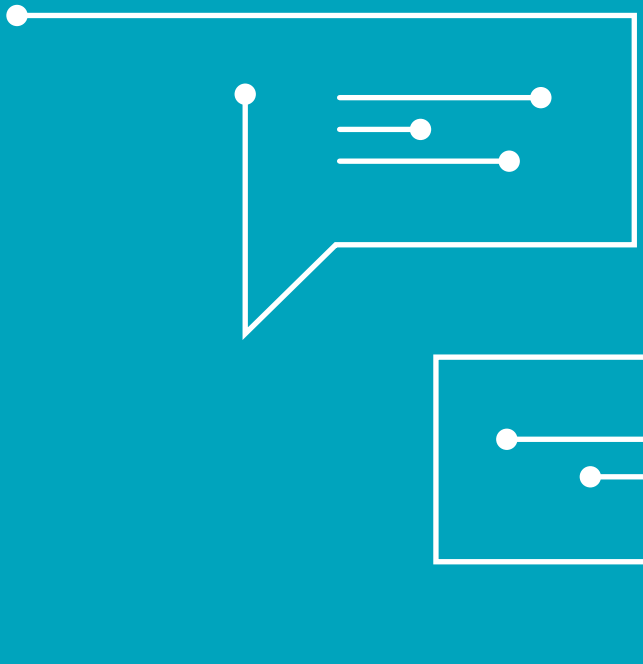

Digital Fluency

Building Success in the Digital Age

CHRISTIAN BRIGGS
& KEVIN MAKICE
ILLUSTRATED BY LARRY BUCHANAN

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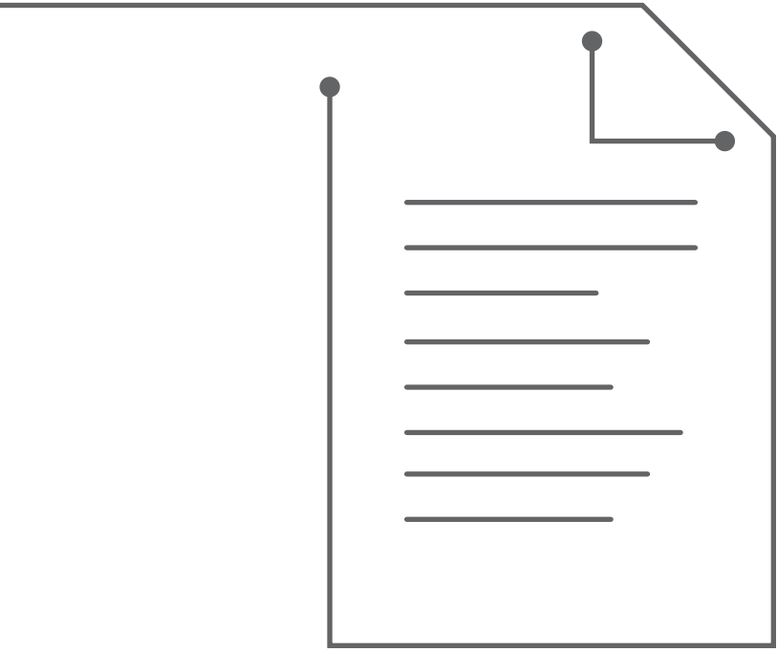

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Slow Steps

On a warm evening at Davis Square in Somerville, Massachusetts, Samuel Smith is walking up the stairs from the train station, ending his short ride home from work. Sam, 47, works as a consultant for a Boston firm that provides management education for companies. He has a habit of walking too fast, but today, his steps are slower.

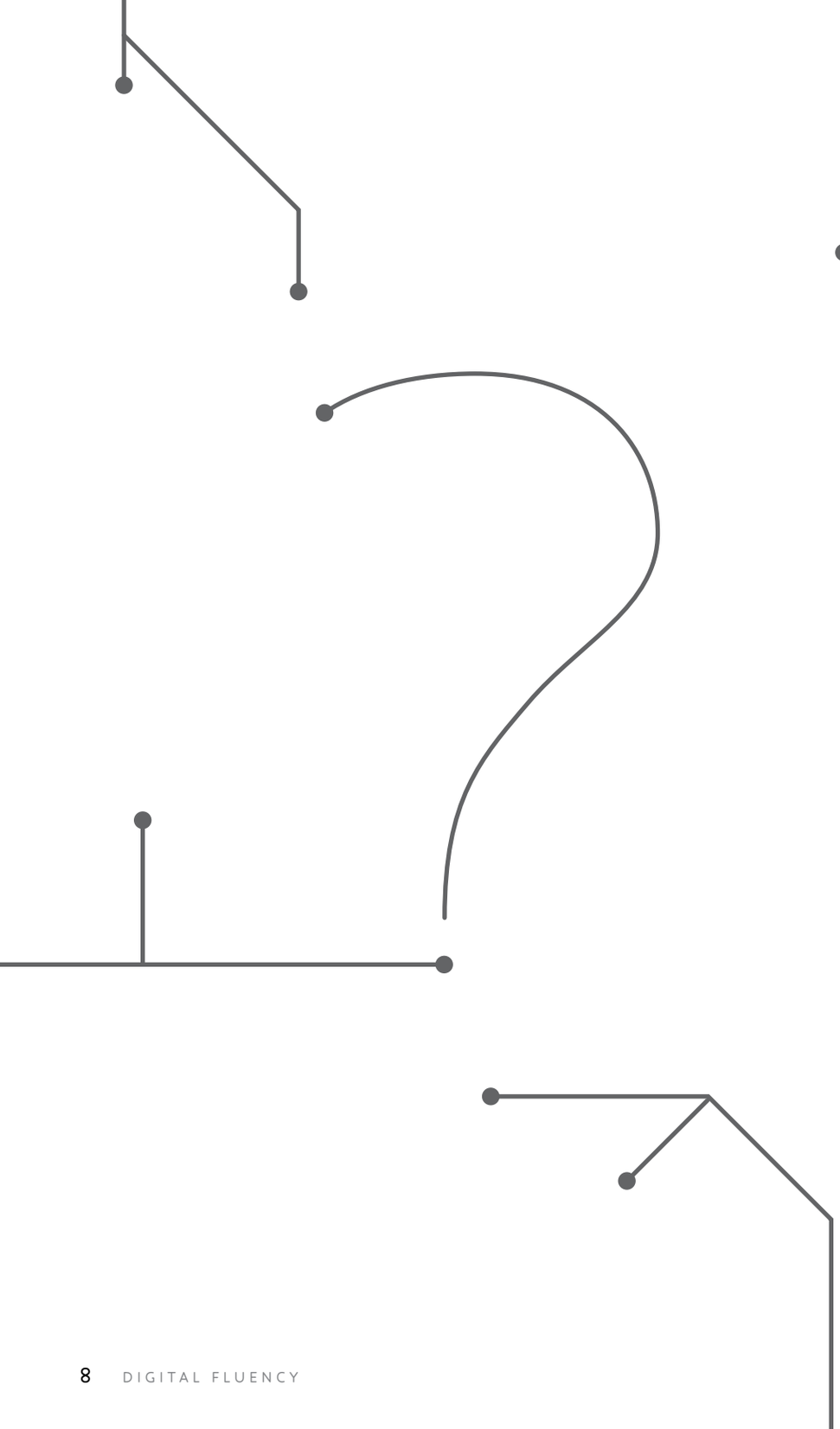
Sam is trying to figure something out. Over the course of the last few years, he has noticed the large, slow-moving changes in his company. There are changes in his clients' companies, too. Previously, Sam had dismissed it as industry innovation, competitors trying to get a leg up or keep in pace with their customers. Today, however, he wonders if something bigger is happening.

Sam stops at a local bakery to pick up sugar cookies for his wife and two girls, who had lobbied for the goodies via text message 30 minutes ago. When he first saw the message, Sam smiled briefly but did not respond. He hands a credit card to the cashier and looks forward to seeing three smiling faces when he gets home.

Stopping for anything is an unusual activity for Sam. Every day, his routine sees a little more work and a little less free time. His job often feels like triage, where he and his colleagues sift through projects hoping to save the most promising ones. Sam hears many complaints about how much time it takes to clear an email inbox and how that distracts from getting "real work" done.

Sam looks around the store at the other patrons. One young woman is sitting at a table sipping coffee and reading from a digital tablet. Behind her, a stack of fresh newspapers is undisturbed. Sam wonders if all of the iPads and Androids he sees explains why his clients seem to know more than he does about his industry. Demand for the company newsletter, once considered a primary source for trends, has declined. Regularly, someone tells him how they heard the news first on Twitter.

With a bag of cookies in hand, Sam heads home with his uneasiness.



Introduction

How this book can help you and your organization adapt to the digital age

Organizations today operate in an environment that is changing in ways and at a pace unprecedented in human history.

Internet-connected digital technology is widely available around the globe. Data is created by more authors and available to more consumers than ever before. Customers, employees, managers and leaders—highly connected to one another inside and outside of the workplace—have access to powerful communication and coordination technologies which enable them to do both great service and great harm. Cultural norms of sharing, transparency, propriety, humor, satire and identity are shifting, as are business practices. Collaboration happens easily outside of the purview of formal leadership. New businesses are born fast, and there are more ways than ever for an organization to contribute to its own demise.

All of this presents every one of us with unique opportunities to innovate, but also with new fundamental challenges to the way that we have lived, worked, socialized and managed organizations and institutions for so long[1].

1
Gary Hamel points out that "..the foundations of 'modern' management were laid by people like Daniel McCallum, Frederick Taylor, and Henry Ford, all of whom were born before the end of the American Civil War in 1865." [Hamel, 2009]

As everyone wrestles with this reality, one vital question frequently comes to mind:

> *How can we adapt and help ourselves succeed in the digital age?*

This book was written to help you answer this question by working through the hopes, questions and fears behind it, and to move toward strategic use of digital tools. We can begin to answer that big question by first paying attention to the smaller, more specific questions it encompasses.

How much needs to change? Success is achieved through a combination of improving your abilities and innovating the processes in your organization. The levers you pull must steer your organization into the waves of change, without getting swamped. You might change the software used to reach out to customers, while leaving the organizational structure intact. New job roles may become necessary, or hiring practices will require an overhaul. To successfully adapt, you must understand what is within your power to change and what impact those actions might have on the organization.

Digital fluency helps your organization find answers to these questions, as well as act on them.

What should be changed first? Once you identify the things that need to change, consider their priority and dependencies, too. Every day, something different will demand your attention. Choosing where to start may impact how well future efforts are implemented. It may be important to re-work an organizational structure to be more agile prior to offering employee training. New communication and collaboration tools could be doomed to fail without adjustments to policies and procedures. Without active participation from the leadership, operational employees may be reluctant to adopt new tools and procedures. Making decisions to focus on improving the wrong thing may undermine your efforts.

How does the context of an organization impact decisions? A shoe retailer is a different kind of business than a tractor manufacturer, and both are different from a non-profit charity. The differences in how these organizations are structured may necessitate distinct approaches to the challenges and benefits of the digital age. An organization manufacturing heavy equipment might benefit most from the efficiencies that networked people and information brings, whereas a small business in a local market might focus on empowering loyal customers to augment what the company can do with limited resources. For highly-regulated industries, like finance or medical devices, there are a new set of obstacles to the use of digital media, courtesy of protective protocols and strategic needs for security. These constraints do not mean these industries are insulated from change, but how they adapt must account for the rules and norms under which they operate.

The answers to these important questions are not easy, but they do contain good news. First, not everything needs to change in order for an organization to thrive in the digital age. Second, there are recognizable patterns emerging to guide organizations toward effective adaptation within its particular context[2].

No matter what your particular organization's answers are to the previous three questions, a key part of the solution must always involve *digital fluency*—the maximum individual potential to achieve desired outcomes through the use of digital technology. This level of ability, which you and the people around you will need to consistently develop and maintain, helps your organization not only to act on your answers. Perhaps most importantly, digital fluency helps you answer the questions in the first place.

To preface this important topic, we first take a step back to

[2] SociaLens is currently conducting extensive research to better understand these patterns. Our next book will report on these findings.

look at the digital age historically. Although the question of how an organization can succeed in the digital age appears to be new, its answer is derived from an old truth: Humans communicate and organize.

Different from most other living things, we humans rely heavily on the combination of signs (e.g., gestures, sounds, and alphabets) and media technologies (e.g., pen and paper, radio, telephones, and the Internet) to connect us. Once connected, we can work together or fight with each other, develop love or foster hatred, bring countries together or tear them apart. We have been doing this a long time, even as the available technology has changed:

The ancient Greeks shared information through epic poetry about themselves, preserved in writing for future generations.

Abraham Lincoln used the telegraph in the U.S. Civil War to receive real-time updates and send commands to his army generals.

In 1944, husbands and wives separated by war used handwritten letters and an international postal system to stay connected across oceans.

Two generations ago, an unemployed person looking for a job contacted employers with typed applications and phone calls, responding to suitable want ads published in newspapers.

Shifting technologies provide opportunities to direct communication through new channels, but the motivation for that communication is largely unchanged.

Cable provider Comcast famously used Twitter in 2008 as a way to connect with customers in real-time and reverse their poor service reputation[3]. Since 2009, political protesters around the world routinely make use of Internet-enabled mobile devices to communicate their grievances and coordinate their actions. Technology has altered their potential for success and the kinds of outcomes they can hope to achieve.

When these transitions occur within a single generation, a person will need to develop new abilities to continue to connect with others effectively. Some transitions, like going from snail mail to using email, require different knowledge, skills and mindsets. A person who is able only to create and send direct mail pieces and persuasive business proposals by postal mail might be mystified by a modern email client. Understanding the etiquette of email, its effectiveness for broadcasting messages, and how to manage group lists would help that person with this new technology.

Shifting technologies provide opportunities to direct communication through new channels.

Other transitions, like the one from the use of a land line telephone to the use of a cell phone, only require a slight change. For a person who can dial numbers and hold conversations via a land line telephone, the ability to use a cell phone was not difficult to develop. A person's potential for success in these transitions depends on the way they adapt their ability to fit the new situation, including using without abusing the pervasive access to friends and customers.

Ability alone is not enough, however. Other factors—including policies, available resources, and feedback about progress—play a critical role in both defining and achieving success. In our early work with organizations that were attempting to deal with a major change, we found many examples of people who should have been able to adapt to digital technologies, but struggled to do so.

In one large IT consulting organization, we met a person

3
Frank Eliason began using Twitter to find disgruntled customers and initiate an online conversation. By being proactive and open about troubleshooting, Comcast became social media darlings. Eliason left the company in 2010, but his technique remains a model for engagement.

who was tech-savvy—a quality many would assume guarantees successful use of digital media—who had at one time used social media. As he moved up through the ranks to become a director of 700 employees, this MIT graduate stopped using those tools in the company.

In a leadership training company, we encountered well-educated, gregarious storytellers—communications skills that should lead to digital success—whose use of an internal collaboration platform could not gain sufficient traction. This failure to adopt came despite the CEO's complete financial and verbal support.

Restrictive legal policies, time pressures, detached leadership, and other organizational circumstances contributed to their difficulty. These people thought the transition from using tools like Microsoft Office and company Intranets to business applications of social networks, blogs, microblogs, and wikis should be an easy one. Although all of these tools are largely run on exactly the same computer systems, the abilities that a person needs in order to use them well are quite different. Without them, success remained elusive.

This book is about that transition and the personal journey to develop the sufficient ability—what we call the *digital fluency*—needed to thrive in this digital age.

In Chapter 1, we examine the speed and complexity evident in the world today that is changing the ways in which we handle information, interact, involve and inspire other people, innovate and imagine the future. In Chapter 2, we help to answer the question of how ready you might be for the digital age. In Chapter 3, we explore the four learning stages we go through to develop digital fluency, and the importance of continually striving to be fluent.

In Chapter 4, we give a quick overview of how organizations can achieve *digital readiness*, the means of supporting the digital fluency of their employees by aligning their resources, culture, and purpose with the tasks they are asked to undertake. We also explore what success is and how to measure it.

Finally in Chapter 5, we suggest some specific activities and exercises that you can undertake to embrace the new normal of digital change.

Throughout this book, we will also illustrate these concepts through the story of two characters, Sam and Louise, who are based on real people we have studied and worked with in the last two years. We will follow their respective journeys toward digital fluency, ultimately skipping ahead to their future to see what it means to be a digitally fluent person in a digitally ready organization.

Digital fluency is an important topic. We want all organizations to know what it is, how it compares with other fluencies, and how it is useful to achieving strategic success.

A Few Things You Should Know About This Book

Though the main focus of this book is on an individual's journey through the learning process of digital fluency, most of the content and concepts are explained as a journey occurring within and affecting the organizational context.

The insights in this book have emerged from three major sources:

- Rapid ethnography and interviews conducted in 10 organizations. We have altered or omitted the names of the people and organizations in order to focus on the truths evident in each case, some of which show hard lessons for the participant organizations.

- Academic research in the areas of media theory, organizational and management theory, institutional theory, psychology and human-computer interaction.

- Personal experiences over the last two decades working in and around organizations of all shapes and sizes as employees, managers, consultants and trainers.

We hope you will keep in mind that our motivation for writing this book is not to provide an exhaustive theoretical argument or conduct an academic debate on the ontological nature of digital fluency. Rather, our goal is to help us make sense of and better thrive in a complex digital world.

Although there is much peer-reviewed research backing the ideas contained in these pages, we have tried to forego the academic arguments in favor of practical examples. Our intent is to provide you with an explanation you can take back to your organizations which will be useful when talking to colleagues about succeeding in the digital age.

The Handshake Deal

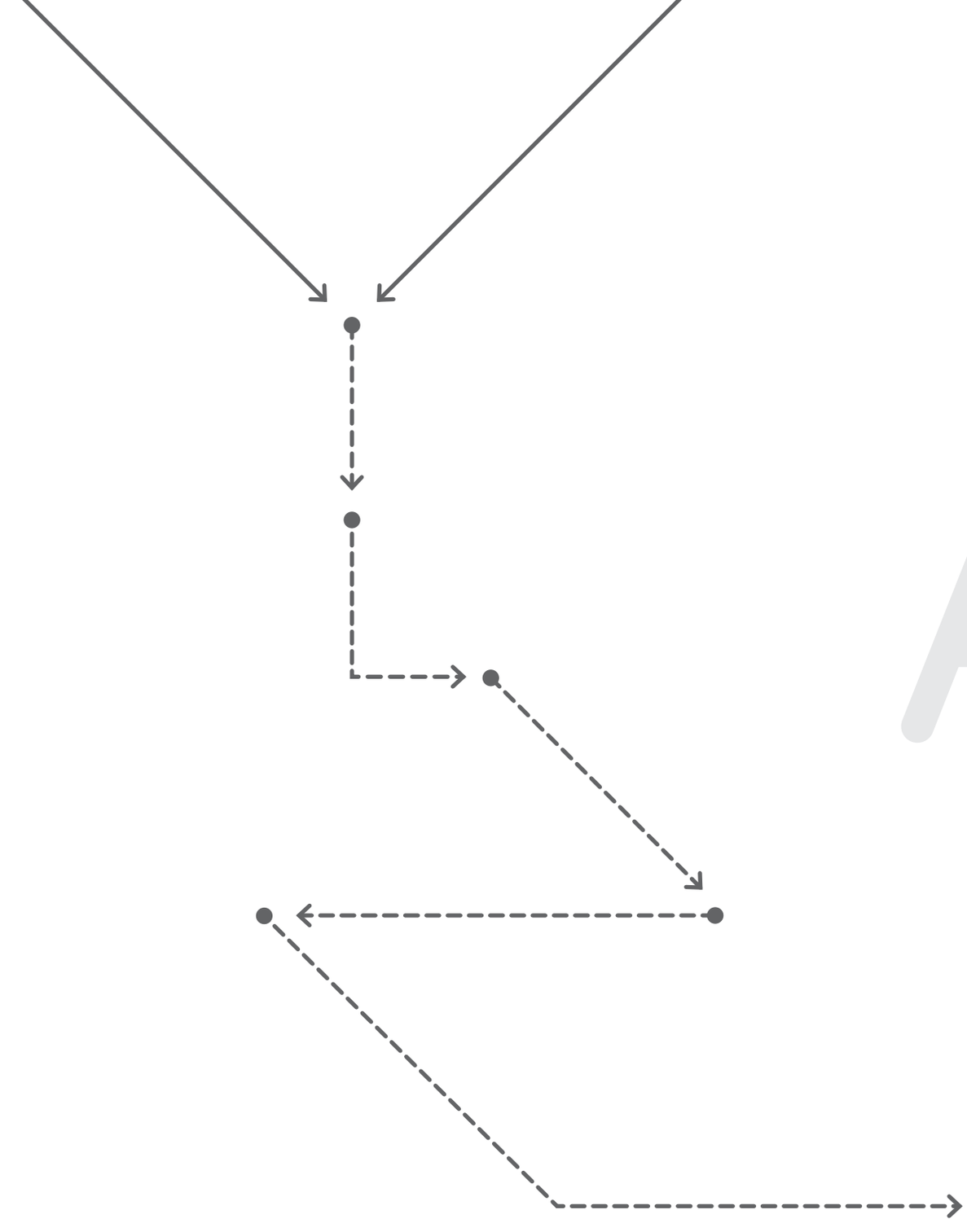
Louise Johnson is lost in thought as she walks down the city sidewalk, barely noticing the man with the bakery bag until he adeptly moves to avoid collision. Louise, 55, notices the clamshell phone open in his hand and wonders why people spend so much time with those things. We are turning into a bunch of antisocial misfits, she mutters.

She is on her way home from work at Superior Machinery, a precision manufacturing business she started with her husband in 1982. The company grew to 70 employees before her husband died, leaving Louise to run it on her own these past four years. Business is good, but she is worried about the future. She doesn't want to rock the boat by investing in new computer software when the current tools are working so well. Her confidence wanes with every step.

A talented, self-taught machinist and now CEO, Louise carries the business section of *The Boston Globe* under her arm. She is always looking for competitive advantages that will make her business more effective. Today's articles are the same as last week's, declaring a need for businesses to "adopt social media" and to use it to "listen to their customers." Louise is certain this won't work for her business. Deals are made with a verbal conversation and a hand shake. You can't replace the personal touch, right?

The city streets are bustling, but Louise can't find an available cab. As her arm waves at another one, Louise is crafting a new memo in her mind, one that will keep "social media" away from her worker bees. She knows the stories about predators, the online rumor mill, and loss of productivity. She's afraid some employee is going to leak privileged information and trade secrets to competitors online. Maybe having her IT director block MySpace and Facebook will keep those problems out of her company. He's young, so he'll know what to do.

Thunder booms somewhere in the distance. Louise didn't bring an umbrella, but has her *Globe* ready if the rain starts before she finds a cab home.



3

Becoming Fluent

The development and maintenance of digital fluency is an ongoing process.

A minor composer in Salzburg during the 18th century proved to be a better teacher than a performer. He wrote a tutorial in 1755, published the following year, that established his reputation in the music community. The composer also had a son, his second child, just as his career was taking off.

On a lark, the father started teaching his kids to play the clavier (keyboard). While he trained his daughter, 7, his 3-year-old son looked on. It wasn't long before the boy started picking out chords that sounded good to him. After a while, his father took notice and gave him formal instruction on a few minuets, which he played flawlessly and in perfect time.

By age 5, Wolfgang Amadeus Mozart was composing and performing his own pieces. At the time of his death only 30 years later, Mozart had originated more than 600 works, including some of the most lasting and influential music in history. Today, most people will agree that music came naturally to Mozart.

Most of the time, fluency is not achieved this easily. Few

people are able to start tapping on keys one day and be considered a prodigy the next. Developing these things takes both time and maintenance.

This is particularly true of digital abilities. Email is a well-established digital channel, but its use causes new problems as life gets faster and more connected. Some of the skills exhibited by an email-able person remain useful: good typing skills, writing a persuasive argument, and finding an optimal time to communicate. To make use of Facebook, however, new skills are needed, such as crafting semi-public messages and managing the platform's complicated and changing privacy settings.

Many people with the ability to use one form of technology quite well struggle to apply those relevant skills to newer tools. While researching this book, we met:

- close-knit teams of tech-savvy storytellers who dreaded company social networks
- experienced public relations professionals who were duped by false information
- IT professionals and programmers who did not want or know how to use online collaboration platforms
- talkative, insightful, wordsmiths unable to work within the constraints of Twitter's 140 characters
- people experienced with radical social innovation who hesitated to engage their customers online, for fear of making mistakes.

In every case, failure was not caused by a lack of ability. Rather, a changing situation altered the tools and technology available. The context shifted, leaving able people without the knowledge, skills, and mindset necessary to take action.

Experience Is Critical

First-hand experience is the best way—and sometimes, the *only* way—to develop the knowledge, skills, and mindset that will lead to fluency. Some knowledge can be gained by reading books like this one, of course, but deeper understanding can only be developed through regular use.

This cannot be overemphasized: As with fluency in a language or with a musical instrument, the development and maintenance of digital abilities *requires practice*. Because first-hand experience is so critical to learning, the process to become fluent demands an investment of time and patience, with ourselves and with those around us.

> First-hand experience is the best way to develop the abilities that lead to fluency.

In early March 2009, Mars candy brand Skittles replaced the home page of their website with a raw stream of Twitter status updates[1]. On the surface, the choice was a bold endorsement of the value of social media. No initial effort was made, however, to filter or engage with the content that consumers were providing. This allowed the site to become a gamed environment for crude and even racist content, posted in the name of the company. Those early mistakes allowed the agency to reflect on their experiences, modify assumptions, and evolve the Skittles site into a positive case study for digital media integration.

The pace of learning is different for everyone. For some, a first blog post is a simple matter of sitting down and typing. For others, it may take years to gain comfort in sharing personal thoughts online. Experimentation through first-hand experience can help dramatically speed up this learning process.

1 The social media strategy concocted by Agency.com also included similar experiments with Wikipedia and Facebook. Learning from early mistakes, Skittles eventually created an "unsite" that directly leveraged various social media platforms. Less than a year after the experiment started, Skittles' Facebook page had over 3.6 million fans, and their reach had multiplied 2-3 times what it once was [Assi, 2010].

Digital Fluency

Most of us have an idea of what it means to be fluent. People who are fluent in speaking French are able to go to Paris and converse with residents on a subject of mutual interest. A fluent reader is somebody who understands what she is reading quickly and with minimum effort. In general, most people know fluency as a level of skill that makes something look natural when you do it.

Fluency is the ability to reliably achieve desired outcomes through the use of technology.

There is something else, though: implicit in fluency is a goal. A fluent reader knows grammar, can read, and believes the printed word is an efficient and entertaining way to consume information, all of which enables her to get some enjoyment out of finishing a book. A person fluent in French knows the vocabulary, has mastered French pronunciation, and can appropriate a Frenchman's world view, all of which allows him to have a heated debate about international politics with a shopkeeper on rue Cler. There is both a motivation to use and an outcome for fluency, not just a possibility.

This is a critical distinction to make when it comes to leveraging fluency within an organization. Successful organizations act with purpose toward an envisioned goal. For our purposes, we offer the following definition:

> *Fluency is an ability to reliably achieve desired outcomes through use of technology.*

Let us illustrate this take on fluency with a true story, relayed to us by a local business man, that doesn't deal with digital technology.

A few years ago, Tom (the business man) took a trip to Mexico to import a large shipment of wine for his business. At the border, a small, bald customs official caused some trouble for Tom and his brother, who was helping with the shipment. Although Tom spoke little Spanish, his brother had lived there for many years. After a few rounds of negotiations with the elderly customs official, Tom's brother returned and in angry whispers, let loose a flurry of comments about the stubbornness of the customs official. Desperate to move through the red tape, Tom suggested that *he* might be able to sway the man.

Leaving his brother somewhat amused, Tom walked up to the official. Smiling warmly, he cobbled together some words he knew well with ones he just heard his brother say, in reference to the official, and greeted the customs officer: "Qué pasa, Señor Pelón." After a moment, the official and his fellow agents burst out laughing. What Tom did not realize was that *Pelón*—the Spanish word for bald—was not the man's name, but just a slur blurted out by Tom's brother in anger. Whether his gaffe helped or hurt the negotiation isn't clear, but it was certainly not the outcome Tom expected.

By our definition, Tom was not fluent in Spanish because he lacked the ability needed to produce the desired outcome. Tom overestimated his understanding of the language in this situation. He did not recognize the nuance of his brother's disdain muttered in Spanish and failed to use the right words to get his meaning across. Instead of approaching a frustrated customs official with a greeting of respect, he had insulted the man.

In order to fully understand what fluency is, we must also explore what it is not. For this reason, we need to introduce a second term, *literacy*, defined as a less-advanced version of fluency. A literate person would understand what to do and how to do it, but would not be able to articulate the when and why.

When Tom the businessman spoke Spanish, he knew enough about the grammar and pronunciation for his words to be understood. He could also hear someone else speak and recognize it as Spanish enough to pull a greeting out of the context. Tom was (barely) literate in Spanish because he understood, to some useful level, how to speak and what to say.

However, Tom was not fluent. He failed to understand that *pelón* in that context was a description, not a name. He didn't know, either, why the customs officials broke into laughter as he greeted them in what he thought was a respectful manner. Even if he had used the official's name correctly, Tom lacked any comprehension of when it might be appropriate to use the informal "Qué pasa?" ("What's up?") and why it is a sign of disrespect in Mexican culture.

The relationship between abilities and desired outcomes applies to any technology, including digital ones. A digitally literate person may know what Twitter is and how to tweet, but he wouldn't understand why posting a link to a web article that strays from his expertise could prove valuable, or when posting that information would have the greatest impact. For a person to achieve her goals, she needs to have moved beyond just the what and how to an understanding of the when and the why[2].

We live in a time when digital materials and tools are pervasive; most societies cannot function without touching digital technology in some way. For that reason, our definition becomes more specific:

> ***Digital fluency*** *is an ability to reliably achieve desired outcomes* ***through use of digital technology***.

A person who consistently develops and maintains their abilities with digital tools will be more likely to achieve what they expect than someone who is content with literacy.

2 Others have described new literacies as the ability to use the "technical stuff" and the "ethos stuff" of a technology [Lankshear and Knobel, 2006].

Digital fluency is not a guarantee, however. Factors out of an individual's control—such as, work environment or market volatility—also impact success. This requires an addendum to our previous definition:

> *Digital fluency is an ability to reliably achieve desired outcomes through use of digital technology.* ***This ability is helped or hindered by the situational forces and the digital fluency of others.***

From our non-digital example, if Tom the businessman were fluent enough in Spanish to avoid the problems he encountered, his fluency alone might not be sufficient to get his imported wine past customs. The context surrounding his conversation might make it impossible to succeed. A fluent Tom may have still failed if:

- the government issued temporary orders to prevent all goods from leaving the country
- the customs official had fought with his wife earlier that morning and was having a bad day
- his brother argued the wrong point
- one of the officials misread a label on the wine.

Fluency gives a person the best possible chance of succeeding, given what that person has within his control.

These complicating factors constitute an organization's *digital readiness*[3], or its ability to create an optimal situation to support individual digital fluency. Throughout this book, we focus on how an individual creates her own best chance of success and will, for now, de-emphasize the organizational context . The reality, however, is that the rest of the world always has something to say about success.

3 This is the focus of our second book.

Not all fluencies are the same. The differences between speaking a foreign language, critiquing a book, and engaging customers through digital media arise from both the properties of the technology being used and the context of that use. The computer programmers who developed successful digital systems don't automatically speak Spanish in Mexico just because of their fluency with writing code. Similarly, Tom's lack of fluency in communicating with the Mexican customs official doesn't mean he can't get great value out of Twitter or Facebook.

What makes digital fluency particularly challenging is *how* it is qualitatively different from earlier forms of fluency. Several decades ago, fluency with a telephone demanded that one understand the concept of a phone number as well as the appropriate ways to answer a call in different situations. Among other things, it required the skills of dialing and conversational communication. It also required a mindset that enabled a person to anticipate the savings of time involved over a face-to-face visit, even while acknowledging the trade-off that might come with the loss of formality (e.g., not making an appointment to meet in the client's office).

With digital technology, the sheer number of systems one must experience to become fluent is daunting. Each digital tool has its own way of providing value. People often employ multiple tools and strategies at the same time, making it necessary to acknowledge that there is no one way to "do it right" if a person is to achieve fluency.

Older tools are not always replaced with digital ones. Even as Voice over IP (VoIP), automatic message transcriptions, and the market penetration of mobile devices altered when and why a phone call is useful, the telephone is still in use. Digital fluency is in many ways more difficult to build and to maintain because of the speed and complexity that digital technologies have introduced into the world (see Figure 1.1).

Four Stages of Learning

Imagine yourself as an early adopter back in 1994. The World Wide Web was too new to be of critical use to your business, but the mobile phone had become your main means of conducting business. Texting was possible, but rarely used (you never did). By making calls on the road, you learned how to talk and drive at the same time and the importance of recharging. You became skilled at managing usage minutes to minimize the cost and maximize the information exchanged during a call.

By our definition, we could say that in 1994, you were mobile phone fluent.

> To remain fluent in 2012, you need more ability than what made you savvy in 1994.

Jump ahead to 2012. The phone may still be an important part of your business process—clients and co-workers know they can reach you at any time—but much about the digital landscape has changed. Texting is common, so much so that new laws are in place to prevent use of the phone while driving. Phones became smart, as well as mobile. They understand where you are and can connect to the Internet to send and retrieve information. Cell phones might not be good for writing reports or programming, but they are loaded with applications for checking email and interacting with your network, as if you were at your computer. Technology has evolved, blurring the line between work and personal time.

To remain mobile phone fluent in 2012, you need more abilities than what made you savvy in 1994. Without any improvement, you might still see your communication options as calling, writing a letter, or making an appointment—all during traditional business hours—and miss ways to communicate instantly and asynchronously via email or Facebook. You wouldn't see the web as a useful way to broadcast information 24 hours a day, let

alone automate some conversations with clients. Fluency is never a static achievement. Without new experiences, the same box of tools will become less useful over time.

Fluency is never a static achievement. Without new experiences, the same abilities become less useful over time.

Occurring again and again, this journey to fluency is a process of four stages: *Anti-Literate*, *Pre-Literate*, *Literate*, and *Fluent*[4]. During each transition, you add a little more knowledge, a few more skills, and a different way of looking at the world, allowing your abilities to improve and adapt.

Anti-Literacy

Far more people in this world do *not* use Twitter than do. There are many valid reasons for declining to make the microblogging service a part of one's life. An Anti-Literate person, however, rejects the possibility that there would be *any* value in Twitter, coming to that conclusion without having experienced the service enough to understand its affordances and limitations. The defining characteristic of an Anti-Literate person is not a lack of knowledge, but the refusal to acquire new knowledge (see Table 3.1).

In some ways, this stage of the learning process may be the most difficult to move beyond. Much about digital media—its uses, potential value, operations, and effects—is still quite foreign to an Anti-Literate person. That makes it easy to resist. What keeps one Anti-Literate is an incomplete or neglected collection of raw materials to use to develop abilities. Either a few key bits of knowledge or skills are missing, or the dominating mindset relies on established abilities that should be discarded.

An Anti-Literate person is drawn into the next stage of learning for different reasons. A few common motivations include:

4
This process is a simplified combination of the Dreyfus model of skill acquisition [Dreyfus and Dreyfus, 1980, 1986] and the Four Stages of Competence model.

Knowledge	The assumption that technologies, not people, always cause success or failure
	The assumption that increased social media use always causes a decrease in face-to-face communication
Skills	Trouble typing, searching, using a mouse
	Difficulty troubleshooting basic computer problems
Mindset	Belief that playful things cannot be used for serious purposes
	Belief that technology is inherently either good or evil

Table 3.1
Signs of digital anti-literacy

Being left behind—When friends and family are doing things you don't understand, that feeling can spark a desire to be better informed. Grandparents often cite their kids' and grandkids' use of digital media as the reason they started using a computer.

Realizing play is serious business—At some point, a suspicion surfaces that digital services are more useful and serious than they appear. Ten million people play the game World of Warcraft, improving real-world communication and leadership skills through its social mechanisms. Twitter is often perceived a soapbox for the trivial and mundane, but the low barrier to sharing such information (and things of more substance, too) proves an effective means of building valuable collaboration networks. Simple explanations no longer fit.

Seeing possibility—Competition can change one's mind about a particular technology. It is easier to see the potential value in digital media when peers experience success by using it[5]. If your competition is doing it, you can too.

When revelations like these occur in an Anti-Literate individual, it is a strong indication that Pre-Literacy is achievable.

Pre-Literacy

In the face of new technology, a Pre-Literate person recognizes something is gained by addressing one's lack of ability. Whereas the Anti-Literate rejected the idea that a new tool like Twitter provides any value, a Pre-Literate person will be open to discovering its potential, improving his knowledge, skills and mindset to do so (see Table 3.2).

Whereas the Anti-Literate rejects the idea Twitter has value, the Pre-Literate is open to discovering its potential.

In this stage, there are many knowledge gaps. With Twitter, the low-hanging fruit consists of knowing what a tweet is, what it means to put a pound sign (#) in front of a word, and whether posted content can be permanently deleted. New skills—many unknown to a Pre-Literate—are needed to follow people and effectively manage a social graph.

Perhaps most importantly, the ways of approaching the digital tools are not fully developed. Being comfortable with sharing personal information in public spaces—despite the loss of control this entails—is a critical mindset to adopt in order to be successful using digital media. It is equally important to understand that Twitter is not a magic-bullet solution for all challenges an organization may face.

Some motivations to overcome shortcomings in knowledge, skills and mindset, advancing the individual to the next stage in the learning process, include:

Finding heroes—Once a person can imagine value in using digital technology, she begins to notice and even emulate digital role models, people who are perceived as more active and knowledgeable about the tools. Developing literacy arises from a desire to use the digital technology in the same way as someone they think does it well.

Finding the silver bullet—When Fluent users make using the tools appear easy, Pre-Literate people may be inspired to take the next step, perceiving digital media to be a quick and simple solution to big problems. While this perception is beneficial to advance one's learning, it may lead to overestimation of the power of the tools or an underestimation of time involved to make using them look easy.

Knowledge	Not knowing terms applicable to a technology of interest
	Understanding the potential value of using a technology
Skills	Difficulty using basic tools of digital technology
	Able to imagine one's self in a future state
Mindset	Either oversimplifying or underestimating the role of a new technology
	Believing change is necessary

Table 3.2
Signs of digital pre-literacy

Literacy

Literate people have acquired basic abilities that allow for the full use of digital technology (see Table 3.3). They know what a tweet is and how to associate it with a topic using a hashtag. They can conduct a simple search for brands and trending topics, and they might recognize a popular meme[6]. They see clear value in use of digital tools, even if their appreciation is limited to a single kind of use. Being Literate means knowing what to do and how to do it.

5
There is a long tradition of psychological research on these sorts of phenomena that is called social learning theory, pioneered by Albert Bandura. [Bandura, 1977]

For many, this stage of the learning process seems like the end of the journey. With more frequent use of digital media, however, the Literate person begins to notice a few new challenges.

Being Literate means knowing what to do and how to do it.

While it worked well initially, a 5-step "best practices" checklist for using Twitter will backfire in some situations. A status update posted as a joke to 100 followers might receive angry replies from a few dozen readers. Managing the onslaught of information feels like a full-time job, cutting into otherwise productive time. Knowing what to do and how to do it is no longer enough.

Moving beyond literacy is a transition that can be triggered in a number of ways, most notably:

Experiencing breakdown—Despite a basic understanding of how a tool works, frequent use of digital technology often brings unexpected results. This disconnect between what a person expects to happen and the actual outcome can reveal crucial abilities missing from the toolbox[7].

Making the tool work differently—At some point, most people realize that technology designed for one use can be appropriated for other uses to achieve a goal. Jack Dorsey imagined urban and office awareness when he created Twitter, not an earthquake warning system[8]. When this realization occurs, a Literate person begins to imagine and experiment, discovering other ways digital media can support their goals.

These motivations are part of the complex mix that may move a person into the Fluent stage of learning.

6
Richard Dawkins coined the term "meme," referring to a unit of cultural transmission or imitation like "tunes, ideas, catch-phrases, clothes fashions that propagate themselves in the meme pool by leaping from brain to brain via a process which, in the broad sense, can be called imitation" [Dawkins, 1976].

7
The idea is a long tradition in the philosophical writings of folks like Heidegger, Leont'ev, and Dewey [Koschmann, et al., 1998] who claim that an important way people learn is when normal functions break down.

Knowledge	Citing the number of posts, tweets, or followers as the key metric for successful digital media use
	Understanding of particular types of potential value in the use of digital media
Skills	Use of digital technology in prescribed ways, sometimes with undesired outcomes due to errors of etiquette
	Ability to copy other people's methods for the use of digital media
Mindset	Feeling that the tools have been mastered, or that there is one "right way" to use digital technologies

Table 3.3
Signs of digital literacy

Fluency

As abilities move beyond the what and how of digital media use, a Fluent person also understands *why* the use is important and *when* it is appropriate, or inappropriate. Use becomes second-nature, or "easy." There is no need to think deeply about the what and how, except when reflecting your past experiences using the tool. As the world around us continues to change, fluent people adapt (see Table 3.4).

Though not immune to mistakes, it is rare that a Fluent person commits a serious social gaffe. When mistakes do occur, the error is addressed in an authentic and often public manner, to turn the experience into a positive interaction with others.

In 2011, Gloria Huang accidentally posted a personal tweet—*"Ryan found two more 4 bottle packs of Dogfish Head's Midas Touch beer...when we drink we do it right #gettngslizzerd."*—to the official Red Cross Twitter account, read by 270,000 followers. The organization acknowledged the mistake in stride with a quick and

8
Fourteen-year-old Sebastian Alegria from Chile appropriated Twitter to develop a $75 earthquake warning system, @AlarmaSismos, that warns tens of thousands of people 5 to 30 seconds before earthquakes hit.

Knowledge	Knowledge of examples where digital technology is being used in ways that were not intended
	Knowledge of the potential uses for digital technology
Skills	Able to adapt to changing norms within a sub-community of users on a digital platform
	Able to jump from one kind of digital technology to another to advance the goal
Mindset	Comfort with the fact that there is no "best" way to use a technology across all organizations and contexts
	Embracing change as opportunity

Table 3.4
Signs of digital fluency

humorous post, earning goodwill for their honesty. Dogfish, the beer company mentioned in the tweet, responded by organizing with a blood drive under the hashtag #gettngslizzerd[9].

A common misconception is that a person's use of digital technology increases with their level of fluency. Many assume that the person who uses her mobile device in the middle of meetings, or who camps out on sidewalks overnight to buy the newest technology, is the most fluent. Being digitally fluent does not equate with being techie.

In fact, a Fluent person may use these tools *less* often. She understands how to align her activities with larger goals, and under what circumstances such use would be detrimental. Making a phone call, or scheduling a face-to-face meeting may prove a better choice than communicating with a public post to Twitter. Fluency is as much about the *why not* as the why.

9
Dogfish Head Brewery encouraged pubs and breweries distributing their product to encourage beer fans to donate a pint of blood to Red Cross and get a free pint as a reward [Segall, 2011]

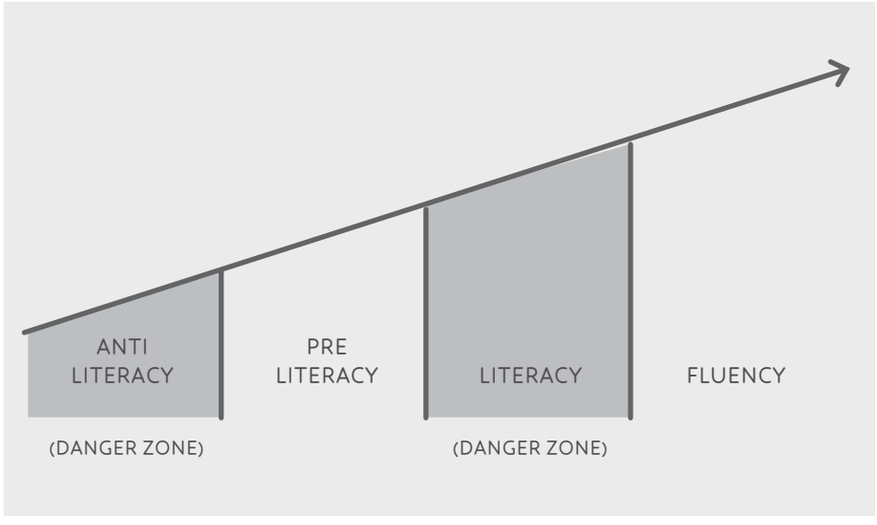


Figure 3.1.
The four stages of digital fluency

The Dangers Within

Because the development and maintenance of digital fluency is an ongoing activity, finding the motivation to continue to the next stage is critical. Along the journey, there are risks of complacency, danger zones where what you know or what you can do is deemed sufficient, causing the process to stall (see Figure 3.1).

In the Anti-Literate stage, the biggest challenge a person faces is seeing *any* value in the use of digital media. If that person waits too long to broaden her mindset to allow for exploration, the knowledge and skills she rejects may end up becoming an integral part of day-to-day business. Key pieces of information may be missed, making that person susceptible to scams or other forms of manipulation. A lack of mainstream skills could threaten job performance.

Similarly, a Literate person may not see value in continuing on with the learning process. Knowing enough to make use of digital technologies, he may not yet have enough experience to achieve desired outcomes.

Some examples of use that could produce unwanted results include unintentionally leaking proprietary company information, surfing the Internet during important meetings, or starting a flame war (i.e., an online fight). Literate people are sometimes just knowledgeable enough to draw incomplete conclusions about the value of digital technology, prompting them to abandon further exploration.

Two stages of learning—Anti-Literacy and Literacy—are particularly ripe for stagnation, because they are not steeped in change.

These two stages—Anti-Literacy and Literacy—are particularly ripe for stagnation because they are not steeped in change. The defining characteristic of Pre-Literacy is the recognition that change is needed. The most important benefit of achieving Fluency is the ability to adapt to constant change. Anti-Literate people don't see a need to change, and Literate people view change as already overcome.

Digital fluency doesn't occur all at once. It arrives in four stages, as people adapt their knowledge, skills and a mindset to the changes the world presents. This is done best primarily through first-hand experience, giving each person a better chance to achieve desired outcomes. While each stage in this journey presents its own challenge, the anti-literate and literate stages hold the greatest danger for stagnation, where people are content to stop learning.

The building and maintaining of digital fluency is an ongoing process that will likely accelerate in the coming years. Some of that is in your control—we'll suggest some starting points for your fluency training later in this book—but the effects of your digital fluency must always happen in context, impacted by forces external to you. In the next chapter, we will explore the role that your organization plays in your ability to succeed.

Glossary

Fluency—An ability to reliably achieve desired outcomes through use of technology.

Digital Fluency—An ability to reliably achieve desired outcomes through use of digital technology. This ability is helped or hindered by the situational forces and the digital fluency of others. A digitally fluent person knows not just what to do with a technology and how to do it, but also when and why to use it at all.

Anti-Literacy—The first of the four stages of fluency, which is characterized by the rejection of the possibility that there might be value of using a technology.

Pre-Literacy—The second of the four stages of fluency, which is characterized by an awareness of the potential value of using a technology, but a shortage of the ability to use it.

Literacy—The third of the four stages of fluency, in which a person possesses the basic abilities that allow for the full use of a technology, but only knows the basics of what to do and how to do it.

Ability—A person's capacity to affect the world.

Knowledge—Factual or procedural information that will help (or hinder) a person's actions.

Skill—Mentual, verbal or physical manipulation of data or objects.

Mindset—A person's point of view on the world.

Organization—Any group of people and arrangements between them.

Digital Readiness—An organization's ability to create an optimal situation to support individual digital fluency.

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