Questioning skills of clinical facilitators supporting undergraduate nursing students

This is the accepted manuscript.

This is the peer reviewed version of the following article:


which has been published in final form at https://doi.org/10.1111/jocn.13761

© 2017, John Wiley & Sons

This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Self-Archiving.

Downloaded from DRO:
http://hdl.handle.net/10536/DRO/DU:30091963
DR. NICOLE (NIKKI) MARGARET PHILLIPS (Orcid ID : 0000-0002-6821-4983)

Received Date : 21-Sep-2016
Revised Date : 20-Dec-2016
Accepted Date : 28-Jan-2017
Article type : Original Article

TITLE PAGE

Full title (concise and descriptive)
Questioning skills of clinical facilitators supporting undergraduate nursing students.

Author details:
Nicole M. PHILLIPS PhD, MNS, GDipAdvNur(Ed), DipAppSci(Nurs), BN, RN, Associate Professor, Deputy Head of School and Director of Undergraduate Studies 1,2
Maxine M. DUKE PhD, Med, BAppSci(AdvNurs), RN, Alfred Deakin Professor, Chair in Nursing Development, Head School of Nursing and Midwifery & Director Centre Quality and Patient Safety (QPS) 1,2
Rona WEERASURIYA PhD, MHP, BAppSc(Psyc), Research Fellow 1

Affiliations
1. School of Nursing and Midwifery, Deakin University, Geelong, Victoria, Australia;
2. Deakin University Centre for Quality and Patient Safety (QPS), School of Nursing and Midwifery, Geelong, Victoria, Australia.

Contact details for the corresponding author
Associate Professor Nicole Phillips
School of Nursing and Midwifery
Faculty of Health
Deakin University
Geelong. 3220

This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1111/jocn.13761
This article is protected by copyright. All rights reserved.
Victoria
Australia
Email: nikki.phillips@deakin.edu.au
Ph: +61 3 9251 7774

Contact details for Maxine Duke
Alfred Professor Maxine Duke
School of Nursing and Midwifery
Faculty of Health
Deakin University
Geelong, 3220
Victoria
Australia
Email: maxine.duke@deakin.edu.au
Ph: +61 3 9244 6578

Contact details for Rona Weerasuriya
Dr Rona Weerasuriya
C/O School of Nursing and Midwifery
Faculty of Health
Deakin University
Geelong, 3220
Victoria
Australia
Email: rona.weerasuriya@gmail.com
Ph: +61 431 419 889

Funding
This study was funded by the School of Nursing and Midwifery, Deakin University, Geelong, Victoria, Australia.

Acknowledgements
The authors acknowledge biostatistician, Dr Mohammadreza Mohebbi from the Deakin Biostatistics Unit, Faculty of Health, Deakin University.
ABSTRACT

Aims and objectives. To report on a study investigating questioning skills of clinical facilitators who support the learning of undergraduate nursing students.

Background. The ability to think critically is integral to decision-making and the provision of safe and quality patient care. Developing students’ critical thinking skills is expected of those who supervise and facilitate student learning in the clinical setting. Models used to facilitate student learning in the clinical setting have changed over the years with clinicians having dual responsibility for patient care and facilitating student learning. Many of these nurses have no preparation for the educative role. This study adapted a comparative study conducted over fifteen years ago.

Design. Descriptive online survey including three acute care patient scenarios involving an undergraduate nursing student. Participants were required to identify the questions they would ask the student in relation to the scenario.

Methods. 133 clinical facilitators including clinical teachers, clinical educators, and preceptors from five large partner health care organisations of one Australian university participated.

Results. The majority of questions asked were knowledge questions, the lowest category in the cognitive domain requiring only simple recall of information. Facilitators who had undertaken an education related course/workshop or formal qualification asked significantly more questions from the higher cognitive level.

Conclusion. The study provides some evidence that nursing facilitators in the clinical setting ask students predominantly low level questions. Further research is needed to identify strategies that develop the capacity of facilitators to ask higher level cognitive questions.
Relevance to clinical practice. Clinical facilitators should undertake targeted education that focuses on how to frame questions for students that demand application, analysis, synthesis, and evaluation.

Keywords. Questioning, nurse education, clinical facilitator, clinical teacher, preceptor, clinical educator, clinical decision-making, quality and safety, low level, high level.

SUMMARY BOX

What does this paper contribute to the wider global community?

• There is further evidence that nursing clinical facilitators ask questions that are predominantly from the lower cognitive level that do not facilitate critical thinking, rather simple recall of information.

• This study provides some evidence that undertaking an education focused course can impact a facilitator’s ability to ask questions from the higher cognitive level.

• Further research should be conducted to identify strategies that develop the capacity of facilitators to ask higher level cognitive questions that promote critical thinking in health professionals.

INTRODUCTION

Internationally nurses plan and manage care for patients with individual needs, in a variety of contexts and with a focus on meeting specific goals of care. To provide safe and quality patient care, nurses need to be critical thinkers. As no two patient situations are the same nurses need to be able to apply their knowledge to unique situations (XXPhillips & Duke 2001). Developing the critical thinking skills of nursing students is therefore an imperative of clinical learning programs and is an expectation of those facilitating learning in the clinical
setting (Sullivan 2012, Gaberson et al. 2015, Wallace & Moughrabi 2016). Questioning is one strategy used by clinical educators to develop nursing students’ clinical reasoning skills (Hunter & Arthur 2016).

**BACKGROUND**

While questioning is a well recognised teaching strategy, there is some evidence in the literature that teachers mainly ask lower level questions that do not encourage critical thinking (Gul et al. 2010, Saeed et al. 2012, Tofade et al. 2013). Questions from the lower level in the cognitive domain foster simple recall and/or basic understanding of information, for example, the ability to paraphrase or summarise information (Bloom 1956). Whereas questions from the higher level in the cognitive domain involve the ability to apply, analyse, evaluate and create (Anderson & Krathwohl 2001).

Bloom’s (1956) taxonomy in the cognitive domain classified intellectual processes into low and high levels to promote higher forms of thinking in education, such as analysing and evaluating, rather than simply remembering facts and rote learning. The domain refers to the attainment of knowledge and intellectual skills, is developmental, and is classified according to level of behavior from the basic to the complex. There are six major categories starting from the simplest behavior to the most complex: knowledge and comprehension (low level); application, analysis, synthesis and evaluation (high level). In the 1990s the classification system was adapted (Anderson & Krathwohl, 2001) and Bloom’s version involving nouns was revised to verbs, for example the knowledge category became ‘remembering’ and comprehension ‘understanding’. In the higher cognitive level the top two categories were...
interchanged, so Bloom’s original synthesis and evaluation categories became ‘evaluating’ and ‘creating’, with creating the highest category. Currently in education both Bloom’s original version and the adapted version are used.

This current study drew from Bloom’s original taxonomy to remain consistent with the original study (XX Phillips & Duke 2001). Presently in Australia a range of supervision models are used to support nursing students in the clinical setting. This study adapted a comparative study conducted by the researchers over fifteen years ago, when models for clinical facilitation in Australia and other developed countries were predominantly a 1:8 clinical teacher to student ratio, or, a 1:1 preceptor to student ratio (XX Phillips & Duke 2001). Models of facilitation have evolved over time as have facilitator role titles. Titles describing the clinical supervisor role may now include clinical teacher, clinical educator, clinical facilitator, preceptor, buddy, clinical associate, and clinical coach. Regardless of the title ascribed the nurses in these roles are responsible for facilitating nursing students in some capacity in the clinical setting and would be expected to ask questions. Nursing students can potentially be facilitated, in ratios that range from 1:8, 1:10, 1:30 or 1:1 and often involve a clinician as ‘buddy’ or preceptor as well as a supervising clinical facilitator. In addition, in some supervision models the person facilitating student learning at the ward level may not be responsible for conducting the student’s formative or summative assessment.

The original study (XX Phillips & Duke 2001) involved clinical teachers and preceptors and investigated their level of questioning. While the study was small (n= 28) the study clearly resonated with nursing educators and other health professionals being regularly cited in the international literature. The findings indicated that both the clinical teachers and preceptors asked questions predominantly from the lower cognitive level. 65.1% of the questions asked by the clinical teachers (n = 14) were low level compared to 87.4% of the questions...
preceptors asked. The clinical teachers asked a larger number of questions overall and more
from the higher cognitive level ($X^2 = 38.15$, d.f. = 1, $P < 0.001$). Another small Australian
study conducted just prior (Sellappah et al. 1998) found clinical teachers ($n = 26$)
predominantly asked questions from the knowledge and comprehension categories (75.1%)
during post clinical conferences.

When the original study was conducted clinical teachers were predominantly employed by
the university, orientated to their role and supported while on placement by academics at the
university. While preceptors were identified by the hospital and undertook the preceptoring
role secondary to their primary nursing role (XX Phillips & Duke 2001). Currently clinical
teachers are mostly recruited and employed by health services and their preparation for their
role is variable. Given the increased demand for nursing graduates equipped with high level
thinking skills it was considered timely to investigate the current situation with regard to the
questioning skill level of those facilitating student learning in the clinical setting by repeating
the original study.

STUDY AIMS

The aim of this study was to explore and describe the level of questions asked by nursing
undergraduate clinical facilitators. The specific research questions were:

• What is the level of questioning used by nursing undergraduate clinical facilitators?

• Is there a difference between the levels of questioning used by those in different roles?

• Do clinical facilitators identify high level questions as important in facilitating learning?
• What is the relationship between further academic qualifications and the number and category of higher level questions asked?

• Is there a relationship between years of experience in the facilitation role and the number and category of higher level questions asked?

METHODS

Design

A quantitative approach using a descriptive design, involving an online survey was used for this study.

Participants

The total population of undergraduate nursing facilitators at five clinical partner healthcare organisations of one university in Melbourne, Victoria, Australia, were invited to participate in the study. The clinical partner healthcare organisations included both public and private health services across metropolitan Melbourne, regional and rural Victoria. Each healthcare organisation is made up of a number of sites, including hospitals and community services. These organisations offer clinical placements for undergraduate nursing students at the university, and may also provide placements to other universities. In Victoria most healthcare organisations provide placements for a number of universities.

A non-probability purposive sampling technique was used to recruit participants. At the time the healthcare organisations were approached to participate in the study the number of facilitators was not known at each organisation. Even after data collection was completed,
final numbers could not be provided by some organisations. Known numbers of facilitators ranged from 22 at one organisation to 475 at another. As such the total population was unknown to the researchers.

The inclusion criteria were (i) employment at the healthcare organisation as a registered nurse and (ii) facilitating the learning of undergraduate nursing students at any hospital site.

Recruitment of participants involved requesting the relevant departmental head of each organisation to forward an email to the relevant staff. A total of 136 participants responded to the online survey.

**Data collection**

Data were collected using an online questionnaire over a five month period, between November 2013 and March 2014. Registered nurses who facilitated undergraduate nursing student learning in the clinical setting were invited by the researchers to participate in the online survey via an email from their departmental head. Participant information and a link to the survey were contained in the email.

**Instrument**

The questionnaire had two sections. The first section contained demographic related questions, for example, level of employment as a registered nurse, facilitation role, number of years of facilitation experience, nursing qualifications, age, and gender. The second section presented three scenarios each involving a patient case and a third year nursing student.
Participants were asked to read the scenarios and type in the questions they would ask the student and then indicate which three questions most facilitated the student's learning in each scenario.

Consistent with our original study all scenarios represented the type of patient a student may be assigned to care for whilst on an acute care clinical placement (XX Phillips and Duke 2001). The scenarios were originally adapted from patient case studies used in tutorials during an undergraduate degree programme at a university in Melbourne, Victoria, Australia (XX Phillips and Duke 2001). Prior to use in this current study all scenarios were reviewed by an expert academic, who was clinically current, for accuracy and no changes were made.

**Data analysis**

The same framework and method of analysis was used as in the original study (XX Phillips and Duke 2001). Craig and Paige’s (1981) question classification framework was used to code the questions listed by participants into lower levels (knowledge and comprehension) and higher levels (application, analysis, synthesis and evaluation). For any question that met more than one category, the question was coded into the highest category.

Using the framework (Craig & Paige 1981) the question, ‘What are some specific assessment findings that can indicate worsening or improvement in the patient's condition and why?’ was coded into the analysis category as it requires exploration of reasoning, using deduction, induction and logical ordering skills. In contrast, ‘What will be your priorities for Mrs Lang and why?’ requires the student to make a judgement, thus meeting evaluation category criteria. Refer to Table 1 for examples of questions participants asked.
Descriptive statistics were used to summarise and describe the data and chi-square to test for significant differences in the level of questioning between groups. One way ANOVA and t-tests were conducted to analyse mean differences and statistical significance in relation to education related course/workshop or formal qualifications, highest tertiary qualification, years of experience in the facilitation role, and the number of higher level questions asked.

Validity and reliability/Rigour

The three scenarios were the same scenarios used in the original study (XXPhillips and Duke 2001). Each was reviewed by an expert for accuracy and currency.

Two researchers independently coded the responses to the three scenarios on 14 randomly selected questionnaires (14/133, 10.53% of surveys). There was a total of 203 questions asked in the 14 questionnaires. Of the 203 questions two questions were initially coded differently by the researchers. These were discussed and agreement was reached; the third researcher was not required. The high rate of percentage agreement achieved, 99.01%, provided reassurance of interrater agreement and thus reliability. One researcher coded the remaining surveys.

Of the remaining 122 participants’ responses coded, there were 9 questions which were discussed with the two researchers and deferred to a third researcher.

Ethical considerations

Ethics approval was granted from the appropriate committees at the university and each health care organisation. The online survey contained no identifying data. To further ensure anonymity potential participants were invited to participate via an email sent from the
healthcare organisation, individual potential participants were unknown to the researchers.

Completion of the online survey was considered to constitute informed consent.

RESULTS

Sample description

A total of 136 registered nurses who facilitated undergraduate nursing student learning in the clinical setting responded to the survey. Three questionnaires were excluded from the study as the respondents only completed the demographic section and had not asked any questions in relation to the scenarios. The total number of questionnaires analysed was therefore 133. Not all participants responded to every question, therefore there was missing data at times.

The study participants were predominantly female (88%, 115/130) and ranged in age from 22 to 69 years, (mean= 39.70, n= 122), 50% (61/122) were between 22 and 39 years and only 4.92% (6/122) between 60 and 69 years. Years of experience facilitating student learning was varied; 20.77% (27/130) had over ten years of experience, 19.23% (25/130) less than a year, 16.92% (22/130) three to five years, 16.92% five to ten years, 13.85% (18/130) one to two years, 12.31% (16/130) two to three years.

As presented in Table 2 participants identified as holding varying facilitation roles in the clinical setting, the predominant role was that of preceptor (45%, 60/133) and some participants had more than one facilitation role.

The majority of participants’ initial qualification to practice as a registered nurse was a Bachelor of Nursing (67.48%, 83/123), while others had qualified with a Hospital Certificate (22.76%, 28/123) and a few a Diploma of Nursing (9.76%, 12/123). Slightly under half of the...
participants (46.62%, 62/133) indicated they had completed an education related course/workshop or formal qualification, Master of Education the highest education focused qualification. More than half (53.38%, 71/133) of the participants had undertaken further tertiary education since registering as a nurse. The most common qualifications attained were postgraduate diplomas or certificates in a practice specialty area (e.g. critical care) or Honours (57.75%, 41/71), Master degree (23.94%, 17/71), or a Bachelor (18.31%, 13/71).

Table 3 provides a description of the nursing roles held by facilitators who participated in the study. The predominant nursing roles (n= 132) were Grade 4 (21.21%), Grade 3 (15.15%) and clinical nurse specialist (15.15%) positions, all of these are considered to be relatively senior roles and the Clinical Nurse Specialist role includes education. The Grade 2, Year 9 role represented 11.36% and there was a fairly even spread of participants in the other Grade 2 roles at the varying levels, for example, Grade 2, Year 5 (6.82%), Grade 2, Year 3 (4.55%), Grade 2, Year 1, 2, 4 and 6 (3.03%). There were only two Grade 1 nurses (2/132, 1.52%).

**Level of questioning**

A total of 1384 questions were asked by the participants. Forty-five (3.25%) were either ambiguous questions, prompts or statements so these were excluded from the analysis, for example, ‘fluid restrictions?’, ‘cardiac enzymes- bloods’, and ‘pain management, CCM’. A total of 1339 questions were, therefore, analysed for the purpose of this study.

Table 4 provides a summary of the total number of questions asked by the participants in all three scenarios using the two main categories of level of questioning, lower (knowledge and comprehension) and higher (application, analysis, synthesis and evaluation). It is evident that a much higher proportion of lower level questions were asked. Approximately 73% of

This article is protected by copyright. All rights reserved.
questions were from the lower cognitive level with approximately 27% from the four categories in the higher cognitive level.

Table 5 presents the numbers of questions asked in each specific category. The majority of questions asked were from the knowledge category (59.90%), the lowest category that requires only simple recall of information. In the higher cognitive level 22.55% of questions were from the application category focusing on applying theory to real situations. Notably, application is the lower of the four categories in the higher cognitive level. The synthesis and evaluation categories made up 2.02% and 0.22% of the questions respectively. Figure 1 illustrates the total number of questions asked in each specific category by the groups of facilitators. Clinical teachers, clinical educators, clinical facilitators, and preceptors all asked the majority of questions from the 'knowledge' category. All groups were fairly consistent in the number of questions asked in the knowledge category, ranging between 56.25% for clinical facilitators to 61.34% for clinical educators. Pearson’s Chi Square test was undertaken indicating no significant difference between groups for the proportion of total low level and high level questions asked ($X^2 = 0.7565$, d.f. = 1, $P = 0.944$).

One of the research questions for this study asked if facilitators identify high level questions as important in facilitating learning. Participants were asked to identify the 3 questions, of those they had listed, that they felt most facilitated the student’s learning. Some participants indicated more than three questions, others only identified 1 or 2 questions; in total 646 questions were identified. Table 6 presents the number of questions in each category that were identified as facilitating learning. Of the questions identified one third (31%) were from the higher cognitive level (application, analysis, synthesis and evaluation) while 69.1% were from the low level.
The number of high level questions asked by participants with an education related course/workshop or formal qualification (n= 62; M 3.5, SD ± 2.9) was compared to those without (n= 71; M 2.1, SD ± 2.7) using a t-test. The mean difference between groups was statistically significant: M = 1.5, 95% CI (0.5, 2.4); p= 0.003, indicating undertaking education focused learning influences the number of high level questions asked. A one way ANOVA was undertaken in relation to highest tertiary qualification held and the number of high level questions asked by those with a bachelor (n= 13; M 1.5, SD ± 2.3), honours or postgraduate certificate/diploma (n= 41; M 3.4, SD ± 2.6), and master degree (n= 17; M 2.8, SD ± 2.3). Statistical significance was not reached (p= 0.06). There was also no significant difference when analysing the number of high level questions asked and years of experience in a facilitation role (p= 0.88) and the nursing role.

**DISCUSSION**

The facilitators in this study asked a much larger number of lower level questions (knowledge and comprehension) then higher level questions (application, analysis, synthesis and evaluation), 73% compared to 27% respectively. Approximately 60% of questions were from the lowest category, knowledge, requiring only simple recall of information and are fact-finding or fact-based questions. Very few questions were asked from the two highest categories in the higher cognitive level, synthesis and evaluation, while nearly a quarter of questions (22.55%) were from the lowest category in the higher cognitive level, application.

These findings are consistent with the original study (XX Phillips and Duke 2001). In that study when questions asked by clinical teachers and preceptors were combined, 75% were from the lower cognitive level. However the clinical teachers asked 65.1% of questions from
the lower level compared to 87.4% of preceptors. The clinical teachers asked more questions overall and more from the higher cognitive level ($X^2 = 38.15$, d.f. = 1, $P < 0.001$). In the current study there was no significant difference between groups (clinical teachers, clinical educators, clinical facilitators, and preceptors) for the proportion of total low level and high level questions asked.

In the original study a total of 585 questions were analysed (XX Phillips and Duke 2001), whereas this current larger study yielded more than double the number of questions and the findings are similar. That is, the facilitators in both studies asked predominantly more questions from the lower cognitive level. Having an education related course/workshop or formal qualification appears to make a difference in this study, as these facilitators asked significantly more higher level questions. Since the original study was conducted, in Australia there has been recognition of the importance of preparing all nurse clinicians for their role in educating students (Health Workforce Australia 2014). The findings suggest that this strategy has had some impact although the part time nature of the nursing workforce in Australia may hinder this strategy. The reality of the clinical setting is that facilitators may have more than one role. For example they may be working in a discrete part time role as clinical teacher and also be employed part-time as a nurse ‘buddying’ with a student.

Students spend up to three times more hours in clinical learning environments (including simulation laboratories) than in the classroom (Flott & Linden 2015). Consequently, it is important that facilitated clinical placements provide nursing students with the opportunity to apply theory and develop the ability to plan and manage care. The quality of patient care is intrinsically linked to patient safety. The development of clinical decision making in nursing students is of paramount importance to ensure quality and safe patient care (Bucknall et al. 2016, Forbes et al. 2016). It is therefore vital that students are supported and encouraged to
develop such higher level cognitive skills. Internationally, education providers are responsible for preparing graduates to practice not only safely but to provide high quality care in complex clinical settings (Bucknall et al. 2016). Registered nurses in Australia must practice consistent with the Nursing and Midwifery Board of Australia’s (NMBA) Registered nurse standards for practice (2016). There are seven discrete standards, each with specific criteria; Standard 1 is titled, Thinks critically and analyses nursing practice. In contrast the United Kingdom’s Nursing and Midwifery Council’s (NMC) standards for nurses do not specify critical thinking overtly, however it is clearly an implicit skill expected to fulfil the standards (NMC 2015). The American Nurses Association (ANA) recognise critical thinking in their standards under the ‘how’ of nursing and specify that critical thinking is required to apply evidence (ANA 2015).

It is in the clinical setting that both critical thinking and the provision of actual patient care are evaluated (Flott & Linden 2015). Questioning is a commonly used teaching strategy to develop critical thinking skills and evaluate student performance. Facilitators should therefore be cognisant of how to frame questions in order to encourage higher order thinking and establish students’ depth of understanding, skill level and professional development. In a qualitative study (N=10) Hunter and Arthur (2016) explored how clinical educators recognised, developed and appraised nursing students’ clinical reasoning ability in the clinical setting. All educators described using questioning skills to develop the students’ clinical reasoning. According to Long et al. (2015) great facilitators are those who pay attention to how they ask questions. Despite the obvious importance of questioning it is evident from the findings of this study that facilitators continue to ask low level questions that do not assist the development of high order thinking. This is concerning given current health care context which increasingly challenges health professionals to effectively manage competing demands with limited resources. Patients, regardless of the setting, present with
complex comorbidities, increasing frailty both physical and psychological requiring highly skilled, nuanced and technical intervention.

Limitations
With survey research there is always an issue of potential bias due to non-response. Unfortunately the exact response rate is unknown. Health care organisations were unable to confirm the number of facilitators approached and thus the number of facilitators who declined to participate in the survey is also unknown.

Participants self-identified to a facilitation role. Roles were not defined in the survey. Specifics regarding what each facilitation role entailed was not investigated and may vary in the different settings. This is not of concern as each participant was responsible for facilitating undergraduate nursing students in some capacity in the clinical setting.

Being an online survey with no time limit gave participants the opportunity to consider the questions they would ask given the situation presented in each scenario. This is potentially unrealistic as in the clinical setting facilitators would generally ask questions spontaneously when working alongside a student or in a teaching ‘moment’.

The sample size was much larger than the original study, 133 participants compared to 28 however the results can still only be generalised to the healthcare settings in which the study was conducted. It should be noted that the healthcare organisations included both private and public hospitals across metropolitan Melbourne, regional and rural Victoria.
CONCLUSION

It is evident that the clinical facilitators involved in this study predominately asked questions from the lower cognitive domain. This finding is consistent with the previous study and points to a potential gap in the ability of clinical facilitators to support the development of critical thinking skills in undergraduate nursing students.

RELEVANCE TO CLINICAL PRACTICE

The provision of not only safe but quality patient care is expected of nurses globally. Critical thinking is integral to decision making. To address the limitation of facilitators’ questioning ability it is proposed that educators in clinical practice would benefit from focused development on how to construct questions that facilitate higher order thinking. Further research needs to be conducted that investigates strategies to develop the questioning ability of facilitators in the health care setting.

CONTRIBUTIONS

NP and MD contributed to the study conception and design, NP, MD and RW were responsible for acquisition and analysis of data; all authors (NP, MD, RW) contributed to the interpretation of data; NP, MD and RW were responsible for drafting the manuscript.

CONFLICT OF INTEREST

No conflict of interest has declared by any of the authors.
REFERENCES


Forbes H, Bucknall TK & Hutchinson AM (2016) Piloting the feasibility of head-mounted video technology to augment student feedback during simulated clinical decision-making: an


Health Workforce Australia (HWA) (2014) *National Clinical Competency Resource*. HWA, Adelaide, SA. Available at:


Nursing and Midwifery Council (NMC) (2015) *The Code: Professional Standards of Practice and Behaviour for Nurses and Midwives*, NMC, Available at:

This article is protected by copyright. All rights reserved.

(accessed 21 September 2016).


Table 1 Example questions asked by participants

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Do you understand why Mrs Frank has peripheral neuropathy?</td>
</tr>
<tr>
<td></td>
<td>What is congestive cardiac failure?</td>
</tr>
<tr>
<td>Comprehension</td>
<td>How would this patient receive palliative care?</td>
</tr>
<tr>
<td></td>
<td>What is the difference between Type 1 &amp; Type 2?</td>
</tr>
<tr>
<td>Application</td>
<td>What can we do to make Mrs. Lang comfortable whilst she is here?</td>
</tr>
<tr>
<td></td>
<td>How are we going to support this patient and their family?</td>
</tr>
<tr>
<td>Analysis</td>
<td>What are some specific assessment findings that can indicate worsening or improvement in the patient's condition and why?</td>
</tr>
<tr>
<td></td>
<td>How may this affect Mrs Frank’s self-esteem and feelings of self-worth, her identity?</td>
</tr>
<tr>
<td>Synthesis</td>
<td>Handover the patient using iSoBAR*</td>
</tr>
<tr>
<td>Evaluation</td>
<td>What will be your priorities for Mrs Lang today and why?</td>
</tr>
</tbody>
</table>

* iSoBAR- Handover mnemonic- identify, Situation, observations, Background, Assessment, Recommendations (ACQSHC, 2011)
Table 2 Facilitation roles

<table>
<thead>
<tr>
<th>Role</th>
<th>n/ 133 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical educator</td>
<td>34 (25.56%)</td>
</tr>
<tr>
<td>Clinical facilitator</td>
<td>24 (18.05%)</td>
</tr>
<tr>
<td>Clinical teacher</td>
<td>12 (9.02%)</td>
</tr>
<tr>
<td>Preceptor</td>
<td>60 (45.11%)</td>
</tr>
<tr>
<td>Other (e.g. ‘buddy’, ANUM, NUM)</td>
<td>15 (11.28%)</td>
</tr>
</tbody>
</table>

ANUM- associate nurse unit manager, NUM- nurse unit manager
Note- some participants indicated more than one role

Table 3 Description of nursing roles held by facilitators

<table>
<thead>
<tr>
<th>Nursing Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>Less than 1 year of nursing experience post registration</td>
</tr>
<tr>
<td>Grade 2, Year 1</td>
<td>Less than 2 years of nursing experience post registration</td>
</tr>
<tr>
<td>Grade 2, Year 2</td>
<td>Less than 3 years of nursing experience post registration</td>
</tr>
<tr>
<td>Grade 2, Year 3</td>
<td>Less than 4 years of nursing experience post registration</td>
</tr>
<tr>
<td>Grade 2, Year 4</td>
<td>Less than 5 years of nursing experience post registration</td>
</tr>
<tr>
<td>Grade 2, Year 5</td>
<td>Less than 6 years of nursing experience post registration</td>
</tr>
<tr>
<td>Grade 2, Year 6</td>
<td>Less than 7 years of nursing experience post registration</td>
</tr>
<tr>
<td>Grade 2, Year 7</td>
<td>Less than 8 years of nursing experience post registration</td>
</tr>
<tr>
<td>Grade 2, Year 8</td>
<td>Less than 9 years of nursing experience post registration</td>
</tr>
<tr>
<td>Grade 2, Year 9</td>
<td>Less than 10 years of nursing experience post registration</td>
</tr>
<tr>
<td>Clinical Nurse Specialist</td>
<td>Specialist Nurse practitioner in a specific field</td>
</tr>
<tr>
<td>Grade 3</td>
<td>Associate Unit Manager</td>
</tr>
<tr>
<td>Grade 4</td>
<td>Unit Manager</td>
</tr>
<tr>
<td>Grade 5 &amp; 6</td>
<td>Oversee other managers; in charge by hospital bed numbers</td>
</tr>
<tr>
<td>Scenario</td>
<td>Low Level</td>
</tr>
<tr>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Scenario 1</td>
<td>410 (76.35)</td>
</tr>
<tr>
<td>Scenario 2</td>
<td>299 (69.86)</td>
</tr>
<tr>
<td>Scenario 3</td>
<td>263 (70.32)</td>
</tr>
</tbody>
</table>

**Total Low Level** 972 (72.59)

**Total High Level** 367 (27.41)

**Grand Total** 1339 (100.0)
Table 5 Specific category of questions asked

<table>
<thead>
<tr>
<th>Category</th>
<th>n   (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>802 (59.90)</td>
</tr>
<tr>
<td>Comprehension</td>
<td>172 (12.84)</td>
</tr>
<tr>
<td>Application</td>
<td>302 (22.55)</td>
</tr>
<tr>
<td>Analysis</td>
<td>33 (2.46)</td>
</tr>
<tr>
<td>Synthesis</td>
<td>27 (2.02)</td>
</tr>
<tr>
<td>Evaluation</td>
<td>3 (0.22)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1339 (100)</strong></td>
</tr>
</tbody>
</table>

Table 6 Questions identified as important to facilitate student learning

<table>
<thead>
<tr>
<th>Category</th>
<th>n   (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>359 (55.57)</td>
</tr>
<tr>
<td>Comprehension</td>
<td>87 (13.47)</td>
</tr>
<tr>
<td>Application</td>
<td>169 (26.16)</td>
</tr>
<tr>
<td>Analysis</td>
<td>17 (2.63)</td>
</tr>
<tr>
<td>Synthesis</td>
<td>13 (2.01)</td>
</tr>
<tr>
<td>Evaluation</td>
<td>1 (0.15)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>646 (100)</strong></td>
</tr>
</tbody>
</table>
Figure 1 Total number and category of questions asked within each role