



# They Treated us Like Employees Not Trainees: Patient Educator Interns' Experiences of Epistemological Shock

Fatmah Almoayad<sup>a,\*</sup>, Alison Ledger<sup>b</sup>

<sup>a</sup>College of Health and Rehabilitation Sciences, Princess Nora bint Abdul Rahman University, Riyadh, Saudi Arabia

<sup>b</sup>Leeds Institute of Medical Education, University of Leeds, Leeds LS2 9JT, UK

Received 7 June 2017; received in revised form 27 March 2018; accepted 28 March 2018

Available online 30 March 2018

## Abstract

**Aim:** To explore Patient Educator Interns' (PEIs') experiences of learning when entering the working environment. **Methods:** Semi-structured interviews were conducted with 10 PEIs. Following a narrative type of analysis, case summaries were prepared, compared and interpreted.

**Results:** At the beginning of their internship, PEIs held specific desires and expectations concerning the type of training and work they would experience. These included the expectation of explicit educational activities and specific types of work activities. PEIs' expectations were frequently not met in reality.

**Discussion:** The findings of the study suggest that new graduates face epistemological shock, which is the challenge of understanding the change from receiving formal instruction at university to learning through participation and engagement in the workplace. **Conclusions:** Universities could do more to explain to students the differences in learning between university and the workplace, so students better understand the value of participation for learning.

© 2018 King Saud bin AbdulAziz University for Health Sciences. Production and Hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

**Keywords:** Patient educator; Transition; Epistemological shock; Internship; Workplace learning

## 1. Introduction

Across healthcare disciplines, much attention has been devoted to the transition between university-based training and workplace practice.<sup>1</sup> This transition period is widely regarded as stressful, yet critical for

individuals' development as safe and effective health-care practitioners.<sup>2</sup> Reported consequences of problems in transition range from poor confidence to abandonment of the profession altogether.<sup>1–4</sup>

Within nursing, Duchscher<sup>5</sup> has described the shock that new nurses face when “moving from the known role of a student to the relatively less familiar role of professionally practising nurse” (p.1105). Applying previous work on “reality shock” by Kramer,<sup>6</sup> Duchscher identified four elements of transition shock for nursing professionals: emotional, physical, intellectual and socio-cultural. The emotional element refers to a feeling of being inadequate to the demands of the activities to be

\*Corresponding author. Permanent address: Almoayyad Bookstore, Abdullah bin Rasheed Street, PO box 92738, Riyadh 11663, Saudi Arabia.

E-mail addresses: [Ftm.myd@gmail.com](mailto:Ftm.myd@gmail.com) (F. Almoayad), [A.Ledger@leeds.ac.uk](mailto:A.Ledger@leeds.ac.uk) (A. Ledger).

Peer review under responsibility of AMEEMR: the Association for Medical Education in the Eastern Mediterranean Region

completed and decisions to be taken. Also, new professionals may become less confident and more anxious when managing complexity in their work, such as with multiple illnesses in patients, or where they feel underprepared to cope, such as when a patient dies<sup>5,7–10</sup>. Shock is experienced on a physical level from difficulty coping with long shifts and high task burden, or challenges with prioritising tasks.<sup>5,9–11</sup> Intellectual shock may result from realisation of knowledge deficits,<sup>5</sup> including a lack of understanding of particular work systems or the role new graduates are expected to fulfil in that workplace. Sociocultural shock is experienced when new graduates struggle to find a connection between the role they have been prepared for and the way in which the workplace expects them to act,<sup>5,9,12</sup> seen for example in their need to distinguish themselves from others and in the efforts they make to be accepted.<sup>5</sup>

Within medicine, transitions involving increased responsibility are also regarded as stressful and recent papers have drawn attention to the ways that doctors can be better supported in the workplace. Authors such as Alexander et al.<sup>13</sup>, Kilminster et al.<sup>2</sup>, and Teunissen and Westerman<sup>14</sup> have suggested that addressing challenges in transition is not only the responsibility of individual graduates and their training institutions, but also the practice settings where graduates are employed. Kilminster et al.<sup>2</sup> have proposed that transitions in medicine should be regarded as critically intensive learning periods (CILPs) and an individual's ability to navigate the transition will be affected by the extent to which the workplace recognises his/her learning needs. This is supported by empirical work, which has indicated that feelings of unpreparedness are less evident when graduates have experienced support and feedback from senior staff and been exposed to more practice opportunities.<sup>2,13</sup>

In light of this literature on transitions, this study set out to explore what the transition experience entailed for graduates of a new profession who had entered their first year of practice. Patient Education is a relatively new and discrete healthcare profession, in which qualified professionals provide education about health, healthcare, and self-management to patients in health care settings.<sup>15</sup> To practice as a patient educator in Saudi Arabia, graduates must first complete a five-year Bachelor of Health Education degree, before entering a year of internship. Workplace experience is limited prior to the internship as the Bachelor-level training is almost always delivered and supervised by university staff. The mandatory internship year is when graduates start to gain first-hand experience of working in different health institutes and providing

health education services. Graduates have a degree of choice in their internship site as they can choose between different health care institutions that offer health education<sup>16</sup>.

In developing this study, we considered it likely that patient educator interns (PEIs) experienced similar challenges to graduates in more established professions such as nursing and medicine. However, we were particularly interested in the extent to which workplaces supported graduates of a profession where there was no history nor experience of the profession to draw upon. This reflects our sociocultural view of learning, in which learning is recognised as an on-going, complex process influenced by different organisational, social and cultural factors<sup>17,18</sup> and involves learners' active engagement at work.<sup>17,19</sup> Through interviewing PEIs and gaining an understanding of their experiences, we hoped to develop recommendations for PEIs as well as training programmes and workplaces where they are employed. In a previously published paper we have discussed how coming into a new profession exacerbated the transition shock among new graduates.<sup>20</sup> In this paper, we focus on the participants' learning process and how PEIs understood learning during their internship.

## 2. Methods

### 2.1. Aim

The aim of the study was to explore PEIs' experiences of learning when entering the working environment and our research objectives were a) to ascertain PEIs' views on the internship experience, b) to identify the factors that influence PEIs' learning, and c) to develop a set of recommendations that can guide the improvement of PEIs' and other new graduates' training.

### 2.2. Overview

This study adopted a constructivist paradigm, using qualitative methods in a single embedded case study approach.<sup>21</sup> PEIs from Saudi Arabia were interviewed one on one to ascertain their experiences of internship. This design was chosen to allow in depth exploration of the highly individual context of patient education in Saudi Arabia. Ethical approval for this design was obtained from both the University in the UK where the research was being undertaken and the University where the participants had graduated from.

### 2.3. Participants

Potential participants were recruited via health education professionals in workplaces, who provided a description of the study. PEIs were asked to contact the lead researcher if they were interested in participating in the study. Only those who had completed at least 6 months of internship were considered eligible for the study, so that participants would have reasonable experience of learning in the workplace to draw on. Of the 18 PEIs who met this criterion, 10 volunteered to participate.

All 10 participants were graduates of the only Bachelor of Health Education programme in Saudi Arabia at the start of the study. Graduates had completed 136 hours of university-based study, including public and health education modules and modules concerned with health, healthcare, and diseases. The programme was delivered in English in an all-female section of the university.

All participants were now undertaking their internship in Riyadh city. The internship duration for participants varied from 9–12 months, with between 2 and 4 rotations, and each participant had finished a minimum of 1 tertiary hospital rotation. Six had completed specialist health centre rotations, 2 had been to school health units, 2 to non-government and 4 to government health organisations. The hospital departments visited for training ranged from clinical to media departments.

### 2.4. Data collection

Interviews were face-to-face and took between 35 and 70 minutes. Audio recording was used throughout.

Table 1  
Interview topic guide.

---

Tell me about your internship
The kind of activities that a patient educator interns get involved in.
Aspects that have had a great impact.
Problems encountered:
<ul style="list-style-type: none"> <li>• How are they managed?</li> <li>• Where to seek help?</li> </ul>
Managing new situations.
Opinions on the training programme:
<ul style="list-style-type: none"> <li>• What helped the most?</li> <li>• What does it lack?</li> </ul>
If you were in charge of the training programme, what changes would you make?

---

Participants were offered the choice of English or Arabic as the language for the interview, and all selected Arabic, although they also used English at times during the interviews. Each interview began by asking the research participant to talk about their experiences as an intern, allowing free reign for them to discuss whatever they viewed to be most important. This interview technique tended to yield chronological accounts of the internship, beginning with the selection of places in which to train (see Table 1 for interview topic guide). Participants gave a number of examples of situations which they considered significant. To enhance the understanding the interviewer probed for further clarification and examples. Additionally, interviewees were asked about their opinion of the training and potential ways to improve it.

It should also be noted that the interviewer identified herself as a patient educator graduate, which may have contributed to the openness and richness of responses.

### 2.5. Data analysis

All interviews were transcribed in Arabic immediately after the interviews, as recommended in the literature.<sup>22–26</sup> To maintain anonymity, workplaces were given codes and participants were given Anglo-Saxon names in the transcripts. Consistent with a narrative analysis approach described by Polkinghorne,<sup>27</sup> each interview transcript was initially summarised in English rather than broken up into codes. Interview summaries were created by highlighting points in the interviews which seemed of greatest importance to the PEIs, maintaining the chronological order of events, and including translated quotations as much as a paragraph long. It then became apparent that the participants' expectations prior to starting their internship were significantly different to the reality which they encountered, and this mismatch seemed to negatively influence their perceptions of learning. These observations led the lead researcher to hone in on four components in each of the PEIs' stories: the PEI's expectations, experiences, emotional responses and actions. Closer inspection of these particular components allowed comparison between participants and enabled a deeper understanding of the transition experience for PEIs. For a more detailed description of the interactive and interpretive analytic process, see.<sup>16,20</sup> Interview summaries have been further edited for presentation here (in keeping with the space restrictions of the journal article format).

## 3. Results

In this research, we intended to explore PEIs' experiences of learning when entering the working environment. Excerpts from six cases are presented here to show how PEIs' experiences of learning in the workplace deviated from how they understood and expected learning to occur. Consistent with our constructivist approach,<sup>28</sup> the following quotations gained relevance through a process of refining, juxtaposing, reinterpreting and representing the stories told by participants in the interviews.

#### Sarah.

Sarah recounted a disappointing start to her internship:

*"The first rotation of my internship was in the institute O, where I spent three months. We chose to go there because they promised to give us intensive training. We were promised that we would take courses, do school visits and more. I was excited to have part of my training in a place other than hospitals to have a different experience. However, going there was the biggest failure in my life; it was a shock because what we did was so different from what we were promised. When we started, we were placed in a shopping mall to participate in a breast cancer awareness campaign. Working there was useless in terms of gaining knowledge and all we did was repeat ourselves over and over again".*

#### **Amber.**

Amber recounted a similar experience of her first rotation in Institute O:

*"This was one of the worst experiences ever, a really bad period. We spent three months there and that was a very long time for me. I have learned enough about the topic but I didn't gain any experience. This is because they didn't teach us how to deal with the community. They only gave us a lecture about breast cancer. We, the girls, used to have discussions with each other, and used the information which we had gained during our studies to develop our own teaching techniques"*

She described a more positive experience of her later rotation at a diabetes education clinic:

*"I spent the first week there observing to gain information. Then I began practicing under observation. After that I was allowed to cover the clinic by myself. It was nice to feel that someone was depending on me and giving me responsibilities. I was confident because I had read brochures and observed before practicing. Furthermore, I was able to contact the educator when facing something new. Overall, my experience in the diabetes clinic was really nice. I liked that I had direct contact with patients".*

#### **Anna.**

Anna's reflections on the internship period suggested that learning did not occur unless the intern was pushed into it by a preceptor:

*"We spent two weeks with each preceptor, so it depends which clinic you were in, I mean if you want to teach me you will pull me by my hair [drag me to work], I wasn't pulled by my hair except for one month, that was the only person who actually pulled me by my hair; she used to call me at half past eight saying 'Anna where are you? Can you rush to the clinic?' and then she would not let me leave until four she really, really, taught me, she pressured me into working, asked me to read and make brochures, I learned about diseases that I have never heard about, I really had a great benefit"*

#### **Emma and Ruby.**

Emma and Ruby understood their role in the workplace as learners and expected to be treated accordingly. Emma said:

*"In hospital C they treated us like employees not trainees, there was no training plan."*

Ruby further suggested that PEIs were exploited by other staff members:

*"Sometimes they take advantage of us as interns, I mean there are jobs that we should not do, but as long as they have interns they delegate, I am talking about their responsibilities, things that they*

*should do and which don't have any educational value for us, but they still give it to us, it is a kind of exploitation"*

She described her work in a health promotion campaign by saying:

*"Although they were supposed to do the work, they gave it all to us, the interns... It is their job to hand out brochures and stuff, but they made me do it and that is fine but I am not benefitting".*

#### **Sophia.**

Sophia distinguished between assigned tasks by defining them as "give" versus "take" experiences. She recalled that;

*"In this hospital I have given more than I have taken, or maybe it was 50% give and 50% take. They were supposed to teach us and give us knowledge and experience, instead they took the breath out of us, they exhausted us just because we were interns".*

This example from Sophia showed how interns expected to "take" learning rather than to "give" or contribute to the work of clinical teams. This showed her lack of understanding of the value of practice for her learning experience. Sophia criticised work in which the learning was not made explicit, considered her engagement in practice as "giving", and consequently did not seem to understand or appreciate the learning that had occurred. When her practice entailed an explicit learning activity she identified it as "taking" and appreciated it as a valuable learning opportunity.

## **4. Discussion**

It was noted in the study that participants held certain conceptions of learning when entering training, including a need for formal teaching interactions. This contrasts with the learning which occurs through participating and engaging in working practices, which is not as well understood and appreciated by new graduates in transition.

As PEIs began their training, they perceived themselves as taking on an intern identity within which the central goal of their presence in the working environment was to learn. Several research participants, including Emma, Ruby, and Sophia, wished to be perceived through this identity by others, thus taking on a learner role. This understanding led to various challenges to learning however. For example, a distinction was drawn between work and learning in which PEIs appreciated or dismissed activities based on their perceived educational value, and some appeared to believe that only situations in which the teaching aspect was explicit contained learning opportunities. A notable source of dissatisfaction was the request to work on health promotion campaigns. Working in health promotion campaigns was not perceived as a valuable educational activity, despite being one of a patient educator's core responsibilities.

Similar findings were reported by Ledger, Kilminster,<sup>29</sup> who found that students in various health professions distinguished between learning and working, and may have

missed valuable opportunities for learning as a consequence. In the current study, some PEIs felt that they were being exploited by staff members by being asked to do jobs which were the responsibilities of the staff rather than the interns. Through holding such a view, it is possible that PEIs missed out on valuable opportunities to learn about aspects such as teamwork and time management. Similar feelings were reported in studies about medical and occupational therapy graduates, in which participants stated that they did not benefit from the delegated work.<sup>9,10,30</sup>

Most participants reported dissatisfaction with training when their learning expectations were not fulfilled. This dissatisfaction was mostly related to a perceived lack of preparedness on the part of the institutions offering internships, a feeling that PEIs' needs were not understood and that a programme of explicitly teaching-focused activities was missing. The distinction between learning and working and the differentiation between work which should be done by interns and that of staff members led many PEIs to underappreciate the educational value of tasks and situations they experienced (see Sarah and Ruby above).

Many participants described their experience as “صدمة” which is translated by the Oxford Arabic Dictionary<sup>31</sup> as “*shock, impact, blow, thrust, jolt*” and when describing an emotion, as “*trauma*”, “*to be traumatized*”, “*to get a shock*”, “*to be in shock*” and “*to be in a state of shock*”. The term shock seemed the most appropriate translation to represent the meaning given by PEIs, rather than the more severe meaning of trauma.

We propose that the type of shock frequently described by PEIs was epistemological in nature. Personal epistemologies are personal views about the nature of knowledge and learning<sup>32,33</sup>, and are proposed to impact upon individuals' learning.<sup>33–35</sup> In considering personal epistemologies, Billett<sup>36</sup> proposes that the capacity, experience and negotiated outcomes of the individual inform the ways in which they act and know.

Epistemological shock is experienced in addition to what other researchers such as Duchscher<sup>5</sup> and Kramer<sup>6</sup> discussed as transition shock. When explaining transition shock, these researchers did not consider the way in which new graduates perceive learning and their epistemological beliefs. Instead, they focused on the gap between theory and practice and on the point that new graduates find that what they have studied at university is not applied in the reality of practice<sup>6,14,37</sup> (what Duchscher<sup>5</sup> referred to as intellectual shock). Sociocultural shock, the difficulty which new graduates face when trying to find a connection between the role

they have been prepared for and the role they practise in reality<sup>5,9,12</sup> has been discussed in relation to new graduates' understandings of themselves and their surroundings and in relation to others, but not in relation to learning.

Despite our observation that PEIs experienced epistemological shock, our findings did suggest that participants' epistemological beliefs could change over time. It was noted that at early stages of the internship, participants wanted to be formally taught. As participants progressed, they seemed to accept the learning which came with participation and social interactions. The majority of PEIs reported that they would prefer to be taught at the beginning of their internship, followed by gradual engagement in work until they were able to reach independence. This mode of learning was reported to increase confidence and help interns to develop their own ways of practising (see quotation from Amber above).

This approach is in line with the training progression suggested by Billett.<sup>38</sup> According to Billett, a novice worker should be expected to start by engaging in simple, peripheral and less accountable tasks, and gradually move towards full participation in more complex and accountable tasks. As the worker develops and shows more readiness to learn, the level of guidance should decrease.

## 5. Conclusion

This paper builds on the work of Duchscher,<sup>5</sup> on transition shock by introducing the concept of epistemological shock. This type of shock is in addition to the emotional, physical, intellectual and sociocultural components proposed in the original work of Duchscher. Epistemological shock concerns new graduates' understanding of learning and the challenges which they face when learning in the workplace is different to their former experience of learning at university. At the beginning of their internship, PEIs expected to be “taught” in a formal sense: however, they seemed to move toward greater understanding of the value of participation as they progressed.

Our findings suggest recommendations for both individual learners and training environments. Universities as well as workplaces need to encourage new graduates to be flexible with regard to their job responsibilities, explain to graduates that learning in the workplace is different from that encountered at university, and highlight the value of participation for

learning. In addition, workplaces need to understand that new graduates are accustomed to explicit learning and that with support and gradual shifts, these understandings can change. Further studies are needed to investigate: the existence of epistemological shock for graduates from other professions; how epistemological shock manifests itself; and to explore ways to help students overcome this shock. One limitation of this study was that it was conducted at only one point during the PEIs' internship period. Longitudinal study would allow deeper exploration of the changes in personal epistemologies occurring over the internship period. Thus, a further exploration of changes in personal epistemologies and their effects on new graduates' learning is needed.

## Funding

This study was funded by the Saudi Ministry of Education and was part of PhD research. The sponsor had no role in the study design; collection, analysis and interpretation of the data; writing of the report; nor in the decision to submit the article for publication.

## Declaration of interest

The authors report no declarations of interest.

## References

1. Edwards D, Hawker C, Carrier J, Rees C. A systematic review of the effectiveness of strategies and interventions to improve the transition from student to newly qualified nurse. *Int J Nurs Stud* 2015.
2. Kilminster S, Zukas M, Quinton N, Roberts T. Preparedness is not enough: understanding transitions as critically intensive learning periods. *Med Educ* 2011;45(10):1006–1015.
3. Duchscher JE, Cowin LS. The experience of marginalization in new nursing graduates. *Nurs outlook* 2004;52(6):289–296.
4. Owens DL, Turjanica MA, Scanion, MW, et al. New graduate RN internship program: a collaborative approach for system-wide integration. *J Nurses Staff Dev: Off J Natl Nurs Staff Dev Organ* 2001;17(3):144–150.
5. Duchscher JE. Transition shock: the initial stage of role adaptation for newly graduated registered nurses. *J Adv Nurs* 2009;65(5):1103–1113.
6. Kramer M. *Reality shock; why nurses leave nursing*. Saint Louis: C. V. Mosby Co; 1974.
7. Turner N, Goudreau J. From student to emergency nurse: a qualitative study of an educational support seminar. *J Nurses Staff Dev: Off J Natl Nurs Staff Dev Organ* 2011;27(5):210–215.
8. Newton JM, McKenna L. The transitional journey through the graduate year: a focus group study. *Int J Nurs Stud* 2007;44(7):1231–1237.
9. Morley M. An evaluation of a preceptorship programme for newly qualified occupational therapists. *Br J Occup Ther* 2009;72(9):384–392.
10. Levine RB, Haidet P, Kern, DE, et al. Personal growth during internship: a qualitative analysis of interns' responses to key questions. *J General Intern Med* 2006;21(6):564–569.
11. McKenna LG, Green C. Experiences and learning during a graduate nurse program: an examination using a focus group approach. *Nurse Educ Pract* 2004;4(4):258–263.
12. Williams C. Understanding the essential elements of work-based learning and its relevance to everyday clinical practice. *J Nurs Manag* 2010;18(6):624–632.
13. Alexander C, Millar J, Szmidt N, Hanlon K, Cleland J. Can new doctors be prepared for practice? A review. *Clin Teach* 2014;11(3):188–192.
14. Teunissen PW, Westerman M. Opportunity or threat: the ambiguity of the consequences of transitions in medical education. *Med Educ* 2011;45(1):51–59.
15. Al-Hashem A. Health Education in Saudi Arabia: historical overview. *Sultan Qaboos Univ Med J* 2016;16(3):286–292.
16. Almoayad FAMA. *Learning during Internship: Patient Educator Interns' Experience of Transition to Workplace [Thesis (Ph.D.)]*. University of Leeds; 2015.
17. Hager P. Theories of workplace learning. In: Malloch M, Cairns L, Evans K, O'Connor BN, editors. *The SAGE Handbook of Workplace Learning*. London: SAGE; 2011. p. 17.
18. Morris C, Balney D. Work-based learning. In: Swanwick T, editor. *Understanding medical education: evidence, theory and practice*. Oxford: Wiley-Blackwell; 2014.
19. Lee T, Fuller A, Ashton D, et al. Workplace learning: Main themes & perspectives. Learning as work research paper;2004(2).
20. Almoayad F, Ledger A. Entering a new profession: patient educator interns' struggles for recognition. *J Health Spec* 2016;4(4):262–269.
21. Yin RK. *Case Study Research: Design and Methods*, 4th ed., London: SAGE; 2009.
22. Gibbs G. *Analyzing Qualitative Data. The Sage Qualitative Research Kit*. London: SAGE; 2007.
23. Maxwell JA. *Qualitative Research Design: an Interactive Approach*, 3rd ed., Thousand Oaks, Calif.; London: SAGE Publications; 2013.
24. Miles MB, Huberman AM. *Qualitative Data Analysis: an Expanded Sourcebook*, 2nd ed., Thousand Oaks, Calif.; London: Sage; 1994.
25. Patton MQ. *Qualitative Research & Evaluation Methods*, 3rd ed., Thousand Oaks, Calif.; London: Sage; 2002.
26. Holloway I, Wheeler S. *Qualitative Research in Nursing and Healthcare*, 3rd ed., Oxford: Wiley-Blackwell; 2010.
27. Polkinghorne DE. Narrative configuration in qualitative analysis. *Int J Qual Stud Educ* 1995;8(1):5–23.
28. Guba E, Lincoln Y. competing paradigms in qualitative research. In: Denzin NK, Lincoln YS, editors. *The Handbook of Qualitative Research*. Thousand Oaks, Calif.; London: Sage; 1994.
29. Ledger A, Kilminster S. Developing understandings of clinical placement learning in three professions: work that is critical to care. *Med Teach* 2015;37(4):360–365.
30. Deketelaere A, Kelchtermans G, Struyf E, De Leyn P. Disentangling clinical learning experiences: an exploratory study on the dynamic tensions in internship. *Med Educ* 2006;40(9):908–915.
31. *Oxford Arabic Dictionary*. Oxford: Oxford University Press; 2014.
32. Elby A. Defining Personal Epistemology: a Response to Hofer & Pintrich (1997) and Sandoval (2005). *J Learn Sci* 2009;18(1):138–149.

33. Schommer M. An emerging conceptualization of epistemological beliefs and their role in learning. In: Garner R, Alexander PA, editors. *Beliefs about texts and instruction with text*. Hillsdale, N. J.; Hove: L. Erlbaum; 1994.
34. Hofer BK, Pintrich PR. The development of epistemological theories: beliefs about knowledge and knowing and their relation to learning. *Rev Educ Res* 1997;67(1):88–140.
35. Chan KW, Elliott RG. Relational analysis of personal epistemology and conceptions about teaching and learning. *Teach Teach Educ* 2004;20(8):817–831.
36. Billett S. Relational Interdependence Between Social and Individual Agency in Work and Working Life. *Mind Cult Act* 2006;13(1):53–69.
37. Chang E, Daly J. Managing the transition from student to graduate nurse. In: Chang E, Daly J, editors. *Transitions in*

*Nursing: Preparing for Professional Practice*, 3rd ed., Australia: Libby Houston; 2012.

38. Billett S. *Learning in the Workplace: Strategies for Effective Practice*. Crows Nest, NSW: Allen & Unwin; 2001.

## Glossary

*Epistemological shock*: The challenges which newly graduated professionals experience as a result of the shift from the formal learning given in educational institutions to learning which takes place in a working environment through engaging and participating in practice.