

Hayes, Catherine (2018) Podiatric medicine and surgery: situated learning in simulation with social constructivism. In: Health Education England North East Quality Conference 2018, 14 March 2018, The Durham Centre, Durham, UK. (Unpublished)

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# 'Podiatric Medicine and Surgery: Situated Learning in Simulation with Social Constructivism'

Dr Catherine Hayes

Faculty of Health Sciences and Wellbeing, University of Sunderland

Visiting Professor of Higher Education, University of Cumbria

Faculty of Podiatric Medicine, Royal College of Physicians and Surgeons (Glasgow)

## Social Constructivist Approaches in Podiatric Medicine

Low fidelity simulation has been an integral part of podiatric medical and surgical education and training for the last hundred years. Undergraduate and postgraduate podiatric curricula are focused on the development of cognitive knowledge, psychomotor skill and professionalism. These are used in outcomes based assessment mechanisms with social constructivist approached to pedagogy as an underpinning philosophy. Providing evidence of competence, core underpinning knowledge and the values base for the provision of care can be greatly enhanced through the adoption of the range of simulation resources available to the profession.



The interrelationship between Intelligence Quotient (IQ) and Emotional Intelligence Quotient (EQ) provides the capacity to undertake complex decision making, maintain self awareness, intrinsic motivation and the capacity of podiatric practitioners to demonstrate higher order thinking skills, characteristic of podiatric medicine and surgery. How educators can embrace the vast array of high and low fidelity simulation now available to them on a commercial basis is a key epiphany for podiatric educators. The integration of high fidelity simulation mannequins such as SIM Man 3G is now an anticipated norm expected by Undergraduates as an adjunct to their education and training programmes across the UK. Indeed Podiatric Medicine has a long history of adopting the medical model of learning and teaching to ensure that from the earliest stages of their studies, students learn to engage and interact with the people they treat as people first and patients second. This is one of the prime reasons that fitness to practice litigation cases directly linked to podiatric medicine are isolated in number and impact. Simulation affords the profession further opportunity to build upon this reputation and share best practice across the allied healthcare professions.



## Authentic Physical Learning Environments

Conveying the complexity of human interaction in relation to physiological presentation and the reproduction of meaningful interaction is the fundamental basis of high fidelity simulation in healthcare practitioner education. The levels of sophistication afforded to pedagogic practice now mean that the replication of these features can take place in an array of educational contexts and settings. This provides students and educators with the opportunity of extending knowledge by affording them to observe the implications of high risk healthcare interventions. Couple this with the capacity to remove the reality of the consequences of inappropriate decision making and truly reflexive practice becomes a reality.



## Increasing Functional Capacity for Podiatric Medicine

Cognitive academic overload is something that UK podiatric curricula proactively seek to acknowledge and balance through the integration of high fidelity simulation. Core developments of effective communication, teamwork and clinical skills have become a primary component of podiatric undergraduate curricula across the UK. This has happened in conjunction with the recognition of the process and outcomes of post-registration professional development that have integrated, consolidated and affirmed the intellectual capacity, functional capability and affective interactional ability of staff that have recently joined regional and national healthcare podiatric workforces. In recent years, the integration of clinical simulation has ensured that the podiatry workforce is better prepared to address the skills deficiencies that have been so readily identifiable in the Cavendish Review (2013) and the Frances Report (2013). As well as the capacity for high fidelity simulation to address the functional capacity of students, it also provides a unique opportunity for the exploration of cultural barriers represented at macro, meso and micro level by government policy, organisational mandate and personal experience. As such these resources represent a mandate for change that can actively promote and exhibit the Faculty of Podiatric Medicine (RCPS) commitment to enhancing the functional capacity and intellectual proficiency of podiatric practitioners educated to meet workforce demand regionally, nationally and globally.

Recreating authentic academic learning environments is another key proponent driving progression and sustaining change around healthcare education. By situating cognition in this manner, and by integrating the latest software packages, we can change generic learning environments to represent reality and to objectify environments so that student experience is framed by the context as well as pedagogic experience. This highlights the capacity of simulated learning environments to enhance capacity for the transferability of theoretical knowledge into applied practice at the front line of patient podiatric care and interaction.



## The Impact of Simulation on Potential Employability Skills

Research evidence demonstrates that simulated learning environments have had a positive impact on the development of core generic skills that characterise ideal applicants for advertised podiatric medicine posts. Key examples of these skills are:

- Core communication and social interaction skills
- The development and nurturing of self confidence
- Fundamental organisational skills
- Time Management and prioritisation skills
- The capacity to be autonomous and independent within the defined scope of practice of the podiatrist.
- The capacity for problem solving and higher order thinking skills aligned to podiatric medicine as an academic discipline
- The capacity to function as an integral and valued part of a multidisciplinary team and in the context of interprofessional working.
- Capacity for leadership or mentorship in the potential development of other podiatrists
- Professionalism in the sense of being committed, reliable, honest, trustworthy, dependable and motivated to constantly improve practice in the context of patient centred care.
- Capacity for care and compassion through social engagement and a genuine regard for others.

## Specialist Surgical Simulation Training

The development of basic psychomotor skills emphasises the fundamentals of basic aseptic technique theory and applications of clinical practice using simulated learning environments. Surgical training and pupillage offers introduction to:

- Suturing
- Knot tying
- Surgical instrument preparation and use
- Donning surgical attire
- Dissection and Debridement



## Developing the Potential Employability of Students

Main considerations of the design features of the physical learning environment for simulation are essentially reliant on scale, location and functionality of learning spaces for the students. Specialist space is an integral part of the much wider social learning technology area. It ought to allow small groups of learners to have a private space, equipped fully with digital technology where the learning that has been stimulated in formalised learning opportunities can be developed in surroundings that support proactive learning and social engagement with other members of the student body. The development of diagnostic reasoning skills is facilitated via specialist software packages which provide computer-based case histories; Students are then allowed to establish their existing evidence base whilst recognising limitations in their knowledge base. In doing so they bridge the gaps in knowledge, skills and professionalism they face and become progressively more proficient in podiatric clinical diagnosis and management.



## Social Constructivism as an Underpinning Philosophy

UK podiatric practice has reached a pivotal time of change and progression, shaped by key political drivers such as the Francis Report (2013) and the Cavendish Review (2013). Social constructivist approaches to learning and teaching in the context of podiatric medicine offer a mechanism of triangulating assessment in relation to knowledge, skills and professionalism. Most significantly they enhance intrinsic motivation to learn, encourage deep as opposed to superficial learning and provide a mechanism of implementation which promotes interprofessional education and multidisciplinary teamwork.. It is clear that authentic learning opportunity is enhanced and developed by simulated learning environments that accommodate the philosophical basis of what teaching and learning is and how best it can be translated into practice. The emergence of a valued and dedicated podiatric workforce is dependent on the degree of commitment podiatric educational providers attribute to simulated learning activity as an integral adjunct to social constructivist approaches to pedagogic practice.

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