

White Paper

Critical Thinking: The Essential Skill for Navigating the Future

Why Critical Thinking is Essential Today

Our world is evolving at a mind-boggling pace. Experts suggest that the digital universe of information doubles every two years, and we are confronted with more data, information, and decisions than ever before. This has real consequences: Scientists have determined that humans can suffer from decision overload. In fact, being faced with many decisions, regardless of whether they are inconsequential or important, can create “neural fatigue.”¹ Our brains, it seems, are designed to handle a finite number of decisions each day, and beyond that limit, our ability to make more diminishes, regardless of how important they are.

That’s bad news for businesses and organizations that are trying to navigate today’s fast-changing, unpredictable environment, because our success — in business and in life in general, both as individuals and as organizations — rests in large part on the quality of the decisions we make. Access to information has never been easier, but reliable voices can be more difficult to recognize among the explosion of sources competing for attention. And while one of the newest, most sought-after competitive advantages is big data, information itself isn’t particularly useful unless people are skilled in evaluating its credibility and accuracy, asking good questions about it, and deciding what should be done in response to it.

Critical thinking is becoming even more important

One of the most important skills in this environment is the ability to think critically. Critical thinking can be described as *self-guided, self-disciplined thinking which attempts to reason at the highest level of quality in a fair-minded way.*² In 2020, a report by the World Economic Forum confirmed that senior executives around the world view critical thinking skills as essential, and they expect these skills to be increasingly important for workplace success. The chart below shows the top skill groups that employers see as rising in prominence in the lead-up to 2025.³

Relative Importance of Different Skill Groups



Source: World Economic Forum “Future of Jobs” 2020

¹ Amir, On. “Tough Choices: How Making Decisions Tires Your Brain.” Scientific American, Scientific American, 22 July 2008, www.scientificamerican.com/article/tough-choices-how-making/.

² Definition from The Foundation for Critical Thinking at www.criticalthinking.org. 2020.

In a recent survey by Dale Carnegie Training across 20 countries and territories, 57% of respondents identified critical thinking as among the top skills needed to prepare to be successful to work in an environment complemented by artificial intelligence, ranking it tied with teamwork and behind only communication skills and creativity.⁴

Critical thinking is a disciplined form of thinking that can be applied to any topic or problem. Examples might include:

- A manager trying to help resolve a disagreement among employees by understanding each side's perspective, evaluating options, and deciding on a path forward that will be perceived as fair to everyone involved.
- A high school student comparing options for post-secondary education, considering the value each could provide, the costs involved in attending, and available funding sources.
- A marketing team working together to create a plan to launch a new

product involving decisions on how to allocate resources among various advertising channels to best reach the targeted consumer segments.

- An accountant preparing to advise a client on how to plan for changes to the tax laws based on their individual financial situation.

Critical thinking requires thinkers to actively improve the quality of their own thinking by deliberately managing the process. Of course, all humans think, but generally we do so without consciously considering the act itself. Unfortunately, it's also quite human for our unmonitored thinking to suffer from misperception, bias, preconception, and distortion. Not only does the quality of our thinking impact the quality of our decisions and lives, it can be argued that critical thinking is the very foundation for transformational change.

For successful transformational change, where the future state is profoundly different from the current one, innovation and intelligent risk-taking along the way are key, and that makes critical thinking essential. Multiple studies have also found a positive correlation between critical thinking and transformational leadership, which is widely held to be the most effective type of leadership for effecting organizational change in a dynamic environment.⁵ But true organizational transformation requires the involvement of more than just leaders.

First, most decisions are best made at the level at which they will be implemented, taking advantage of the expertise and knowledge of those working directly on the problem. Second, real transformation can happen only when employees at every level adopt new mindsets and behaviors and work together to create a new culture that both emerges from and serves the organization's higher purpose. It's not enough to have their full involvement, though, unless those at every level are also equipped to contribute successfully.

Effective critical thinking enables effective problem solving and creativity, and it supports rational decision making. For all of these reasons, employees as well as their leaders recognize its value.

% who say
critical thinking is
among the most
important skills for
future work

USA	62%
India	61%
China	53%
Germany	52%
UK	55%
Brazil	63%

Source: Dale Carnegie Training

⁴ Dale Carnegie Research: AI & Agility 2019.

⁵ Y. Mao and Y. Chen, "The Empirical Research on Relationship between Critical Thinking Disposition and Transformational Leadership," *2011 International Conference on Management and Service Science*, Wuhan, 2011, pp. 1-4. Leadership." June 14, 2009.

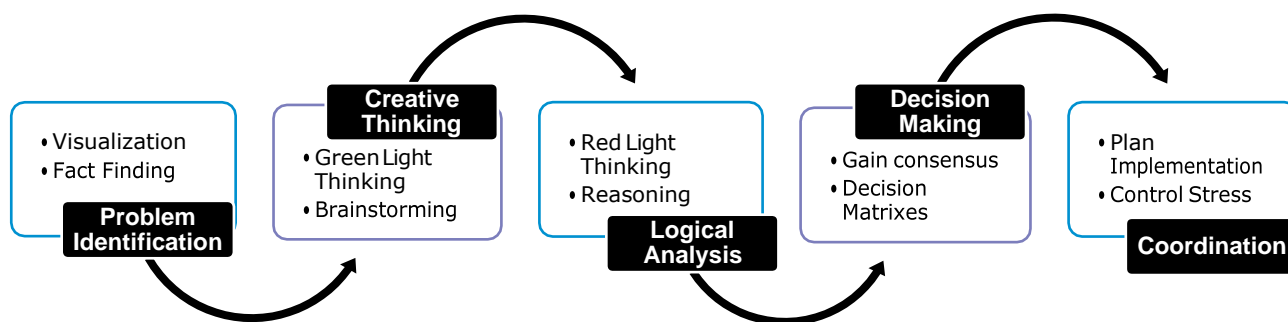
Critical thinking is in short supply

At the same time, many in leadership roles point to a shortage of critical thinking skills in the workforce. Of the soft skills that hiring managers most want to see in recent graduates under consideration for employment, critical thinking/problem solving (60%) was found to be most often lacking, according to a 2016 survey of hiring managers in the U.S.⁶ Research since then does not suggest that this skill gap is narrowing. A 2019 report found that not only was critical thinking once again among those in short supply, more than 50% of respondents “felt that the skills shortages had worsened or greatly worsened in their organizations in the last two years.”⁷

Critical thinking/problem solving is the most commonly lacking soft skill among recent graduates under consideration for employment.

So why don't more of us approach training our brains to think well, in the same way many of us train the rest of our bodies? The first reason is that it's easy to assume it's not necessary. Without an impetus for reflection upon the act of thinking, it's unlikely most people will do so. Even if we do, without a basic understanding of what constitutes quality thinking, it's challenging to effectively evaluate our own.

A second reason for the lack of focus on critical thinking is that it isn't an easy skill to teach. In contrast to many “hard skills” that can be learned through self-study, traditional coursework, and online options, less tangible “soft skills” like critical thinking generally require a different kind of cultivation that includes instruction on the concepts followed by disciplined practice over time in the real world. Dale Carnegie Training provides a model for critical thinking that can serve as a foundation for learning the skillset.



Critical thinking involves five phases:

1. *Problem Identification*, which involves clarifying the problem by first considering the goals and objectives and then visualizing the ideal outcome, as well as gathering information through fact-finding to determine the root causes for the gap between the current situation and the ideal outcome.

⁶ “Leveling Up: How to Win in the Skills Economy: the 2016 Workforce-Skills Preparedness Report.” *PayScale*, May 2016, www.payscale.com/data-packages/job-skills.

⁷ “2019 State of the Workplace.” *Society for Human Resource Management*, 2019, www.shrm.org/about-shrm/Documents/SHRM%20State%20of%20Workplace_Bridging%20the%20Talent%20Gap.pdf.

2. *Creative Thinking*, during which possible solutions to the root causes are invented or identified through brainstorming and the use of “green light thinking,” which suspends judicial thinking to focus exclusively on generating ideas rather than evaluating them.
3. *Logical Analysis*, which involves recognizing and testing assumptions, thoroughly evaluating options, controlling for biases, and ensuring that conclusions are not drawn from incorrect beliefs and mistaken observations.
4. *Decision Making*, when the methods and criteria for deciding on the path forward are determined through team consensus in a way that takes advantage of its collective knowledge and experience to assess risks and the likelihood of success and that builds commitment to the proposed solution.
5. And finally, when the solution involves others — as it almost inevitably does in any organization — the *Coordination/Implementation* phase is when timeframes are set, roles are clarified, and expectations are established. In this phase, Dale Carnegie’s advice from his book *How to Stop Worrying and Start Living* is particularly relevant: “Once a decision is carefully reached, act! Get busy carrying out your decision and dismiss all anxiety about the outcome.”

While critical thinking is clearly a set of skills that individuals must learn and practice with self-discipline, there *are* things that leaders can do to encourage the development and use of critical thinking within their own teams and organizations.

How leaders can support critical thinking

First and foremost, it is vital that leaders both develop and model critical thinking themselves.

This requires making a special effort to seek and consider input from others and discuss your decision-making process openly. It means recognizing good decisions and determining and highlighting how they were arrived at and, perhaps even more importantly, deconstructing the occasional bad decision as a learning opportunity to share with others.

Organizations should incorporate the elements of critical thinking into the design of projects and problem-solving processes. Especially as work is increasingly being accomplished by composites of traditional staff, artificial intelligence, and crowdsourcing, it’s helpful to think of the phases of critical thinking and how each resource can best be incorporated. For instance, crowdsourcing has been effectively used by local communities for problem identification, such as mapping the location of potholes or graffiti, after which point expert staff take over the critical thinking process. In other types of projects, it is the staff that formulates the precise problem, and the phase of critical thinking that involves crowdsourcing is focused on brainstorming creative solutions.

Develop the critical thinking skills of your employees, especially the younger ones. Retaining talent is a perennial challenge. Millennial and Generation Z employees are particularly driven to learn new skills and achieve career milestones, and if they don’t find the opportunities they’re seeking with one company, they won’t hesitate to look elsewhere. Helping younger hires develop enduring skills they recognize will be valuable for their career advancement is an important part of any retention strategy.

Finally, it is crucial that leaders support their employees as they learn and apply these new skills. That means accepting that mistakes will sometimes be made and helping employees work through them as learning experiences. Failure can be demoralizing to learners without encouragement from their leaders. Leaders who demonstrate confidence in employees’ ability to develop the skill are essential in moving them toward mastery.

Critical thinking: important in business and in life

While no one is perfect at critical thinking, people who commit themselves to its consistent practice are at an advantage. Strong critical thinking skills enable individuals to better understand themselves and their own opinions, help them have better relationships with others, and become better citizens. Critical thinking assists people in recognizing and avoiding overly simplistic explanations of complex issues and encourages the respectful examination of diverse perspectives without fear or bias. They are tools to help people become proactive in the face of problems, whether in their personal lives or careers. When employees are skilled at critical thinking, they are better equipped to contribute to well-considered solutions to help steer their organizations through the rough waves of change, making the organizations they work for better at navigating — and succeeding in — the new normal and beyond.

About the Author:

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About Dale Carnegie:

Dale Carnegie is a global training and development organization specializing in leadership, communication, human relations, and sales training solutions. More than 9 million people around the world have graduated from Dale Carnegie Training since it was founded in 1912. Through franchises in over 90 countries and in all 50 states, Dale Carnegie's mission is to empower organizations to create enthusiastic and engaged workforces by fostering confidence, positivity, and productive, trust-based relationships.

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