

# Critical Thinking in Undergraduate Student Nurses: Reflection and Selective Literature Review

by D Hayes, RN, BEd (Hons)

The concept of critical thinking (CT), in spite of best efforts, remains perplexing. As an examiner for undergraduate student nurses' assignment scripts, I discovered through reflection (Johns, 1995) that students were not gaining high marks in written assignments for critical thinking. In order to critically evaluate this issue, I conducted a literature search, and reviewed articles on the definition of CT, its policy, and the ethical and philosophical aspects that determine its degree. The conclusion on this issue is that CT is complex and needs further investigation.

In one occasion, I encountered several students who expressed their disappointment over getting low marks for descriptive, rather than critically analytical, work. Similarly, a colleague was dismayed over a same experience that was also illustrated in an article authored by Gopee (2002) on critical thinking. The situations concerned and prompted me to critically evaluate the issue, initially through a literature review, which aims to facilitate students to gain higher marks. I developed a basic level research question using the PIO model: P=persons (student nurses); I=intervention (learning CT); and O=outcome (identifying best practice) in order to gauge 'the best practice for the learning of critical thinking by student nurses'. Using a data base, the key words used for the literature search were 'critical thinking' and 'nurse education'. The inclusion criteria were articles written in the English

language, scholarly discussions or research reports from peer reviewed journals, resulting in 36 articles being retrieved. Some articles involved non-western participants, of particular interest in my work setting in Malaysia. As the subject of CT generally is well established, the year of publication was not made an issue; in the event, the articles spanned 18 years - from 1991 to 2009.

All articles except those by Schommer-Aikins and Easter (2009) discuss in varying detail the problems of defining CT. Exceptionally, Schommer-Aikins and Easter (2009) refer to higher order thinking, though they do not venture to define it. Girot (2000) points out to CT as a process needing higher order thinking. Most other articles rely on the results of the research reported by Jones and Brown (1991) carried out on behalf of the National League for Nursing. The resulting definition is

a complex one, and has cognitive, behavioural, moral, ethical and personality dimensions. This gives rise to discussions about the suitability of the scientific method for investigating the issue (Ku, 2009).

## CT as a Gender Issue

Although a positivistic, scientific philosophy is generally highly valued, its use for investigating complex human behaviours is questionable (Hill, 2008). Schommer-Aikins and Easter (2009) use questionnaires using multiple choice questions and Likert scaled statements to investigate the complex human behaviour of willingness to argue. With the relationship between context, response and experience in the critical thinker's worldview, feminism may be a more appropriate philosophy (Cohen, et. Al, 2007), especially as CT skills appear to need the critical thinker to be outside the limits of control and

conformity (*Ip, et. al., 2000*).

Indeed, CT as a gender issue is mentioned as a side issue by some researchers, in the context for example of distance learning materials they reviewed being mostly written by men (*Bethune and Jackling, 1997*). However, the literature is accepting of the progress so far in measuring CT using scientific methods such as questionnaires (*Mitchell and Batorski, 2009; Staib, 2005; Kyung, 1998*), though there are reservations (*Ku, 2009; Giro, 2000*). Daly (*1998*), whilst also quoting the definition reported in Jones and Brown (*1991*), discusses several others, again reflecting the complex nature of CT. Even with such problems of definition, nursing has embraced the concept of CT and has incorporated it into policy.

### **CT as a Major Policy in Nursing**

Many articles refer to a major policy by the nursing profession to demand increased critical thinking ability in nurses (*Anderson and Tredway, 2009; Fero, et. al., 2009; Duchscher, 1999*). This was perhaps reinforced by the studies of Benner and her colleagues into the nature of nursing expertise starting in the early 1980s (*Benner, et. al., 1996*). The interest in CT is described as starting in earnest in the 1980s (*Duchscher, 1999*), rather later than most academic disciplines.

The rationale for CT comes from a perception that with increased change in clinical practice, increased aptitude in CT among nurses is necessary to respond effectively to health care challenges (*Simpson and Courtney, 2002*).

This is based on the concept that CT is a preparation for higher order thinking, and deemed necessary for better clinical decision making in the face of new diseases, new treatments and new expectations of care, which are all part of the scenario of change (*Giro, 2000*). The transfer of CT to clinical decision making is however not necessarily linear and cannot be assumed (*Greenwood, 2000*) though Simpson and Courtney (*2002*) argue that the clinical decision making process needs CT. This was researched by others using high fidelity human patient simulation, but with equivocal results (*Horan, 2009; Ravert, 2008; Rush, et. al., 2008*). The relationship between CT and clinical decision making therefore is still to be explicated fully.

However, some statutory nursing bodies have sufficient confidence in the strength of the relationship between clinical decision making and CT to demand for CT as outcome of learning for accreditation (*Simpson and Courtney, 2002*). This has stimulated the profession to take stock of its position with curriculum development regarding CT, in face to face and online educational modes (*Legg, et. al., 2009; Mitchell and Batorski, 2009; Staib, 2005; Simpson and Courtney, 2002*). This does however raise a point about the nature of CT as an outcome. Daly (*1998*) reflects that CT ability is a desirable outcome. If the definition reflects the complexity of human behaviour in CT, then to be able to implement CT skills is going to need not only cognition and knowledge, but the application

of judgment to the individual situation in its context. In this way, CT could be seen as a process, rather than an outcome (*Simpson and Courtney, 2002*).

This issue needs to be resolved so that curriculum planners might have a better foundation for action. It is possible that the curriculum needs an introduction to CT, but also the integration of CT in the remaining parts of the curriculum. This would require an adult learning model (*Tennant, 2006; Knowles, et. al., 2005*) in order to move towards a more transformative model of education to prepare students for the challenge of change (*Gordon, 2009*). This would give students the ability to construct knowledge according to the requirements of the individual context, which may strengthen clinical decision making. This also supports the work on the CT definition being multi-dimensional.

### **Multi-dimensional Definition of CT**

The multi-dimensional definitions of CT reveal that cognitive aspects are important, but also that there are moral, judgmental and ethical aspects to be considered. For this, the personality of the student is a key factor (*Profetto-McGrath, 2003; Tiwari, 2003; Ip, et. al., 2000*). This also raises an issue of cultural aspects of CT skills, for research shows that where CT is considered outside of Western culture, differences emerge (*Tiwari, 2003; Ip, et. al., 2000*).

In collective societies such as those found in Southeast Asia,

the expression of CT may have profound implications. Willingness to argue in an academic sense is a precursor of CT (*Schommer-Aikins and Easter, 2009*), so that where culturally such willingness may be interpreted as going against cultural norms, then the development of CT skills may be restrained. This may be important when we need to consider Asian values to which most of the students are accustomed through their upbringing and

socialization. There is thus a need to review this in detail, so that appropriate modifications may be made to the process of learning CT in order for it to be sensitive to the local customs and culture.

### Conclusion

The articles reviewed show the significance of the work of Jones and Brown (*1991*) in defining CT as a complex human behaviour with cognitive, moral and personality

dimensions. The method of investigating CT leads to caution about accepting the measurement of CT using positivistic scientific methods, whereas a feminist approach may be more inclusive. Further, while the Nursing profession is shown to have imbibed CT as an important part of its curriculum since the 1980s, the cultural implications for Southeast Asian countries for the teaching and learning of CT are yet to be addressed. ■

### References :

- Anderson, G.L. & Tredway, C.A. (2009). Transforming the nursing curriculum to promote critical thinking online. *Journal of Nursing Education*. 48(2):111-115.
- Benner, P., Tanner, C.A. & Chesla, C.A. (1996). *Expertise in nursing practice: caring, clinical judgment and ethics*. New York: Springer.
- Bethune, E. & Jackling, N. (1997). Critical thinking skills: the role of prior experience. *Journal of Advanced Nursing*. 26:1005-1012.
- Cohen, L., Manion, L. & Morrison, K. (2007). *Research methods in education*. (6th ed). London: Routledge.
- Daly, W.M. (1998). Critical thinking as an outcome of nursing education. What is it? Why is it important to nursing practice? *Journal of Advanced Nursing*. 28(2):323-331.
- Duchscher, J.E.B. (1999). Catching the wave: understanding the concept of critical thinking. *Journal of Advanced Nursing*. 29(3):577-583.
- Fero, L.J., Witsberger, C.M., Wesmiller, S.W., Zullo, T.G. & Hoffman, L.A. (2009). Critical thinking ability of new graduates and experienced nurses. *Journal of Advanced Nursing*. 65(1):139-148.
- Gopee, N. (2002). Demonstrating critical analysis in academic assignments. *Nursing Standard*. 16(35):45-52, 54-55.
- Girot, E.A. (2000). Graduate nurses: critical thinkers or better decision makers? *Journal of Advanced Nursing*. 31(2):288-297.
- Gordon, M. (2009). Toward a pragmatic discourse of constructivism: reflections on lessons from practice. *Educational Studies*. 45:39-58.
- Greenwood, J. (2000). Critical thinking and nursing scripts: the case for the development of both. *Journal of Advanced Nursing*. 31(2):428-436.
- Hill, M. (2008). *Social research philosophies: a brief introduction*. Northumbria University: unpublished handout.
- Horan, K.M. (2009). Using the human patient simulator to foster critical thinking in critical situations. *Nursing Education Perspectives*. 30(1):28-30.
- Ip, W.Y., Lee, D.T.F., Chau, J.P.C., Wootton, Y.S.Y. & Chang, A.M. (2000). Disposition towards critical thinking: a study of Chinese undergraduate nursing students. *Journal of Advanced Nursing*. 32(1):84-90.
- Johns, C. (1995). Framing learning through reflection within Carper's fundamental ways of knowing in nursing. *Journal*

- of Advanced Nursing. 22:226-234.
- Jones, S.A. & Brown, L.N. (1991). Critical thinking: impact on nursing education. *Journal of Advanced Nursing*. 16:529-533.
- Knowles, M.S., Holton III, E.F. & Swanson, R.A. (2005). *The adult learner*. (6th ed). Amsterdam: Elsevier Butterworth Heinemann.
- Ku, K.Y.L. (2009). Assessing students' critical thinking performance: urging for measurement using multi-response format. *Thinking Skills and Creativity*. 4:70-76.
- Kyung, R.S. (1998). Critical thinking ability and clinical decision making skills among senior nursing students in associate and baccalaureate programmes in Korea. *Journal of Advanced Nursing*. 27:414-418.
- Legg, T.J., Adelman, D. & Levitt, C. (2009). Constructivist strategies in online distance education in nursing. *Journal of Nursing Education*. 48(2):64-69.
- Mitchell, A.W. and Batorski, R.E. (2009). A study of critical reasoning in online learning: application of the Occupational Performance Process Model. *Occupational Therapy International*. [DOI:10.1002/oti.272. Accessed 8 April 2009].
- Northumbria University. (2009). *Research skills: approaches to evidence and enquiry*. Unpublished handout. Northumbria: Northumbria University.
- Profetto-McGrath, J. (2003). The relationship of critical thinking skills and critical thinking disposition of baccalaureate nursing students. *Journal of Advanced Nursing*. 43(6):569-577.
- Ravert, P. (2008). Patient simulator sessions and critical thinking. *Journal of Nursing Education*. 47(12):557-562.
- Rush, K.L., Dyches, C.E., Waldrop, S. & Davis, A. (2008). Critical thinking among RN to BSN distance students participating in human patient simulation. *Journal of Nursing Education*. 47(1):501-507.
- Schommer-Aikins, M. & Easter, M. (2009). Ways of knowing and willingness to argue. *The Journal of Psychology*. 143(2):117-132.
- Simpson, E. & Courtney, M. (2002). Critical thinking in nursing education: literature review. *International Journal of Nursing Practice*. 8:89-98.
- Staib, S. (2005). Teaching and measuring critical thinking. *Journal of Nursing Education*. 42(11):498-508.
- Tennant, M. (2006). *Psychology and adult learning*. (3rd ed). London: Routledge.
- Tiwari, A., Avery, A. & Lai, P. (2003). Critical thinking disposition of Hong Kong Chinese and Australian nursing students. *Journal of Advanced Nursing*. 44(3):298-307.

### **About the Author:**

*D Hayes, RN, BEd (Hons) is the Senior Education Officer of the MAHSA University College. His article is a reworking of previously prepared material. He wishes to extend his acknowledgement to Associate Professor Zahrah Saad, Dean of the Faculty of Nursing, MAHSA University College, and Dr Maureen Sookhoo and her colleagues of Northumbria University, UK for giving him encouragement and inspiration to consolidate this review.*