Measuring Thinking Worldwide

This document is a best practices essay from the international, multidisciplinary collection of teaching and training techniques, “Critical thinking and Clinical Reasoning in the Health Sciences.” Each essay in this set provides an example of training reasoning skills and thinking mindset described by international experts in training clinical reasoning.

Interpreting Benevolence and Righteousness in Contemporary Health Care

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With Hong Kong now seeking to identify the essential learning outcomes of its educational programs, Dr. Tiwari and her research team are assisting by delineating more fully the manifestations of good critical thinking and clinical judgment in professional practice. We are as eager to see the fruits of this work as we were years ago when she and her team achieved a culturally competent authorized Chinese translation of the California Critical Thinking Disposition Inventory (CCTDI) for use in Hong Kong.

In this chapter Tiwari and Yuen bring us a thoughtful discussion of the impact of culture on the expression of thinking and judgment. The context of the lesson is health care ethics built on a traditional reading about the ethical assumptions behind everyday discourse. Finally, this lesson includes a well-integrated assessment of progress in developing critical thinking skills. This assessment is done by the professors, and, perhaps just as importantly, it is performed by the students themselves. This type of internalization of the criteria for demonstrating strength does much for developing the habits of mind of demanding strong critical thinking dispositions. This chapter is a jewel of a lesson – one to be contemplated and remembered.
Class session and students
This is an example taken from a class we teach to the master of nursing students. The class is the first session in the Philosophy & Science of Nursing course. As is true of most students in Hong Kong, our nursing students come from a Chinese culture with a highly competitive, examination-oriented, and teacher-dominated educational experience. Although the ‘traditional’ Chinese culture has been modified in recent decades with increasing contacts with the Western culture, some elements of the tradition remain, particularly in aspects of childrearing and education. An emphasis on social harmony and affective control would be the norm for our students while challenging authoritative statements and expressing their private thoughts publicly would not come naturally to them. Furthermore, they would expect classroom activities to be a means of acquiring words of wisdom from the knowledgeable teachers/professors rather than a forum for them to engage in dialectical discussion. One of the objectives of the Philosophy & Science of Nursing course is therefore to encourage students to break free from an authoritarian tradition that has inhibited their desire to search for meaning and truth.

The goal of the class session
Our goal in this class for our students is that they should strengthen their critical thinking skills and be better able to integrate the skills with confidence and good judgment in their professional work. We mainly focus on the skills of interpretation, analysis, evaluation and explanation as these are more likely to be under-developed in our students given their educational experience in a teacher-dominated, hierarchical and didactic classroom.

The actual material used for the class session
We have purposefully selected a short chapter on the principles of benevolence and righteousness taken from the Book of Mencius (Table 1), an authoritative seminal work that would not be unfamiliar to our students. Challenging authoritative statements, however, would be a novel undertaking for the students as the usual way of learning such seminal work is by understanding the teaching of the master (Mencius in this case) and adopting the authoritative principles in their daily practice. By asking the students to conduct a critical appraisal of Mencius’ teaching on benevolence and righteousness and to provide justifications for their conclusion, we seek to promote their skills in interpreting statements, analyzing arguments, assessing claims and presenting reasoning. With practice, we hope that the students would acquire confidence in and develop an inclination to applying their critical thinking skills to authentic life or work situations.

Learning objectives
By examining the Chapter on Benevolence and Righteousness taken from the Book of Mencius, students who participate in this lesson will be able to:

1) comprehend and express the meaning of benevolence and righteousness in the contemporary healthcare context;

2) identify the reasons in support of their opinions regarding the importance of applying the principles of benevolence and righteousness to the provision of healthcare;

3) assess the credibility of their expressed opinions; and

4) justify their reasoning in terms of evidential or conceptual considerations.

What we do before class even begins
Before the class, we need to prepare the material for the discussion, which includes the original Chinese version of the Chapter on Benevolence and Righteousness and its English translation (Table 1). The English translation is necessary because many of the students would have some difficulty reading the writing of Mencius as it is not written in modern Chinese. Since the students are adept at reading Chinese and English, a bi-lingual presentation of the Chapter will help them decipher the writing in a less time-consuming manner. We also prepare guidelines to help the students conduct a critical, interactive and hopefully, dialectical discussion. The guidelines are written as a series of critical thinking questions based on the learning objectives of
the session (Table 2). We deliberately label the questions as “critical thinking questions” so as to remind the students that they are practicing their skills in critical thinking. Since “critical thinking” is frequently talked about by students and teachers in our tertiary education institutions, it is often treated as a cliché with little regard given to how it is to be acquired or practiced.

**How we teach this lesson**

We start the lesson by reiterating the key thinking that underpins the Philosophy & Science of Nursing course: the advancement of nursing science requires its practitioners to have the skills and inclination to reflect on the quality of one’s thinking and to use one’s critical thinking skills to engage in more thoughtful thinking and problem-solving in work situations. We tell the students that the Chapter on Benevolence and Righteousness by Mencius provides the context for sharing of views and engagement in mutual and reciprocal critique in this lesson. We then ask the students to read through the Chapter on their own, allowing five minutes or so for this quiet reading activity. More time may be added if necessary. We encourage the students to do their own reading first before moving onto group discussion so that they have a chance to think on their own rather than relying on others’ points of view.

After the individual reading, students form discussion groups. Each group consists of 8 - 9 students. Within each group, students further divide into A and B groups for the purpose of completing the group tasks. Table 2 shows the guidelines for group discussion which list the learning objectives and the critical thinking questions for each of the objectives. We choose a seminar room (with capacity for 50 students) for this activity. The groups work through the learning objectives one by one, tackling the critical thinking questions as required. We deliberately give the groups only five minutes to work on each of the objectives as in authentic work situations nurses usually have little time to think before having to respond to problems. Acting as facilitators during the student-led discussion, we assist the groups to focus on the set tasks and adhere to the time allowed for each objective where necessary.

The group’s performance during the discussion is observed and recorded unobtrusively using the *Holistic Critical Thinking Scoring Rubric* (HCTSR)
. In the first lesson of the course, one of us performs the task of recording these observations, as none of the students would have any experience of using the HCTSR. In the subsequent lessons, two students from each group independently rate the group’s performance using the HCTSR. Students rotate to serve as raters so that by the end of the course, every student would have had at least one chance of rating his/her group.

After the group discussion, a “think-aloud” method is used to provide feedback on the group discussion. In the first lesson, the “think-aloud” is led by the facilitator. With reference to the different levels of the HCTSR, a description of the group’s performance while tackling the critical thinking questions during group discussion is read out. Where possible, verbatim transcripts of the discussion are used to illustrate the level of the HCTSR demonstrated by the group. For example, in the first lesson, biased interpretation of evidence is detected in the group discussion in which a group member declares that the local private hospitals are only concerned about “li” (financial gains) and only the public hospitals can afford to care about benevolence and righteousness in health care provisions. The member’s interpretation reflects her biased assumption that private patients have to pay a large sum for their care whereas patients in public hospitals have only to pay a nominal amount. In reality, her assumption is not upheld as competition among private hospitals has helped to ensure that private care is affordable for a greater number of health care users while health budget cuts have necessitated public hospitals to impose charges at a market price for a number of diagnostic procedures and operations. The group does not question her biased interpretation. In the ensuing discussion, it soon becomes apparent that the group has failed to question the meaning of Mencius’ principles of benevolence and righteousness. By highlighting the deficits based on the HCTSR, we are then able to work with the group members in improving their critical thinking skills.

While facilitator-led “think-aloud” is useful in providing feedback, peer-led “think-aloud” is more beneficial for group learning in terms of enhancing critical thinking skills. Therefore, we use facilitator-led “think-aloud” for the first lesson only and peer-led “think-aloud” is conducted for the rest of the course. The role of the facilitators during peer-led “think-aloud” is to act as critical peers, which includes questioning assumptions or demanding justifications where appropriate.

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1 The *HCTST*, Facione & Facione, 1994 is reprinted with instructions for use in the final chapter of this teaching anthology.
Feedback from the students

Initially, students may not be used to this format of learning. They may be confused about their role in the group discussion, for example, those in Group A may perform the tasks assigned to Group B if the latter fails to perform well, and vice versa. Discussion, at the early stage, tends to be superficial and descriptive, with little evidence of dialectical debate. Assumptions are often offered and accepted with little questioning. After the facilitator-led “think-aloud”, most of the students would realise where they need to improve. But the most noticeable improvement comes when students take charge of their own rating of performance and “think-aloud”. This is particularly true for the raters who have to give feedback to group members.

Subsequent to their experience in providing the “think-aloud”, the student-raters generally take a more critical stance and provide a more noticeable leadership in the ensuing group discussions. The impact of the “think-aloud” is best illustrated by the student who demonstrated a biased interpretation as described earlier. At the end of the first lesson, she approached one of the authors and expressed her difficulty to hold her own view when facing people with authority. She was helped to analyze her own deficits in critical thinking and work out some remedial measures. After several rounds of “think-aloud”, not only was she playing a more active role in the group discussion, she was evidently more thoughtful when analyzing points of view and more confident in justifying her decisions. Her group’s performance also improved from level 2 (at the first lesson) to level 4 (at the sixth lesson) of the HCTSR.
Table 1. Benevolence and righteousness from the Book of Mencius

<table>
<thead>
<tr>
<th>The Works of Mencius</th>
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<tr>
<td>Book 1, Part I: King Hûi of Liang</td>
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<tr>
<td>Chapter I. Benevolence and righteousness</td>
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|Mencius’s only topics with the princes of his time; and the only principles which can make a country prosperous.|

1. Mencius went to see king Hûi of Liang.

2. The king said, ‘Venerable sir, since you have not counted it far to come here, a distance of a thousand li, may I presume that you are provided with counsels to profit my kingdom?’

3. Mencius replied, ‘Why must your Majesty use that word “profit?” What I am provided with are counsels to benevolence and righteousness, and these are my only topics.

4. ‘If your Majesty says, “What is to be done to profit my kingdom?” the great officers will say, “What is to be done to profit our families?” and the inferior officers and the common people will say, “What is to be done to profit our persons?” Superiors and inferiors will try to snatch this profit the one from the other, and the kingdom will be endangered. In the kingdom of ten thousand chariots, the murderer of his sovereign shall be the chief of a family of a thousand chariots. In the kingdom of a thousand chariots, the murderer of his prince shall be the chief of a family of a hundred chariots. To have a thousand in ten thousand, and a hundred in a thousand, cannot be said not to be a large allotment, but if righteousness be put last, and profit be put first, they will not be satisfied without snatching all.

5. ‘There never has been a benevolent man who neglected his parents. There never has been a righteous man who made his sovereign an after consideration.

6. ‘Let your Majesty also say, “Benevolence and righteousness, and let these be your only themes.” Why must you use that word -- “profit?”

Figure 1. Benevolence and righteousness from the Book of Mencius
Table 2. Guidelines for Group Discussion: The application of the principles of Benevolence and Righteousness to the contemporary healthcare context

<table>
<thead>
<tr>
<th>Learning Objectives</th>
<th>Critical Thinking Questions</th>
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<tbody>
<tr>
<td>1. To comprehend and express the meaning of benevolence and righteousness in the contemporary healthcare context</td>
<td><strong>Group A</strong> to pose the question: “Should Mencius’ principles of benevolence and righteousness, rather than ‘利’ (financial gain), be the guiding principles for providing healthcare?” (May follow up on the answers provided by group B as appropriate)</td>
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<td></td>
<td><strong>Group B</strong> to respond to the question and follow-up questions.</td>
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<tr>
<td>2. To identify the reasons in support of their opinions regarding the importance of applying the principles of benevolence and righteousness to the provision of healthcare</td>
<td><strong>Group A</strong> to pose the question: “Why do you think that?” (May further explore the answers provided by group B)</td>
</tr>
<tr>
<td></td>
<td><strong>Group B</strong> to respond to the question and follow-up questions.</td>
</tr>
<tr>
<td>3. To assess the credibility of their expressed opinions</td>
<td><strong>Group A</strong> to determine if the reasons given by group B are likely to be true or false and may ask group B to provide new information to further confirm their expressed opinion.</td>
</tr>
<tr>
<td></td>
<td><strong>Group B</strong> to respond to group A’s request for further confirmation as necessary.</td>
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<tr>
<td>4. To justify their reasoning in terms of evidential or conceptual considerations</td>
<td><strong>Group B</strong> to justify the reasoning upon which their position on the importance of applying the principles of benevolence and righteousness to the provision of healthcare is based: “we believe that benevolence and righteousness are/are not important guiding principles in the provision of healthcare based on the following evidence and counter-evidence…”</td>
</tr>
<tr>
<td></td>
<td><strong>Group A</strong> to express their approval or disapproval of group B’s justifications.</td>
</tr>
</tbody>
</table>

“*A comparison of the effects of problem-based learning and lecturing on the development of students’ critical thinking.*” Authors: Tiwari, Agnes; Lai, Patrick; So, Mike; Yuen, Kwan. Source: Medical Education, Volume 40, Number 6, June 2006, pp. 547-554(8). Publisher: Blackwell Publishing.

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