# Not another essay! Transforming assessment in an evidence-based practice nursing unit

**Dr Leigh Davis**
Queensland University of Technology lm.davis@qut.edu.au

**Moira Cordiner**
University of Tasmania moira.cordiner@utas.edu.au

*Evidence-based practice (EBP) requires the provision of care that will deliver the best possible patient outcomes, reduce practice variation and be consistent regardless of the clinician, hospital or geographical location. Learning how to apply the complex skills of EBP is therefore considered essential, so that health professionals can base their clinical decision-making on up-to-date and best evidence. This paper explores some of the issues associated with the first iteration of an introductory core EBP subject (unit) for third year undergraduate nursing students at an Australian University in 2007. Specifically, it focuses on the provision of an innovative assessment task for a diverse student cohort. The task was 'not another essay', but a submission for clinical practice change to a hypothetical Director of Nursing. This allowed students to apply their EBP skills in an authentic way related to their future professional practice. Various sources of evaluation data revealed that these students needed more scaffolding than had been provided, notably more explicit teaching and practice in how to apply EBP skills.*

**Keywords:** *Nursing, evidence-based practice, assessment*

## Background

The world-wide rapid uptake of EBP in health care settings has been fuelled, not only by the need to allocate resources cost-effectively, but also by an increasingly litigious society. EBP necessitates that healthcare professionals provide care that delivers the best possible patient outcomes, reduces practice variation and is *consistent* regardless of the clinician, hospital or geographical location (Cannavina, Cannavina & Walsh, 2000, p.305). According to Sackett, Rosenberg, Gray, Haynes and Richardson (1996), evidence-based practice is the integration of the best research evidence with clinical expertise and patient values to facilitate clinical decision making (p71). It involves a prescribed sequence of steps, with each step requiring the proper application of complex skills (Fineout-Overholt, Melnyk & Schultz, 2005, pp.338-340). Refer to Table 1.

**Table 1: The five steps of the EBP process**

1. Use a practice encounter to specify what information you require and translate it to answerable and searchable question; the focused question is then used as a basis for literature searching
2. Search for the 'best' evidence using reputable sources
3. Appraise the quality of evidence in terms of reliability and validity, based on criteria to determine the best evidence
4. Incorporate the selected best evidence into a suitable format for implementation such as policies, procedures, protocols, clinical guidelines, algorithms
5. Evaluate whether the selected best evidence achieved the desired outcomes

EBP is seen as an essential part of quality assurance processes and health care accreditation. To obtain and retain registration in Australia, nurses must demonstrate a number of competencies, two of which refer to the provision of evidence-based nursing care (ANMC, 2005). Universities are starting to incorporate EBP in the undergraduate curriculum aligned with these competencies.

## Designing and implementing the first iteration of an EBP curriculum

The Faculty of Health at the Queensland University of Technology decided to offer a one semester unit for the first time in 2007 for third year nursing students. The curriculum design team decided that an introduction to EBP would be a balance of theory and practical application, with the latter related to students' future professional practice. We used the following three-step strategy to design and implement the curriculum.

### 1. Understand the characteristics of the student cohort
The characteristics of the first cohort to study EBP (450 students) have remained fairly stable from year to year and mirror the characteristics in other Australian universities (Kokkinn, 2001). Most of the students are female and many enter directly from high school or indirectly, from other pathways. Students with degrees in other professions, and those already qualified as registered nurses in their own countries (this latter group includes International students and those from non-English speaking backgrounds) are eligible for direct entry to third year. As a result of these multiple pathways of entry, academic readiness is varied. The diversity is such that the only characteristic they share is often a lack of preparedness for university study, particularly in responding to written tasks in a scholarly manner (Whitehead. 2002, p. 498; Kokkinn, 2001, p. 2).

### 2. Design a major assessment task
In order to engage these students, we designed the major assessment task to be authentic by relating it their clinical practice experiences. The task was in the form of a hypothetical submission to the Director of Nursing, based on a plausible clinical scenario. Students had to argue the case for a practice change, supported by best evidence and then create a draft policy (as the first step to hypothetical implementation). A highly-directed template was provided for the draft policy as well as online examples of actual hospital policy documents. This task was therefore *not an essay*, but a way for students to enact the five-step EBP process and thus mimic real life. The scenario (see Box 1) presented a realistic clinical situation with conflicting evidence, variations in practice and the requirement that students separate relevant from irrelevant information. Because the task reflected how policy and guidelines are developed, it had the potential to stimulate students to see how they could advocate for best practice. We therefore believe that the task was innovative and challenging — not an essay that required only the critiquing of existing evidence sources (Ciliska, 2005, p. 348).

**Box 1: Excerpt of the clinical scenario**

You are a newly registered nurse working at Matilda Memorial Country Hospital.  A 3 year-old child with no known pre-existing medical conditions is admitted to the hospital with pyrexia of unknown origin (PUO) for investigation.  Nurses at the hospital manage uncomplicated fever differently.  Some administer paracetamol every 4 hours when a child has a fever, while others observe the child and administer paracetamol less frequently.  There is no hospital policy on the management of uncomplicated childhood fever, although evidence about best practice is available in the research literature. The hospital's Director of Nursing has asked you to identify the best available evidence on the nursing management of uncomplicated fever in children and propose a draft policy based on the information you find.

## 3. Scaffold the students

The characteristics of the student cohort indicated that scaffolding in applying EBP skills was required to support students in responding to the major assessment task (Robertson, Fluck, & Webb, n.d.).  One of the successful ways of scaffolding is by providing written guidelines with clear and easy to follow instructions (Green, 2007; Maldoni, Kennelly & Davies, 2007; James, McInnis & Devlin, 2002; Kokkinn, 2001). We created the scaffolding in four forms in plain, simple and clear English, free of jargon (refer to Table 2). Table 3 provides details about the criteria sheet referred to in Table 2.

**Table 2: Summary of scaffolding provided for students**

| Assessment format | Nature of the scaffolding |
|---|---|
| Worksheet | Step by step instructions on applying the first 3 steps of the EBP process in a simple mini scenario that had strong evidence. This was a 'dry run' for the first steps in the major task (but with a different scenario). |
| Submission for practice change (task guidelines and the draft policy template) | 1. Task guidelines in the form of step by step instructions (that matched the worksheet) for how to set out the submission and applying *all* of the EBP steps. Synthesising evidence and devising a policy was in addition to what was in the worksheet. 2. A partially-completed policy template with instructions, plus online real examples of current hospital policies. |
| Marking criteria sheet (grading rubric) | Descriptions of expectations for five different standards of achievement to meet criteria. Refer to Table 3 for an excerpt. |

**Table 3: Extract from criteria sheet for major task**

| CRITERIA | A (highest grade) | D (passing grade) |
|---|---|---|
| Demonstrate and apply knowledge of the principles of evidence-based practice to the given scenario.<br><br>weighting 25% | In your submission for practice change, you have: | In your submission for practice change, you have: |
| | • explained why a hospital policy is needed by providing valid reasons that directly relate to practice and patient outcomes<br>• used the PICO format to devise a plausible clinical question that directly relates to the key issues | • explained why a hospital policy is needed by providing reasons that are linked loosely to practice and patient outcomes<br>• used the PICO format to devise a clinical question that relates to some of the key issues |
| Analyse and evaluate heath information and research to justify selection of evidence, the draft policy and its acceptability.<br><br>weighting 50% | • comprehensively analysed and evaluated the selected sources to: | • analysed and evaluated the selected sources to: |
| | – correctly identify the quality of evidence and discuss and synthesise best practice in relation to the clinical problem<br>– complete the draft policy consistent with the policy statement and objective by:<br>  o suggesting a realistic outcome standard and a range of valid evaluation methods<br>  o devising a detailed and logical sequence of procedural steps that reflect best practice | – identify the quality of evidence and discuss practice outlined in the sources<br><br>– complete the draft policy that is mostly consistent with the policy statement and objective by:<br>  o suggesting an outcome standard and evaluation methods<br>  o devising a sequence of procedural steps that reflect some aspects of best practice |
| | – convincingly justify and supported why the draft policy should be accepted by considering the impact of the evidence-based process on nursing care and patient outcomes | – justify and support why the draft policy should be accepted by referring to the evidence in the sources |
| Communicate to the director of nursing through scholarly writing.<br><br>weighting 25% | • clearly and concisely communicated in scholarly writing, in both the structured essay and the resulting draft policy | • communicated in scholarly writing that is mostly clear, in both the structured essay and the resulting draft policy |
| | • correctly cited all sources by consistently adhering to a referencing convention, in both the text, the reference list and the policy procedural steps | • cited most sources using a referencing convention, in both the text, the reference list and the policy procedural steps, with occasional errors |

## Evaluation of the first iteration of the curriculum

### Data sources

Three data sources were used to evaluate the first iteration. The first of these was a University-wide online voluntary, anonymous student evaluation of the unit made available from week 10 of a 13 week semester. 43% (of the cohort of 450) answered 'satisfied' or 'not satisfied' to the five 'measures' as shown in Table 4.

**Table 4: Students' overall satisfaction of the introductory EBP unit**

| Measure | Evidence-based Practice unit | | | Faculty Average for units | |
|---|---|---|---|---|---|
| | % Satisfied | % Not Satisfied | % Not Applicable | % Satisfied | % Not Satisfied |
| Assessment - Workload | 68.8% | 29% | 2.3% | 85% | 13% |
| Assessment - Level of Difficulty | 61.9% | 35.2% | 2.8% | 83% | 15% |
| Assessment - Relevance to Topic | 72.2% | 25.6% | 2.3% | 88% | 11% |
| Lecture - Presentation | 67.6% | 26.7% | 5.7% | 75% | 19% |
| Tutorials | 71.6% | 26.1% | 2.3% | 67% | 19% |

Students were also invited to comment on five statements which provided us with some qualitative data:

- The unit activities helped me develop useful skills and knowledge
- The relevance of the unit activities was clear
- The structure and organisation of the unit assisted my learning
- I received helpful feedback on my learning
- I have been satisfied with the overall quality of this unit

Table 5 shows an analysis of the 44 comments made in answer to these questions. Most of these were easily grouped into opposing views about five themes. The remainder could not be grouped into themes.

**Table 5: Extract of qualitative data (n=44)**

| Themes identified from data analysis | % of positive comments about this theme | % of negative comments about this theme |
|---|---|---|
| Assignment and related worksheet | 6%<br>• *I liked that the assignment was discussed in detail and that an outline was provided specifically instructing us what needed to be included/identified/addressed*<br>• *A new challenge in assignments instead of the usual case based scenarios. We had something new. This is GREAT!* | 18.6%<br>• *Assignment expectations are unclear*<br>• *The weighting of the assignment is too much at 50%* |
| Relevance of EBP | 14.4%<br>• *This is something all nurses should understand and utilize within their practice*<br>• *I have even been able to explain and show my study materials to the RNs at work and these have helped quite a few understand EBP* | 9.8%<br>• *The content of the lectures did not seem to be entirely relevant/applicable to general nursing practice*<br>• *I think we should have less on the theory of nursing practice and research and more on the things we actually NEED to know, such as pharmacy - learning drug names and interactions/dosages, considering we are responsible for people's lives* |
| Difficulty of content | 1%<br>• *The difficulty was appropriate*<br>• *The content was relatively easy to understand* | 8.2%<br>• *Make it clearer, it is difficult to understand*<br>• *It's a very heavy subject and very hard to take it all in sometimes* |
| Researching and evaluating | 6.7%<br>• *(The unit was) helpful in learning the skills for researching and finding sources* | 0% |

| Themes identified from data analysis | % of positive comments about this theme | % of negative comments about this theme |
|---|---|---|
| | *to compare the clinical management* <br> • *It is only now because of this subject that I have learnt how to evaluate articles properly* | |
| Placement of unit within the degree | 0% | 3.6% <br> • *It would be of benefit if this unit was taught earlier on in the degree* <br> • *Suited for research students, rather than first time nurses* |

The second data source was anecdotal information from tutors and students. Tutors' feedback about the worksheet and the major task was that many students described, rather than analysed and synthesised health information – this was particularly the case with some International students and those with English as a second language. Tutors were particularly concerned with the poor assessment results for many of these students. Some students sought multiple private appointments with tutors to help them develop an understanding of how to apply EBP skills. In contrast, many students commented favourably on the scaffolding of the major task. The third data source was the means of students' grades/marks for the worksheet and the major task: worksheet 10.9/15 (15% of the unit's assessment); major task 34/50 (50% of the unit's assessment).

## Limitations

There are a number of limitations of our data. The first data source is not based on a randomised sample of students from the unit and we have no input into the construction of the 'measures' or the five questions. This survey is administered by the university three weeks before students have submitted the major task or sat for their exam. The small number of comments (44) indicates that, during this week, many students would have been preparing for these assessments and either not concerned with fully completing a survey, or taking the opportunity to comment under stressful conditions. This means that the student sample of qualitative data is not representative. Because of university policy, we cannot match the characteristics of particular students to the feedback they gave us, nor can we obtain certain details about the characteristics of the cohort, such as the percentages who were mature-aged, the tertiary entrance scores of students who started the degree directly from high school and the ratio of ESL (English as a second language) students.

## Discussion

Despite these limitations, the data (Table 4) indicates that most students found the subject relevant and could achieve reasonable results in the assessment tasks. Only 62% found the difficulty level satisfactory, despite the fact that the subject was at an introductory level. Table 5 reveals contrasting opinions on a number of themes. For some students, the major assessment task was too challenging and insufficient scaffolding was provided. Others commented that the task was a refreshing change and well-structured. Students who had difficulty with the task were unable to analyse and synthesise even though scaffolding had been provided. According to Biggs, some International students from particular modern Asian and South-East Asian cultures that have a common Confucian heritage, have difficulty analysing and synthesising (2003, pp.125-132). This may be because these students view

knowledge as information to be told (described), rather than constructed or transformed (analysed and synthesised) (Green, 2007, pp.330-331). Kokkinn supports this view and suggests that these students need support and practice to build expertise in these less familiar skills (2000, p.2). However, tutors found that this inability to analyse and synthesise was not confined to particular International students, but was evidenced across the cohort. The relevance of the task also drew opposing views from students, as did the difficulty of the content. Those students, who thought the content too hard, suggested that the placement of the unit in the degree be reconsidered.

With hindsight, we now realise that the construct validity of the task was not as high as intended. Construct validity is when an assessment task assesses what it is supposed to, thus is aligned with the curriculum. It also includes assessing how real-life problems are solved. (Walsh & Betz, 1995, p.58). While we designed the task to be authentic, its construct validity was compromised by insufficient authentic learning. That is, there was not sufficient alignment between learning and assessment. Pleasingly, the failure rate for the whole cohort was not high and was comparable to the rate for other third year subjects.

## Conclusion: Implications to inform future iterations

The first implication of our study is the need for a change to the pedagogy in tutorials. The data seems to indicate that students needed *much more scaffolding* and *extensive practice* in how to apply the skills (especially of analysis and synthesis) than we had provided. Caldwell et al. (2007, p. 527) advocate that these be in a structured, developmental sequence with reinforcement and feedback at each step. The second implication is to remove the requirement for students to produce a 'policy document' as part of the major task, as this proved to be too challenging, despite extensive scaffolding. The third implication is that university policy needs to be changed to allow us greater access to data about the cohort, so that scaffolding can be tailored better to help students.

As yet, there is no 'best evidence' about the most suitable way of incorporating EBP into nursing or any evaluations of curricula (Ciliska, 2005, pp.345-6), because EBP does not have a long history in nursing education. Longer term studies are needed to assess how well one unit in a degree can prepare students to critically reflect on their practice.

## References

Australian Nursing and Midwifery Council (ANMC). (2005). *National competency standards for the registered nurse*. (Retrieved 11/12/2007) http://www.anmc.org.au/docs/Competency_standards_RN.pdf

Biggs, J. (2003). *Teaching for quality learning at university*. (2nd ed.). The Society for Research into Higher Education & Maidenhead, UK: Open University Press.

Caldwell, C., Coleman, K., Copp, G., Bell, L., & Ghazi, F. (2007). Preparing for professional practice: how well does professional training equip health and social care practitioners to engage in evidence-based practice? *Nurse Educ Today*, 2007; 27, 518–28.

Cannavina, C., Cannavina, G., & Walsh, T. (2000). Effects of evidence-based treatment and consent on professional autonomy. *British Dental Journal*, 188(6), 302-6.

Ciliska, D. (2005). Educating for evidence-based practice. *J Professional Nursing,* 21(6), 345-50.

Fineout-Overholt, E., Melnyk, B., & Schultz, A. (2005).Transforming health care from the inside out: advancing evidence-based practice in the 21st century. *J Professional Nursing*, 21(6), 335-44. (Retrieved 7/10/ 2007).

Green, W. (2007). Write on or write off? An exploration of Asian International students' approaches to essay writing at an Australian university. *HERD*, 26(3), 329-44.

James, R., McInnis, C., & Devlin, M. (2002). *Assessing Learning in Australian Universities*. Melbourne: Centre for the Study of Higher Education and Canberra: Australian Universities Teaching Committee (AUTC).

Kokkinn, B. (2001).Lifebuoys in a sea of confusion: an integrated learning support program for first year nursing students. *Annual National Language and Academic Skills Conference*, Latrobe University, Victoria. (Retrieved 24/9/ 2007) http://www.latrobe.edu.au/lasu/conference/kokkinn.doc

Maldoni, A., Kennelly, R., & Davies, D. (2007). A discipline support program (DSP) for students from non English speaking background at the University of Canberra in Introduction to Management: a work in progress. *HERD news*, 29(1), 11-13.

Robertson, M., Fluck, A., & Webb, I. (n.d.). *Scaffolding.* (Retrieved 17/5/ 2008) http://www.educ.utas.edu.au/users/ilwebb/research/scaffolding.htm.

Sackett, D., Rosenberg, W., Gray, J., Haynes, R., & Richardson, W.  (1996). Evidence based medicine: what it is and what it isn't. *British Medical Journal*, 312, 71-72 (13 January). (Retrieved 18/5/ 2008) http://www.bmj.com/cgi/content/full/312/7023/71.

Walsh, W., & Betz, N. (1995). *Tests and assessment* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.

Whitehead, D. (2002). The academic writing experiences of a group of student nurses: a phenomenological study. *Journal of  Advance Nursing*, 38(5), 498–506.