

# ***Clinical Skills in Undergraduate Nurse Education: Transforming and Harnessing Student Engagement through Problem Based Learning utilising a Blended Teaching Approach.***

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## **Abstract.**

The Covid-19 pandemic has had a transformative effect on teaching and facilitating clinical skills within undergraduate nursing programmes. Traditionally, clinical nursing skills have been taught face to face in the Department of Nursing and Health Care in South East Technological University (SETU), however, due to the pandemic, skills content has had to be taught through a blended format, predominantly on-line. The curriculum remained unchanged, with clinical skill content to be delivered, and learning outcomes which were required to be met. There was significant pressure to deliver skills teaching in an effective way despite the enforced change due to the pandemic restrictions on face-to-face teaching. Online student engagement was a priority for the working group as active engagement has been shown to enhance students' motivation to learn and increase students' satisfaction in achieving their educational goals. Furthermore, positive student engagement can reduce the sense of isolation and lend itself to improved students' performance.

This paper provides an overview of how some of the academic team of a higher institute of technology, in the Republic of Ireland, creatively met these challenges, through on-line delivery and a blended learning approach. The module teams utilised the application of Problem Based Learning (PBL), underpinned with a philosophical framework based on Critical Social Theory (CST) principles. In order to achieve this, an acronym was devised, namely RAPID (Recognise, Assessment, Plan, Interventions and Discuss). The students were supported to develop a Portfolio of Clinical Scenarios, to enhance their learning which empowered the students to further develop their critical thinking skills.

Recommendations include a problem based learning and interdisciplinary structured nursing approach to patient assessment using the acronym RAPID. This enabled students to develop their problem-solving skills. Therefore, applying it to real world problem-based patient case scenarios, which can enhance student motivation and engagement.

**Keywords:** Clinical nursing skills; Nursing education; Online and blended learning; Problem-based learning; Student-centred.

## 1. Introduction.

Covid-19 has instrumentally changed the face of what was deemed traditionally the norm in teaching and facilitating clinical skills with nursing students (Agu et al., 2021). Despite the changes imposed as a result of the pandemic, the curriculum remained the same, skill content had to be delivered and learning outcomes were required to be met. A working group from the Department of Nursing and Health Care in South East Technological University (SETU), came together, representing three clinical skills modules across the undergraduate Intellectual Disability and General disciplines of nursing. Two clinical skill modules were at the year 2 stage in General and Intellectual Disability nursing, while the third module was at the year 3 General nursing stage. The aim was to review the approach to clinical skill delivery due to the Covid-19 pandemic. When re-designing the approach to skills, a completely online approach was implemented in both the year 2 General and Intellectual Disability nursing modules with a blended approach adopted in the year 3 General module. The rationale for the blended approach in the year 3 module was due to their advanced stage in the programme (pre-internship) and in response to a survey completed by these students in which 79% (of n=28) of the students requested to return to face-to-face skills classes for two skills (tracheostomy care and catheterisation). Flexibility to the needs of the students given the circumstances was a priority, as well as the importance of student engagement when establishing such novel approaches to clinical skill delivery. This paper identifies key principles and practices for the delivery of practical skills using online/blended pedagogy through implementing problem based learning (PBL). It is hoped that these principles and practices, will contribute to the growing body of knowledge in the area and assist other educators in navigating the challenges of this method of delivery.

Nursing skills acquisition within the undergraduate nursing programme across all disciplines, is a fundamental part of all nursing programmes. Clinical skills and reasoning are an essential component of competence in clinical practice (Kavanagh & Szweda, 2017). Traditionally, the assessment for nursing skills modules are based on Objective Structured Clinical Examination (OSCE). The OSCE is designed to assess student's ability to competently apply nursing skills and knowledge at an appropriate level, rather than merely assessing how well the student can

remember and recite facts (NMBI, 2016). In line with national Covid-19 restrictions in place at the time, it was clear that students would not be permitted to enter skills laboratory within the institution in the same numbers as pre Covid-19. Nursing skills modules were now required to be delivered using an online and blended format. The module leaders for these programmes were challenged as to how to ensure that students would meet their learning outcomes for these modules in a cohesive and practical manner.

The cornerstone of nursing practice worldwide is founded on professional nursing skills (Staycova et al., 2015). Nursing skills range from simple to complex (Bradshaw & Hultquist, 2017), from basic hygiene care to tracheostomy and ostomy assessment and care. Gonzol and Newby (2013) maintain that the necessity for teaching clinical reasoning and critical thinking during the application of these nursing skills is underscored by the need to provide safe and appropriate care in an increasingly complex health care environment. Therefore, clinical skills and reasoning are fundamental to nursing practice but is perplexing to teach and learn because it is multifarious and tacit. These skills that students develop are honed as they move through their undergraduate nursing programme (Delaney & Golding, 2014). Various frameworks and guidelines have been used by the nursing profession to support decision-making processes when caring for deteriorating patients.

In 2013, the Health Service Executive (H.S.E) introduced the National Early Warning Score (NEWS) into acute hospitals settings in Ireland to support the recognition and response to a deteriorating patient (H.S.E, 2020). NEWS is an early warning system to assist staff to recognise and respond to clinical deterioration. Pre Covid-19, this system guided the approach to clinical skills teaching using problem-based patient case scenarios in one specific clinical skills module within the Department of Nursing. In 2020 the Department of Health (DOH) introduced the Irish National Early Warning System Version 2 (iNEWSv2) whereby the notable change is ensuring a complete system response is in place to anticipate, recognise, escalate, respond, and evaluate the clinically deteriorating adult patient (DOH, 2020). The focus of the iNEWSv2 (DOH, 2020) is concerned with primarily the categorisation of a patient's severity of illness and the early detection of patient deterioration. The reporting of a patient deterioration is completed using ISBAR. The ISBAR framework represents a structured communication tool which can be used in any situation. It stands for Introduction, Situation, Background, Assessment and Recommendation (DOH, 2020), (see Figure 1). It is this version that was reviewed by the working team in SETU to devise an acronym; namely RAPID, using pertinent terminology from the iNEWSv2 (DOH, 2020) document which could be applied to clinical skills

modules in the department using problem-based patient case scenarios.

**Figure 1: ISBAR: A Structured Communication Tool used in Clinical Practice.**

<b>I identify</b>	<b>Specify:</b> <ul style="list-style-type: none"> <li>• Who are you</li> <li>• Where are you</li> <li>• Who you are speaking with</li> <li>• Patient's name, age, gender and department</li> </ul>
<b>S situation</b>	<b>What is the problem/reason for contact:</b> <ul style="list-style-type: none"> <li>• I'm calling because...(describe)</li> <li>• I have observed changes.... (ABCDE)</li> <li>• I have measured the following values.... EWS, Spo2, HR, RR, BP</li> <li>• I have received test results...</li> </ul>
<b>B background</b>	<b>Brief and relevant background. If it is urgent and /or concerned – speak up</b> <ul style="list-style-type: none"> <li>• Admission diagnosis and date</li> <li>• Previous illness of significance</li> <li>• Relevant problems and treatment/ interventions to date</li> <li>• Allergies</li> </ul>
<b>A assessment</b>	<b>Assessment of the situation and background</b> <ul style="list-style-type: none"> <li>• I think the problem/reason for the patient's condition is related to...</li> <li>• I don't know what the problem is, but the patient's condition is deteriorating</li> <li>• The patient is unstable, we need to do something</li> </ul>
<b>R recommendation</b>	<b>Request specific advice and interventions, and clarify expectations</b> <ul style="list-style-type: none"> <li>• I suggest.../what interventions do you recommend?</li> <li>• Immediate intervention?</li> <li>• Investigation/treatment?</li> <li>• Confirm messages and interventions with a closed loop.</li> </ul> <p style="text-align: right;">Adapted from Moi <i>et al.</i> (2019)</p>

The working team looked at how best to support engagement, learning and assessment for the students online, and the decision was made to teach and assess through a Problem Based Learning (PBL) model. According to De Long *et al.*, (2017), PBL is a student-centred approach

to learning that encompasses groups of students working to solve a real-world problem. Through PBL, students not only strengthen their teamwork, communication, and research skills, but they also sharpen their critical thinking and problem-solving abilities essential for life-long learning and engagement with the module content (Figure 2).

**Figure 2: The Principles of Problem Based Learning in Practice**

1. The problem acts as a trigger for learning
2. Learning occurs in a small group setting
3. The lecturer acts as a facilitator to the learning process
4. Learning is student centred
5. Prior knowledge is activated
6. New knowledge is acquired and integrated
7. Students take responsibility for their own learning

(Price, 2003)

All teaching approaches require an underpinning philosophical framework. The philosophy based on Critical Social Theory (CST) principles aligned itself appropriately with PBL. The philosophical basis of CST has been largely associated with Brazilian philosopher Paulo Freire. According to Freire (1972) education should nurture change and empower students to be engaged with the world.

Educational assessments have a significant impact upon teaching, learning and student engagement as they commonly define what areas of learning will be formally given credit (Baird et al., 2017). Furthermore, assessment is one of the major influencers for students when selecting which areas to focus their studies on (Zwaal, 2019). Nursing faculty are challenged in relation to assessment for clinical skills modules, and even more significantly so when there are barriers in relation to conducting face to face assessments.

There is also a responsibility on faculty to ensure graduate nurses attain the skillset and competence to safely perform clinical skills in practice (Sullivan *et al.*, 2009). These increasing demands require module and curriculum designers to create opportunities for students to engage (including through assessment) in order to enhance students' competence in a particular area or skill (Lazinica and Calafate, 2009; Chian *et al.*, 2019). To overcome these demands this paper suggests the use of PBL and problem-based assessment as a philosophy and pedagogy that takes a learner centred approach to both teaching and assessment.

## 2. Challenges and barriers to traditional teaching skills.

The learning of fundamental skills begins in Higher Education Institutions where undergraduate nursing students are expected to gain confidence through the practice of skills, first in skills laboratories and then at clinical sites (Staykova et al., 2015). However, it has been recognised that student nurses feel ill-equipped for the transition to registration despite the best efforts of nurse educators (Newton et al., 2009, Ross, 2015). One of the greatest challenges highlighted by newly registered nurses is meeting the demands made on them both personally and by the healthcare organization in terms of developing their professional skills as nurses to a competent level (Jonsson et al., 2014).

There has long been a broad acceptance, according to Maginnis and Croxon (2010), of the concept of '*cognitive dissonance*' whereby the academic ideal of nursing taught at 3rd level clashes with the reality of clinical practice. Traditional approaches to skills acquisition at undergraduate level have historically focused on nursing-process-based skills checklists using textbook readings, videos, didactic lecture, and guided learning laboratory skills practice (Ross, 2015), leading to an emphasis on content retention without necessarily ensuring understanding and clinical reasoning have taken place (Baxter & Boblin, 2008). The ability of the student to perform psychomotor skills without understanding the associated reasoning is often revealed when the student, in the clinical setting, cannot provide a rationale for a skill (Gonzo & Newby, 2013). Making the critical connections between clinical reasoning and critical thinking is significantly more challenging when the novel issue of limited face to face contact with students due to COVID 19 is taken into consideration.

Despite the importance of bridging the gap, there remains a paucity of empirical evidence measuring skill transference from theory to practice in the nursing literature. Thus, creating a challenge for nurse educators to identify effective strategies to help narrow the theory- practice gap (Stolic, 2014). However, it has been acknowledged that there may also be a lack of desire from educators to move away from passive traditional teaching methods and implement more engaging active strategies which will capture and hold the attention of adult learners (Bradshaw & Hultquist, 2017; Staycova et al., 2017).

A longitudinal mixed methods study by Newton *et al.*, (2009) which examined the different

pedagogical approaches used in clinical laboratories, found that some of the dissonance that students experience in translating knowledge between university and the clinical setting was the student's perception that clinical laboratories lacked authenticity because they did not replicate the kinds of interpersonal communication, interactions and critical discussion that occur with real patients, leading to a lack of student engagement. The students indicated that their learning was enhanced when given the opportunity to actively participate in clinical skill decision making as opposed to the rote learning of skills checklists which lack critical thinking or discussion. The changes brought about by the pandemic in relation to the provision of clinical skills content provides nurse educators with an opportunity to refine the teaching and facilitation of clinical skills within the undergraduate nursing programme.

### **3. Application of Problem-Based Learning to clinical skill scenarios.**

As established above, this foundation was pre-set from the traditional perspective; face to face, problem-based patient case study scenarios using a systematic A-E clinical assessment approach (Simpson, 2021), along with key terms from the iNEWSv2 protocol (DOH, 2020). This was utilised across the three clinical skill modules representing both disciplines from undergraduate General and Intellectual Disability nursing. The A-E clinical assessment is a universally used tool in nursing primary and secondary care settings as it integrates the procedure associated with resuscitation and emergency situations (Cathala & Moorley, 2020) By applying the A-E approach, the nurse will systematically and clinically assess the patients' Airway, Breathing, Circulation, Disability and Exposure in terms of their presenting condition (Simpson, 2021), ultimately preventing a patient from deteriorating.

The integration of terminology from the nursing process within the PBL scenarios was pivotal as this is common language among all undergraduate-nursing disciplines. As Osman et al., (2021) deliberate, the nursing process may be considered as the central core of nursing practice, forming the basic framework to render quality nursing care to all patients. Therefore, using the nursing process as an approach to online clinical skills was deemed appropriate as it was applicable to all disciplines of undergraduate-nursing practice.

The overarching aim of the problem-based patient case scenarios was that the student nurse

could follow a sequential structure to their thought process and decision making in the assessment and provision of care and apply this to all scenarios throughout each module. In order to achieve this, an acronym was devised and adapted by the working team from pertinent terminology and language that was within the iNEWSv2 (DOH, 2020) document. The RAPID acronym is reflected in the approach to skills modules in terms of enabling students to apply the nursing process to their patient regardless of the case scenario. When assessing and providing care for a patient through the lens of RAPID, students are encouraged, depending on the module, to engage in problem solving and critical thinking in a guided and structured format (Figure 4).

The primary aim from the lecturer's perspective included: that the student could demonstrate that they initially recognise what may be going on with their retrospective patient, which in turn informs their actions, inclusive of applying the assessment (Benson, 2020) and iNEWSv2 (DOH, 2020) protocol. Dependant on the year of undergraduate-nursing study and expectations from the individual module learning outcomes, the plan of care would be identified, by the student, inclusive of the necessary interventions that were pertinent to the individual case scenario. Finally, the student would demonstrate understanding of the process, discussing, and reporting this with their lecturer utilising the ISBAR (DOH, 2020) acronym as a guide, meeting the module learning outcomes. Furthermore, transferring these newly adopted skills to the clinical area under the guidance of their clinical preceptor.

**Figure 4: RAPID; the acronym devised by the working group to guide students through clinical skill learning while maximising student engagement.**

R	What are the concerns and initial impressions in caring for this patient? (RECOGNISE).
A	What <i>ASSESSMENT</i> will be undertaken for this patient? (A-E assessment: Act, Interpret & document) .
P	Identify from the A-E assessment the <i>PLAN</i> of care that will be undertaken.
I	What nursing <i>INTERVENTIONS</i> are required in caring for this patient? (IMPLEMENT)
D	How will the findings be communicated with the preceptor? (Report & <i>DISCUSS</i> using the ISBAR tool)
Adapted by Gooney et al (2021) from DOH 2020(iNEWSv2)	

The challenge was to coordinate and move the content to the online environment, whilst also developing an innovative way to assess students in their skills using the online space. Student



engagement was key in enabling module completion with regular, supportive, timetabled online skills classes and lectures. Hudson (2015) noted nursing students may find better engagement when they have a variety of activities in different settings to complete. Clinical problem-based patient case study scenarios were used to support and underpin the learning process, thus, igniting the interest of the students for the duration of the modules, while linking it directly to the module assessment. The students had a two hour online timetabled skill class each week, in addition to lecture and seminar classes, dependant on the module and year of study. Clinical skills content was available for students to review each week. The approach taken across all skill modules was that the first timetabled hour was to be an independent learning hour where students had allocated time to review the relevant problem-based patient case scenario. An example of a Case Scenario for a Year 2 & 3 General Nursing and a Case Scenario for a Year 2 Intellectual Disability cohort which were utilised is included in Appendix 1.

The independent learning hour permitted students to review content, source relevant reading, and use a systematic approach like the RAPID acronym, as a guide to structure their relevant case prior to engaging with the Lecturer in the 2<sup>nd</sup> hour, thus, promoting student engagement. This engagement can assist in moving students to be more independent thinkers and well-rounded problem solvers (Hudson, 2015). Consequently, the benefit of empowering students in this manner is the potential for students to simulate and create the conditions that enable the best possible care for patients (Kennedy, 2015).

Students attended the second hour of the online skills class via an online learning platform, prepared, in small pre-assigned groups, led by a lecturer, to participate, critically discuss and evaluate patient care with the RAPID acronym, underpinning the approach to the skills class. Furthermore, in alignment with PBL and CST principles, the information and data generated from the problem-based patient case scenarios during the timetabled clinical skills classes, supports the new knowledge that is acquired by students. It is then integrated as part of their Continuous Assessment, thus allowing and encouraging students to take responsibility for their own learning (Price, 2003). Additionally, in one module, the blended approach to clinical skills was exercised, when students attended a two-hour face to face clinical skills class on campus at their request.

It is worth noting however, that students may have trouble adjusting to a PBL focused

curriculum, as there is an increase in the amount of time spent invested in knowledge acquisition. (Henderson et al., 2021). Additionally, the students may find the transition to PBL challenging because it places the learner in the centre of the process. A number of techniques were used to overcome these difficulties including orienting students to PBL during the initial phase by faculty modelling a PBL case and systematically explaining the process. Overall, incorporating PBL proved to be an innovative and creative way of delivering skills which was uniform and strategic, across undergraduate-nursing disciplines and years alike. This novel approach to online clinical skill teaching enhanced student engagement and effectively met module learning outcomes, as it safely informed the lecturer of the students' level of understanding and grasp of key concept material (Filer, 2010). Feedback was immediate and quantifiable (Hudson, 2015) from both the lecturer and student perspective. All of which was positively emulated in end of module feedback from the students.

#### **4. Assessment to enhance student engagement**

To create congruency with the philosophy and principles of PBL, the assessment should enhance the process of contextual, collaborative and self-directed learning (Zwaal, 2019). Historically a wide variety of methods have been used to assess students learning in PBL, from traditional multiple-choice question exams and assignments to new assessment techniques such as case-based assessment, self and peer assessment, performance-based assessment and portfolio assessments (Gijbels et al., 2005). An authentic assessment which involves problem solving promotes learners to engage in self-regulated and self-directed learning (Moallem et al., 2019). Therefore, the assessment tasks and the content of the assessment materials must be appropriate to create engagement and enhance each student's problem-solving skills. The aim is for students to develop academic (generic) knowledge about the relevant skills content, which is transferable to practice as they develop a higher level of knowledge and competence (Lazinica and Calafate, 2009; Chian *et al.*, 2019).

As already discussed, traditional assessment, such as face to face OSCE, could not be undertaken due to Covid-19, therefore, assessment approaches were revised and changed in line with online/blended clinical skills delivery approach. The aim of the assessment was to achieve alignment of the learning and teaching tasks, intended learning outcomes, indicative content, and assessment tasks. Therefore, for their assessment submission students were required to use a systematic approach like the RAPID acronym to develop '*Nursing Care*

*Plans*' related to the outlined clinical scenarios into a '*Portfolio of Clinical Scenarios*' (see Appendix 1).

Students developed their Portfolio of Clinical Scenarios which reflected each week's theme and related clinical scenario (module dependant). The student was responsible for completion of the Portfolio of Clinical Scenarios with encouragement and advice given by the module team through attendance at online clinical skills class and lectures. This approach motivated students to attend all online classes, which has seen a significant level of student engagement with the online clinical skills approach. At the end of the module this Portfolio of Clinical Scenarios was submitted as part of their Continuous Assessment and as evidence of student learning in meeting the required learning outcomes set in the curricula.

One of the key features of PBL is to enhance learners' ability to conceptualize the dimensions of real-life scenarios and integrate their knowledge to generate hypotheses and/or solutions to multifaceted, complex problems (Allareddy et al., 2011). The use of clinical scenarios encourages the learner to recognise and analyse the problem(s) contained within, to integrate theory and practice and conduct research to develop their knowledge and skills and to generate potential solutions (nursing care plan), (Moallem et al., 2019). This assessment process guides students to collaboratively develop a higher level of understanding of the complex issues and clinical skills outlined in the specific clinical scenarios through the development of specific nursing care plans.

Assessment design must be student-centered (Chian et al., 2019). At the beginning of the new semester, the assessment design and process were clearly communicated to the students, alleviating any elements of the unknown. The Portfolio of Clinical Scenarios template, headings and expectations relating to the assessment were made familiar to students throughout the semester. Each week the assessment task (clinical scenario/nursing care plan) paralleled the content covered in the learning activities within the curriculum (skills class, seminar, and lecture). Students were encouraged to prepare their assessment (Portfolio of Clinical Scenarios) throughout the term. According to Chian et al., (2019), the assessment design should create opportunities for students to make progress across the curriculum. This was achieved though the incorporation of elements such as the nursing process, the A-E assessment, and the use of ISBAR (DOH, 2020) to communicate escalation, deterioration or changes in patient care, all elements which are

covered across the curriculum.

It can be argued that lecture-centered learning and assessment is still prevalent, and the '*jump*' to a new system with a more modern approach is not easy for academic staff (Sattarova et al., 2021). However, for students to effectively learn, the assessment should not only measure students' performance, but it should also serve as a tool to support their learning (Chian et al., 2019). The Portfolio of Clinical Scenarios serves as a formal assessment to showcase and improve student's repertoire of knowledge and skills as well as their competence in problem-solving processes. Through feedback from assessors, students were provided with a guide on areas for improvement in relation to their competence. A summary of how PBL should be incorporated into an assessment for nursing skills is outlined in Figure 6. Design and delivery of this innovative approach to assessment has shown in feedback from students that they appreciate the educational value of the approach and consider that it has enhanced their competence and clinical skills.

**Figure 6: Problem Based Learning for Assessing Clinical Nursing Skills.**

- The assessment should enhance the process of contextual, collaborative and self-directed learning (Zwaal, 2019).
- The assessment should achieve alignment of the learning and teaching tasks, intended learning outcomes, indicative content and assessment tasks.
- The assessment process should guide students to collaboratively develop a higher level of understanding of the complex issues and clinical skills.
- Assessment design must be student-centered.
- For students to effectively learn, the assessment should not only measure students' performance, but it should also serve as a toll to support their learning (Pellegrino, 2018).

## 5. Discussion and conclusion.

Due to the Covid-19 pandemic and the difficulties with teaching face to face, the module teams from the Department of Nursing in SETU sought to re-design the approach to teaching clinical skills utilising a completely online approach in some modules and a blended approach in others. Student engagement was a key priority when delivering this novel approach to clinical skill delivery. A major aim of the new model of delivery was to build the confidence of students

in relation to their clinical skills/clinical reasoning and to empower them to develop a higher level of knowledge to become competent practitioners.

The above deconstruction and reflexive reconstruction in relation to the methods of delivery of clinical skills made visible the often-invisible complexities, challenges, and considerations of how skills were historically delivered to nursing students. When the working team came together there was a realisation that nursing skills need to be delivered and facilitated in a way that monitors, guides, and assesses what and how students are learning using an integrated, problem-based approach in order to enhance engagement with the curriculum. These more engaging active strategies which capture and hold the attention of student's, also enhanced their clinical reasoning and critical thinking skills.

The constituent elements of Critical Social Theory (CST) and core principles of Problem Based Learning (PBL) were used to identify the best methods of delivery, which would compel students to actively engage with clinical skills and in turn narrow the theory practice gap. Monteiro and Sibbald (2020) highlight the common use of simulation /scenario-based learning in medical education, utilising constructivist theories, to bridge this gap. However, they warn against the allegory of the preconceived notion that educators must include an element of surprise within the scenarios to introduce real world tension or surprises to evoke exploration and discerning problem solving, as a method of challenging students to critically think. Monteiro and Sibbald (2020) view this as a myth, camouflaged as experiential learning, which can have negative consequences for the students. We support this view point, suggesting that there is a need for simulation based education, transparent learning objectives which are aligned with the PBL scenarios and the curriculum.

To this end, module teams developed patient case scenarios. Using these scenarios students were required to use a systematic approach, such as RAPID (Recognise, Assess, Plan, Implement, Discuss), to develop nursing care plans to prioritise the patient care required for each scenario/situation. The development of these nursing care plans formed the assessment for these skills modules. Through engagement with and completion of this assessment, students were guided to collaboratively develop a higher level of understanding of the complex issues related to the clinical skills outlined in the specific patient case scenarios. A systematic approach like RAPID can be harnessed to underpin the application of this new knowledge into practice. As students move through the programme this pedagogy can be implemented to scaffold the

learning as students advance in their expertise.

Recommendations from the experience of non-traditional clinical skill delivery during the Covid 19 pandemic for under-graduate nursing students include the use of national guideline and policy to develop a shared interdisciplinary structured nursing approach to patient assessment such as RAPID and applying it to real world problem-based patient case scenarios, to ensure student motivation and engagement can be achieved. Linking this approach to the final assessment is fundamental in meeting the needs of students and the module learning outcomes alike. Consequently, a timetabled clinical skills class for students to review content prior is pivotal in empowering and encouraging students to engage with material independently and is necessary in supporting students in preparation for online class.

Assessment development is reliant on academic staffs' shared understanding of the fundamental perspectives of student's level of knowledge and learning (Chian et al., 2019). Regular ongoing monitoring and consistent feedback with students during each skill class ensured validity and reliability of this novel approach. For ongoing assessment development, the assessment approach and its implementation should support any modifications in the intended learning outcomes (Chian et al., 2019). This is inclusive of the traditional and blended approach to clinical skills teaching.

Incorporating PBL is dependent on the commitment of academic staff, in the form of developing knowledge acquisition in the practical application of PBL, not to mention the time and energy needed to prepare the content for delivery. The unskilful application of PBL can run the risk of unnecessary disruption of the learning process for students. A study by Sattarova et al., (2021) supports this view by highlighting low levels of satisfaction with PBL because of lack of preparation or experience from facilitators. Because of the dearth of previous experience with PBL, there was a risk of difficulty for academic staff in understanding the basic pillars of this method of delivery. Nevertheless, the positive feedback from both students and academic staff suggest that this would be a mutually beneficial area for future development. While it was not within the scope of this study to evaluate student feedback, we plan to conduct further study in this area.

This paper aimed to address the need to explore different pedagogy for delivering clinical nursing skills while the traditional face to face method of delivery was not available. Insights gained through this process have highlighted some key principles and practices for the delivery of practical skills using online/blended pedagogy through implementing PBL. This conceptual

paper concludes with the hope that by identifying these principles and practices, it will contribute to the growing body of knowledge in the area and assist other educators in navigating the challenges of this method of delivery.

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## Appendix 1

### Case Study 1: Year 3 General Nursing Students

(Portfolio of Student Learning & Continuous Assessment)

- There are 4 case studies to be critically explored in this portfolio. Each one reflecting the themes covered in this module.
- Under the care plan headings provided you are required to use a systematic approach (Recognise, Assess, Plan, Implement, Discuss/evaluate) to prioritise the immediate care provided using the nursing process. The simple care plan you develop should demonstrate a synthesis of your learning and specifically address the key learning outcomes of this module.
- These case studies will be explored in your skills class and the care plan can then to be completed by you once class is completed.
- The word count will be 600 words per case study/care plan (+/- 10%). References are required to support your work (a guide of minimum 6-8 per scenario) and a reference list must be included at the end of this document.
- All scenarios should be typed and saved in this word document. The completed work should be uploaded to Turnitin before the set time and date. There is no need for a hard copy submission.
- This will account for CA 85% of your total mark for this module.
- The submission date is \_\_\_\_\_
- In class participation is vital in the ability to undertake and complete this assessment (CA up to 15% for online participation and activity completion/seminar work).
- Attendance at online and face to face skills classes is mandatory.

### Neurological Trauma

A 19-year-old male, Sean, is admitted to the emergency department following a road traffic accident (RTA). He was the single occupant of the car. He was restrained by a seatbelt. He arrived in the ED (Emergency Department) immobilized on a flat board with a hard cervical collar in place. The paramedics inform you that it appears that Sean was travelling at high speed on a secondary road and appeared to have suddenly lost control of the vehicle and crashed into a light pole. He has a head injury (has dressing to same with minimal blood loss) and is being treated for suspected spinal cord injury.

The paramedics tell you that their initial assessment found his heart rate was 90 beats per minute (bpm), respiratory rate was 24, and initial blood pressure (BP) was 130/80. His GCS is 12/15; 3- responds to speech, 3- inappropriate words, and 6- obeys commands.

You have been assigned to assess and provide immediate care to Sean in the ED. You must approach

the task in a holistic way when assessing and caring for Sean. His mother is also present in the ED.

Pulse 122bpm

BP 110/60 mmHg

Respiratory rate 22/min

SaO2 recordings 94% on 2L O2

**Using the case study above in your skills class, use the document below to develop a systematic approach for the immediate prioritisation of patient care:**

<b>Recognise/Assessment:</b>	
<b>Nursing Diagnosis (Four Nursing Problems)</b>	
<b>Interventions (Plan &amp; Implement)</b>	<b>Rationale</b>
<b>Discuss/Evaluation/Report:</b>	

**Case Study 2: Year 2 Intellectual Disability Nursing Students**

**Complex Symptomatic Epilepsy**

Paul is a 57-year-old man with a moderate ID, living with Cerebral Palsy right sided hemiplegia. In addition, he has other co-morbid health issues which include diagnoses of Epilepsy (since childhood), Chronic Obstructive Pulmonary Disease (COPD), Hypothyroidism, GORD, and Bi-Polar Disorder with associated anxieties, Constipation & some behavioural issues. Paul is non-verbal and will use vocal sounds and gestures to communicate with staff. Paul smokes and is on a smoking cessation programme. He likes to visit staff in other houses within the residential centre’s grounds & is free to leave his home to do so independently.

Paul has nursing oversight within the area he lives during the day. At night he has care staff support, who supports two other houses. Hence there are periods throughout the night when Paul has no staff within his home.

Paul has a Wireless Convulsion Sensor Mat on his bed & night staff carry a Pager with them if they must leave Paul's home to check on other residents in other houses nearby.

**Epilepsy presentation:**

Paul is diagnosed with Complex Symptomatic Epilepsy since childhood. Paul can present with focal impaired awareness, focal generalised myoclonic & focal generalised atonic seizures. He has a History of Status Epilepticus and has been hospitalised in the past with this.

Paul also can endure seizures at night. Paul can require the support of emergency AED medication; if seizures last longer than 5 minutes. He also requires oxygen, to support him when in seizure if he becomes cyanosed. This is prescribed by his GP.

Paul's recovery post seizure (postictal) can take several hours and may require oxygen support and monitoring of his vital signs including neurological observations and oxygen saturation levels.

**Task:** What are the priorities of care that should be included in a person-centred Epilepsy Care management plan, to support Paul? Please use the document below to develop the plan, utilising a systematic approach.

<b>Recognise/Assessment:</b>	
<b>Nursing Diagnosis (Four Nursing Problems)</b>	
<b>Interventions (Plan &amp; Implement)</b>	<b>Rationale</b>

<b>Discuss/Evaluation/ Report:</b>	

### Case Study 3: Year 2 General Nursing Students 2

#### Post-Operative Care Skill Class

Annie has arrived onto the ward following her tonsillectomy. She had morphine 10mgs IM as pain relief given before returning to the ward.

You have been assigned to care for Annie on her return to the ward and are working with your clinical preceptor. An hour after her return you go to check on Annie and you note a lot of blood on the pillow, and she appears to be swallowing excessively. She is crying with pain in her throat and has a numerical pain score of 8/10.

You immediately recheck her observations and you note the following:

- Temperature                      36.9 °C
- Pulse                                      130 bpm regular
- Respiration rate                      18
- Blood Pressure                      100/60 mmHg
- SpO2                                      98% on room air

**Following the guidelines set out for this class, USING THE RAPID acronym, and using all the available information above answer the following questions and be prepared to discuss with your lecturer and fellow students, the following:**

<b>Recognise/Assessment:</b>	
<b>Nursing Diagnosis (Four Nursing Problems)</b>	
<b>Interventions (Plan &amp; Implement)</b>	<b>Rationale</b>

<b>Discuss/Evaluation/ Report:</b>	