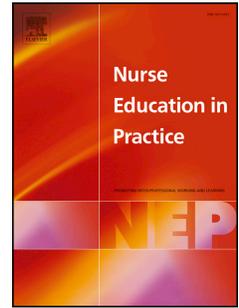# Accepted Manuscript

Developing nursing competence: Future proofing nurses for the changing practice requirements of 21st century healthcare

Keith Weeks, Diana Coben, Gerard Lum, David Pontin

Developing nursing competence: Future proofing nurses for the changing practice requirements of 21st century healthcare

Keith Weeks[1], Diana Coben[2], Gerard Lum[3], David Pontin[4]

1. Professor of Innovation and Engagement in Healthcare Numeracy and Education, Faculty of Life Sciences and Education, University of South Wales, UK
2. Director, National Centre of Literacy & Numeracy for Adults Te Kura Toi Tangata/Professor, Faculty of Education, University of Waikato, New Zealand
3. Senior Lecturer Philosophy and Education Management, School of Education, Communication and Society, King's College, London, UK
4. Aneurin Bevan Chair of Community Health, Faculty of Life Sciences and Education, University of South Wales, UK

There's a conundrum that is taxing us at the moment – how can we see into the future to know what we need to know, to be prepared for things to come? Obviously none of us has the actual ability to 'see' into the future, but we are very good at distilling trends from the past, projecting them forwards and developing plans for action in the here and now. We try to create what Alvin Toffler calls 'time spanners' – things to connect us to the future (Toffler 1970). However, the further we move away from today, the more uncertain we become about our predictions and our ability to cope: our spanners are too short. We can see elements of this conundrum in the preamble to the UK Nursing and Midwifery Council (NMC) draft *Standards of Proficiency for Registered Nurses*, the council stated that:

> "Registered nurses provide care to people at every stage of life across all care settings. They work in the context of continual change, challenging environments, growing diversity and rapidly evolving technologies. It is therefore essential that they are equipped with the knowledge, confidence and transferrable skills needed to respond to these demands. (NMC 2017, p.3)"

1

In short, we perceive our world to be constantly changing, with uncertainty becoming an ever-constant challenge for humanity. Consequently, the task for nursing education shifts from teaching for now, to preparing nurses for the challenges of 21st century healthcare delivery. This preparation integrates professional knowledge, skills, ethical codes of practice, emotional intelligence and associated competencies.

Unfortunately, the way we have traditionally organised nursing education in classrooms and clinical practice has reinforced reductionist education approaches. We have physically and cognitively separated the learning and teaching of knowledge, skills and ethical codes of practice. In doing so, we have unintentionally created artificial boundaries and barriers to the natural synthesis of the knowledge, skills and attitudinal values that underpin professional nursing practice.

However, these barriers can be overcome through the use of innovative curriculum design and pedagogical practice developments. Such innovations support boundary crossing and significant learning and competence development opportunities. We are developing holistic education processes that respond to the changing practice requirements of 21st century healthcare. Advances in clinical simulation, virtual authentic learning and assessment environments and other innovative constructivist based pedagogies can help us redress the current paradoxical position. There is exciting work to be done in the domain of authentic competence modelling, development and assessment. An integrated model of competence development can support three things:

1. Synthesis - of cognitive, functional, ethical, personal and meta competencies,
2. Reflection in and on experience, and
3. Learning how to learn to manage uncertainty (see Figure 1).

The model we propose in figure 1 draws on original work by Cheetham and Chivers (1996). It develops and integrates competence in three primary domains:

- Cognitive competence (knowing that and knowing why):
  Knowledge (knowing that) and understanding (knowing why) of the professional knowledge base underpinning the practice of nursing in 21st century healthcare environments

- Functional competence (know how & skills):
  Demonstration of skilled performance of the professional and psycho-motor skills, and procedures required to administer safe nursing care across the spectrum of technology-rich to austere 21st century healthcare environments

- Ethical competence (practicing within legal and professional codes of practice):
  Knowledge of the country specific professional code of practice and the law associated with the practice of nursing (knowing what's right), and demonstration of the possession and application of appropriate personal and professional values during the practice of nursing (doing what's right).

Figure 1

An integrated model of nursing competence
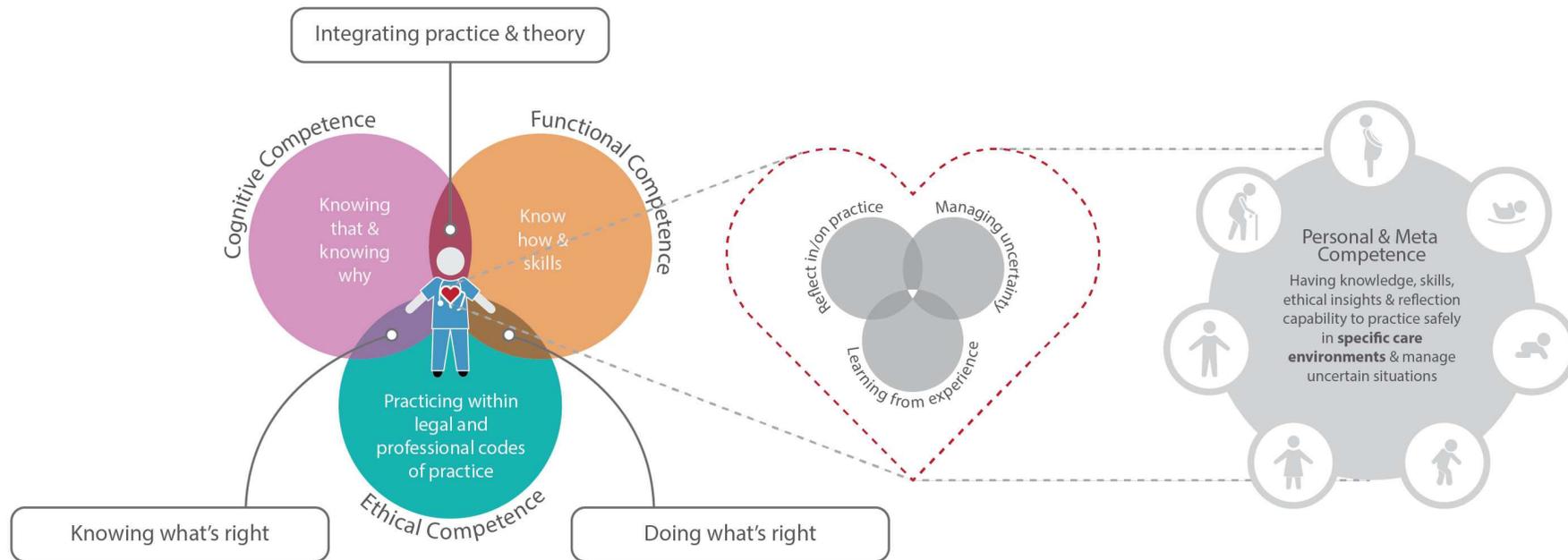
In the model we go beyond Cheetham and Chivers' framework by populating the critical intersections positioned between the three primary competence domains. These populated intersections help students and neophyte RNs to synthesise cognitive, functional and ethical competencies by removing the traditional barriers to learning. Our integrated model illustrates how facilitating boundary crossing between the three primary competence domains supports synthesis of the core competencies. It also allows us to reveal intersections that highlight previously obscured focal points for competence development, synthesis and requisite education interventions:

Competence	Intersection
Cognitive + Functional	Theory-practice integration
Cognitive + Ethical	Knowing what's right
Functional + Ethical	Doing what's right
Cognitive + Functional + Ethical	*Personal & Meta-competence

*Position on novice-expert continuum when a nurse possesses the knowledge, skills, ethical insights & reflection capability to practice safely in specific care environments, with specific patient and client groups and to manage situations of uncertainty.

We propose that advances in clinical simulation, virtual authentic learning and assessment environments, and other innovative constructivist based pedagogies support boundary crossing and integration between these domains. They do this in three ways. Firstly, they provide liminal spaces that sit cognitively and functionally between classroom and practice environments. This means they can act as a conduit between the ordered and abstract world of classroom-based knowledge, and the situated messy world of practice, where knowledge, skills and ethical decision-making is often obscured, tacit and invisible.

Secondly, they model authentic representations of the real messy world of clinical nursing practice to support learners' observations of expert problem-

solving and practice. They can also scaffold and support the learning and synthesis of competence development.

Finally, they promote safety and allow for authentic assessment to take place in a safe environment before going into the real world, including austere environments. Nursing/midwifery students and practitioners can safely construct, integrate, rehearse and practice cognitive, functional, ethical, personal and meta competencies before entering the practice setting. These pedagogical approaches are currently in use and we anticipate that many other innovations exist within the spectrum of classroom, virtual, clinical simulation and practice environments. We suspect that they offer further opportunities for exploring boundary crossing and competence development.

This editorial is a precursor to a *special Nurse Education in Practice eSeries.* The eSeries' focus is on the design, development, use and evaluation of innovative pedagogical approaches that support competence development. We invite the international nursing and health professional education community to share their reflections on the proposed competence model, and on their own pedagogical innovations that support professional competence development and assessment. To misquote Alvin Toffler, we want to create shared time spanners to enhance our sense of the future… to create a heritage for the future.

References

Cheetham G & Chivers G (1996) Towards a holistic model of professional competence, Journal of European Industrial Training, 20(5) 20-30

Nursing and Midwifery Council (2017) *Standards of Proficiency for Registered Nurses.* NMC, London p.3

Toffler A (1970) Future Shock. Bodley Head, London