

## **Propositions belonging to the thesis**

### **Self-explanation fosters clinical reasoning among medical students**

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1. Self-explanation used by medical students at clerkship level while solving unfamiliar clinical cases improves their diagnostic reasoning  
(This thesis)
2. The mechanism behind self-explanation is that students are encouraged to elaborate on, and to revise their specific knowledge relevant to the clinical situation.  
(This thesis)
3. Students were shown to activate predominantly biomedical knowledge while engaging in self-explanation. This illustrates the importance of biomedical knowledge in the construction of coherent mental representations of diseases.  
(This thesis)
4. Clinical reasoning in practice is a complex, ill-structured cognitive skill, which occurs most of the time in silence. Fostering self-explanation represents a practical strategy to make explicit for others (peers, teachers) the process and the knowledge used while solving cases, allowing them to learn from it.  
(This thesis)
5. Students seem to better learn from examples having intermediate levels of expertise than from peers' or experts' examples.  
(This thesis)
6. The use of prompts requiring students to generate explanations about underlying mechanisms, or that invite them to compare and contrast their knowledge representation with the one provided by the example, further support students' learning.  
(This thesis)
7. When the solution of a problem is not immediately available, experts demonstrate additional skills in accessing information and generating innovative solutions that ultimately improve practice.  
(Mylopoulos & Regehr 2011)
8. Effective clinical problem solving needs to be patient-centered and requires effective communication skills (during the whole process) since elicitation of valid data depends on understanding patient's beliefs, interpretations and expectations and choice and

implementation of successful therapy necessitates patient's partnership, understanding and collaboration

(Silverman & Kurtz 1998, 2003)

9. Clinical teaching is a unique and challenging teaching setting because it involves interactions between patients, students and clinical teachers, in which the latter simultaneously engage in clinical and pedagogical reasoning.  
(Irby 1992, 1994, 2014)

10. In academic internal medicine teaching units in Canada, medical teaching teams involved with inpatient care develop progressive collaborative refinement of representation and understanding of the multiple and complex patients' problems; however to better impact on patient care, the challenge is to capture, document and transfer this information through optimal transition of care.  
(Goldszmidt et al 2014)

11. In the present Ebola virus epidemic in West Africa, while waiting for effective vaccines and other specific treatment, significant decrease in fatality rate could be achieved right now by implementing best practices of basic supportive care.

(My colleague and friend François Lamontagne et al., at the bedside caring for patients in Liberia, 2014)