Critical thinking and creativity in nursing: Learners' perspectives

Zenobia C.Y. Chan *

School of Nursing, The Hong Kong Polytechnic University, Hung Hom, Hong Kong

A R T I C L E   I N F O

S U M M A R Y

Background: Although the development of critical thinking and the development of creativity are major areas in nursing programme, little has been explored about learners' perspectives towards these two concepts, especially in Chinese contexts.
Objectives: This study aimed to reveal nursing learners' perspectives on creativity and critical thinking.
Design: Qualitative data collection methods were adopted, namely group interviews and concept map drawings.
Settings: The process of data collection was conducted in private rooms at a University.
Participants: 36 nursing students from two problem-based learning classes were recruited in two groups for the study.
Methods: After data collection, content analysis with axial coding approach was conducted to explore the narrative themes, to summarise the main ideas, and to make valid inferences from the connections among critical thinking, creativity, and other exogenous variables.
Results: Based on the findings, six major themes were identified: "revisiting the meanings of critical thinking"; "critical thinking and knowledge: partners or rivals?"; "is critical thinking criticising?"; "revising the meanings of creativity"; "creativity and experience: partners or rivals?"; and "should creativity be practical?".
Conclusions: This study showed that learners had diverse perspectives towards critical thinking and creativity, and their debate on these two domains provided implications on nursing education, since the voices of learners are crucial in teaching. By closing the gap between learners and educators, this study offered some insights on nursing education in the new curriculum, in particular to co-construct nursing knowledge which is student-driven, and to consider students' voices towards understanding and applying creativity and critical thinking in nursing.

Introduction

This study explored nursing students' perceptions towards critical thinking and creativity. Although the developments of these two skills are crucial in preparing professional nurses in the future (Lauder et al., 1999; Kalischuk and Thorpe, 2002; Neuman et al., 2009; Emmanuel et al., 2010), few studies have been conducted to explore learners' perspectives towards these two concepts in nursing education, particularly in Chinese contexts (Cooke and Moyle, 2002; Hall and Mitchell, 2008; Klunklin et al., 2011). To depict learners' views on critical thinking and creativity in a holistic and comprehensive manner (Hydo et al., 2007; Lillyman et al., 2011), a total of 36 nursing students from two groups were recruited for a class interview and a concept map creation.

Literature

Critical Thinking

While different disciplines struggle with a concise definition of critical thinking (Marquis and Huston, 2006; Rolfe, 2008), little literature on

critical thinking was available in nursing education; yet nursing students' ability to think critically has been frequently analysed (Duchscher, 2003). According to the existing literature, critical thinking can be defined as clear and rational thinking, which consists of clarification, simplification, and organisation. In particular, clear thinking is an ability to think precisely, systematically and structurally, which can help avoiding linguistic pitfall and hence, construct logical arguments. Rational thinking includes scientific reasoning, strategic thinking and logic which enable learners to predict, explain and influence empirical phenomena. It allows one to verify whether the premises of an argument are true, relevant, and acceptable before evaluating its reasoning strength (Rolfe, 2008; Lau, 2011). However, rather than prescribing the above definitions of critical thinking to the participants, this study allowed them to revisit the meaning and their perceptions of critical thinking in nursing education and practices.

It is important to help learners to develop critical thinking ability in nursing care and education. With patients' increasingly complex health needs, nursing students should be equipped with integrated skills and transferrable competency, critical thinking and rapid decision-making skills (Lauder et al., 1999). The environment of healthcare system has also transferred from a process-oriented system (i.e. procedures dependent and provider dominated) to an outcome-driven and evidence-based system that can be influenced by exogenous factors

* Tel.: +852 2766 6426; fax: +852 2364 9663.
E-mail addresses: hszchan@inet.polyu.edu.hk, zenobia.chan@polyu.edu.hk.

(Huber, 2010). Furthermore the nursing curriculum is largely theory based. To help nursing students to put theory into practice has always been a challenge for nursing educators (Binding et al., 2010). Therefore Duchscher (2003), and Lisko and O'Dell (2010) emphasised that one primary goal of nursing education should be to help learners to develop critical thinking ability through experience, inquiry, and reasoning.

Creativity

Regarding patients' safety, nurses should always follow the procedures of providing healthcare services. Despite this, the role of creativity in nursing care should not be overlooked since it is one of the essential components in solving problems. The definition of creativity is very broad and Lau (2011) summarised the meaning of creativity by three principles: (i) new rearrangement of old ideas; (ii) selection of useful ideas; and (iii) exploration of connections among ideas. These three principles of creativity are relevant to nursing education. Due to their lack of life experience, nursing students are often too young to empathise with older adults or critical patients. Human simulations and other creative teaching modalities could help transferring textbook knowledge to real-life situations so that nursing students could learn to value patients, develop new ways to care for them, and eventually become successful decision makers in the clinical environment (Marquis and Huston, 2006; Robertson, 2006). Another reason for promoting creativity in nursing education is that, nursing educators have to elucidate statistical analysis, abstract concepts and interpretations. How to achieve optimal learning and retain students' long term memories of materials becomes a challenging task. Beitz and Robinson (1997) suggested that using creative teaching approaches could enhance the productivity of traditional lecture approaches and therefore, learners of the new generation in health professions should develop general and lifelong attributes of thinking critically and creatively (Maslin-Prothero, 1997). Existing scholars have made much contribution to developing theories and practices of critical thinking and creativity competence; however, the validity of these contributions from learners' perspectives particularly in Chinese contexts remains uncertain. Although the differences of nursing programmes between western and eastern cultures have been reduced due to the globalisation process and advanced technology of information exchange (Wang, 2003), critical thinking and creativity may not be highly appreciated in nursing education in Chinese contexts. Since learners may have different understanding and expectations towards critical thinking and creativity in nursing education, this study aims to fill the gap between learners and educators by revealing learners' perspectives towards critical thinking and creativity in nursing education.

Methods

Design

This study adopted a qualitative research approach to explore nursing students' perspectives towards critical thinking and creativity through group interviews and concept map drawing. The use of semi-structured interviews enables interviewers to elicit information on specific topics by making reference to participants' own experience while drawing concept maps is a common participant-oriented strategy in nursing and psychological research that facilitates free reflection on personal experiences (Ausband, 2006; Guez et al., 2010). Through drawings, participants often reveal more diverse and deeper views subconsciously (Andrews and Ridenour, 2006). Therefore, the data collection strategies adopted in this qualitative research consisted of class interviews and concept map drawing.

Sample and Setting

A total of 36 year one and year two students (including 10 males and 26 females) were recruited from two problem-based learning classes of Bachelor of Science in Nursing Programme at one University. Each group of participants then attended a two-hour interview facilitated by the researcher and a trained research assistant in a private room before they were asked to create concept maps for critical thinking and creativity respectively within an hour. Before the study, ethical approval of audio recording was obtained from the Human Subjects Sub-committee of the University and a consent form with an information sheet was signed by all participants in advance.

Data Collection and Analysis

Since group interviews can provide diverse perceptions via discussion among participants (Gerrish and Lacey, 2006), two class interviews were conducted with a total of 36 learners. Participants were also asked to create concept maps to apply decision-making ability in showing the relationship between main themes and sub-concepts (Noonan, 2011). The data collected were transcribed verbatim and translated in English. The narratives were examined by the researcher and the research assistant through content analysis and main ideas were summarised in narrative themes (Krippendorff, 2004; Hall and Irvine, 2009). To discover the causal connection among critical thinking, creativity, and other exogenous variables, such as experience and knowledge, an axial coding approach was adopted (Strauss and Corbin, 1998). To ensure that data analysis was conducted in a rigorous and comprehensive manner, regular meetings were held to discuss categories selection and data saturation.

Results

Based on the content analysis of data, learners' perspectives on critical thinking were summarised in the following three themes: "revisiting the meanings of critical thinking"; "critical thinking and knowledge: partners or rivals?"; and "is critical thinking criticising?"; while their perspectives on creativity were thematised as: "revisiting the meanings of creativity"; "creativity and experience: partners or rivals?"; and "should creativity be practical?". The quotes were identified with the code Y denoting the year in programme and S denoting the student number. Two concept maps were selected to depict learners' perspectives on critical thinking and creativity.

Revisiting the Meanings of Critical Thinking

Although critical thinking is a popular term in education, some participants admitted that they did not know what it means. By making reference to their own experience, the other participants generally thought critical thinking should involve logical reasoning and that in order to help understand the world and solve various problems, critical thinking should emphasise on making an argument with sound evidence rather than merely expressing an opinion:

- "Our instructor told us that if we want to show that we have thought thoroughly in our written reports, we could simply add our own opinion. But if we want to demonstrate our critical thinking competence, we have to support our arguments with reason or evidence." (Y1S13)

Some participants added that critical thinking is not an exclusive competence of highly-educated people but that everyone can think critically on different scales. A majority of participants echoed that critical thinking refers to multi-dimensional perspectives of high quality thinking:

- "My teacher said critical thinking should be renamed as 'multi-dimensional thinking'. A coin has two sides or even more. One