Critical thinking is a process of “conceptualizing, applying, analyzing, synthesizing, and/or evaluating information…” (criticalthinking.org). Critical thinking is different from other types of cognition in that critical thinkers specifically:

- Acknowledge the complexity of decisions.
- Understand that information is rarely complete.
- Are motivated by facts, observations, and reasoning rather than emotion, habits or heuristics.

To improve your critical thinking, both in the MBA program and in your future career, the faculty at Neeley have designed The Neeley FROG Model for Critical Thinking. It’s a simple model for use in critical thinking situations, including decision making, problem solving or the assessment of implementation issues. The questions contained within each step in the model are not fixed or exclusive (i.e., some situations will require additional questions, others may require fewer questions), but they should get you started in your critical thinking process.

What is critical thinking?

What’s with the FROG?
Frame
the Issue

Focus on divergent, and then convergent, thinking

Identify, gather and analyze relevant information to understand the context. Determine whether the issue is:

- A problem for which we need to identify a root cause.
- A decision for which we need to make a choice.
- An implementation issue for which we want to either optimize the likelihood of implementation or fully develop what we are implementing.

Possible Questions to Consider

- Why is this issue important?
- Who are the stakeholders (e.g., employees, clients, investors, suppliers, industry/competitors, community, environment, etc.) and what are their interests?
- What information and criteria are needed to completely address this issue?
- In what way is the current situation different from previous issues?
- What are the key assumptions?
- What are the key uncertainties (e.g., lack of information, changes in technology or regulations, etc.)?
- What are the key ethical issues?
- What is going on in the broader environment (business unit, organization or market)?
- Could this issue be a symptom of something bigger? (see “Five Why’s” technique)
- If multiple issues are identified, how are they prioritized? How are they interrelated?
  - Short-term impact and urgency
  - Long-term impact
- What is the goal(s) for addressing this issue?
- Develop a succinct statement of the issue that addresses the central aspects.

Recognize
Possible Approaches

Focus on divergent thinking

Using your best creative thinking, brainstorm about all of the possible approaches that could address the issue(s).

Possible Questions to Consider

- How well does each alternative address the criteria above (purpose, values, goals) in relation to your issues?
- How likely is each alternative to be successful?
- What are the potential costs, limitations, implications, unintended consequences of each alternative (e.g., capabilities, readiness, training, etc.)?
- Which of these alternatives are within the control of management?
- What about ongoing control issues?
- What ethical issues may be relevant here?
- What evidence supports each alternative?
- What additional information would be most valuable to acquire?
- What could cause each approach to fail (i.e., play devil’s advocate)?
- What would be the best arguments against your preferred approach?
- How would a reasonable person disagree?
- If considering this evidence as a group, what efforts have been made to avoid groupthink and to include a diverse perspectives?
- Consider the short-run versus long-run implications: optimizing versus satisfying.
Focus on convergent thinking

Consider which approaches best address the issue(s).

- Is there one best approach?
- Or could there be a combination of approaches (i.e., move from “either/or” to “and” thinking)?
- When and how should a particular approach be implemented?
- Is there a particular sequence of actions needed to ensure your approach is successful?
- What might go wrong in implementing a particular approach?
- How will you communicate the logic behind the decision (why and how you chose this decision, including quantitative and qualitative justification)?
- To whom do you need to communicate the decision?
- When and how will this information be communicated?

Focus on reflection

Take the time to consider your critical thinking, both the process and the outcome.

- What did you learn about your process?
- Did you define the issues at hand well enough given the information available?
- Was there additional information you should have identified?
- Did you generate the right set of approaches?
- Did you select the right approach?
- If so, how do you know?
- If not, why not?
- What would you do differently next time?
- What does this process teach you about your approach to handling messy situations?
- If you found issues that relate to your mindset, how will you address these issues going forward?

Possible Questions to Consider
INTELLECTUALLY CURIOUS
Deeply understands domain knowledge that can be used to resolve the issues presented, which includes the ability to correctly choose the most relevant or applicable domain knowledge. Self-motivated to understand or figure out the issue at hand for the simple pleasure of learning.

PERSISTENT, PATIENT AND DISCIPLINED
Appreciates that identifying the correct problem or issue is as important or more so than identifying a correct answer/solution. Works through analyses and arguments in a thorough, systematic fashion, not skipping steps in the analytical process nor jumping to conclusions.

CREATIVE AND FORWARD-LOOKING
Is clever in generating novel alternatives and can consider future consequences of decisions by anticipating a variety of possible outcomes (perhaps some unintended). Can combine inputs across seemingly unrelated domains and connect tactical decisions to strategic goals.

HUMBLE AND EMPATHETIC
Considers issues from multiple points of view with an appreciation for the depth and range of issues, challenges, competing interests, ambiguities and uncertainties that arise in complex business situations. Able to consider alternate points of view from self in order to absorb such arguments fully and is receptive to changing one’s mind.

INTROSPECTIVE WITH A LEARNING ORIENTATION
Able to be self-monitoring, self-correcting and self-motivating in order to improve one’s skills.

LOGICAL AND RATIONAL
Can analyze and make arguments in which the conclusions follow from the premises. Understands the prevalence of emotions in self and others and can formulate arguments grounded in reason, not emotion.