PebblePad

CASE STUDY

PebblePad to patient: Enhancing simulated bedside care

Dr Martin Hopkins & Ms Caroline Browne, Murdoch University, AU

PEBBLEPAD CASE STUDIES

STORIES OF INNOVATION TOLD BY THOSE CHARTING NEW COURSES IN LEARNING, TEACHING AND ASSESSMENT.

THE CONTEXT

Background

Nursing education has transcended hospital-based apprentice style training, moving to a university-based bachelor's degree, and laying a theoretical evidence-based grounding whilst providing students with the skills to translate this into professional nursing practice. Nursing students are required to learn core clinical skills embedded throughout the curriculum, supported by up to date clinical evidence, and integrating fundamental theoretical knowledge into holistic patient care. There are many pedagogical approaches to aid in delivering this essential content and engage the learner, including blended learning, simulated practice, and case-based inquiry. The increased availability of technology within both healthcare and higher education has enabled innovative new ways to provide learning experiences for future Registered Nurses. Healthcare globally is moving towards the integration of advanced digital technology to enhance patient care and make services more effective and efficient. Simulation provides one avenue in nursing education to engage students in real-world learning experiences, whilst developing psychometric skills in a protected, safe environment (Bland, Topping & Wood 2011).

This Case Study is from PebblePad's 2020 *'Charting New Courses in Learning and Teaching'* conference.
To download all of the Case Studies from this event, head to https://hubs.ly/H0rFypx0

Murdoch University (MU) Discipline of Nursing has integrated PebblePad throughout the Bachelor of Nursing (BN) course (Nilson & Hopkins 2018). The curriculum design of the BN course at MU has allowed academics to adopt a blended learning approach to the teaching of practical clinical skills by incorporating digital technology in the form of PebblePad with low fidelity manikins in a simulated environment, replicating real-world nursing care. Traditional blended learning concepts promote the combination of a variety of different teaching methodologies such as didactic lectures, online resources and digital technologies (Halverson & Graham 2019). The objective for the nursing academics at MU was to apply blended learning principles, using PebblePad in an innovative way, to allow students to apply knowledge and skills at the patient bedside in a simulated environment whilst taking responsibility for their personal learning experience and reflect on it in their own time.

Aims and Objective

The success of integrating PebblePad throughout the BN course has provided academics the opportunity to be innovative with the platform, to meet course and unit learning outcomes, whilst also enhancing the student experience. Therefore, the main objective was to develop innovative resources within PebblePad that allow nursing students the opportunity to explore current evidenced based practice, plan and evaluate the care they provide patients, and review and reflect on their actions as a novice clinician in a safe and supportive environment

THE PROBLEM

The successful integration of PebblePad into the entire BN course provides students the opportunity to own their learning and continually build their eportfolio of evidence for their career as a Registered Nurse. However, to ensure continued success and innovation, academics were required to consider new and creative ways to use PebblePad as a tool to enhance learning and engagement, rather than merely a repository for evidence or to duplicate functions of existing learning management platforms such as assessment submission.

To apply a blended leaning pedagogical approach at the patient bedside, the use of eportfolio had to be reimagined to form the construct of the students' learning through incorporating digital media resources. It could then become a tool to facilitate students' understandings of holistic patient care through providing a foundation for evidenced-based practice, enhancing critical thinking skills and encouraging reflective and reflexive practices.

THE APPROACH

Academics within the BN program had a strong desire to encourage students to take ownership of their learning and development; a pedagogical approach that develops inquisitive learners who are able to think critically, analyse available evidence, and integrate this into effective holistic patient care. The curriculum design of the MU BN uses a case-based inquiry model to facilitate learning in a variety of simulated settings including acute and community care environments. Inquiry based learning requires the student to direct the learning and take an active role in the acquisition of knowledge.

Inquiry based learning has been described as:

> *'an environment in which learning is driven by a process of enquiry owned by the student. The tutor establishes the task and facilitates the process, but the students pursue their own lines of enquiry, draw on their existing knowledge and identify the consequent learning needs. They seek out relevant evidence and take responsibility for analysing and presenting this appropriately, either as part of a group or as an individual supported by others. They are thus engaged as partners in learning.'*
>
> (Kahn & O'Rourke, 2005, p. 1)

To be successful using this pedagogical approach, students will need to take responsibility for their own learning, be proactive in preparing for class, and work together with their classmates to form a community of inquiry.

A variety of different resources available in PebblePad assist students to navigate this learning approach and to develop stronger teamwork and critical thinking skills, both essential requirements for a Registered Nurse. Students are provided with case studies that include a patient scenario, diagnostic tests and imaging, patient notes, and referrals. PebblePad has been used to replicate the move towards digital healthcare resources such as e-health records and online databases for clinical policies and practice standards. Students are able to retrieve this information without leaving the simulated patients' bedside. This provides students with a learning experience similar to that of a hospital clinical placement, whilst in the safety of the university setting where they can explore all aspects of patient care at their own pace. At MU, PebblePad is being used at the simulated patient bedside to create immersive experiential learning that transcends the classroom, promoting self-directed learning and critical thinking.

Challenging existing pedagogies

Providing students with the opportunity to provide holistic care through the integration of PebblePad technology at the bedside is a new pedagogical approach to nurse education which traditionally applies a skills focused pedagogical approach to simulated care. The innovative use of PebblePad, moving away from its conventional use as an eporfolio, provides academics the opportunity to posit case-based questions and facilitate student discussion within the simulated clinical environment. Students are able to track their progress, justify clinical decisions and explore alternative pathways, and share this information with their classmates and tutors within PebblePad.

THE RESULTS

The implementation of PebblePad as a single point of contact to promote and enable student learning within the case-based inquiry nursing units has been beneficial for academics and students alike. The building of case scenarios within PebblePad has allowed the academics, teaching staff and students to all be involved simultaneously with a live dynamic resource that can be adapted to their needs and showcase evidence-based nursing care at the bedside. Academic and hospital resources can be

incorporated into the case scenarios, ensuring students receive continually up to date evidence that is pertinent to their specific patient case with changes to patient notes, and imaging and lab results made in real time, replicating a dynamic clinical environment.

Innovating teaching, learning and assessment

Using PebblePad allows for students to learn at their own pace whilst focusing on the clinical components of the case in detail at the bedside, fostering a new approach to student centred learning. Through the integration of theoretical components such as pathophysiology and pharmacology with clinical scenarios, students are able to begin to make connections, reflect on their knowledge and link theory to practice. The construct of the case scenario within PebblePad allows students to recognise the need to find further information relating to a specific patient and explore resources such as pathology or radiology reports to drive their decision making and patient care.

Experiential learning in this manner, although simulated, replicates real life clinical environments where students have to search for digital patient reports and work within a paperless, digital environment to challenge their thinking and critically appraise their patients needs.

Enhancing student learning and success

The provision of case-based scenarios at the bedside through PebblePad provides the student with an immersive learning experience that not only allows for a hands-on evidence based learning experience, but also better prepares them for clinical practice where they are able to apply their learned experiences in real world situations.

Students find the case studies develop their learning and understanding of complex patient conditions:

> '*The settings for clinical labs enhanced my learning because of the real-world case scenarios…'*
>
> (NUR242 Case Based Inquiry - unit survey student response)

Also, students are able to identify the links between the learning required in the simulated sessions and the different methods for achieving this, with one student identifying that the outcome of the learning was to:

> *'… bring out the acquisition in the ability to problem–solve, critical thinking skills and the essence of acute care'*
>
> (NUR242 Case Based Inquiry - unit survey student response)

LESSONS LEARNT

Using PebblePad in a different format to traditional eportfolio application has many benefits for academics, teaching staff and students. However, there is a need for continued support to maintain the platform from within the discipline to ensure the end user has a worthwhile experience.

It is important that whilst being innovative with eportfolio platforms such as PebblePad, that it is not a 'one size fits all', and while it is beneficial as a resource repository and environment for reflective practice, it may not be suitable for all student needs, and therefore customised tailoring to the receiving cohort is imperative for success.

The learning experience can not only be enlightening for students but also for teaching staff, whilst allowing academics to be creative in the construct and delivery of leaning materials. Clinical development of nursing students is not only evident in how they carry out progressive care in the simulated environment but also when they practice in real world clinical settings.

IN BRIEF

- Technological innovation enhances student learning through replicating dynamic real-world clinical environments.
- Empowering students by targeting the skills they require, allowing them to drive their own learning, and developing critical and reflexive thinking skills is essential in preparing work-ready graduates.
- A move towards digital healthcare requires education provides to think creatively about how these platforms can be replicated in a simulated environment.

Watch: https://bit.ly/nursing-at-murdoch

REFERENCES

Bland, A.J., Topping, A., & Wood, B. (2011). A concept analysis of simulation as a learning strategy in the education of undergraduate nursing students. *Nurse Education Today 31*(7),664-670.

Halverson, L.R., & Graham, C.R. (2019). Learner engagement in blended learning environments: A conceptual framework. *Online Learning, 23*(2), 145-178.

Kahn, P., & O'Rourke, K. (2005) Understanding enquiry-based learning. In Barrett, T., Mc Labhrainn, I., & Fallon, H. (Eds). *Handbook of Enquiry & Problem Based Learning*. Galway: CELT

Nilson, C., & Hopkins, M. (2018) Pilot to Program: The full integration of PebblePad eportfolio learning into a Bachelor of Nursing course. PebbleBash; The Enterprise Endeavour; Scaling up personal learning. Melbourne, Australia ISBN 978-0-9565641-5-3

AN EXPERT TEAM YOU CAN DEPEND ON

GET IN TOUCH

There are an awful lot of things that make PebblePad unique. Not least the fact that it's a platform designed by educators for educators. Indeed, the PebblePad team is bursting to the seams with innovators and practitioners, all of whom learnt their craft in teaching roles. If you want to talk to a team who really understands your world, get in touch.

PebblePad HQ (UK)

01952 288 300

PebblePad North America

(864) 650 5406

PebblePad Australasia

0400 899 820

hello@pebblepad.com

https://twitter.com/PebblePad

https://www.linkedin.com/company/pebblepad