Dr Helen Vosper Research Interests

additional information

Dr Vosper’s current research interests fall into two main areas: patient safety and educational development. The two are linked by Human Factors and Ergonomics (HFE).

Human Factors (synonymous with the term ‘Ergonomics’) is defined by the International Ergonomics Association as “the scientific discipline concerned with the understanding of interactions among humans and other elements of a system and the profession that applies theory, principles, data and methods to design in order to optimise human wellbeing and overall system performance.”

HFE approaches are therefore systems-based, and involve working in a participatory manner with the people within the system (the ‘actors’) to explore everyday work and how it is influenced by the design (deliberate or otherwise!) of that system. HFE collects data about work from multiple sources, and it is a discipline where quantitative and qualitative data sit comfortably side-by-side. ‘Systems’ are essentially constructs, developed through interaction, relying on communication and language (and the extent to which it is shared), and qualitative exploration is necessary to capture individual experiences of the system.

Optimising system performance is often about balancing competing outcomes. In healthcare, for example, system outcomes include patient safety and financial sustainability, both of which are likely to be highly interdependent. HFE approaches are increasingly considered the best option for managing safety in a realistically achievable manner. HFE can be applied in any system, including academic practice, supporting the enhancement of system outcomes such as student wellbeing, satisfaction and achievement. Dr Vosper’s interests in student partnership and staff development fit well with the participatory nature of HFE and the outputs have been used to underpin the School Learning, Teaching and Assessment Strategy. HFE can also be used to support curriculum design, and an example of a suggested healthcare curriculum model is shown above.

A traditionally constructively aligned healthcare curriculum reflects professional behaviour, articulated by the regulator as a set of programme outcomes. Assessment is designed to capture these outcomes, and appropriate teaching and learning activities established to support student success in assessment. Appropriate staff expertise is required to deliver the course. The model proposed above develops this further by recognising the importance of the ‘hidden curriculum’ (experiences out with the formal taught programme) in driving student learning and behaviour. To improve the quality of learning about patient safety, the hidden curriculum needs to be mapped and, in this exercise, students themselves are the experts – staff need to defer to this expertise and work in partnership. Academic staff also need to work closely with those delivering placement to quality assure these experiences. Curriculum content must be driven by the needs of the practice role, meaning staff must have an agreed vision of the practice role and the drivers that shape it.

The curriculum needs to take into account the ‘hidden’ experiences of students, allocating ‘space’ in terms of teaching and learning activities to allow student-led exploration of their ‘schemes of experience’ that influence their ‘professional’ behaviour. Assessment must be authentic, effectively measuring professional competencies. This may require a move away from traditional assessment formats, requiring staff to challenge their existing practice. Teaching, learning and assessment strategies must be clearly articulated and adhered to.

It is proposed that HFE provides the tools to deliver on all of these aspects, and should be central to the curriculum, in both delivery and design.