing mutual respect for ideas and opinions of others as well as building self-esteem (Brookfield, 1986; Johnson & Johnson, 1986; Mezirow, 1990; Sheridan, 1989).
"I think all the paperwork was relevant and meaningful in helping me to think further and reason my actions for my patients." [Student response] "Once I got used to the amount of paperwork, I was glad I did it because now I have lots of evidence of my learning and experience." [Student response]	• Peer learning draws on past experiences, wisdom, and knowledge bespoke to an individual and generates an independence in learning (Brookfield, 1986).

Next Steps

The Hull EASI model will continue to undergo further development within outpatient and ward-based settings using feedback from the experiences of those delivering it and the students who utilise the model. As placements implementing the Hull EASI model increase and sufficient data is gathered, analysis and evaluation of the model is intended to be published. An accessible training and induction package is under development for students and for teams. Work has started on exploring the potential for the model to be utilised by other AHPs as a positive response to the need for AHP student placements locally. It is hoped that exposure to the model will strengthen a culture of peer learning amongst current staff as well as students. The work on developing the Hull EASI model has resulted in the first author being awarded a secondment in January 2021 to concentrate solely on delivering different models of placement, including the Hull EASI model, to the region's AHPs. This work is to facilitate placement expansion across Humber Coast and Vale, funded by Health Education England.

References

Benner, P. (1982). From novice to expert. *American Journal of Nursing, 82*(3), 402–407.

Bloom, B. S. (1956). Taxonomy of educational objectives: The classification of educational goals. New York: Longmans, Green.

Brookfield, S. D. (1986). Understanding and facilitating adult learning. San Francisco: Jossey-Bass Publishers.

Bruffee, K. A. (1987). The art of collaborative learning change. *The Magazine of Higher Learning, 19*(2), 42–47.

Croskerry, P., Singhal, G., & Mamede, S. (2013a). Cognitive debiasing 1: Origins of bias and theory of debiasing. *BMJ Quality & Safety, 22*, ii58–ii64.

Croskerry, P., Singhal, G., & Mamede, S. (2013b). Cognitive debiasing 2: Impediments to and strategies for change. *BMJ Quality & Safety, 22*, ii65–ii72.

Chartered Society of Physiotherapy. (2014). Ensuring sufficient practice placement capacity for physiotherapy students. *Chartered Society of Physiotherapy*. Retrieved from: https://www.csp.org.uk/system/files/csp_practice_education_message_09jun14.pdf [Accessed 15.01.2020]

Chartered Society of Physiotherapy. (2017). English government to fund more student placements. *Chartered Society of Physiotherapy*. Retrieved from: https://www.csp.org.uk/news/2017-08-09-english-government-fund-more-student-placements [Accessed 15.01.2020]

Dalton, M., Keating, J., & Davison, M. (2009). Development of the assessment of physiotherapy practice (APP): A standardised and valid approach to assessment of competence in physiotherapy. *Australian Learning and Teaching Council (ATLC),* Final Report. 6–28. Retrieved from: https://ltr.edu.au/resources/grants_pp_physiotheraphy_instrument_griffith_report_2009.pdf [Accessed 13th March 2020]

Demo, D. H., Fry, D., Devine, N., & Butler, A. (2015). A call for action: Advocating for increased funding for the allied health professions ASAHP leadership development program. *J Allied Health, 44*(1), 57–62.

Dreyfus, S., & Dreyfus, H. (1980). A five stage model of the mental activities involved in directed skill acquisition. California University Berkeley

Operations Research Center [monograph on the Internet]; Available from: https://www.researchgate.net/publication/235125013_A_Five-Stage_Model_of_the_Mental_Activities_Involved_in_Directed_Skill_Acquisition [Accessed 04/03/2021]

Dye, V. (2011). Reflection, reflection, reflection. I'm thinking all the time, why do I need a theory or model of reflection? In McGregor, D. and Cartwright, L. (Eds.) *Developing Reflective Practice: A guide for beginning teachers*. Maidenhead McGraw-Hill Education, 217–234.

Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review, 100* (3), 363–406.

Fitts, P. M., & Posner, M. I. (1967). Human Performance. Belmont: Brooks/Cole Pub. Co.

Gibbs, G. (1988). Learning by doing: A guide to teaching and learning methods. London: Further Education Unit.

Johnson, R. T., & Johnson, D. W. (1986). Action research: Cooperative learning in the science classroom. *Journal of Science and Children, 24*(2), 31–32.

Kell, C., & Jones, L. (2007). Mapping placement educators' conceptions of teaching. *Physiotherapy, 93*, 273–282.

Kneebone, R., Nestel, D., Vincent, C., & Darzi, A. (2007). Complexity, risk and simulation in learning procedural skills. *Medical Education, 41*, 808–814.

Kolb, D. A. (1984). Experiential learning: Experience as the source of learning and development. Englewood Cliffs: Prentice Hall.

Kulik, J. A., & Kulik, C. L., (1979). College Teaching in Peterson and Walberg (Eds.) *Research in Teaching: Concepts, findings and implications*. Berkeley: McCutcheon Publishing.

Ladyshewsky, R. K., Barrie, S. C., & Drake, V. M. (1998). A comparison of productivity and learning outcome in individual and cooperative physical therapy clinical education models. *Physical Ther., 78*(12), 1299–1298.

Lekkas, P, Larsen, T., Kumar, S., Grimmer, K., Nyland, L., Chipchase, L., Jull, G., Buttrum, P., Carr, L., & Finch, J. (2007). No model of clinical education for physiotherapy students is superior to another: A systematic review. *Australian Journal of Physiotherapy, 53*(1), 19–28. Doi: 10.1016/s0004-9514(07)70058-2. PMID: 17326735.

Lempp, H., & Seale, C. (2004). The hidden curriculum in undergraduate medical education: Qualitative study of medical students' perceptions of teaching *BMJ, 329*, 770.

MacGregor, J. (1990). Collaborative learning: Shared inquiry as a process of reform. *New directions for teaching and learning*.

Manis, C. (2012). Daily teaching tools: An overview and analysis of cooperative learning. http://www.dailyteachingtools.com/cooperative-learning.html. [Accessed 04/03/2021]

Meyer, I. S., Louw, A., & Ernstzen, D. (2019). Perceptions of physiotherapy clinical educators' dual roles as mentors and assessors: Influence on teaching-learning relationships. *South African Journal of Physiotherapy, 75*(1), a468.

Mezirow, J. (1990). Fostering critical reflection in adulthood: A guide to transformative and emancipatory learning. San Francisco: Jossey-Bass.

Ohman, A., Hagg, K., & Dahlgren, L. (2005). A stimulating practice-based job facing increased stress: Clinical supervisors' perceptions of professional role, physiotherapy education and the status of the profession. *Adv Physiother.*, *7*, 114–222.

O'Sullivan, E. D., & Schofield S. J. (2018). Cognitive bias in clinical medicine. *Journal of the Royal College of Physicians of Edinburgh, 48*(3), 225–231.

O'Sullivan, E. D., & Schofield, S. J. (2019). A cognitive forcing tool to mitigate cognitive bias: A randomised control trial. *BMC Med Educ., 19*, 12. https://doi.org/10.1186/s12909-018-1444-3 [Accessed 04/03/2021]

Parker, A., & Kersner, M. (1998). New approaches to learning on clinical placement. *International Journal of Language and Communication Disorders, 33*, suppl. 255–260.

Perkins, D. (1999). The many faces of constructivism. *Educational Leadership, 57*(3), 6–11.

Sevenhuysen, S. L., Nickson, W., Farlie, M. K., Raitman, L., Keating, J. L., Molloy, E., Skinner, E., Maloney, S., & Haines, T. (2013). The development of a peer assisted learning model for the clinical education of physiotherapy students. *Journal of Peer Learning, 6*, 30–45.

Sevenhuysen, S., Skinner, E. H., Farlie, M. K., Raitman, L., Nickson, W., Keating, J. L., Maloney, S., Molloy, E., & Haines, T. P. (2014). Educators and students prefer traditional clinical education to a peer-assisted learning model, despite similar student performance outcomes: A randomised trial. *J Physiother.*, *60*(4), 209–216.

Sevenhuysen, S., Farlie, M. K., Keating, J. L., Haines, T. P., & Molloy, E. (2015). Physiotherapy students and clinical educators perceive several ways in which incorporating peer-assisted learning could improve clinical placements: A qualitative study. *J Physiother., 61*(2), 87–92.

Sheridan. J. (1989). Rethinking andragogy: The case for collaborative learning in continuing higher education. *Journal of Continuing Higher Education, 37*, 2–6.

SkØien, A. K., Vagstol, U., & Raaheim, A. (2009). Learning physiotherapy in clinical practice: Student interaction in a professional context. *Physiotherapy Theory and Practice, 25*(4), 268–278.

Slavin, R. E., (1978). Student teams achievement divisions. *Journal of Research and Development in Education, 12*, 9–49.

Totten, S., Sills, T., Digby, A., & Russ, P. (1991). Cooperative learning: A guide to research. New York: Garland.

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Massachusetts: Harvard University Press.

Webb, N. M. (1980). An analysis of group interaction and mathematical errors in heterogeneous ability groups. *British Journal of Educational Psychology, 50*(3), 266–276.

Webb, N. (2005). Depth-of-knowledge levels for four content areas. Presentation to the Florida Education Research Association, 50th Annual Meeting, Miami, Florida.

Whipple, W. R. (1987). Collaborative learning: Recognizing it when we see it. Source: AAHE Bulletin. 4–6.

Wolpaw, D. R., & Papp, K. K. (2003). SNAPPS: A learner centred model for outpatient education. *Academic Medicine, 78*(9), 893–898.