Smart Summaries

Book Briefs for Education Professionals

CESA 6
SMART THINKING.

Smart Summaries break down important books, texts and other educational resources into an easy-to-read synopsis and provides busy education professionals with ideas to help develop greater leadership skills, intellect and innovation within classrooms and educational systems.

The Book
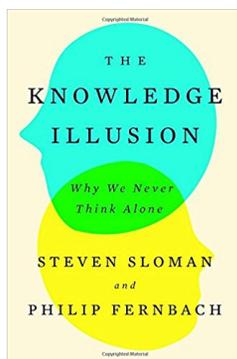
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Title:
The Knowledge Illusion
Authors: Steven Sloman and Philip Fernbach
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Author Site
Youtube

At a Glance

| You think for yourself, but you never think alone. | Collective knowledge in an organization trumps individual knowledge. |

Qualities of Collaborators

- **The group has the intelligence**

- **Diverse teams drive greater returns towards solutions**

- **Technology is both limiting and increasing our collective intelligence**

- **Educators need to adjust practice to acknowledge collective knowledge**

"Our intelligence resides not in the individual brain but in the collective mind."

Introduction

The Knowledge Illusion is a fantastic find and will demonstrate how "we live in a community of knowledge." This text walks through all the ways in which we can increase our collective capacity in systems by relying on everyone in the organization. The authors demonstrate how collaboration leads to greater personal and community intelligence. Here is the text that provides fuel for the importance of operating as a collaborative organization. Communities are built by the contribution of everyone who occupies that environment. When building a new community everyone offers a different skill set. Knowledge works on the same premise. Everyone observes and absorbs different information and develops different memories. As a result, when the community is drawn together to share their collective knowledge, problems can be identified and solutions can be collaboratively developed.

The inverse is also true. As a result of human reliance on collective knowledge, many of us simply and purposefully forget information because we rely upon others to recall that information. So then, what is the impact in the classroom, in the school and in the system if everyone is walking away from a shared experience only recalling what he or she needed? This text is fantastic and will impact everything in a school system from Board leadership to student learning. It will even explain why in your relationships with friends, colleagues and loved ones they grow frustrated with your memory. Simply put, your brain won't remember it if your brain knows that the other person will. "Sorry I didn't remember that we were going out with Jim and Amy tonight – but my brain knew you'd remind me."

Chapter Review

CHAPTER 1: What We Know

KEY QUOTE: *"Kids understand the complexity of things, that explaining at a deeper level just prompts more questions. The proof is in a child's tenacious ability to as the question 'why'."*

- We think we know a lot until we have to demonstrate our knowledge. Test – draw a bicycle from memory and see how accurate you are.
- If you live 70 years you will acquire roughly one gigabyte of knowledge.
- "People rely on their bodies, on the world around them, and on others' minds."
- Our brain does not have the capability to remember every detail of every experience we have.
- "We ignore complexity by overestimating how much we know about how things work, by living life in the belief that we know how things work even when we don't." This is the knowledge illusion.
- "We tolerate complexity by failing to recognize it."
- Humans only understand the complexity of our worlds as a result of our ability to "divide up our cognitive labor."
- The complexity of our world is only understandable as a result of our ability to work together and collaborate.

CHAPTER 2: Why We Think

KEY QUOTE: *"The purpose of thinking is to choose the most effective action given the current situation."*

- No one can recall every single detail of every event that has occurred in his or her life. We are not computers.
- "The brain was not designed by computer engineers. It was shaped by forces of evolution to solve specific kinds of problems, and remembering tons of details doesn't help achieve that."
- Much of the purpose of our brains is a total mystery.
- "Being smart is all about having the ability to extract deeper, more abstract information from the flood of data that comes into our senses. Instead of just reacting to light, sounds and smells that surround them, animals with sophisticated large brains respond to deep, abstract properties of the world they are sensing."
- "Remembering everything gets in the way of focusing on the deeper principles that allow us to recognize how a new situation resembles past situations and what kind of actions will be effective.

CHAPTER 3: How We Think

KEY QUOTE: *"Stories are used to transmit casual information and lessons among people, as well as to share experiences, to organize a community's collective memory, and to illustrate and announce attitude."*

- "Casual reasoning is our attempt to use our knowledge of casual mechanisms to understand change."
- We are by nature good at casual reasoning. We are not by nature gifted in logical thinking.
- We are constantly and casually analyzing situations to determine the consequences of the situation. What is in it for me? What is the threat?
- We are unique as a species because we can reason backwards to determine why something occurred. We can reflect to determine the causes of the actions that have occurred.
- "Even though we're not great at diagnostic reasoning, our ability to do it may be what makes us human."
- People learn and remember best through stories.
- "People see stories everywhere."
- We think through stories.

CHAPTER 4: Why We Think What Isn't So

KEY QUOTE: *"Normal human thought is just not engineered to figure out some things."*

- Our mind plays tricks on us.
- As humans we are more attuned to things that we care about.
- If we are not seeing an importance in information, we don't store it. We depend on others for it if we need it later.
- Our first reaction to information or a situation is often different than the conclusions we have if we take time to reflect or deliberate.
- We will often correct our error in thinking if we engage in a community of thought. Engaging others in a situation brings new information and allows for more informed decisions and actions.
- When presented with riddles our first instinct or visualized answer is often incorrect. When we walk away from the riddle and think it through or engage others in a discussion we are likely to see the riddle and answer correctly.
- "People who are less reflective, depend on intuition."
- People who are more reflective tend to be more careful when given problems involving reasoning."
- "Highly reflective people crave details."

> "In a community of knowledge, an individual is like a single piece of a jigsaw puzzle."

CHAPTER 5: Thinking With Our Bodies and the World

KEY QUOTE: *"We should not think of the mind as an information processor that spends its time doing abstract computations in the brain. The brain and the body and the external environment all work together to remember, reason and make decisions. The knowledge is spread through the system, beyond just the brain."*

- "We draw conclusions about the world based on small glimpses."
- Daily life is pretty normal. This normalness is a "crutch for humans. It means that we don't have to remember everything because the information is stored in the world."
- "Wherever you look you'll see something that is reassuringly normal and consistent with the other things that you see. The world is acting as your memory."
- Artificial intelligence is a powerful tool in technology. However, humans have the edge because "there is no computer that has common sense."
- What we see in the world is acting as an immediate memory. Not to be used later but to process the information in the moment.
- "At the most basic levels of functioning, we use the world as our memory store."
- We do this with everything in our life. To do lists, files filled with information, our email folders, etc. We know we don't have to memorize all of the information because we know where it is and how to find it.
- The world, the people in it, the smells, sounds and sights all act as our memory.

CHAPTER 6: Thinking With Other People

KEY QUOTE: *"Humans are the most complex and powerful species ever, not just because of what happens in the individual brain, but because of how communities of brains work together."* "Part of your job as a parent is to teach desire. To teach your kids to go beyond-whatever floats your boat."

- "When multiple cognitive systems work together, group intelligence can emerge that goes beyond what each individual is capable of."
- When humans began hunting and thinking together, no beast was too big. Today, most problems can be solved when people work together.
- "Our thinking evolved interdependently, to operate in conjunction with the thinking of others."

> "It's futile to try to teach everything to everyone. Instead, we should play to individual strengths, allowing people to blossom in the roles that they're best at playing. We should value skills that enable people to work well with others, skills like empathy and the ability to listen."

Chapter Review

CHAPTER 6: Continued

- Language is the greatest example of how our minds collaborate together and how we approach "complicated mental processes" as a community.
- Humans are unique in our ability to recognize when we are sharing an experience with another person. We recognize that we "are sharing common ground."
- "A basic human talent is to share intentions with others so that we can accomplish things collaboratively."
- "People are built to collaborate."
- "Cumulative culture: the ability to store and transmit knowledge from one generation to another."
- "Modern team work: has no clear leader, but rather a collection of expertise that, in the best case, provides a group intelligence greater than the sum of its parts."
- People only recall what is needed in order to function within a particular community. We rely on others to fill in the missing parts. We each have a function and we will bring that function to the collective table.
- When we know that others have the information we feel knowledgeable. We can depend upon the others to fill in the blanks or we know where to go to get what we need.
- "In a community of knowledge, what matters more than having knowledge is having access to knowledge."
- "We live in a community of knowledge and we fail to distinguish the knowledge that is in our heads from the knowledge outside of it."

CHAPTER 7: Thinking With Technology

KEY QUOTE: *"Collaboration across continents using technology will result in a community of knowledge that can address any issue."*

- Computers and the Internet create a false level of knowledge. We know where the information is, therefore we infer to ourselves that we know and understand it.
- Research has shown that when people research or learn using the Internet they will fail to recognize that they didn't understand it or know it before and instead give themselves credit for what "Google gave them."
- "When we have the whole world's knowledge at our finger tips, it feels like a lot of it is in our heads."
- Example: "When people use WebMD, they diagnosis themselves and will override the knowledge of the professional because they think they know more and fail to take into consideration all the knowledge of the professional."
- Communities of knowledge can infer from others, learn from others and apply common sense. A computer can't. We may soon rely so much upon technology that many of us will forget simple principles and lose skills once depended upon to find solutions to our own problems.
- "Computerized automations for safety and our over reliance on them is creating a dilemma. People are forgetting what to do and instead rely on the technology. However, if it fails and we don't have the knowledge – we all fail."
- Human dependence on technology fails to help us see the nuances of the real world. Data doesn't have a heartbeat and can lead us astray.
- Crowdsourcing and using the wisdom of all those using technology can increase your collective knowledge.
- "Technology can create a huge advantage in its ability to connect more people from more communities."
- Technology can be harnessed to create the greatest wisdom. Using the Internet we can harvest skills, understanding and solutions from across the globe.

"We're not very good at knowing what we don't know."

CHAPTER 8: Thinking About Science

KEY QUOTE: *"We rely on our community of knowledge to understand complex topics. No one person could ever understand all complex scientific topics."*

CHAPTER 9: Thinking About Politics

KEY QUOTE: *School leaders can use community knowledge to support education by simply providing information to as many members of the collective knowledge community as possible.*

- When people of like minds get together and talk through an issue, they become more polarized and less open to the opinions or ideas of the opposition.
- When people are asked to give detailed examples of their political perceptions they tend to make casual explanations and come across less extreme."

CHAPTER 10: The New Definition of Smart

KEY QUOTE: *"Intelligence is not the property of an individual; it's a property of a team."*

- There are two types of intelligence:
  - "Fluid - the ability to come to conclusions quickly and figure new things out."
  - "Crystalized - the amount of information one has at their disposal in their stored memory."
- An individual's intelligence is determined by the community in which they operate. "A team with complimentary skills is most likely to satisfy all demands made by the division of cognitive labor."
- An individual IQ test is not a true reflection of someone's intelligence because of our use of the community of knowledge. "A better measure is the group's performance."
- Strong and dedicated teams work hard for each other, drive toward success and fail fast together.
- People may bring specific skills to the group to help address the problem while others can manage the dynamics of the group.
- Problems across the world can be addressed by utilizing collective intelligence.

CHAPTER 11: Making People Smart

KEY QUOTE: *"People are primarily designed for action, not for listening to lectures, not for manipulating symbols and not for memorizing facts."*

- "Skilled teachers and learners know that simply listening to lectures, mindlessly manipulating symbols and memorizing facts are not the best way to learn. Action is required."
- Children do not always see or realize the relevance of what they are learning. Too often they are expected to learn and not to act upon their learning or apply their knowledge. The brain disengages when not acting.
- "Learning requires breaking common habit by processing information more deeply."
- We are not built to master all topics. We are designed to work together in a community and participate in understanding our world.
- "The idea that education should increase intellectual independence is a very narrow view of learning."
- Learning is about collaboration "with others, recognizing what knowledge we have to offer and what gaps we must rely on others to help us fill."
- Education and the science of education need to teach others how to rely upon each other's knowledge.

CHAPTER 12: Making Smart Decisions

KEY QUOTE: *"Good decisions are made when the community of knowledge is engaged."*

- This chapter focuses on financial decision making. Read it.

Lessons

Reflective questions for the reader:

Teachers: When developing instructional methods are you considering the power of collaboration?

Leaders: When designing solutions are you utilizing the collective knowledge of the community?

Parents: When frustrated by your children not recalling expectations, are you considering that you've created a reliance on yourself to support the memory of the child?

Where is the text most applicable

Classroom	★ ★ ★ ★
Leadership	★ ★ ★ ★
Motivation	★
Parents	★ ★ ★ ★
Personal Development	★ ★ ★ ★ ★
Schools and Systems	★ ★ ★ ★ ★
Teaching	★ ★ ★ ★ ★

Have you:

- Developed opportunities to collect the wisdom of the crowd
- Engaged broad perspectives
- Enrolled a variety of skills and talents when building teams
- Created opportunities for technology to expand your collective knowledge
- Evaluated the talents of your teams
- Identified the gaps in skills and knowledge before addressing a problem
- Recognized your own limited knowledge
- Designed instructional methods for children or adults that honor the community's knowledge

If you liked The Knowledge Illusion, you'd like…..The Wisdom of Crowds!

A NEW YORK TIMES BUSINESS BESTSELLER
"As entertaining and thought-provoking as The Tipping Point by Malcolm Gladwell.... The Wisdom of Crowds ranges far and wide." —The Boston Globe

THE WISDOM OF CROWDS
JAMES SUROWIECKI
WITH A NEW AFTERWORD BY THE AUTHOR
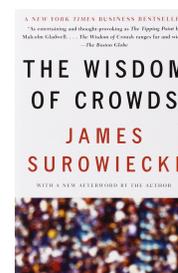
Notable and Quotable
"Intelligence is not the property of an individual; it's a property of a team."

Ted's Take

This text is a critical read for all stakeholders in the lives of children. The evidence and arguments in the text will help educators and parents understand not only how to better support the learning of their children and students, but to also support their own understanding of themselves and the relationships they have with all people. I was constantly stopping, reflecting and rereading this book. Many of my own behaviors and life experiences were explained when I read this book. I now understand why I don't recall our social calendar at home. I understand why so many people who hear the same message or read the same text do not have the same memory. I understand better than ever why we need communities to identify problems and solve them collectively. All teachers must read this to have a better understanding of how the child's brain is wired to seek help, and all leaders need to read this for the same reason. We have great intelligence as a group and limited intelligence on our own. More proof that the wisdom of the crowd will always trump the smartest person in the room.

For more information, contact:
Ted Neitzke, Administrator/CEO | tneitzke@cesa6.org | 262-483-3997

CESA 6
2935 Universal Court
Oshkosh, WI 54904

cesa6.org

@tneitzke

About Ted Neitzke

Ted Neitzke is the Chief Educational Officer and Agency Administrator for CESA 6, a non-profit cooperative that serves 40 public school districts in Wisconsin. Ted is an advocate for children and public education. He believes that everyone in a school is a servant leader. "A leader is anyone who has influence over another person." This, Neitzke believes, "makes all of us leaders." These Smart Summaries are his way of helping pay-it-forward for the leaders in the classrooms and schools. "Not everyone has time to read or search for great texts that will help them develop as learners, leaders or innovators and these briefs help to increase personal intelligence and support the strategies necessary to help leaders in the 21st century educational world. Ted Neitzke has been a superintendent, assistant superintendent, principal, assistant principal, high school and middle school teacher and, while in high school, was an aide in a summer school program for students with significant disabilities. He is the father of two and is married to Megan, a 7th grade teacher in a public school. Ted is the son of a kindergarten teacher and is surrounded by relatives who are leading classrooms and systems.