

Critical thinking skills for healthcare

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Critical thinking is an essential goal of all education, particularly higher education. However it is:

A complex and controversial notion that is difficult to define and, consequently, to study. (Abrami et al., 2008, p.1103).

The critical thinking movement that emerged in North America in the 1980s was characterised by debate around how this concept should be defined, as well as how it should be taught. With these debates in mind, in 1990, a multidisciplinary panel of experts collaborated using the Delphi method to come to a consensus that included the following statement:

We understand critical thinking to be purposeful, self-regulatory judgement which results in interpretation, analysis, evaluation and inference, as well as explanation of the evidential, conceptual, methodological, criteriological or contextual considerations upon which that judgement is based. (Facione, 1990, p.3).

This aligns with the 'student-centred' definition presented by McKendry in her book, which requires the capacity to:

Ask awkward or uncomfortable questions and not be dismissed with easy answers; consider issues from an objective viewpoint and evaluate varying perspectives before coming to a balanced judgement that can be substantiated with credible evidence. (p.1).

This book addresses the question of **how** to think rather than **what** to think and is most suitable for undergraduates in a healthcare context. Chapter one, 'taking a critical approach in everyday life', leads the reader in gently, and is very much targeted at less experienced learners. However this is a book that one can certainly 'dip into' at any place, and more experienced university students might prefer to start at chapter two, 'taking a critical approach at university', in which skills involved in critical thinking are further clarified (p.17):

- Weighing up an argument from many perspectives.
- Evaluating evidence.
- Challenging assumptions (your own, as well as others).
- Investigating the context of any work or statement.
- Questioning and examining everything you encounter.
- Thinking at a deep rather than surface level.
- Making logical connections between ideas and knowledge.
- Relating theory to practice (and vice versa).

Critical thinking skills are more important than ever in clinical practice. In an era of evidence-based medicine and a plethora of practice guidelines and algorithms, it is essential that healthcare practitioners are aware that these do not take all contextual factors into account. This book is timely and very accessible, being well structured around a clear set of learning outcomes (p.5). These form the basis for the following sections, in which I summarise the content of the book, and highlight some of the important messages.

Recognising critical thinking

Learning outcome: You will recognise your existing ability as a critical thinker. (p.5).

While this is a key theme throughout, two chapters specifically focus on this learning outcome. Chapter one fosters a systematic self-evaluation of general critical thinking skills, while chapter two aims to foster a more critical approach in academic work. Everyone will relate to the use of:

- The toddler question: 'why?' (p.24)
- The teenage question: 'so what?' (p.25)

as techniques to foster a critical approach to everything, including the process of reflection (p.102).

Spotting flaws and inconsistencies in arguments

Learning outcome: You will be able to spot logical flaws and inconsistencies in arguments. (p.5).

In order to be able to identify flaws and inconsistencies in an argument, an understanding of how one is constructed is essential. This is addressed in chapter four, 'building a rational and credible argument', wherein the reader is guided through the process of deconstructing an argument. Examples of common mistakes in reasoning are also nicely highlighted, chapter-by-chapter:

- Ad hominem arguments (p.27).
- Cherry-picking the literature (p.47).
- The non sequitur (p.58).
- Ad populum and received wisdom (p.72).
- Causation versus correlation (p.85).
- Representing all sides of an argument equally (p.98).
- False cause (p. 107).

Considering multiple perspectives

Learning outcome: You will learn to consider health issues from multiple perspectives, weighing up the strengths and weaknesses of a case. (p.5).

The fundamental importance of considering different perspectives around healthcare issues is identified from the start and is a key theme throughout the book. Chapter three, 'taking a critical approach to reading', encourages reading beyond one's discipline and

profession and the demonstration of criticality through defining and explaining the limits of transferability between discipline areas. Critical thinking however requires more than this, and chapter four encourages the use of different sources from diverse areas to build an argument while chapter five, 'taking a critical approach in assessments', focuses on how to bring these approaches together in communicating with others.

Building a convincing argument in assessments

Learning outcome: You will be able to build a convincing argument in assessments. (p.5).

This is a practical book for the undergraduate student for whom assessments are a key driver of learning. While **creative** thinking is not the same as **critical** thinking, they overlap and constitute 'good thinking'. I like the emphasis therefore, in chapter two, on the creation of 'a novel or unique argument' (p.18) by the good critical thinker. Taken together, chapters four and five facilitate the building of rational and credible arguments. With a view to writing essays, or preparing for exams or presentation, chapter five in particular reminded me how important the process of critical thinking is to learning. This deep approach to learning is based on constructivism, i.e. learners structuring their own understanding based on their experience of the world.

Developing a range of critical skills for successful study and healthcare practice

Learning outcome: You will develop a range of critical skills for successful study and healthcare practice. (p.5)

Critical thinking is described as the **ability** to grasp inferential connections, which should also be **exercised** (Mulnix, 2012). This exercising of critical skills is considered as an important component of their definition and various facets of this theme are addressed throughout the book. In chapter one, the systematic self-evaluation of general critical thinking skills encourages the reader to identify their own needs for further development and steps to address them. Then, shifting from reflection on skills, to practice, I like the simple three-step model of a critical approach outlined in chapter two (pp.17-18):

1. Get to the heart of the concept/theory/argument with which you are engaged.
2. Analyse and evaluate that concept.
3. Synthesise the concept along with others to construct your own argument.

Chapter three is a strong chapter supporting this learning outcome, as the reader is supported to develop skills in relation their reading. It is written clearly and of sufficient depth for visual and verbal learners. Those with a good knowledge of statistics however, should probably avoid the section on critically reading graphs since this is dealt with superficially. This is one topic for which references to other resources would have been helpful to students. On the other hand, the tools suggested for synthesising literature, including guidance towards thematic analysis, were extremely helpful. Chapters four and five use examples and activities relevant to healthcare to encourage the reader to deepen and hone critical skills for study and practice.

Today it is easy to be overwhelmed by the volume of healthcare literature, and as practitioners we will frequently use literature reviews, or perhaps be in a position to write our own. Chapter six, 'taking a critical approach in literature reviews', is therefore an important one and, in conjunction with chapter seven, 'taking a critical approach in dissertations', is a sound introduction for healthcare students and practitioners seeking to increase research skills.

Reflection is a key component of healthcare practice and chapter eight encourages the reader to take a critical approach to 'actions, feelings and attitudes' (p.100), by linking theory to practice, particularly in the writing of reflective assessments.

Concluding comments

Undergraduates are constantly asked to evaluate evidence, and to be critically reflective. It is particularly important not only to introduce all healthcare professionals in training to these ideas, but also to facilitate the practice of critical thinking. This book does this successfully. It provides excellent starting points, leading the reader through a variety of concepts and, most importantly, provides practice examples to develop essential skills.

Critical thinking, as presented in this book, places the student at the heart of the learning experience. Being comfortable with uncertainty and taking responsibility for their own learning are key steps in developing criticality. As the book points out and reinforces, becoming and being comfortable with uncertainty is of critical importance in healthcare:

I would certainly prefer to be treated by a professional who questioned, evaluated and made up their own mind rather than someone who blindly followed instructions and believed in absolute certainties in all areas of their work. (p.26).

If there is a flaw in the book, it is that it does not include a bibliography or reference to an evidence base. Why is this approach to developing critical thinking skills useful? What is the evidence for this? This would have been helpful for teachers who might recommend the book to their students. It would also have been useful for the reader to have a list of resources for further practice. In a book on critical thinking skills, if it is successful, it is inevitable that the reader will apply the principles to the book itself. Indeed students with greater self-awareness and understanding of critical thinking as a process would expect to see the evidence on which the definitions and frameworks are based. However the book includes an appropriate caution about the use of frameworks for critical analysis in terms of any kind of formulaic approach:

Frameworks are there to provoke critical engagement, to assist you in asking the right questions and knowing what to look for with different kinds of research. They do not provide a ready-made template for critical reading, however... frameworks must themselves be used in a critical manner. (p.44).

This book is excellent for the independent learner. However, in order to ensure the use of critical thinking skills in healthcare education and practice, greater attention should be paid to the context. There should be greater clarity as to the requirement for critical thinking and the environment necessary to encourage it should be explicitly nurturing. In higher education the language of intended learning outcomes should therefore align appropriately with the outcomes for developing critical thinking. Further more it is important that close attention is paid to the design of research that will contribute to the evidence base around the success of interventions supporting the learning of critical thinking skills (Behar-Horenstein and Niu, 2011). In a recent systematic review of knowledge sources used by newly graduated nurses, it was concluded that they tend to:

Draw uncritically on the experienced co-worker as primary knowledge source [and clinical practice] needs to provide a supportive environment which nurtures critical thinking. (Voldbjerg, 2016, p.1).

The development of critical thinking skills oriented towards evolving autonomy or self-regulation, is dependent on sufficient practice. If 'critical thinking is not a method to be learned, but rather a process' (Simpson and Courtney, 2002, p.91), then it is best supported by an approach that inspires and facilitates practice. This book does just that. Indeed the principles and exercises in the book are helpful for students beyond healthcare studying in other areas in higher education.

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