Going paperless in student nurse clinical work integrated learning

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The Context

The development of student nurses' knowledge and skills in the Murdoch University (MU) undergraduate Bachelor of Nursing (BN) course is assessed against the Nursing and Midwifery Board of Australia [NMBA] (2016) Registered Nurse standards for practice, using the NMBA framework for assessing standards for practice (NMBA, 2015). During the three-year MU BN course students are required to successfully complete seven work integrated clinical placement units. Previously students and their assessors used paper based clinical portfolios to document the achieved learning outcomes of the units. The development of the MU BN clinical eportfolio, using both the PebblePad and PebblePocket platforms, was guided by the key elements of the NMBA Assessment model (NMBA, 2015) that comprises:

- Self-assessment by the student nurse
- Observation by the assessor
- Validity and reliability of assessment
  - Validity in the assessment process is the extent to which assessment meets the intended outcomes. The learning outcomes are determined by the National Competency Assessment Schedule (NCAS) interim and final regulatory assessments and eight employer assessments that measure the performance of the student nurse commensurate to their year level, against the NMBA Standards.
  - Reliability in the assessment process refers to the consistency or accuracy of the assessment process outcomes.
- Documentation of data over a period of time and in a range of situations allowing for reflection on the:
  - Practice of the student nurse being assessed, and
  - Interpretations made by the assessor.
- Required participation and collaboration of both student nurses and assessors

The Problem

The evidence of clinical competence gathered whilst on clinical placement over the three years of the BN course is integral to the development of the graduate nurse's professional portfolio. The paper based clinical portfolios were difficult to keep professionally presentable and had potential to be misplaced during and after the completion of the clinical placement. Converting to a digital clinical eportfolio using PebblePad and PebblePocket was viewed as providing the MU nursing students with a platform for 'real world' learning, and necessary to meet the increasing demands for nurses to have skills in information and communication technology (Levett-Jones & Bourgeois, 2015).

Implementing PebblePad and PebblePocket in Clinical Placement

Following several trials in the clinical area where PebblePad was used as a clinical eportfolio, it became evident that gaining access to Wi-Fi in some of the hospitals was problematic and this complicated the processes required for completing the necessary assessment documentation. The PebblePocket app was explored as an option where Wi-Fi was not available, however in its generic format it was not entirely suitable to meet the requirements of the NMBA Assessment model. Funding was obtained in early 2017 and MU School of Health Professions, Discipline of Nursing collaborated with PebblePad IT specialists to create custom templates relevant to the NCAS, the NMBA Standards and the NMBA Assessment model. The first cohort to use the MU BN PebblePocket custom templates with a PebblePad clinical eportfolio workbook in December 2017 were 212 first year nursing students and 35 Clinical Nurse Facilitator (CNFs) assessors.

The Approach

PebblePocket

In each clinical placement unit the nursing students are required to achieve learning outcomes determined by an interim and final NCAS regulatory assessment and identified employer NCAS assessments selected from the following eight categories:

- The initial and ongoing assessment of a client/patient
- Caring for a client/patient requiring wound management
- Managing medication administration
- Managing the care of a client/patient
- Managing the care of a group of clients/patients
- Monitoring and responding to changes in a client/patient condition
- Teaching a client/patient
- Teaching a colleague

The regulatory NCAS assessments were created in PebblePocket by using radio buttons to select between the interim or final assessment, and text boxes for the CNF assessors to document their comments relating to the student's level of achievement. The employer NCAS template was created in PebblePocket in the same way, with radio buttons to select which of the eight categories was being assessed at the time, and to which level the student was being assessed at. Other templates necessary to the completion of the clinical eportfolio that were created in PebblePocket were the Daily Timesheet, the Student Declaration, and the Student Development Plan. Students, at a minimum, use PebblePocket to create a Daily Time Sheet which is signed off by a CNF or designated supervisor. By using PebblePocket, the assessments (and other requirements) can be undertaken without the use of Wi-Fi and the CNF assessors have the capability to complete, sign and lock the templates, which prohibits the student from making any changes. When the student is next in Wi-Fi range it becomes their responsibility to send the locked forms to their personal Pebble+ account for later inclusion into their clinical eportfolio workbook.

PebblePad Clinical Portfolio workbook

The PebblePad clinical eportfolio workbook is set up in such a way that the students and the CNFs are able to progress from the beginning tab of instructions, through the remaining tabs that include declarations, assessments, and reflections, and onto the final tab containing a checklist that both have to sign. The completed, signed and checked clinical eportfolio workbook is then shared by the student to the MU Discipline of Nursing Clinical Practice Office for recording.

Students and CNFs have the option to complete the clinical assessments by using the templates in PebblePocket or by using the templates provided in the PebblePad clinical eportfolio workbook. The PebblePad workbook possesses the full assessment templates that the CNF can complete using a computer with Wi-Fi connectivity in the clinical area.

CNFs use Assessor designated fields to provide feedback to students regarding learning objectives, written reflections, and the clinical placement as a whole. Students, CNFs, the Unit Coordinator and the Clinical Placement Officers have access to the clinical eportfolios and can monitor the progress of the students' use of the clinical eportfolio workbook in real time.

Process in Implementing the Clinical ePortfolio

Hospital and facility induction

An important part of the implementation of the clinical eportfolio was to visit all the MU partner hospitals and facilities to seek approval and permission. This involved the induction and training of staff who were to be student preceptors and those who held roles of responsibility for student clinical placement. In addition, most hospitals and facilities do not allow staff to have

any personal electronic devices with them because of the risk it poses to corporate security. The use of smart devices was discussed, and assurances given that MU nursing students and CNFs sign a declaration stating that their devices will only be used for the purpose of assessment, and any breach to this would lead to disciplinary action. Ongoing and available technological support to promptly address any issues arising was also assured. Administratively, the clinical eportfolio workbook is set up to auto-submit which allows monitoring of student and CNF activity and the ability to address issues as they arise.

Student Induction

A week prior to commencing the clinical work integrated practice units, students are provided with instruction into the process and intent of the clinical eportfolio.

In the first instance, it is ensured that all students have downloaded PebblePocket onto their smart device to provide them with access to the custom designed assessment templates. Students open PebblePocket and sign the Student Declaration, which states that they agree to follow University and Facility policies that includes the limited and specific use of their smart device. Once the Student Declaration is signed and saved the form is sent to the student's personal Pebble+ account, and from there they upload it into the clinical eportfolio workbook. This task, together with other pre-placement requirements and activities, is completed during the induction phase to demonstrate the connectivity of PebblePocket with PebblePad. The students also practice filling in the Daily Timesheets, send them to their Pebble+ account, and create an Activity Log. Instruction is provided on how to write learning objectives for each week of clinical placement, and the pre-clinical placement reflection is introduced. These activities allow the students to begin working within the PebblePad clinical eportfolio in a safe environment and enable any academic and technical questions to be addressed.

Clinical Nurse Facilitator induction

CNFs are registered nurses who are employed by the University to assist, assess and observe student nurses while on clinical work integrated placement. A three-hour education session is conducted for CNFs to allow them to become familiar with the introduction of eportfolios. In preparation for the induction session, PebblePad accounts or External ATLAS accounts are created for the CNFs. The use of sets in ATLAS permit CNFs to see only those students assigned to them for the duration of the clinical placement. The CNFs complete the assessment and clinical skills templates found in the students' clinical portfolio, accessing them through ATLAS. During the induction session, the clinical eportfolio and the concept, context and processes to access the students' portfolio through ATLAS was presented and practiced.

The Results

By using the clinical eportfolio workbook in PebblePad and the custom assessment templates in PebblePocket, the students and CNFs had ready access to the eforms without having to carry a paper-based portfolio, which would often fall apart over time. An additional advantage was the ability to monitor the clinical eportfolios as they were being completed, and address issues promptly without waiting for the submission of the paper-based portfolio on completion of the clinical placement. The ability to view the clinical eportfolios in real time, together with the students and/or the CNFs, ensured swift problem solving and prompt support for technical or academic issues.

When asked if she missed writing in a paper-based portfolio, a CNF replied:

"It was so nice to get away from the paper because A. you didn't have to rely on the student to remember to bring it all with them; and B. it was just accessible so whenever we wanted to access it we could. I thought it was just so refreshing to not have to be rustling through papers and relying on [student]... It was great for me to log on before I went to meet them, to see what their learning objectives and goals were, so I had it in my head what sort of things they were concerned about or looking forward to doing."

Holly Clegg, Clinical Nurse Facilitator, 2018

Lessons Learnt

- A more scaffolded and activity-based induction is required to enable CNFs of differing skill levels to become accustomed with the new platforms.
- Although students are familiar with the platforms, there continues to be a need for repetitive instructions on how to complete worksheet assessment. As an example, the Activity Log is not as intuitive as expected and students demonstrated frustration and anxiety in filling it out. Ongoing provision of resources for students to refer to is required.
- Some students completed both the PebblePocket template and the workbook template for the one assessment. From both a design and a user experience perspective, we need to make this workflow clearer.
- Some CNFs were using their smartphone to complete the assessments in ATLAS, which proved frustrating on such small screens. We need to address how the clinical portfolio workbooks are being accessed in the field.
- The inability to run ATLAS reports of the Activity Log is a concern as Clinical Placement Officers are required to verify the hours worked by the students.
- A contingency process needs to be in place for when students have their template signed and locked before the assessment is fully completed.

Take home messages about 'Scaling up'

- Induction, communication, and support are essential to the implementation and ongoing success of clinical eportfolio use.
- Using eportfolio learning instils in students a practice of reflection, self-audit, and self-development all while using PebblePad to collect, collate, and organise their achievements and experiences.
- Administrative, environmental and economical sustainability with no accumulation of paper-based portfolios to review and archive.

References

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