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Digital Competence Frameworks: their role in enhancing digital wellbeing in Nursing Curricula

Abstract

Digital competence, capability and/or literacy are still mostly understood and approached within higher education in terms of technical skills and knowledge. However, with media and digital technologies today are embedded in everyone's life and learning, it is now becoming clear that nurturing digital competence has become crucial for overall wellbeing of staff and students (Biggins et al. 2017). Their holistic approach to digital competence is in line with Todres et al.'s (2009) humanisation framework, a significant body of research suggest that digital technology plays an important role in the development of insidership, agency, uniqueness, togetherness, sense-making, personal journey and sense of place. This chapter will combine the nursing humanisation curricula work with that of digital competence frameworks, offering a model which is of relevance to higher education practitioners concerned with the wellbeing of students and staff.

Introduction

Framing the expectations of digital literacies has been a problematic and contested path. To foster a digital mindset is an expectation of employers, and the susceptibility of jobs replaced by machine learning and automation has focused the endeavours of policy makers and educators alike. The seminal work of Frey and Osborne (2017) calculates that 47% of total US jobs are at risk from computerisation in the next decade. Whether the existing and future workforce have access to these yet unknown roles is predicated on educational attainment. In the UK, the Make or Break: The UK's digital future report (2015) had already started to categorise future skill needs, estimating that only 10% of the workforce were capable and highly skilled 'digital makers' ; whereas 7% of the workforce were lambasted as 'digital muggles', for whom the digital may as well be 'magic'.

Mariya Gabriel, EU Commissioner for Digital Economy and Society, reported 'the digital skills gap is real. While already 90% of future jobs require some level of digital literacy, 44% of Europeans lack basic digital skills' (Velker 2018, p.4). Numerous technology reports highlight national economies driven by automated futures and fast paced change (MacKinsey 2018; PWC 2018; Ernst-Young & FCCI 2017)

"The pace of change of technology is far exceeding the speed at which many organisations are changing their behaviours and working practices at the moment. Businesses need to wake up to that now," Jonathan Tate, UK and EMEA (Samsung 2017 p.5).

Internationally, the New Media Horizon (NMC 2020) future scanning report, reports on the employers are increasingly turning to skills-based hiring and in quickly changing professions like healthcare or technology, commented that existing employees must continue to upskill. Against a fast paced change in the working world, policy makers have sought frameworks to understand, measure and implement digital change. The EU, through its digital vision for Europe 2020 first published the Digital Competence Framework (2013); in the UK parallel work was undertaken by the

Joint Information Systems Committee (JISC) and the foundations of their digital competence framework can be found in Beetham et al. (2009). The gap, however, in the digital frameworks is the thought and consideration needed for those working in these new ways. As digital ways of working, collaborating and networking offer great benefits in interdisciplinary working, for both industry and Higher Education alike; the impact cascades outside formal spheres of our lives and into our private life via a whole raft of social media channels and tools. Not all of these are invited – the power of the algorithm to follow our every tap and click has unintended consequences. Work by Biggins et al. (2017) identified a ‘gap’ in the most prevalent digital frameworks – the EU Digicomp and the UK JISC Digital Competency Frameworks. For these researchers, the importance of life-long learning, self-development and wellbeing were inadequately developed.

Good practice can be found where Governments’ place more emphasis on the holistic, and New Zealand has been quick to frame their digital framework through the dimensions of wellbeing that are potentially most affected by digital transformation. These are described as the evolving institutions of self, of social life and of civic life by Gluckman and Allen (2018). This chapter is thus located in an emergent body of work where digital frameworks are evolving to encompass wellbeing. JISC established a taskforce in 2018; the EU set out updated guidance for its DigiComp framework (2016) where, for the first time, the concept of digital wellbeing was articulated, under the digital safety category. The political framing of digital frameworks and skills is driven by economic success factors, it is timely to reflect upon what Brown (2018 p.54) articulates as:

‘digital literacies need to strike a balance between a focus on the development of important skills for today anchored in the language of opportunity, and deeper levels of critique framed in the longer-term mission of promoting access, equity and education for all.’

The significance of ‘humanising’ the curriculum in Nursing

The cornerstone of nursing practice is person centred care and the cultural and philosophical basis is strongly embedded in contemporary nursing practice (Cummings 2017; NMC 2018). At the point of registration the nurse must be able to

“demonstrate the numeracy, literacy, digital and technological skills required to meet the needs of people in their care to ensure safe and effective nursing practice” (Nursing and Midwifery Council 2018, p.9).

Technological and digital advances in healthcare have significant implications for all contemporary healthcare professionals. The digital future of Nursing advocates that digital skills training will need to be mandatory for nurse training and for this to be rooted in person centred and humanising experience (Royal College of Nursing 2018). Nurses will therefore need to effectively and responsibly use technology. This includes finding and evaluating information, to evidence collaboration with others, to produce and share original content, using the Internet and technology tools to achieve many academic, professional and personal goals (Terry et al 2019). These professional standards and requirements for contemporary professional nursing practice will require digital competence and literacy of current and future nursing workforce. They are essential in preparing nursing students for their placements; and to facilitate individual students for living, learning, working and participating in an increasing digital healthcare profession (Grech 2014). Knowledge of self, the individual own

strengths and weaknesses as a professional nurse is an important attribute for understanding and building person centred care (McCormack and McCance 2017). The need to place students at the heart of the learning process regarding digital skills and learning technological advances is paramount to the successful learning journey (Greaves et al. 2012). From the first entry into clinical practice, student nurses use a tablet device to record vital life signs such as temperature, pulse and blood pressure.

Underpinning Values Building Integrity and Trust

The values of openness, transparency and good communication are essential in building trust. Teachers that create learning environments in which students are given every encouragement to take ownership of their learning processes will increase individual self-efficacy, self-confidence and self-esteem, as outlined in the work of Bandura (1977). This will be essential when engaging in new and different learning material, such as digitalisation and technological skills. Facilitating students to be open and honest about previous experiences of technology and digital literacy will provide the foundations for continuous learning, helping them to build upon their experiences and any existing digital skills. Teaching nurses requires empathy and compassion, showing a much deeper understanding of the individuality of students. Critical to how comfortable students feel about learning new technology and digital skills will be considerations of how the past experiences of the learner, the contexts of their lives are valued by those they are learning from.

Understanding how each student has engaged with digitalisation the foundation for building upon experiences and changing perceptions of what digitalisation means to those providing person centred healthcare. Mannerstrom et al. (2018) show that the majority of adolescents in Western countries engage in friendship driven digital engagement, as opposed to interest driven, creative and goal orientated digital engagement prior to moving to higher education. This motivation towards friendship driven, keeping up peer-relations, social networking will become an important area to build upon teaching the purpose of digital skills and transferring of the aim in healthcare, of connecting in a responsible way to patients, addressing needs, valuable health monitoring and information.

Digital learning journeys

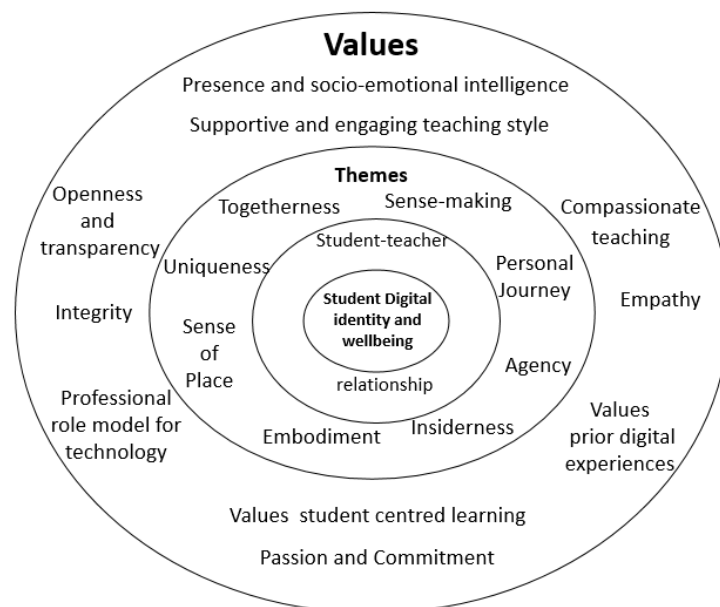
Supporting students in their learning journey towards digital awareness in the Nursing context is problematic. Future technological innovation involves a step-change in culture, in ways of working, and draws upon bodies of work that practitioners may be unaware of, such as the legal requirement to work to General Data Protection Regulation (ICO 2020). Digital frameworks such as the JISC digital competency framework frame the actual competencies to be developed, but lacks guidance as to the underpinning values of a specific sector. Building digital and technological readiness for current and future healthcare needs to scaffold the engagement of nursing students as they access and engage with digital learning processes. The Todres et al. (2009) Humanising Framework sets out a way of understanding how to humanise nursing care, through the 8 humanising dimensions. The framework offers a way of examining how as humans we will learn differently using technology.

Demonstrating the significance of the relationship between student centred learning of digital literacy and teacher can be understood through the quality of the interactions between student and teacher. Underpinning values and attributes become explicit in this model. Student centredness of

learning processes are paramount in the humanising of digital learning processes. As digitalisation in health increases, this enhances the gift of time nurses can spend interacting with patients and improvements in relationships with patients will be possible (Topol 2019). When applying this model the patient is placed at the centre of health care delivery and nursing care.

Nurturing the precious inter-human bond and deeper human interactions, based upon trust, presence, empathy and communication equals placing the patient in the centre of healthcare delivery and high-quality safe patient care (Topol 2019 p. 6).

In this chapter, the Todres et al. (2009) framework has been adapted as a model to show how we can conceptualise the humanising curricula to put students at the centre of the learning process. The concentric circles demonstrate a values based offering; a relational model, with the students at the heart. It demonstrates the relationship between students, their identity and wellbeing and the role of nurse academic in terms of the professional underpinning values, beliefs and principles.



A framework for nursing: humanising digital learning processes
(Waight and Holley 2020 adapted from Todres et al. 2009; Devis-Rozental 2018).

Themes: *Insiderness; Agency; Uniqueness; Togetherness; Personal Journey; Sense Making; Embodiment; Sense of Place*

Values: *Empathy; Compassionate teaching; Integrity; Honesty; Respect and dignity; Professional role model for technology, Presence and socio-emotional intelligence; Valuing prior digital experiences; Facilitative, supportive and engaging teaching style; Values and philosophical underpinning teaching of student centred learning; Openness and transparency.*

The framework for nursing

The Waight and Holley framework for nursing draws upon the body of work by Devis-Rozental (2018), exploring socio—emotional intelligence; and the work of Todres et al. (2009) in offering a

value based approach to building digital capacity for student nurses. This aligns with the professional requirements and its core values of person-centred clinical practice. Each dimension is framed as a value, followed by a brief explanation, with key proposals for good practice guidance for teaching and applying digital skill development.

Insiderness focuses on humanising student learning environments, encouraging student reflection about how the individuals experiences life from the inside, their feelings about using technology, their emotions and mood. The teacher interaction should therefore focus upon students' feelings, knowledge and motivation about digital skills. Many students will have had prior digital experience and this may have been based upon peer friendships, social networking or about interest, creativity and searching for information (Terry et al. 2019). Understanding a motivational perspective from inside the person, illuminates what students can do, building upon their existing digital footprint, and providing a good platform from which to build digital skills. The focus is about a 'can do' approach, is positive enabling positive self-efficacy and self-esteem, enabling the student nurses to increasing understand and read patients in complex nursing situations.

Proposals for teaching:

- Nurse academics focus upon students' inner feelings, knowledge and motivations about learning digital skills; encourage exploring students contexts, how they live their lives in relation to technology
- Using good facilitative skills find out more about students values, beliefs, feelings, opinions, needs, problems and solutions with digital and technology (JISC 2019).

Uniqueness is our underpinning values and beliefs that make us who we are and should not be viewed as a group with a set of the same characteristics (Todres et al. 2009). In our student context it is important for the teacher / student relationship to understand students background and what makes students who they are as individuals. Careful consideration is required of educational background, social environments and how students live their lives from the digital perspective. Teachers may need to consider that some students have no digital experiences at all. Wellbeing is paramount for health professionals, and accessing resources online seems an easy fix. However, a scoping review by Webster et al (2020) identifies a dearth of research into how technology can support the well - being, working lives and self-care of nurses.

Proposals for teaching:

- Set up empowering interactions with students that build self-esteem, valuing student individual learning needs as expressed with respect, honesty and trust
- Open questions finding out what students do not understand, what puzzles them, what they do not like, do not agree with will enhance deeper and meaningful student nurse academic interactions.
- Challenging our digital assumptions about students
- Add to the evidence base of how, and in what circumstances, technologies can support nursing, and nursing student wellbeing.

Personal journey can be explained as how students view life in terms of past, present and future. It will be important for students to understand that their past experiences are valued. Students will be

familiar with the past, and anything new and unfamiliar can potentially causes distress and anxiety (Mannestrome et al. 2018). Teachers that are aware of a students' background, any limitations and indeed opportunities students have and can bring to the digital learning environment will promote a much better engagement with digital literacy (Terry et al. 2019). Assessment of previous technological experiences, that is students own personal journey, will enhance technological acquisition in the future. This approach can support and realign to a new health digital and technological journey applicable to healthcare requirements. Such teaching strategies that acknowledge and value students personal digital journey thus far, will facilitate a meaningful navigation of and new positive digital experiences of the future.

Proposals for teaching:

- Interacting with students using compassion, empathy and deeper socio-emotional intelligence supporting students to navigate the unfamiliar digital learning environment and mitigate against distress and anxiety
- Facilitate students to value who they are and consider the external environment fostering a sense of coherence and meaningfulness about internal and external environment of learning.

Todres et al. (2009) explain having **agency** as having freedom of choice and being individually accountable for any choices being made. By participating freely and showing responsibility for our actions and things that happen around us, our own sense of dignity and self-efficacy is promoted. This is a key aspect when supporting students in unfamiliar learning situations such as digital and new technical skills. Students seeing themselves as taking control or allowed to take control and being proactive in digital skills acquisition, offers students control and ownership of the learning experiences (Rotter 1990). This is linked to students emotional well-being and enabling meaningful learning in Devis-Rozental (2018); and contributes towards a more sustainable way of nurses enhancing their wellbeing online, an under-researched area as outlined in Webster et al (2020). Supporting students through understanding that learning digital literacy is part of living and working in a person-centred society and that involves respecting and promoting dignity of all individuals (Topol 2019).

Proposals for teaching:

- Explore with students their perceptions of control and how they feel able, allowed, and welcome control in their lives. Exploring the culture and structure of the learning environment to mitigate against blocks or barriers to positive learning experiences
- Nurse academics need to facilitate choice in how students interact with digital skills acquisition, such as what to learn and how to learn, encouraging early research skills.
- Students own sense of dignity and self-efficacy need to be enhanced and maintained.

Togetherness is defined as being part of a community, recognising students' individuality whilst being part of a group or community of learning. Student centred pedagogies such as peer led learning activities are developing recognition as a fundamental aspect of many teaching programmes, and are nationally recognised as excellent (Keenan 2014). Many benefits to the student are demonstrated, including increased confidence in practising skills, better self-esteem, improved communication skills, developed critical thinking skills and an overall higher performance during studies. This will be crucial when learning the unfamiliar, such as new technical skills and

negotiating learning of new and different skills. Working together on digital literacy enhances deeper learning opportunities for new and different digital skills through the online and blended opportunities of technology, especially through the enhanced features of contemporary Virtual Learning Environments (VLEs).

Proposals for teaching:

- The role of nurse academic to be a facilitator, providing opportunities to build relationships with peers to work together on digital literacy and creating a sense of belonging to the peer group
- Nurse academics need to focus interactions upon building a community of students learning together, social learning.

Nurse academics that are focused upon **sense making** are focused upon and care about students past and current experiences with technology. Understanding and what make sense to students so far on their journey of digital learning supports meaningful understanding of the significance of technology to the nursing discipline and caring for patients. This approach goes deeper behind the surface learning of digital skills as it supports students to examine the world of technology around them whilst beginning to understand their own views and concerns regarding technology. For example, students will have prior skills of online social networking, seeking online information. These existing technological skills build upon online communication with patients such as use of information Apps, telemedicine that promote quick and efficient communication, accessibility of information for patients and the role nurses have in addressing patient information needs. A systematic review by Maudsley et al. (2019) reports mobile devices particularly supported student: assessment; communication; clinical decision-making; logbook/notetaking; and accessing information. Informal and hidden curricula included: concerns about: disapproval; confidentiality and privacy; security;—distraction by social connectivity and busy clinical settings; and mixed messages about policy. Thus, the nursing academic has a key role to help the student navigate through this complex and fast changing environment.

Proposals for teaching:

- Consider existing digital skills students use in social networking, build upon these and apply to concrete examples that relate to caring for patients. For example, using telemedicine to provide health information and education for patients.
- Nurse academics need to provide information on what technology is available that enables connection and meaningful interactions with patients. This will include, telemedicine, information Apps, patient digital monitoring of clinical signs using handheld devices.

Having a **sense of place** offers security, comfort and familiarity (Hemmingway et al. 2012). Students exist in their own familiar space that offers security and therefore confidence. Experiencing a new and different environment and space based on new technology can be frightening and stressful for students (Topol 2019). Therefore, the student teacher interactions need to do the best to mitigate against this in a supportive and understanding way, reducing stress and anxiety from the unfamiliar. The teacher student interactions should be based upon building trust, flexibility in learning approaches, to support negotiating this unfamiliar space of the digital learning environment.

Sensitive and flexible teaching approaches will enable students to be comfortable with digital learning.

Proposals for teaching:

- Encourage students to express views and concerns in an open, non-judgemental and sensitive learning environment culture
- Support students to negotiate unfamiliar learning environment setting small achievable learning goals. Education through best practice learning design in online environments such as online library, information seeking chat rooms, using digital access for education (JISC 2018)
- Encourage successful digital and technology learning stories to be shared amongst students in the group, this is surprisingly underutilised in research and evidence based practice reporting (de Jager et al. 2017)
- Support and educate students life skills development, such as assertiveness, decision making, social interaction good interpersonal skills, and linking this to resilience building and coping strategies (Devis-Rozental 2018, Meneghel et al. 2019).

Considering the psychological, physical and spiritual, the holistic needs of an individual, are important to a sense of well-being. In the humanising framework this is described as **Embodiment** (Galvin and Todres 2012). Embodiment is about the whole person, the mind, body and spirit and these elements not being viewed as separate (Todres et al. 2009). Designing purposefully for the quality of the learning environment, and student and teacher interactions within these spaces have an impact upon student nurses emotional health and wellbeing (Tharani et al. 2017). Limited access to learning resources such as computers, or noisy learning spaces can impact upon psychological wellbeing of students undergraduate nurse training. Teaching digital literacy should therefore consider holistically the needs of students, provide learning opportunities that enhance emotional wellbeing, within the digital learning environment. Careful attention to students' psychological needs in addition to the practice of learning digital literacy enhances well-being.

Proposals for teaching:

- Focus upon students strengths and build positively upon student centred learning
- Carefully consider the emotional and psychological health of students, in the classroom and in helping them prepare for clinical placement
- Provide timely and helpful feed-forward advice to students building upon digital strengths
- Monitor learning environments and building a calm and relaxed atmosphere
- Ensure adequate Information technology resources to reduce frustration and anxiety.

Conclusions:

McCormack and McCance (2017) describe patient centred healthcare environments that enable patients and staff to flourish, as environments of care when nurses really do focus upon patients, getting to know and understand their patients in a true holistic way. Our model applies this same approach, human interactions which aim to provide student centred learning for digital literacy. Humanising the learning experience for students who are on the learning journey of digital literacy will require important and nuanced skills from the teacher. The need to consider the quality of

student – teacher interactions is crucial. Compassion, empathy and socio-emotional intelligence are key attributes of the nurse academic when teaching a student centred approach. Implementing this adapted model of humanising the learning experience and the values and attributes of nurse academics enables students to flourish and engage in some deep digital learning practices. E-portfolios; reflective blogs and online networking are ways of offering different spaces for reflection to happen. Teacher and student interactions based upon meaningful connections, non-judgemental interactions provide the safe environment for learning new and different digital skills. The humanising dimensions of insiderness, uniqueness, agency, togetherness, personal journey, sense of place, sense making and embodiment and what matters to students is central to achieve this.

A humanising digital learning environment will consider the social context, psychological, physical and spiritual aspects of our students. By creating the context for being 'present' in the learning environment, digital or face-to-face, space is available for meaningful interactions between the student and nurse academic. This reinforces the achievement of positive and successful learning outcomes. Role modelling professionalism in all the spheres of learning and teaching can reinforce positive professionalism. Whether this is during routine email correspondence, social media posts, blogging and posting in other social media channels; it is the nurse academic who will demonstrate the values underpinning good practice that should be followed by student nurses in all of their professional and personal life. Student centred digital learning rooted in a humanising, holistic teaching approach provides the socio-emotional wellbeing so crucial for positive digital learning.

Our Nursing model offers a way forward for those interested in embedding humanistic and holistic values with a digital framework, with the students at the centre of their practice. We hypothesise this can be applied across disciplines, especially for tutors supporting students who will undertake professional placements; and this reflects the head, hand and heart approach reflected throughout this book.

Recommendation for good practice arising from this chapter:

- All academics are able encompass aspects of a holistic teaching approach by finding out what matters to students, considering psychological and spiritual needs, and creating a sense of well-being,
- Academics, not just nurse academics, would benefit from ongoing continuous personal and professional development to integrate the humanistic with the digital curricula,
- Embedding the JISC national digital competence frameworks adds breadth and depth to any curricula, as well as meeting the requirements of more clinical aspects of student nurse development,
- Students studying towards professional qualifications benefit from a spiral curricula that reinforces the key values underpinning their profession and 'way of being',
- With the fast pace of technological innovation, we all, as academics, need specific and bespoke digital learning opportunities to enhance our own, and our students, technological capabilities.

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