

Biography Page

1. Title of manuscript

Implementation of a virtual student placement to improve the application of theory to practice

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Abstract

Background

The primary aim of undergraduate, pre-registration nursing education is to prepare students to practise as registered nurses who can effectively apply theory to practice, asking placements to support the practice element of the programme. However, the theory-practice gap is a long-standing challenge within nurse education, as nurses continue to practise with incomplete knowledge supporting their actions.

Problem

In April 2020, the COVID-19 pandemic caused a reduction in clinical placement capacity which impacted on student learning opportunities.

Approach

Based on Miller's (1990) pyramid of learning, a virtual placement was created using evidence-based learning theories and an array of multimedia technologies intended to replicate real-life experiences and promote problem-based learning. Scenarios and case studies were collated from clinical experiences and mapped against student proficiencies to produce an authentic and immersive learning environment.

Conclusions

This innovative pedagogy provides an alternative to student nurse placement experience while enhancing the application of theory to practice.

Keywords: *virtual placement, theory-practice gap, problem-based learning, simulated learning, hybrid pedagogy, multimedia technologies, case studies*

Background

Student nurse education requires the understanding of theory as well as its application in clinical practice (Corlett 2000; Mitchell et al. 2017). The theory-practice gap denotes the separation between theoretical knowledge and its application to practice (Greenway et al. 2019; Mitchell et al. 2017; Rolfe 1998). Theoretical knowledge refers to research or evidence which looks to inform practice. It is the 'evidence' in evidence-based practice. The 'practice' element denotes what is happening in clinical practice (Rolfe 1998).

In the United Kingdom (UK), the standards for undergraduate nursing education, as well as nursing practice, are established and enforced through the Nursing and Midwifery Council (NMC). The NMC (2018b) expects registered nurses and student nurses to effectively apply theory to practice through its requirement that clinical practice should be evidence-based. Therefore, the ability to apply theory to practice is a fundamental pre-registration requirement for all student nurses.

However, Greenway et al. (2019) and McCaugherty (1991) observe that there is a disparity between theory and practice, highlighting that the complexity of clinical environments can never be described on paper in their entirety. Indeed, there are many causes for the gap. For example, Shoghi et al. (2019) found that the large student to educator ratio in undergraduate education created challenges to implementing innovative pedagogy around the application of theory to practice. Furthermore, they found that both students and educators found research confusing and difficult to implement. Numerous commentators

assert that it is the role of the nurse educator to minimise the theory-practice gap (Akram et al. 2018 and Saifan et al. 2015), and to motivate and empower students to apply theory to practice (Falk et al. 2016).

According to Hamid and Aras (2020) theory-learning normally occurs in the classroom, whilst clinical practice is where students apply theoretical learning to practice. Modern pedagogy is moving towards active and interactive methodologies with the aim of improving application of knowledge to practice. For example, problem-based learning promotes the acquisition of higher cognitive skills (Ellaway and Masters 2008; Roblyer and Doering 2013), and blended learning, alongside interactive videos, discussions, debates, and other interactive pedagogy, enhances engagement and promotes critical-thinking (Dong and Goh 2015). Such active and interactive pedagogy can lead to learner fascination in a subject and consequential pursuit of knowledge in the learner (Ellaway and Masters 2008; Prober and Khan 2013).

In relation to clinical practice, Miller (1990) described the development of clinical competence from knowledge to capability in clinical practice through his pyramid of learning (Figure 1). Miller (1990) stated that learning started with knowledge of a subject, which moved onto knowing how to do it (competence). Following this, 'shows how' indicated being able to perform the subject, finishing with 'does' being able to perform the skill using the knowledge base in practice. Classroom learning provided the opportunity to 'know' a subject but may not have shown students how to use the information.



Figure 1: Miller's (1990) pyramid: Framework for clinical assessment

Building on Miller's (1990) work, Ericsson (2004) acknowledged that practice was a vital component to developing into an expert practitioner, but practice alone did not guarantee development. When considering what made a person an expert, Ericsson (2004) suggested that mindful, and deliberate practising of skills promoted development as opposed to automatic or unconscious actions. As a result, Ericsson (2004) argued that one should seek new learning, with the aim of continuously developing through mindful action, self-reflection, and feedback.

Regarding the learning environment, Ericsson (2004) described authentic clinical situations (or scenarios) as more memorable and transferable into the real-world than classroom learning alone. This resonates with Sweller's (1988) suggestions regarding the use of schemas to transport learning and experiences into long term memory. Schemas denote the

categorising of knowledge from which new learning can be attached to improve memory (Sweller 1988). In this context, Sweller (1988) suggests using real life examples or experiences in learning as these would link more easily to a schema. Furthermore, practical learning uses knowledge in the undertaking of skills, also allowing for immediate feedback. For example, problem-based learning, such as through simulation, can be stopped, explored, rewound, and debated, thereby enhancing retention through the understanding of underlying concepts (Ericsson 2004).

Problem

In April 2020, the COVID-19 pandemic caused a reduction in clinical placement capacity which impacted on student learning opportunities, including reducing opportunities for students to apply theory to practice in clinical settings (Swift et al. 2020). During this period, the number of applications for pre-registration nursing courses tripled throughout the UK, raising hopes for the current deficit in nursing staff (Gov 2021). The increase created further demand for clinical placements, and a need for innovative solutions to address this complex, fast-moving situation. Face-to-face teaching, as well as clinical practice learning were rapidly replaced with online alternatives by nurse educators (Haslam 2021). As Haslam (2021) observes, there is now an opportunity for old and new teaching methodologies to be combined into an improved, sustainable, hybrid pedagogy in undergraduate nurse education.

This paper discusses the use of a virtual placement to improve student ability to apply theoretical knowledge to clinical scenarios, through hybrid interactive pedagogy. The university in which the virtual placement was conducted is a wider participation university. Wider participation universities attract diverse populations, many of whom have been out of university for many years or have additional learning needs (Connell-Smith and Hubble 2018). These students often consider themselves practical learners, who prefer active or interactive learning pedagogy (McKendry et al. 2014). Although various commentators have been promoting the inclusion of wider participating populations in the nursing profession (McKendry et al. 2014), it may be challenging to teach students who perceive themselves as practical learners to apply theory to practice through virtual means. The additional focus of this paper is on innovative virtual, hybrid teaching and learning solutions, and refer to the needs of educators working with wider participating populations.

Approach

Based on Miller's (1990) pyramid of learning, a virtual placement was created using evidence-based learning theories and multimedia technologies intended to replicate real-life experiences and promote problem-based learning. Scenarios and case studies were collated from clinical experiences and mapped against student proficiencies. Appendix 1 presents these proficiencies. Following this, the scenarios were filmed and adapted into interactive videos. Alongside each scenario, patient-specific documentation was created to complement respective clinical narratives. This paperwork included patient admission documentation based on Roper-Logan-Tierney Activities of Daily Living (Roper et al. 2000) as

this is the model taught in the adult nursing programme. Risk assessment documentation was also created, as well as discharge planning forms and daily clinical notes. Observation charts were made available to be printed and completed by students. Finally, a 'daily reflections and goal setting sheet' was created, and students were required to complete this at the end of each teaching day.

Each week consisted of four virtual placement days due to the university running a one day a week university taught timetable. The placement ran from 7th June 2021 to 2nd July 2021. It involved twenty-five second year student nurses using Microsoft Teams as the primary platform for communication. Students had not undertaken a virtual placement prior to this experience but had become accustomed to online delivery of learning from the start of the COVID-19 pandemic. A timeline with an overview of the placement, alongside activities and topics covered in respective weeks, can be found in Figure 2.



Figure 2: Virtual placement timeline

Week one

Week one (Figure 3) was used to introduce students to virtual resources and establishing ground rules. During the first two days, students were involved in activities that equipped them with knowledge and skills necessary to engaging with the immersive virtual experience. These activities included demonstrations on using virtual resources and teaching on prioritisation, history taking, conflict resolution, and managing difficult

conversations. On the third day, students were then required to manage the virtual ward presented in Table 1.

Timeline	Activities	Resources
Week 1 Days 1 and 2 Goal: Prioritisation History taking Conflict resolution Difficult conversations	Morning and afternoon sessions <ul style="list-style-type: none"> Establish ground rules Orientation around resources Lectures on history taking, difficult conversations Case studies using forum theatre on conflict resolution and difficult conversations Discussions on prioritisation 	<ul style="list-style-type: none"> Ground rules sheet to tick off (online) Populated handover sheets with scenarios of events on the ward for prioritisation activities Blank admission documents PowerPoint slides Case studies
Week 1 Day 3 Goal: Immersive simulation, applying the learning from days 1 and 2 above.	Morning activities <ul style="list-style-type: none"> Small groups of 6 to 10 students Prioritising patients and ward activities Completing risk assessments and observations Admitting a patient: 20-minute slot per group to admit a simulated patient, who requires in-depth of questioning to gain the necessary information. Engaging in de-escalation scenario: 1 patient is unhappy due to loosing his iPad, repeatedly messaging the student nurses (via teams) 	<ul style="list-style-type: none"> Handover sheet of the patients on the ward (see table 2) Interactive videos with patient notes Patient Volunteer
	Afternoon activities <ul style="list-style-type: none"> Same groups of 6 - 10 students Discuss a patients' experience of palliation after listening to an audio only file Intergroup activity: Handover the days activities to the other students Reflect on the learning of the day 	<ul style="list-style-type: none"> Audio only file Wonder me app Objectives and reflective sheet
Week 1 Day 4 Goal: Pain management Stigmatisation.	Morning and afternoon activities <ul style="list-style-type: none"> Watch videos and discuss pain management. Debate the views of the patient, nurse and doctor. Reflect on the learning of the day 	<ul style="list-style-type: none"> Series of videos based on of an injecting drug user requiring pain management post surgery. Objectives and reflection sheet

Figure 3: Virtual Placement Timeline (week 3)

Table 1: Overview of the patients on the virtual ward in week one and week two

Week one, day three - An overview of the patients on the virtual ward				
Patient	Presenting complaint	Role and activity during the virtual placement	How this was conducted	Main learning objective and link to proficiency (P)

1	Abdo pain	Patient 1 needed to be admitted.	Each group admitted a simulated patient* during an allocated time slot. (*volunteers played the role of simulated patients.)	History taking and doing admissions. P 1,2,3,4,6,8
2	Elective anterior cruciate ligament reconstruction	Patient 2 was frustrated because he could not find his iPad after coming out of surgery. He should not be weight bearing.	Each group was sent regular messages through their TEAMS chat showing frustration and unsafe actions. The messages were sent by the facilitator who was acting as the patient.	De-escalation. Managing complaints. P 18,19,22,23
3	Ovarian cancer	Patient 3 was scared because she found out that she was for conservative treatment only and had been referred to the palliative care team.	Students listened to an audio recording of the patient discussing their prognosis through headphones. Students were then required to make decisions about the prioritisation of the patient's care needs.	Understanding of the term 'palliative'. Pain management. Managing difficult emotions. P 1,2,19,22
4	Fall ? Cause	Patient 4 was confused and had a full history, including UTIs.	Student watched a video in which the patient fell. Policies and risk assessments were available for the students to complete and discuss actions.	Falls management and associated risk assessments. P 1,2,3,4,6,8,9,21

Week two, day three - An overview of the patients on the virtual ward

Patient	Presenting complaint	Role and activity during the virtual placement	How this was conducted	Main learning objective and link to proficiency (P)
1	Exacerbation of COPD	Patient 1 was 'sleeping well' with 3L of oxygen.	An interactive video with branching scenarios was used to help students explore the effects of oxygen on COPD patients.	Oxygen use. P 1,3,4,10,15,17,23
2	Alcohol withdrawal	Patient 2 was waking up with excessive tremors and demanding a higher	Drug charts were incorrectly completed regarding the patient's chlordiazepoxide. The students could bleep/ call	MDT working. Alcohol withdrawal. Medicines management.

		dose of chlordiazepoxide.	any member of the MDT through teams for support and amendment of the drug chart.	P 1,2,3,17,18,19,22,23
3	Lung cancer	Patient 3 was angry and confused about his new diagnosis. He felt angry towards patient 2 as he believed that his condition was self-inflicted.	Students listened to an audio recording of the patient discussing their anger and upset through headphones. Their anger related to a perceived injustice of their diagnosis in relation to other patients on the ward. Students were then required to make decisions about the prioritisation of the patient's care needs.	Palliative care. Recognising stigma. P 1,2,19,22
4	Motor neuron disease	Patient 4 was able to blink once for yes and twice for no. Patient was anxious and wanted her mum.	A time slot was allocated for each group to find out what the patient wanted. Communication guidance was available in the patient's notes and in their 'this is me' documentation.	Complex communication skills. Importance of reading notes. P 1,3,19,21,22,23

To mirror the unpredictable nature of a clinical setting, the fourth day included a scenario which had not been discussed with students. Schön (1987) highlights the need to introduce surprise into learning so that learners can experience discomfort and thoughts related to the unknown. Through this experience learners can begin to reflect on and analyse events in a way that promotes problem-solving skills and situation-based adaptation, as is experienced in clinical practice. The scenario and associated debate asked students to consider differing views regarding pain management in injecting drug users (Figure 3, day 4).

Week Two

During the first two days of the second week, students were provided with teaching in preparation for the week's virtual experience. The topics taught included communication tools, medicine management, and reading blood results (including arterial blood gasses). On the third day, students were then required to manage the virtual ward presented in Table 1.

[Table 1]: Overview of the patients on the virtual ward in week one and week two.

On the fourth day, students explored a domestic abuse scenario. A vulnerable female patient attending the virtual ward was accompanied by a domineering husband. Students were not informed that this was an abuse scenario and were asked to consider the admission. Once signs of an abusive relationship were identified, students were required to manage the scenario. Due to the sensitive nature of this subject, a mental health practitioner with extensive experience in talking therapies facilitated the session.

Week Three

Week three was split into two parts: an infection prevention and control related scenario, and the care of patients with common mental health conditions. On the first day, students were asked to manage the virtual ward, however, they were not aware that the ward was on the verge of a norovirus outbreak. Table 2 outlines the series of videos used on the first day to depict the spread of norovirus within the ward. On the second day, students were then asked to investigate the events of the previous day and complete a root cause analysis to help identify how norovirus was spread. A specialist infection control nurse lecturer facilitated these first two days.

Table 2: Infection prevention and control related videos – representing 4 admission days

Video	Admission on day	Main learning objective and link to proficiency (P)
Video 1 Three patients and their paperwork are introduced. An additional patient (patient zero) is then admitted onto the ward.	Day 1	Admissions, discharges, risk assessments, stoma management, learning of conditions including Crohn's disease. P 1,2,3,4,6,8
Video 2 The patients are starting to deteriorate.	Day 2	Risk assessments, de-escalation, documentation, talking to patients with learning difficulties including the

<p>One patient with learning difficulties is becoming distressed.</p>		<p>'this is me' document, identifying deterioration. P 1,2,3,4,6,8,12,19,21,22,23</p>
<p>Video 3 Diarrhoea and vomiting is spreading through the ward. More patients are becoming distressed and generally unwell. Patient zero feels better and is ready for discharge.</p>	<p>Day 3</p>	<p>Communicating with distressed patients from a variety of backgrounds, risk assessments, documentation, managing deterioration. P 1,2,3,4,6,8,12,19,21,22,23</p>
<p>Image 4 Photo of the healthcare assistant feeling unwell at home. There is a sign on the door stating that the ward is closed due to norovirus.</p>	<p>Day 4</p>	<p>The meaning of the day is revealed to show that the students had observed the spread of infection, ready to do a root cause analysis. P 11</p>

On the third day, students were presented with medical notes and a video of patients on a general ward with a combination of physical and mental health illnesses. Throughout the day, students were asked to manage the care of the various patients. On the fourth day, forum theatre was used to work through preconceptions as well as how best to care for patients with various mental health conditions. A mental health nurse lecturer facilitated these last two days.

Week Four

The fourth week of the virtual placement focused on the assessment and management of deteriorating patients (Figure 4). Case studies were used to consolidate learning from the previous weeks, as well as develop skills in identifying and managing deterioration. The case studies were discussion based and allowed students to problem-solve different cases in small groups before exploring the cases as a whole group. This week was facilitated by a lecturer with a background in critical care nursing.

Timeline	Activities	Resources
Week 4 Days 1, 2, 3 and 4 Goal: Airway and breathing, Circulation, Gastrointestinal, Shock and sepsis.	Morning and afternoon session of day 1 <ul style="list-style-type: none"> In the large group including all the students, lecture and discussion on Airway and breathing In small groups of 6 - 10 students, explore a case study of a breathing deterioration including ABG's, blood results and observations drop; demonstrating peri arrest In the large group including all the students, feedback findings of the case study 	<ul style="list-style-type: none"> Whiteboard on TEAMS Case study (Airway and Breathing)
	Morning and afternoon session of day 2 <ul style="list-style-type: none"> In the large group including all the students, lecture and discussion on Circulation In small groups of 6 - 10 students, explore a case study of a circulatory deterioration, using ABG's, ECG changes and observations; demonstrating fast AF. In the large group including all of the students, feedback findings of the case study 	<ul style="list-style-type: none"> Whiteboard on TEAMS Case study (Circulation)
	Morning and afternoon session of day 3 <ul style="list-style-type: none"> In the large group including all of the students, lecture and discussion on the Gastrointestinal system In small groups of 6 - 10 students, explore a case study of a gastrointestinal deterioration, using ABG's and observations; demonstrating hypoglycaemia In the large group including all of the students, feedback findings of the case study 	<ul style="list-style-type: none"> Whiteboard on TEAMS Case study (Gastrointestinal)
	Morning and afternoon session of day 4 <ul style="list-style-type: none"> In the large group including all of the students, lecture and discussion on shock and sepsis In small groups of 6 - 10 students, explore 1 case study of an anaphylaxis and 1 case study showing septic shock In the large group including all of the students, feedback findings of the case study 	<ul style="list-style-type: none"> Whiteboard on TEAMS Case study (Shock and sepsis)

Figure 4: Virtual Placement Timeline (week 4)

Discussion

In the virtual placement described in this paper, multimedia and subsequent information analysis and synthesis offered a multi-layered learning experience, including backstories, patient notes, audio reflections, and interactive videos. Students were immersed and engaged in an authentic learning environment, characterised by meaningful and in-context activities. Importantly, these resources and activities provided a contextual platform

whereby learning could be directly related to clinical practice. Problem-based learning lends itself to the principles of application of theory to practice by directly teaching how to use theory in clinical scenarios, and has additional benefits linked to collaboration and self-efficacy (Yew and Goh 2016). In relation to Miller's pyramid, problem-based learning helps to fill the gap between 'knows' and 'does' (Bosse et al. 2010; King et al. 2018) as well as improve skills in critical thinking and problem-solving (Yew and Goh 2016). Collaborative problem-solving activities required students to individually synthesise information from simulated resources prior to consolidating their learning in larger groups.

The resources used within the virtual placement, including interactive media, had a positive impact on learning, as reported through student evaluation and semi-structured interviews with students. Multiple studies have found that interactive videos enhance students' curiosity and motivation, as well as promote self-efficacy, as compared to more traditional mediums (Brookes and Moseley 2012; Kim et al. 2015; Whitton and Maclure 2017), whilst Hsin and Cigas (2013) found that interactive videos increase retention of learning.

Moreover, audio files provide a powerful medium for teaching compassion and empathy (Adamson and Dewar 2015; Waugh and Donaldson 2016). Brame (2016) highlights how the combined use of verbal/auditory and visual channels enhances memory and increases cognitive capacity, thereby promoting self-efficacy and learning.

According to Bandura (1997), an individual's self-efficacy is crucial to how they perceive present situations and subsequently respond to future situations. Self-efficacy may be defined as 'belief in one's capabilities to organise and execute the courses of action required to manage prospective situations' (Bandura 1997, p2). Indeed, self-efficacy is closely linked

to goal setting in relation to future decision-making (Lunenburg 2011). Locke and Latham (2006) denote goals as identified improvements one wants to make, thereby facilitating deliberate learning. In the process of working towards a goal, new discoveries are often encountered. In the virtual placement, students were required to regularly set goals to support personal professional development and enhance self-efficacy. This linked well with NMC (2018a) standards where students are expected to set agreed outcomes whilst in clinical practice to maximise learning opportunities.

In relation to Miller's (1990) pyramid of learning, goals inspired students to acquire relevant knowledge, consider how to implement it, and start practising applying knowledge in simulated scenarios. Within the virtual placement, an example of a goal included 'improving knowledge and skills in managing de-escalation.' This goal required students to gain the knowledge through research or discussion (knows), followed by considering how to implement it into clinical practice through discussion or forum theatre (knows how). Following this, students demonstrated the learning in the virtual simulated environment (shows) before using the new skill in practice (does). Although the final step can only be actualised in clinical practice, virtual simulation created a feeling of uncertainty as would be experienced in clinical practice. This leads to self-discovery where previous unconscious incompetence develops into a known enigma to be explored (Yew and Goh 2016).

Mcleod and Steinert (2015) also discuss four aspects of learning that influence students' ability to acquire and store new knowledge in a retrievable manner. These aspects were incorporated in the virtual placement. The first aspect was in relation to the need to understand the meaning behind the concept being learnt. This was achieved through the

systematic teaching of theory before, during and after respective simulated sessions. The second aspect relating to the 'context of the learning', where learning a clinical task is more memorable within a clinical setting (as opposed to learning from a textbook) was achieved through engaging with simulated sessions that were filmed in a clinical setting. The third and fourth aspects were met through regular reflections, group discussions, real-time feedback, and the use of forum theatre which allowed students to experiment their responses (actions and behaviour) within a safe environment. These aspects relate to how deliberate learning requires the learner to be mindful during the performance of tasks and link the knowledge and related activity to a schema, thus enabling easier future retrieval and application of learnt responses when faced with similar situations.

The use of debates in teaching and learning has long been accepted as beneficial for developing analytical thinking, higher thinking processes, and problem-solving skills (Spaska et al. 2021). Debates require the student to consider researched information in a variety of capacities, ready to answer any counter arguments made (Spaska et al. 2021). Namely, within the research process, the student will endeavour to find usable and compelling arguments, leading to a better understanding and an ability to transfer the information to other settings. Furthermore, debates are collaborative in nature, thus enabling learning from one another, and developing skills in leadership and persuasion (Spaska et al. 2021). Therefore, debates encourage deep understanding of concepts, alongside deliberate learning and practising the art of memory. In relation to Miller's (1990) pyramid, debates created depth in learning the knowledge (knows) and understanding how to use it (knows how), thereby consolidating learning, and promoting application of theory to practice.

Finally, reflection provides a useful learning tool for applying theory to practice by combining critical thinking, self-awareness, and reflection (Finlay 2008, Greenway et al. 2019, Schön 1987). Unsurprisingly, reflective practice is a requirement for all nurses, as denoted through the revalidation process (NMC 2019). Nevertheless, one can only gain from reflective practice if they are psychologically ready for the experience and will only progress to where they are ready to get to (Finlay 2008). Within the virtual placement, each day ended with a group reflection activity, after which students were asked to individually reflect on the day. The reflection asked students to identify three points in each of the following: 'what went well', 'what didn't go so well', and 'what will you take forward'. This reflective practice provided students with the opportunity to construct new, deeper understanding which could be used in future situations, in a fluid and intuitive manner, as suggested by Schön (1987).

Lessons and limitations

One of the aims of developing the virtual placement was to allow students who could not attend clinical placements during the COVID-19 pandemic to complete placements in a virtual environment so that they did not lose placement hours. Due to the urgency that drove the development of the virtual placement, an opportunity was missed when clinical placements restarted to conduct follow up studies to measure the impact the virtual simulated practice placements had on clinical practice. At the time of writing this paper, current virtual and face-to-face simulated practice placements, which have been informed

by the lessons learnt from the discussed virtual placement, are being run as part of a longitudinal study where impact on clinical practice will be measured.

In relation to teaching and support, the teaching team involved in the virtual placements found the virtual platform easy to navigate and use. This was mainly because they had become accustomed to online delivery of learning from the start of the pandemic. They were also able to utilise teaching and facilitation techniques that promoted student engagement, including the use of breakout rooms for small group tasks and interactive technologies, such as Mentimeter (Jürgen 2018), where every student was required to participate. The team also reported how students who were normally reserved appeared more vocal during the virtual simulated practice placement. Despite these positive reports, poor internet connectivity impacted some students' experience of the virtual placement. This finding correlates with reports from the Office for Students (2020) where they identified how the rapid shift to remote learning created issues around digital access.

Conclusion

This paper presents a viable pedagogy for enhancing the application of theory to practice, as well as addressing capacity concerns. The paper presents a multidimensional virtual placement based on Miller's (1990) pyramid of learning and supported by various learning theories. It incorporated an array of multimedia technologies used to replicate real-life experiences and promote problem-based learning. The absence of real patients or deterioration created a safe environment where students could explore theory and how it

linked to practice. To further support the application of theory to practice, each scenario, lesson, and case study was designed against specific learning objectives, linked to student proficiencies. This new innovative pedagogy looks to provide an alternative for the student nurse placement experience, whilst improving patient care by enhancing the application of theory to practice.

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Appendix 1: Student nurse proficiencies

No	Proficiency
1	Provides people, their families and carers with accurate information about their treatment and care, using repetition and positive reinforcement when undergoing a range of interventions and accesses translator services as required.
2	Works in partnership with people, families and carers to monitor and evaluate the effectiveness of agreed evidence-based care plans and readjust goals as appropriate, utilising appropriate negotiation strategies, drawing on the person's strengths and assets.
3	Maintains accurate, clear and legible documentation of all aspects of care delivery, using digital technologies where required.
4	Makes informed judgements and initiates appropriate evidence-based interventions in managing a range of commonly encountered presentations.
5	Effectively uses evidence based nutritional assessment tools to determine the need for intervention.
6	Assess level of urinary and bowel continence to determine the need for support, intervention and the person's potential for self-management.
7	Undertakes, responds to and interprets neurological observations and assessments and can recognise and manage seizures (where appropriate).
8	Uses contemporary risk assessment tools to determine need for support and intervention with mobilising and the person's potential for self-management.
9	Effectively manages the risk of falls using best practice approaches.
10	Undertakes a comprehensive respiratory assessment including chest auscultation e.g. peak flow and pulse oximetry (where appropriate) and manages the administration of oxygen using a range of routes.
11	Effectively uses standard precaution protocols and isolation procedures when required and provides appropriate rationale.
12	Provide information and explanation to people, families and carers and responds appropriately to questions about their treatment and care.

13	Undertakes assessments using appropriate diagnostic equipment in particular blood glucose monitors and can interpret findings.
14	Undertakes an effective cardiac assessment and demonstrates the ability to undertake an ECG and interpret findings.
15	Interpret normal and abnormal blood profiles.
16	Manage and monitor blood component transfusions in line with local policy and evidence-based practice.
17	Can identify signs and symptoms of deterioration and sepsis and initiate appropriate interventions as required.
18	Applies an understanding of the differences between risk management, positive risk taking and risk aversion to avoid compromising quality of care and health outcomes.
19	Demonstrates awareness of strategies that develop resilience in themselves and others and applies these in practice. E.g. solution focused therapies or talking therapies.
20	Participates in the planning to ensure safe discharge and transition across services, caseloads and settings demonstrating the application of best practice.
21	Negotiates and advocates on behalf of people in their care and makes reasonable adjustments to the assessment, planning and delivery of their care.
22	Demonstrates effective persons and team management approaches in dealing with concerns and anxieties using appropriate de-escalation strategies when dealing with conflict.
23	Recognises signs of deterioration (mental distress/emotional vulnerability/physical symptoms) and takes prompt and appropriate action to prevent or reduce risk of harm to the person and others using for example positive behavioural support or distraction and diversion strategies.
24	Manages the care of people receiving fluid and nutrition via infusion pumps and devices including the administration of medicines where required.