Pearson | TalentLens

Critical Thinking **Means Business**

Learn to Apply and Develop the #1 Workplace Skill of the 21st century!

By Judy Chartrand, Ph.D., Heather Ishikawa, MA, & Scott Flander

Table of Contents

Critical Thinking Means Business

Introduction

When more than 400 senior HR professionals were asked in a survey to name the most important skill their employees will need in the next five years, Critical Thinking ranked the highest – surpassing innovation or the application of information technology.[1] Such a response reflects how the nature of work – and the skills required – have been changing dramatically.

With globalization and the increased speed of business, employees at every level are facing an increasingly complex flow of information. Work settings are changing rapidly, and employees are moving into new roles, often with limited direction. Employees can no longer rely on others to make key decisions. They often must make them on their own, and quickly. And the decisions have to be good ones. If they fall short, there may be no time to recover.

Good decisions require focusing on the most relevant information, asking the right questions, and separating reliable facts from false assumptions – all elements of Critical Thinking. And yet too few employees possess these essential skills.

A survey of HR professionals conducted by the Society for Human Resource Management (SHRM) and The Conference Board found that a full 70 percent of employees with a high school education were deficient in Critical Thinking skills. Even among employees with a four-year college education, 9 percent were deficient in Critical Thinking skills, 63 percent had adequate skills, and only 28 percent were rated excellent Critical Thinkers.

Many business leaders also come up short. Senior executive-development professionals report that the competency that next-generation leaders lack the most is strategic thinking, which hinges on Critical Thinking skills.[2] Many next-generation leaders also lack the ability to create a vision or to understand the total enterprise and how the parts work together – both competencies that are closely tied to Critical Thinking.

What can be done? Once organizations understand the role of Critical Thinking in everyday decision making, they can begin to take steps to develop that skill in their leaders and employees. This paper describes some possible solutions, including a model for understanding and developing Critical Thinking. It also provides trainers with some specific techniques that can jump-start the process.

Senior executive-development professionals report that the competency that next-generation leaders lack the most is strategic thinking, which hinges on Critical Thinking skills.

Too Little Critical Thinking =

Big Problems

The U.S. Department of Labor has identified Critical Thinking as the raw material of a number of key workplace skills, such as problem solving, decision making, organizational planning, and risk management. There is no lack of examples of what happens when an absence of Critical Thinking in business cascades into a complete systems failure.

In 2007, the U.S. electronics company Circuit City fired 3,400 of its highest paid store employees, saying it needed to make the cuts to remain competitive with Best Buy and other electronics retailers. The employees, the company said in a statement, had previously been given raises by managers that paid them "above the market-based salary range for their role," and would be replaced by workers making less money. The move resulted in a storm of public reaction. News stories quoted angry consumers who vowed to boycott Circuit City for what they considered shabby treatment of successful employees. Sales of big-ticket items dropped suddenly and sharply, forcing the company to revise its revenue estimates downward. Industry analysts blamed the poor sales on the job cuts, saying that when consumers buy expensive, complicated electronics, they expect the sales staff to be experienced and knowledgeable. Shoppers likely were reluctant to take a chance at Circuit City, the analysts said.[3] The company downplayed the possibility that reduced sales were related to the rings, saying that only two or three salespeople per store, on average, were cut. While it is impossible to know exactly what went on in Circuit City's executive proces, it is clear the company miscalculated on several fronts. It failed to fully consider what the public reaction might be, not only to the firings, but to the lack of experienced staff on the sales floor. It seemed the company was so focused on the bottom line, it failed to look at the larger picture. These are signs of a breakdown in Critical Thinking.

A window into the company's thought process can be found in its suggestion that because few employees per store were fired, the drop in sales of expensive items was probably not related. But how many would-be shoppers did encounter inexperienced sales staff, and walked out empty-handed? And how many more simply stayed away from Circuit City altogether because they had seen the news reports, and did not expect to find knowledgeable employees? Public perception no doubt played an important role in the entire affair, something the company – even in the face of disaster – apparently failed to comprehend. The firings may even have contributed to the company's eventual demise. Circuit City continued to lose ground in the electronics wars and could not survive the recession. The chain liquidated all of its stores in 2008 and 2009.

A failure in Critical Thinking may have also sabotaged an ambitious plan by Tesco to blanket the West Coast of the U.S. with a chain of small grocery stores focusing on fresh foods. Prior to opening its first Fresh & Easy stores, Tesco conducted an extraordinary level of market research, with Tesco executives living in the homes of American consumers to observe their eating and shopping habits.

However, the Fresh & Easy concept failed to catch fire, and expansion plans for the chain were scaled back. Tim Mason, the head of Tesco's U.S. business, said that despite the intensive market research, the company failed to realize that Americans would not be content with Fresh & Easy's "everyday-low-prices" strategy, and wanted to see coupons and other special offers.

A comment Mason made later to The Times of London was particularly revealing of the company's thought process. "There's less loyalty in the American market," Mason said. "A Brit has to hear it a few times before [they] accept that people make up their minds each week when they check out the special offers."[4] Mason was suggesting that the marketing executives had been told of the importance of special offers, but the information didn't register with them because it didn't correspond to the way British people shop. In other words, the executives apparently were unable to clearly evaluate evidence because of preconceived notions – a classic example of a lack of Critical Thinking.

Critical Thinking

In the workplace

Research conducted in recent years by Pearson, as well as by a variety of independent academics, has shown that people who score well on Critical Thinking assessment are also rated by their supervisors as having:

- ✓ **Good analysis and problem-solving skills.**
- ✓ **Good judgment and decision making.**
- ✓ **Good overall job performance.**
- ✓ **The ability to evaluate the quality of information presented.**
- ✓ **Creativity.**
- ✓ **Job knowledge.**
- ✓ **The potential to move up within the organization.**

Because it is often difficult to discern such Critical Thinking skills through a resume or job interview, many organizations are turning to assessments to help them evaluate candidates. One of the most widely used assessments in this area is the Watson-Glaser™ Critical Thinking Appraisal, from Pearson TalentLens. The Watson-Glaser offers a hard-skills appraisal and is suited for people in professional and managerial positions.

Perhaps not surprisingly, independent research has also found that the higher up the ladder a position is, the more essential Critical Thinking becomes. People who are successful in these positions tend to be able to learn quickly, process information accurately, and are able to apply it to decision making. One of the most well-established research findings in industrial psychology is that cognitive ability is directly related to performance in all jobs.[5] Critical Thinking, one type of cognitive ability, is of particular importance where sophisticated decision making and judgment are required. It is not uncommon for organizations to ignore such research findings when they are engaged in succession planning or top-level executive searches. Organizations often assume that everyone at the highest corporate levels is bright and a "good thinker," so they don't assess their candidates' Critical Thinking capabilities. However, a 2009 study by Ones and Dilchert found that there is variability in critical thinking ability within groups of executives (as well as among supervisors and managers).[6] Although executives generally did perform better on Critical Thinking tests when compared with other groups, there was a wide range of higher and lower scores. Simply put, the research found that some top executives are better at critical thinking than others – and so are likely to be more successful.

It is important to note that research has also found a positive correlation between certain personality

characteristics and job success. Consequently, organizations that include both critical thinking and personality in their battery of assessments tend to get a more comprehensive view of a candidate than do organizations that use either personality or Critical Thinking assessments alone.

How Critical Thinking Works:

Introduction to RED

Fortunately, Critical Thinking can be taught. Pearson has developed the following RED Model – Recognize assumptions, Evaluate arguments, Draw conclusions – as a way to view and apply Critical Thinking principles when faced with a decision. This model is particularly helpful in Critical Thinking training programs.

Recognize Assumptions

Evaluate Arguments

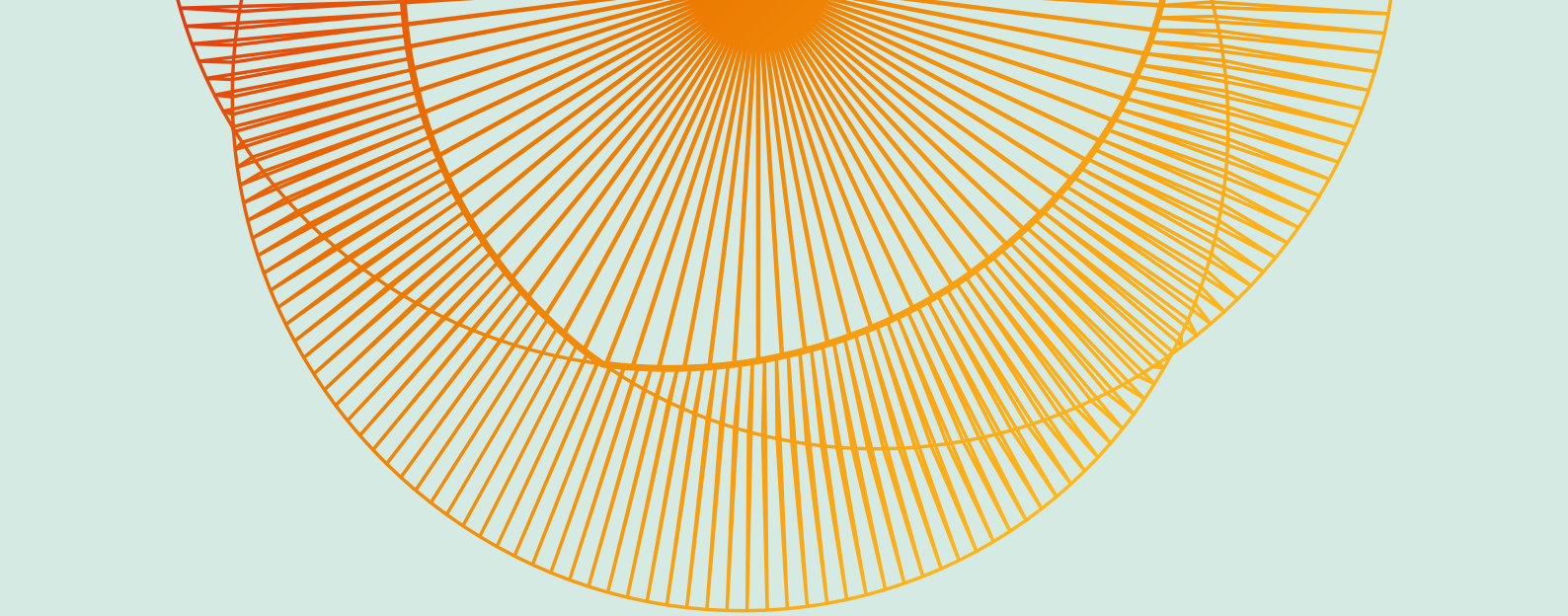
Draw Conclusions

Recognize Assumptions. This is the ability to separate fact from opinion. It is deceptively easy to listen to a comment or presentation and assume the information presented is true even though no evidence was given to back it up. Perhaps the speaker is particularly credible or trustworthy, or the information makes sense or matches our own view. We just don't question it. Noticing and questioning assumptions helps to reveal information gaps or unfounded logic. Taking it a step further, when we examine assumptions through the eyes of di erent people (e.g., the viewpoint of di erent stakeholders), the end result is a richer perspective on a topic.

Evaluate Arguments. It is difficult to suspend judgment and systematically walk through various arguments and information with the impartiality of a Sherlock Holmes. The art of evaluating arguments entails analyzing information objectively and accurately, questioning the quality of supporting evidence, and understanding how emotion influences the situation. Common barriers include con rmation bias, which is the tendency to seek out and agree with information that is consistent with you own point of view, or allowing emotions – yours or others – to get in the way of objective evaluation. People may quickly come to a conclusion simply to avoid conflict. Being able to remain objective and sort through the validity of different positions helps people draw more accurate conclusions.

Draw Conclusions. People who possess this skill are able to bring diverse information together to arrive at conclusions that logically follow from the available evidence, and they do not inappropriately generalize beyond the evidence. Furthermore, they will change their position when the evidence warrants doing so. They are often characterized as having "good judgment" because they typically arrive at a quality decision.

Each of these Critical Thinking skills fits together in a process that is both fluid and sequential. When presented with information, people typically alternate between recognizing assumptions and evaluating arguments. Critical Thinking is sequential in that recognizing faulty assumptions or weak arguments improves the likelihood of reaching an appropriate conclusion. Although this process is uid, it is helpful to focus on each of the RED skills individually when practicing skill development. With concentrated practice over time, typically several months, Critical Thinking skills can be significantly increased.



Using the RED Model in Decision Making:

A Case Study

Making Dentists Feel At Ease

A company that sold medical equipment directly to dentists had what appeared to be a minor, easy-to-solve problem. The company's sales representatives reported that they were having difficulty selling new equipment because the dentists had a number of technical questions that went beyond the reps' knowledge. The sales staff requested that this technical information be put on the company's website, so that it could be accessed by the dentists.

This seemed like a very reasonable request. Company executives were familiar with surveys that said dentists liked to search online for the latest information and developments in their eld. The executives checked with company customer-service reps, who also reported that dentists were asking a lot of technical questions about the new equipment. After studying the issue, the company redesigned its website, providing a wealth of technical information about its equipment.

But the changes had no effect whatsoever. Sales of the new equipment remained sluggish. Dentists continued to ask sales representatives for additional technical information – even after they were referred to the revamped website.

To understand what was happening, several company executives met informally with dentists whom they knew were in the market for new equipment. Through these conversations, the executives learned that the dentists didn't feel comfortable

during the purchasing process. What they really wanted, though they didn't explicitly ask for it, was to talk to someone at the company – a peer – who could walk with them through the entire process, answering their questions honestly and knowledgably. Essentially, they didn't want a salesperson or a website – they wanted a coach.

By examining the RED Model, it can be seen where the company went wrong:

Recognize Assumptions: The executives had assumed the sales staff had an accurate handle on the situation. But the executives had never asked the reps how deeply they had probed into the customers' concerns.

Evaluate Arguments: The executives later recalled that during a meeting on the issue, a manager had recommended hiring a retired, highly regarded dentist who could help the customers on a peer-to-peer level. The suggestion had been quickly dismissed because of the cost. Others at the meeting noted that updating the website would be far cheaper. The executives also later remembered that while surveys did show that dentists like to get information online, the surveys also revealed that dentists don't fully trust the information unless they can verify it with someone they trust – such as a peer. The executives realized that they had chosen to focus on the portion of the research that suggested a cheaper solution.

Draw Conclusions: The executives had taken the evidence they possessed – the dentists' technical questions – at face value, without considering that people do not always clearly ask for what they want. Had the company executives recognized their operating assumptions – and questioned them one by one; had they fairly evaluated alternative arguments and points of view; and had they dispassionately analyzed the information available before drawing any conclusions; they may have been able to quickly identify and address the underlying issue. As is often the case, there wasn't an isolated breakdown in Critical Thinking here. There was a systemic, cascading failure.

For Trainers - Developing Critical Thinkers and Problem Solvers Using the RED Model:

A Sample Training Program

If companies are to remain competitive in today's business environment, they need to incorporate critical thinking into all aspects of their organization, including their training programs. Here's how an effective critical thinking training program could be structured:

1. Educate employees on the key components of Critical Thinking (the RED model), making clear the essential role of each component within the workplace.

2. Demonstrate how the RED model can be used to improve understanding of the topic at hand. A few approaches to accomplish this include:

a) Ask the employee to provide an actual problem that he or she is facing in the workplace. The employee leverages the RED model to identify any assumptions that are inhibiting the decision-making process. The model is also used to identify other viewpoints/key stakeholders that need to be included, and to evaluate the various arguments and viewpoints.

b) Provide a sample case study that students can work through with a focus on applying the RED model.

3. Encourage trainers to incorporate the RED model into their overall curriculum.

4. Reinforce Critical Thinking post-training by encouraging different viewpoints, raising challenging questions and playing the devil's advocate.

While working through
the problem or case study

Ask these Key Questions

Recognize assumptions

Separating fact from opinion.

- What is the key issue/problem that you are trying to resolve?
- What information do you have about this issue?
- What are your ideas and assumptions that support your strategy or plan?
- Is there solid evidence to support those assumptions, and what might be some gaps in your reasoning?
- Who are the key stakeholders and what are their viewpoints?
- What other ideas should be explored, and what else do you need to know?

Evaluate arguments

Analyzing information objectively and accurately, questioning the quality of supporting evidence, and understanding how emotion influences the situation.

- What are the pros and cons of the solution that you are proposing?
- What are your biases? Is there someone who has a different opinion than yours that you could run your ideas by?
- What impact will your decision have on others? How will you handle this?
- Who would disagree with your proposed solution? What is the rationale that supports their viewpoint?
- What key points, models and/or perspectives do you need to keep in mind as you evaluate the options?
- What will be the impact of your decision?

Draw conclusions

Bringing diverse information together to arrive at conclusions that logically follow from the available evidence.

- After evaluating all of the facts, what is the best possible conclusion?
- What specific evidence is driving your conclusion?
- Is there new evidence that would impact your decision?

Critical Thinking

Conclusion

Critical Thinking is the lifeblood of the most essential workplace skills, including problem solving, decision making, good judgment, and sound analysis. Organizations that can attract, retain, and develop the best Critical Thinkers have a significant and measurable competitive advantage in the business world.

Yet business suffers from a severe shortage of critical thinkers. Too few employees come to their jobs with these skills, and too few have the opportunity to develop them in the workplace. The good news, however, is that Critical Thinking can be taught, and applied directly to on-the-job problems and decisions. The easy-to-use RED model is a breakthrough in approaching what until now has been a mostly abstract and elusive concept. The RED model lays out a path for understanding how critical thinking works, and for developing each of the essential skills.

The return on investment (ROI) for Critical Thinking training tends to be extremely high. One company reported 17 times ROI. And as a whole, participants in an onsite Critical Thinking Boot Camp workshop reported 74 percent of employees actually applying the new skills. Other research has shown that when training moves a $60,000-a-year manager or professional from average to superior, the ROI is $28,000 annually. At that rate, training 25 managers or professionals in Critical Thinking would yield $720,000 a year.

At the same time, tools are available for organizations to assess and develop Critical Thinking skills in prospective job candidates, high potential employees, and those being considered in succession planning. The value of this cannot be overestimated.

Critical Thinking, perhaps more than any other business skill set, can make the difference between success and failure. Fortunately, these skills are not out of reach – they are readily available to employees at all levels. Once gained, Critical Thinking skills last a lifetime, and become a powerful asset for organizations seeking a competitive edge.

References

1 *Are They Really Ready to Work? Employers Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century US Workforce* (2006). Study conducted by The Conference Board, Partnership for 21st Century Skills, Corporate Voices for Working Families, and the Society for Human Resource Management.

2 Hagemann, B. and Chartrand, J.M. (2009). *2009 Trends in Executive development: A Benchmark Report* (Technical Report). Oklahoma City: Executive Development Associates.

3 "*Circuit City's Job Cuts Back ring,Analysts Say,*" Washington Post, May 2, 2007.

4 "*Tesco Admits:We Got it Wrong in the US,*" The Times of London, February 22, 2009

5 Schmidt, F. L. and Hunter, J. E. (1998). *The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings.* Psychological Bulletin, 124 (2), 262-274.

6 Ones, D.S. and Dilchert, S. (2009) *How special are executives? How special should executive selection be? Observations and recommendations.* Industrial and Organizational Psychology, 2 (2009), 163–170.

About Us

Pearson TalentLens publishes scientific assessments that are used globally to hire and develop the 21st century workforce.

Our instruments measure Critical Thinking, problem solving, and a range of job skills to deliver data-driven insights that inform and clarify an organization's human capital decisions.

Learn more about Critical Thinking and other products and services at www.talentlens.com