Opening Door to Life-long Learning Skills: using Metacognitive Reflective Learning Practice in an on-line teaching program

Abstract

Learning is a challenging process of human’s life journey. Despite a significant improvement gained in the recent decades to achieve long-life learning, practical approaches are yet to be improved. Meta-cognitive reflective learning is a strategy that helps learners achieve long-life learning and provides students with a systematic structure that allows them to develop their critical thinking, view problems from different angles, bring appropriate tools to new situations, develop new insights, and integrate theory into practice. Scaffolding, reflective diary and mind map are the approaches that benefit learners to develop the analytical skills through reflective learning.

Achieving to the stage of “deep knowing” occurs only when changes happen in learners’ perspectives in relation to the way they communicate with the world; through a process of “reflection”; which is simply seeing the things happen and all the surroundings in a mirror from different perspectives to help exploring what is beyond the line of vision (Freshwater, 2012, p 16). It enables people to gain insight into their own experiences and develop a deeper understanding of themselves and their situations and occurs in three stages: awareness, critical analysis, and self-regulation ( ). Learning in this way then becomes embedded into the real situations, where learner achieves to the point of long-life knowing.

Henderson, Napan, & Monterio (2004, p. 357) and Biggs (2007) state that in the process of reflective learning, learners consciously think and analyse what was occurred, work strategically towards solving the problems using their knowledge and metacognitive skills, and regulate their emerging solutions. The outcome is developing new insights upon what was experienced (Freshwater, Taylor & Sherwood 2008).

figure 1 shows how critical thinking, reflection, decision making and problem solving work as the main components of metacognitive learning (Dawson 2008).
Metacognitive learning is not an easy process to achieve. According to Chew (2010) the following steps help students achieve metacognition:

1) Elaborating on their teaching and learning materials and explore the interconnections among the various concepts.
2) Critically thinking about the key differences among the concepts.
3) Making a connection between the concepts they learnt and their personal perspectives.
4) Retrieving the concept in their mind and highlighting the aspects representing the core meaning in connection to the context.

The next step is evaluation of how the integrating of the new perspectives into the existing ones works. Are the outcomes adequately achieved? Were the new perspectives able to deal with the emergent problems in the specific situations? Self-regulation assists learners to manage their thoughts about the situation, navigate their learning experiences, and create effective plans; while they continuously assess the meaningfulness of their learning tasks and their intrinsic motivation to effective completion (Zumbrunn, Tadlock, and Roberts 2011).

Reflective learning has been adopted by a number of disciplines in tertiary education to offer an effective framework to keep the continuous commitment to improve the professional practices; especially where a significant part of delivery in an educational programme is happening online (Henderson, Napan and Monterio 2004; p.357). In a research conducted by Murugiah and Thang (2010) on reflective learning among distance learners at a public university in Malaysia, findings revealed that the students acquired significant cognitive benefits and also valuable practical learning skills through the online discussions.
There are a variety of reasons to include reflective practice methods in the educational programmes of practical professions such as health professional tertiary education. Some of these reasons consist of learning about the skills of the profession and how to think critically, learning to make sense of information, developing analytical skills and new insights, bridging theory and practice, identifying values and beliefs in the context, and suggesting areas for improvement (Johnson 2013, p.46).

Nurses specifically are encouraged to develop a reflective mindset to enable looking thoroughly at every incidence or experience in a new light by asking questions such as “what can I learn? And what can I do to improve my practice?” (Henderson, Napan & Monterio 2004; p.357); which brings an awareness of personal feelings and thinking about the experience and changing behaviours in the light of the situation (Bandura, cited in Burke and Mancuso 2012). Reflection can significantly communicate with the complexity of nursing practice by describing the situation, where an intervention affected outcomes, using scientific knowledge, nursing skills, technical expertise, critical thinking, and assessment skills. The self-regulated learning model in nursing is proposed as a theoretical structure that explains how clinical reasoning skills can be acquired through attention to reflective thinking and critical thinking skill acquisition.

In terms of the approaches to use in delivery of a reflective learning programme, Keeping a diary in an e-portfolio with making entry at least once a week promotes development and transformation of learning. A reflective diary may benefit to explore the critical incidents raised, identify the errors and how they could be managed (Biggs 2007). Moon (2013, p 6-7) highlighted the purposes of using reflective diary as following:

- To record learners’ experiences
- To support understanding of a concept
- To develop critical thinking and questioning attitude
- To encourage for metacognitive learning
- To increase students’ active involvement with learning
- To enhance reflective practice
- To develop personal growth and self-empowerment
- To foster communication with peers and teacher
- To enhance creativity
- A mean of assessment

Following questions listed by Johnson (2013) could be asked when writing a reflective diary:

- What assumptions am I making about this situation?
- Have I already made any interpretation or judgment about the situation?
- What are my fears about the situation?
- How does this situation make me feel?
- What decision is available to adopt, alter, or abandon what I learned?
- How can I respond differently to a similar situation in the future?

Students’ journals are extensively used in tertiary education as a method of facilitating reflection, deepening personal understanding and stimulating critical thinking (Bain etal 1999 in Henderson, Napan and Monterio 2004; p.357).
Concept maps are another useful tool to draw a work-in-progress, indicating how the new information can be integrated and linked to the previous knowledge on a specific area. It assists students to highlight the key concepts raised from their learning and bring a number of concepts in a hierarchy in terms of their depth and priority. Concept maps also allow teachers to assess students' understanding of the concept and all the inter-connections developed.

There are some barriers to deliver a reflective learning programme including lack of knowledge of reflection as a learning tool, applying mindful reflection, cultural background that did not encourage students to use reflective process. Scaffolding modelling helps overcoming these barriers. In the process of scaffolding, teacher assists students to manage a task that is independently difficult to manage (Salmon 2004).

Close monitoring of a writing reflective activity, tutor guidance, encouraging for compulsory participation, addressing technical problems, commencing strategic training prior to the beginning of a task, and implementing team teaching are the strategies that help addressing the barriers (Murugaiah & Thang 2010).

In summary, the on-line reflective learning programme provides with learners to enhance their learning skills as well as their motivation to learn, socialisation, and development of broader insights.

References


