

Human Factors Engineering II

Discussion Questions for Working Minds

Crandall, B., Klein, G., & Hoffman, R.S. (2006). *Working Minds: A Practitioner's Guide to Cognitive Task Analysis*. Cambridge: The MIT Press.

Chapter 1. Introduction

1. In your own words, what is the goal or purpose of Cognitive Task Analysis (CTA)?
2. In your own words, define CTA by “unpacking” these three words: Cognitive, Task, and Analysis.
3. In your own words, what is the purpose of this book?
4. (Optional) Why is “*Working Minds*” a good title for this book?

Chapter 2. Overview of Cognitive Task Analysis Methods

1. Think of a potential problem-solving domain where CTA might be applied to advantage. Ideally it should be in a domain related to the problem-solving domain you chose for the discussion questions for the Introduction to *Thinking, Fast and Slow*, but it need not be, and it need not be the domain which you finally choose for your HFE II CTA project.
 - a. What is the domain (e.g., medical diagnosis)?
 - b. What problem might CTA help understand (e.g., diagnosing infectious diseases merely from signs and symptoms and without the benefit of a modern medical lab)?
 - c. What kinds of solutions might a CTA suggest (e.g., clinician selection and training, a meaningful way to display clinical data, a decision aid)
2. (Optional) Explain knowledge elicitation, analysis, and representation in the context of this domain (see previous question).
3. What are the main data collection methods used in CTA and how might they be applied in your domain?
4. (Optional) Where could you look for CTA data for your domain in time, realism, difficulty, and generality?
5. (Optional) What types of data analysis and representation might your CTA yield?
6. Briefly (i.e., in one or two sentences) describe one or two more potential domains for your HFE II CTA project.