Pilot to Program: The full integration of PebblePad eportfolio learning into a Bachelor of Nursing course

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The Context

PebblePad was first introduced into the Murdoch University (MU) Bachelor of Nursing (BN) course in 2015 into a first year, first semester theoretical unit (Nilson & Hopkins 2016). In 2018 it is integrated across the whole three year program through a whole-of-course mapping. By introducing PebblePad eportfolio learning into the BN course and threading it through the three-year program, students are provided with a platform for 'real world' learning.

The BN course at MU is a three-year undergraduate degree that is accredited by the Nursing and Midwifery Board of Australia (NMBA), and on successful completion of the course, graduate nurses are eligible for registration with the NMBA as professional nursing practitioners. Registered Nurses (RN) need to maintain professional portfolios for annual performance appraisals, documentation for employee accreditation, career promotions, job applications, and importantly to document a minimum number of annual continuing professional development hours, which is a registration requirement of the NMBA. Following a three-year curriculum mapping exercise, in collaboration with learning designers and academics from the MU Discipline of Nursing (DoN), the lead academic team have been able to successfully integrate eportfolio learning using the PebblePad platform into the all University based theoretical units and all clinical placement units across the BN course.

Aims and Objective

The initial success of PebblePad in strategic units of the course acted as a driver for change for both academics and students alike. The full integration of PebblePad into the BN curriculum has created a new dynamic in MU nurse education with academics and students identifying a need for PebblePad in other theoretical units and within the clinical setting. Therefore, the main objective was to fully integrate PebblePad into the BN course in every theoretical unit and all the clinical placement units.

This has provided students the opportunity to:

- build a comprehensive portfolio of their undergraduate journey;
- demonstrate reflective and reflexive practice;
- map their progression from novice to advanced learner through critical thinking and critical analysis;
- evidence their knowledge and skills development;
- maintain an accurate record of clinical hours; and
- maintain a body of evidence for future accreditation.

For students on clinical placements to:

- view previously achieved skills in real time;
- engage with their clinical learning by linking course learning outcomes (CLOs), unit learning outcomes (ULOs), and required competency development through a live PebblePad clinical eportfolio workbook; and
- be able to reflect, monitor, record and report knowledge and skills development, delivered in real-time to the students' owned and managed clinical eportfolio in the PebblePad platform.

For academics to:

- create innovative formative and summative assessments that the student is in control of;
- build/develop a framework to maintain a learning thread throughout the curriculum;
- link curriculum delivery and assessment to the CLOs, individual ULOS, the University graduate attributes and NMBA standards; and
- provide transparency of learning by providing students with ownership of their learning materials.

The Problem

The success of the initial implementation of PebblePad into key units within the BN course (Nilson & Hopkins 2016) became a catalyst for a change of focus in pedagogical approach and nurse education design. ePortfolio e-learning has moved student learning from the didactic model to a student-led focus. The integration of PebblePad eportfolio learning has allowed students to take ownership of their learning in units where PebblePad is integrated, and what is evident is that students want ownership of all their learning and achievements throughout their nurse education.

For the eportfolio learning program in PebblePad to be successful in the MU BN course, it was deemed that it must be integrated into as many units across the BN course as possible. This would enable students to engage in student-led elearning and allow them to showcase their whole learning journey, theoretical and clinical, to their future employers, in a format easily accessible to them.

The three-year mapping exercise of eportfolio across the BN course identified three domains through which students are able to build resources, develop skills and evidence personal and professional achievements in PebblePad. Using the three domains of the PebblePad eplatform (Appendix A), students have their own e-learning space, where they have the opportunity to meet the predetermined objectives of set work; record, reflect, self-audit, seek feedback and self-develop their knowledge and understanding; and furthermore, collate, collect, organise and present their achievements and experiences.

A MU BN nursing graduate describes how her learning was enhanced though eportfolio learning in the PebblePad platform and that she is using it for her continued professional development as a registered nurse:

> It [My Portfolio] looked professional and eye-catching, and showed off my creativity. I will also continue to use PebblePad to record my CPDs as they are easily retrievable either via creating a portfolio primarily to meet AHPRA auditing requirements, or by printing off the certificates and CPD table should the need arise.

MU BN 2017 Graduate

The Approach

In the theoretical units the application of eportfolio learning within PebblePad is varied, and includes formative and summative assessments, reflection and group work, written assessments, video assessments, blogs and enquiry based learning. The more clinically based and clinical practicum units utilise PebblePad as a means of logging and mapping skills-based activities including psychomotor skills assessments, clinical skills, clinical documentation and evidencing of external qualifications pertinent to the students nursing education (Appendix B). The diversity of activities provide students the opportunity to develop and display integral nursing skills such as communication and interpersonal skills as well as more traditional theoretical skills such as essay writing. The pedagogical approach of mapping and implementing formative and summative assessment, as well as experiential learning activities through the PebblePad eportfolio, ensures adherence to NMBA registration requirements and allows students to take ownership of their learning. Importantly, the eportfolio provides linkages between learning and assessment and changes the focus from assessment of learning to assessment for learning (Lawson, 2016).

Clinical Practicum Portfolio

Students and their assessors use a generic clinical eportfolio workbook built in PebblePad to meet the required Australian Nursing Competencies Assessment Schedule (NCAS) whilst on clinical placement. To make the eportfolio more flexible to the user's needs within the practicum setting, funding was secured from Murdoch University Education Executive, and in collaboration with

PebblePad, forms specific to the MU DoN NCAS requirements were built in the PebblePocket app. This internal collaboration is supported by Hallam et al., (2008), who suggest that unless there is support from upper management of the University, success of School or Discipline eportfolio application is restricted. The innovative use of PebblePocket, together with the PebblePad workbook, enables 400 MU BN students in any one clinical placement rotation to complete clinical portfolio assessment tasks in real time even when WiFi is not available, and then add them to their workbook when next online.

The Results

MU DoN is at the forefront of eportfolio learning by implementing PebblePad into a discipline wide curriculum using a diversity of activities, whilst also enhancing the students' ability to meet the requirements of their governing body (AHPRA) for registration.

The benefits to the students are evident not only from the work they have produced within the PebblePad platform, but also from feedback obtained through formal and informal channels. In one first year Professional Nursing Practice (NUR114) unit students were required to undertake collaborative reflection, where students compare their own thinking with that of the others in the group, with the opportunity to adjust their understanding and interpretation of the concepts and ideas being discussed (Hallam et al, 2008; Harris et al., 2001). Reflective practice represents a holistic approach to the students' learning, where the students constructed their own experiences and the learning had personal significance.

> *Tutorials were extremely interesting and structured in a statement that allowed you to think and check your learning, but learn from others and to also develop a 'learning relationship' with other students in the class ...loved the group task.*

> (NUR114, 2016 student survey, respondent 15).

> *I have found PebblePad a fantastic way to cement the readings that we cover each week followed by the activities completed in class. I thoroughly enjoyed having a range of assignment tasks both written and oral vs the standard test.*

> (NUR114, 2016 student survey, respondent 53).

In a first year clinical nursing theory unit the eportfolio activities supported assessments for learning, which were made relevant to developing competency in selected clinical psychomotor skills. Students were motivated to engage with the activities because they could see the relevance of the eportfolio for their own development and growth, and for their future professional careers.

Excellent assessment. The criteria were clear and concise. I knew what I had to learn. I thoroughly enjoyed completing the psychosocial health assessment in PebblePad. Easy to access and save, it was structured perfectly. I think this is an excellent unit! LOVED IT!

(NUR105, 2015 student survey, respondent 10).

Likewise, final year students identify the benefits of having a tool that can allow them to be reflective and reflexive in their nursing studies:

I have found the use of PebblePad very beneficial for my learning time in the clinical labs. It is a simple and effective way to work through patient assessments, and allows me to build on what we are learning each week. The benefit of having the case study information of our patient, the following prompts and the ISOBAR documentation at our fingertips allows for a smooth learning process. My personal favourite benefit of having this tool is that I can access this from home, and I can update my ISOBAR to build on it, and find my own flow with documentation. More importantly, it allows me to reflect on what I have learnt. I find this really important, as I am able to see you (or whomever our tutor may be) do the skills in the lab, practice the skills in the lab myself, and then reflect on the skills using PebblePad, and this will help me progress my skills further, and help reinforce the knowledge. This is definitely a great tool for us student nurses, and going forward into my career, PebblePad is something I plan to be able to use going forward in my post-grad and/or grad program in the hospital setting for reflection and portfolio purposes.

Personal Communication – Third year Nursing student Feb 2017.

Academics also identified the benefits of being able to use a flexible platform within the theoretical environment to enhance and underpin clinical knowledge:

As an academic, it enables me to keep track of the students' progress throughout the tutorial and keeps costs down as there are minimal paper-based charts for the university to print and laminate. PebblePad has also made marking a breeze with its built-in marking rubric and ability to mark assignments from anywhere with internet access. It has moved nursing education into the 21st century.

Personal communication - Academic Tutor March 2017

The success of the clinical practice portfolio is evidenced by both students and staff with students commenting:

I enjoyed being able to track my progress, I found it helpful being able to see what assessments I had and hadn't completed.

MU 2nd Year BN Student 2018

The ePortfolio encouraged me to link what we had learned in class to the clinical setting, which was really interesting and made everything come full circle.

MU 2nd Year BN Student Survey Response 2018

Clinical Nurse Facilitators (CNFs) also find the use of a live, dynamic eportfolio beneficial for supporting, grading and ensuring students were on task for success.

A great tool for evaluating students' progress and monitoring their work outside the clinical area.

MU CNF Survey Response 2018

An added benefit to the clinical placement portfolio was the ability to moderate practices and assessments from afar. Students who are on rural and remote placements receive instant feedback on their reflective practice, clinical logs and tracking of their hours from their supervising CNFs.

The success is not only evident within the DoN but has been recognised at a university level with the development team invited to present the progress and success at a Murdoch University Teaching and Learning conference and also being awarded a Vice Chancellors Citation Award for the development and implementation of PebblePad into the nursing curriculum.

In mapping the eportfolio learning across the whole course, the students collect a 'history' of development and growth, with experiences and reflections encompassing activities that span the students' entire academic career. The 'history' is built by the student as evidence is collected of their learning, forming a list of achievements and skills accessible to others, including potential employers. The results are often considered more authentic' than a formal transcript of academic progress (Hallam et al., 2008).

Lessons Learnt

Developing the eportfolio elearning program in the MU BN course has added another dimension to promoting the central philosophies underpinning the use of eportfolio practices in Australian Universities (Hallam et al., 2008):

- A place for students to reflect on their learning and the processes of learning through the reflection;
- A place to evidence the students' learned skills and the opportunity to evidence the process and reflect on the development;
- A secure repository for students to collect and store evidence of the attainments; and
- A place to demonstrate their continued capacity for life-long learning.

In integrating eportfolio learning throughout the BN course, it has become apparent that there needs to be ongoing support for academics, CNFs and tutors as well as students. Re-evaluation of the needs of students and staff ensures the eportfolios implemented continue to meet CLOs and ULOs, and are dynamic in their application and evolve with the program. ePortfolios, if constructed with collaboration from industry partners, can be drivers for learning and enable students to develop 'real world' skills in an on-line platform. Continued engagement with healthcare industries and collaboration with PebblePad have allowed the MU BN program to create an innovative learning experience, which students can embrace and reflect on at any point in their career.

Take home messages about 'Scaling up'

- Start small – Aim big
- Look at yesterday, plan for tomorrow
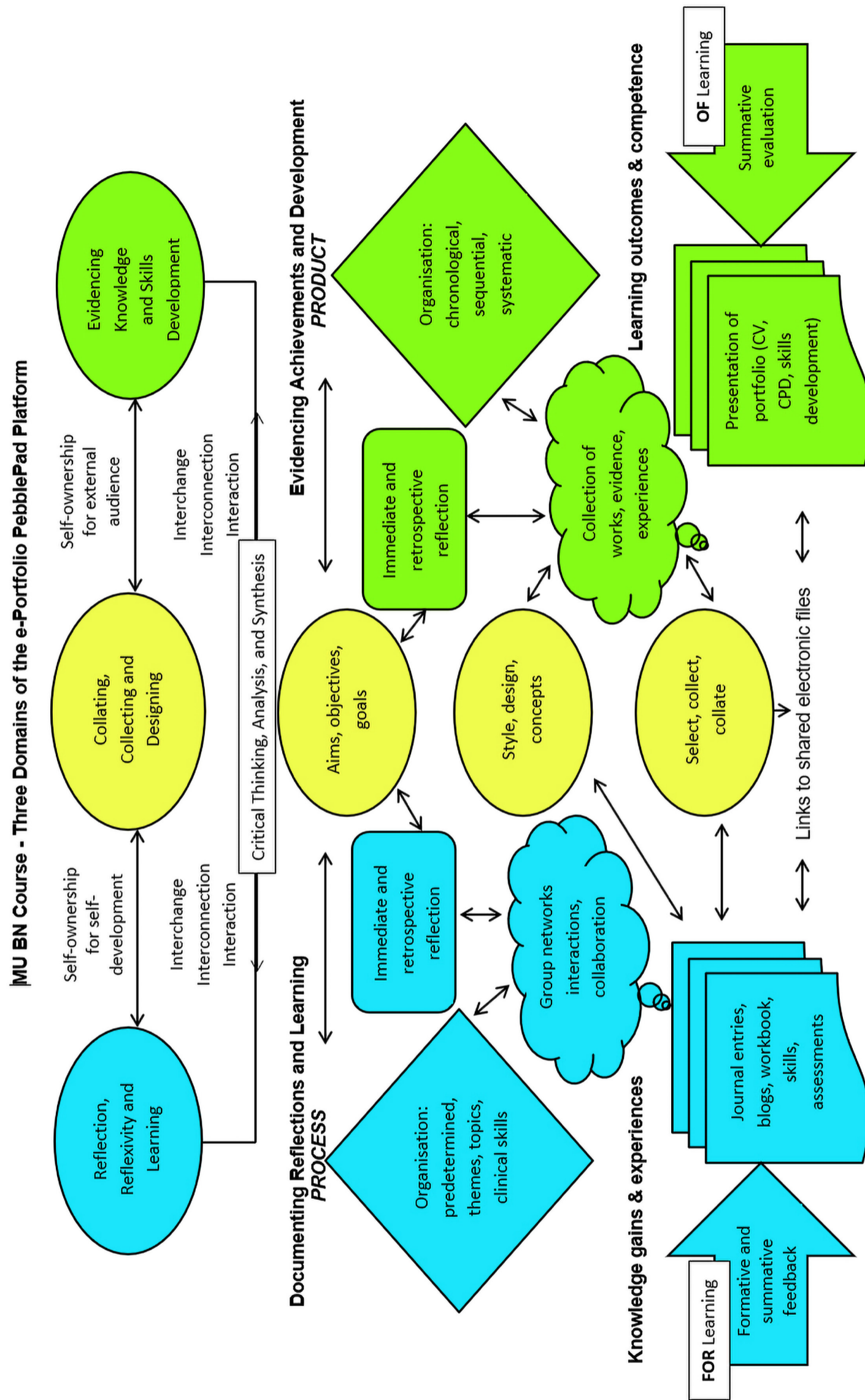- Work with the drivers for change, others will follow the success

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To view further case studies from PebbleBash 2018 please visit https://bit.ly/PB18PUBS

Appendix A

MU BN Course - Three Domains of the e-Portfolio PebblePad Platform

Evidencing Achievements and Development *PRODUCT*

Documenting Reflections and Learning *PROCESS*

Learning outcomes & competence

Knowledge gains & experiences

Evidencing Knowledge and Skills Development

Collating, Collecting and Designing

Reflection, Reflexivity and Learning

Self-ownership for external audience

Self-ownership for self-development

Interchange Interconnection Interaction

Interchange Interconnection Interaction

Critical Thinking, Analysis, and Synthesis

Organisation: chronological, sequential, systematic

Organisation: predetermined, themes, topics, clinical skills

Immediate and retrospective reflection

Immediate and retrospective reflection

Collection of works, evidence, experiences

Group networks interactions, collaboration

Aims, objectives, goals

Style, design, concepts

Select, collect, collate

Links to shared electronic files

Presentation of portfolio (CV, CPD, skills development)

Journal entries, blogs, workbook, skills, assessments

OF Learning — Summative evaluation

FOR Learning — Formative and summative feedback

Appendix A: Acknowledgement: Barrett, H. (2009). Balancing the two faces of e-portfolios. Retrieved from http://electronicportfolios.org/balance/Balancing2.htm

Appendix B

PebblePad activities in Murdoch University BN program units

Unit Name and Classification T = theory C/T = clinical lab practice & theory C = clinical placement OC = Old Curriculum	Unit PebblePad Activities									
	Reflective and reflexive entries	e-portfolio development	Documentation collection	Blog(s)	Essay(s)	Clinical Skills Evidence/Assessment	Psychomotor Skills	Multi-Media Video Submission	Clinical Documentation	Evidence of external qualification
BNR100 Transition to nursing studies (T)	✓	✓	✓							
BNR150 Health and Human Behaviour (T)	✓	✓	✓							
NUR111 The Healthy Human Body 1 (T)			✓			✓	✓	✓		✓
NUR105 Health Assessment and Physical Examination (C/T) (OC)					✓					
NUR112 Health across the life span 1 (T)	✓					✓	✓			
NUR103 Contemporary Nursing Practice (T) (OC)	✓	✓	✓	✓						
NUR114 Professional nursing practice 1 (T)	✓	✓	✓	✓					✓	
NUR122 Health across the life span 2 (T)	✓					✓	✓		✓	
NUR123 Professional nursing practice 2 (T)	✓	✓	✓	✓						
NUR155 Clinical Placement 1 (C) (OC)										
NUR109 Clinical Nursing Practice 1 (C)	✓					✓	✓		✓	
NUR210, NUR 152 (OC) Indigenous health & culture (T)	✓		✓	✓						
NUR232 Acute care perspectives 1 (C/T)	✓		✓			✓	✓	✓	✓	
NUR233 Case Based Enquiry 1 Community (C/T)	✓		✓				✓	✓	✓	
NUR259 Maternal Child and Adolescent Nursing Care (C/T) (OC)			✓							✓
NUR242 Case Based Enquiry 2 Acute (C/T)	✓		✓			✓	✓	✓	✓	
NUR243 Case Based Enquiry 2 Community (C/T)	✓		✓				✓	✓	✓	

	1	2	3	4	5	6	7	8	9	10
NUR257 Pre-Clinical Placement Brief (C/T) (OC)	✓					✓	✓	✓	✓	
NUR 257 Clinical Placement 3 (C) (OC)	✓					✓	✓		✓	
NUR353 Complex care perspectives (C/T)	✓		✓						✓	
BNR359 Clinical research perspectives (C/T)	✓	✓	✓			✓				✓
NUR361 Complex professional practice (T)	✓	✓	✓							✓