

Integrating PebblePad throughout an undergraduate nursing curriculum to build student nurses' beginning professional eportfolios

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A case study from PebblePad's 2016 'Future Ready' conference on preparing and equipping learners for their journey.

The Context

This case study is being undertaken at the School of Health Professions, Discipline of Nursing (DoN) at Murdoch University (MU), Perth, Western Australia in the undergraduate Bachelor of Nursing (BN) course. The nursing students enrolled in this BN course are aged between 17 and 70 and are predominantly female. The gender imbalance represented by the large female population of this study is representative of nursing being a largely female dominated profession both in Australia and abroad (Bailey, 2014; McLaughlin, Muldoon & Moutray, 2010).

Registered nurses need to maintain professional portfolios for annual performance appraisals, documentation for employee accreditation, career promotions and job applications, and importantly to document continuing professional development. Portfolios have been used as a learning strategy within nursing education for some time (Harris, Dolan & Fairburn, 2001), and their use is reported to encourage critical thinking, promote discussion between student and preceptor, and assist students to develop self-assessment skills through reflective practice (McMullan et al., 2003).

Aims and Objective

MU DoN's vision was to embed the PebblePad eportfolio within the BN curriculum through whole-of-course mapping and design. Developing an eportfolio can be a catalyst for students' professional and personal growth, particularly through the process of reflective practice and critical analysis (McMullen, 2014). By providing each nursing student with the opportunity to develop a comprehensive learning eportfolio using PebblePad, the main objectives for the DoN were to:

- assist students to develop reflexivity and self-awareness;
- encourage continuous and structured reflection of both clinical and theory units beginning at the undergraduate level;
- promote a lifelong learning philosophy;
- engage the student in owning her/his learning (an awareness of their own skills, strengths and limitations);
- assist students to understand the importance of an eportfolio in their professional lives (Green, Wyllie & Jackson, 2013);
- develop a deeper engagement of the clinical facilitator in the student's learning journey;
- streamline the assessment process for students whilst on clinical placement;
- maximise efficiency of the student result recording process by the Clinical Practice Office (CPO)
- develop an eportfolio in readiness for post-registration practice (evidence students' theoretical knowledge development, critical analysis, critical thinking skills and reflective learning abilities, and their clinical skills competencies).

The Problem

It was decided to introduce PebblePad into the undergraduate nursing program as a means of fulfilling the Nursing and Midwifery Board of Australia's [NMBA] requirements for nursing practitioners to maintain a professional portfolio, and also as a means of streamlining current practices to increase efficiency. As the demand for higher level nursing knowledge and skills, and attributes and characteristics, has increased, the need for student nurses to evidence their learning beyond the clinical interface has become necessary.

The need for progressive resource change was twofold:

1. Clinical Practice Clinical Portfolio

Due to increasing numbers of enrolments into the MU BN course, there was an increased burden placed on the CPO team. The paper-based version of the clinical portfolio created a heavy workload for the CPO and the flexibility that the electronic clinical eportfolio would provide over the paper-based version was valuable from a workload management perspective. From the students' perspective it would ensure that the nursing students would take ownership of their learning and the completion of their required competencies (Fawn & McKenzie, 2010; Green et al., 2013). The collaboration required by the student nurse and the MU clinical facilitator to complete each psychomotor competency skill and enter them, together with the feedback, into the eportfolio ensures appropriate support and supervision (Fawn & McKenzie, 2010). Further, the MU clinical facilitators have a more comprehensive, dynamic and regularly updated view of how well students are progressing, which can help formative and summative assessment (Fawn & McKenzie, 2010).

2. Theoretical Unit Learning Tool

Not only is it necessary for a nurse to demonstrate clinical competency, but also an engagement in their theory to practice and evidence based knowledge development. While some researchers warn against the introduction of assessment into eportfolio development (Barrett, 2005; Joyce, 2005), it is also recognised that students will not undertake activities such as essential and required reading, self-directed learning packages, journaling and reflective writing, unless it is connected to assessment (Hobson, 2004). Research by Strivens and colleagues (2009), which reviewed the role of the eportfolio as an assessment tool, found that the facilitator and coordinator respondents reported a range of benefits relating both to student education and improved efficiency. Further, the evaluations from students were equally positive and the findings of the study suggested that eportfolios can be used successfully for both formative and summative assessment.

The Approach

Implementation of a new system into the BN theory units and the clinical practicum required significant planning and a strategic approach to its introduction. It was decided to introduce the PebblePad eportfolio to a cohort of 1st year BN students in semester one as an assessable component of one unit out of four, and then in two units out of four in the second semester. The principle consideration for the wider integration across the BN course would consider the unit objectives and the types of assessment in the units, and the benefits and meaningfulness of those to the students. As a means of introducing new software to students the focus was placed on the ability of PebblePad to not only showcase an individual's progression through their nurse training and beyond, but also as a platform to store, submit and receive feedback on written assessments. To facilitate this implementation, each unit constructed a method for submission of written assessment and feedback in a variety of ways (Table 1).

Unit Name	Assessment Type	PebblePad Asset
NUR103 Contemporary Nursing Practice	Reflective learning through required reading and group activities.	Development of a portfolio, file uploads to asset store, blogs, generating a collection of assets, releasing the portfolio to ATLAS.
NUR152 Indigenous Health	Reflective learning through required reading.	Workbook with weekly sections and built in feedback template for 3 submissions across the semester (14 weeks).
NUR105 Health Assessment and Physical Examination	Part A: Genogram and 500 word report Part B: Health assessment interview, care plan, diagnoses Part C: 1000 word research based essay	Workbook consisting of three sections with built in templates for Part B.
NUR114 Professional Practice 1	Reflective learning through required reading and group activities.	Development of a portfolio, file uploads to asset store, working in a workbook.

Table 1: Methodology of introducing PebblePad into the MU BN course with a first year cohort.

Theoretical unit implementation

In semester 1 2015 a working party was established consisting of academic, administrative, professional and clinically based staff to ascertain the possibility of progressing with PebblePad into the theory units as a real time, on-line alternative to traditional paper-based portfolios. Students were offered support both prior to implementing PebblePad into the BN program and during semester times in a number of ways including formal tuition, drop-in sessions and online help (Figure 1).

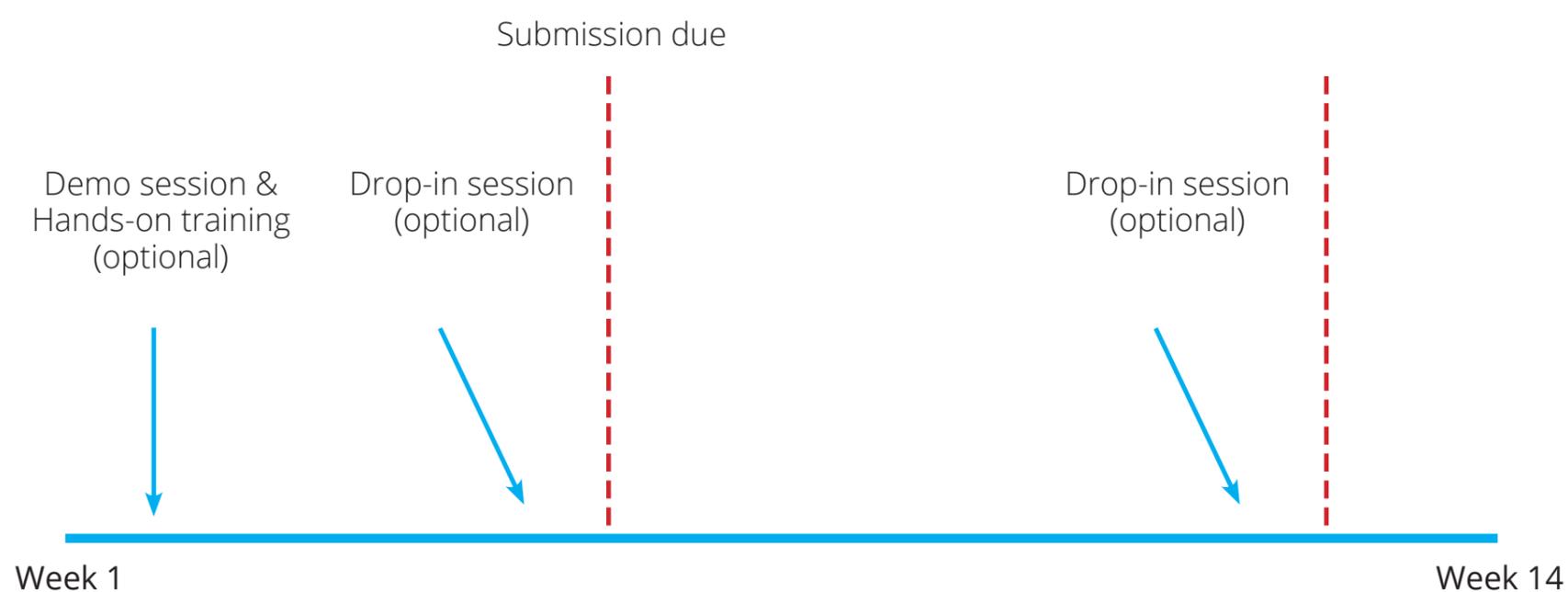


Figure 1: How students were supported through the implementation process

Students were also provided with 'how to' guides and online technical support via discussion forums within the learning management system, which were accessible throughout the semester.

Clinical practicum implementation

From the analysis of the student surveys of the units in the first year, it was understood that students were able to successfully use the software. To use the PebblePad eportfolio to replace the paper-based clinical portfolio it was decided that a pilot project was required initially to identify acceptability, usability, and any operational issues. A pilot group of students (N=8) who had used PebblePad in the three previous theoretical units was selected for the mid-year semester 2015 pilot project together with one MU clinical facilitator who had experience in marking within PebblePad in two of the previous theory units. A clinical facility was consulted and agreed to allow PebblePad to be used in its clinical area. A PebblePad Clinical ePortfolio was developed in the form of a workbook, which incorporated the required Australian Nursing Competencies Assessment Schedule (NCAS) that is mapped to the NMBA National Competency Standards for the Registered Nurse, and which students are expected to demonstrate attainment of. The eight students and the clinical facilitator were briefed on the use of PebblePad two weeks prior to commencing the placement. The brief included a demonstration on how to complete the workbook in PebblePad and outlined student and clinical facilitator responsibilities.

The workbook did not allow students to progress from one section to the next until 'sign off' by the clinical facilitator was given. Academic and professional staff services were made available during the placement to troubleshoot any potential problems.

The Results

Following the implementation of PebblePad into the theoretical units, specific student feedback was sought via the MU student survey of units to ascertain its success and highlight any changes that needed to be made for the future integration and implementation.

The results for all components of the implementation have been positive. Two of the theoretical units in which it was implemented had specific questions relating to the use of PebblePad in the unit student survey. Both these units (NUR105 and NUR152) had overall positive responses with 60% and 66% respectively responding positively to the use of PebblePad in the units. There were positive qualitative responses to PebblePad in all three theoretical units with a selection of comments identified in Table 2.

Unit Name	Student Comment
NUR103 Contemporary Nursing Practice	Respondent 14: <i>'...I understand now that PebblePad is a great tool for learning and storing all the information that is necessary for each unit.'</i> Respondent 47: <i>'...found it very useful in learning to summarise and reflect. I found the program easy to work with and set out.'</i>
NUR152 Indigenous Health	Respondent 12: <i>'Great. It has allowed me to place all my information for my studies into one area and is easily accessible.'</i> Respondent 13: <i>'The eportfolio was extremely useful as it helped me understand and grasp the subject thoroughly. It also helped me with revision.'</i>
NUR105 Health Assessment and Physical Examination	Respondent 5: <i>'I love PebblePad and I think it is a very useful tool going forward for keeping our nursing portfolio.'</i> Respondent 8: <i>'I find PebblePad easy to understand and upload my work to. I found it very helpful when completing the health assessment for this unit and all the subjective data was broken down into sections on PebblePad to ensure I covered all important areas for the assessment.'</i> Respondent 19: <i>'Always a pleasure to use PebblePad. It is a great place to store assignments and work on them until the due date. Easily accessed from any computer too.'</i>

Table 2: Students' qualitative responses to PebblePad in theoretical units

The pilot project of PebblePad in the clinical practicum unit was very successful with limited changes required for the next phase of implementation. There were no changes required to any of the workbook assets within PebblePad and all students and the clinical facilitator provided positive comments via personal communication (Table 3). Limitations have been identified in

relation to access to electronic devices in the clinical area; however, this is being addressed prior to the next phase of the roll out of the PebblePad clinical eportfolio.

Practice Member	Comment
Student	<i>'At first I was apprehensive as I assumed this process would be both time consuming and difficult opposed to simply writing in our paper books daily. I did not find this to be the case at all, PebblePad proved to be extremely useful and easier to document our daily interims and activities. I believe this was due to the easy to read layout on each section on PebblePad. The online checklist was also very helpful as it reminded us of what we had completed and what else was required. In addition I believe the privacy of submitting via PebblePad was great as we could go home and reflect on how we really felt without the added pressure of knowing what we write was easily accessible to those around us, particularly if we happened to misplace our books.'</i>
Clinical Facilitator	<i>'The setup of PebblePad was concise and had easy flow. The students were open to the use and felt confident with the process. As a facilitator I felt confident with the layout . . . I would feel confident to teach another facilitator how to use PebblePad. Tabulation and the process is functional and systematic.'</i>

Table 3: Clinical practicum qualitative feedback

The feedback and responses on the use of PebblePad as an asset store, journaling tool and a platform to showcase work, from academic staff, professional staff, and students, has been pleasing. The use of PebblePad for formative and summative assessment and psychomotor skills assessment is unique to MU DoN and the authors believe this will enable the BN students to 'stand out from the crowd' in today's competitive world of nurse recruitment.

Lessons Learned

The implementation of PebblePad into the undergraduate nursing program was challenging, however through consultation with academic and professional staff and with Industry partners and their staff, it is achievable. Staff and student training was provided by both academic and professional staff in the DoN and from the MU Centre of Teaching and Learning and IT departments, which successfully alleviated most issues regarding uptake of PebblePad.

A few barriers were highlighted with the use of PebblePad in the theory units, however these were related to skills and technology 'know how', and to other technological issues such as browser compatibility.

A further potential barrier to rolling out the use of PebblePad clinical portfolios across all three years of the BN course are the complexities in accessing the students' PebblePad platforms while on placement. This relies on every student having access to a smart device and/or access to a computer with internet connectivity, and the agreement between MU and the clinical facilities to allow students to access these resources on site. In the pilot project this was overcome through discussion with the clinical facility to allow student access to devices on site, and also by providing the MU clinical facilitator with a laptop and a mobile dongle internet access device. To plan for

the wider scale roll out of the PebblePad clinical eportfolios the DoN is conducting surveys of students, clinical facilitators, and clinical facilities. The surveys will establish how many students and MU clinical facilitators have access to a smart device such as a laptop/tablet/smartphone, and if the clinical facilities will be prepared to engage in a memorandum of understanding with MU for students to access these resources on site.

A further pilot project for the PebblePad clinical eportfolio will be conducted in June/July 2016 to trial its use with a larger cohort of 32 students across 4 clinical placements, supervised by 4 MU clinical facilitators. Successful implementation and adjustment of processes and programming at this phase will allow for full roll out in December 2016 and January 2017.

In brief – showcasing ‘future readiness’ with PebblePad

- The PebblePad eportfolio platform is providing undergraduate nursing students with the ability to keep a continuous record of their learning across their whole BN course, which is a requirement of the NMBA.
- The PebblePad eportfolio platform enables nursing students to evidence their learning and present a professional account of specific evidence requirements for continuing professional development entry into the workforce, for future career development opportunities, and for employee accreditation purposes (NMBA, 2008).
- The PebblePad eportfolio platform is an ideal resource for student nurses, registered nurses, and midwives for journaling reflective and reflexive practice, which is an essential process required to link theory to practice, and improve nursing practice and client care.

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