

The Marshall Experience

Why should I get a college degree?

Finish high school, start college.

It's exciting, liberating, maybe a bit intimidating. But you do it only once. When you step through that door, there's no going back.

Most of you graduated from high school a few months ago, but even if it's been a while, your first day as a freshman on a college campus is full of possibilities. Are you trying to take the next logical step toward adulthood? Did you follow your friends here? Or do you think college will give you a ticket to a good job? Do you want to change careers altogether? Do you love to learn new things? Or are you doing what your parents want you to do?

Whatever your reason for being here, a college degree can help you build the kind of life you want to live. It's a step, a good start. It can *help*. But college is not the singular rite of passage it used to be. In 2013, it's no longer enough. If your degree is going to be worth anything by the time you graduate, you're going to need to think strategically while you're here.

You're probably thinking that we're going to make a case for graduate school. And for some of you, going to graduate school is precisely what you'll need to do to pursue the career you desire. But right now we're talking about a different kind of strategic thinking. For those of you whose highest priority four years from now will be graduating and finding a job, how can you make your time in college *now* worth more in the *future*?

We live in a rapidly evolving "information age." In fact, most of you were born into it. You have never known anything different. For you, there has always been an Internet. Phones have always been smart. Movies have always been streamable. Google is now a verb. Vast stores of information are so accessible, so at your fingertips, that it almost feels like we don't really need universities anymore. But because no single human being can master all this information, any and every type of employer—corporations, small businesses, government agencies, hospitals, school systems—will want to hire a new kind of college graduate, one who is able to adapt at a moment's notice to new information, new problems, new environments. And the ability to adapt is not a matter of knowing something. It is a matter of *doing*. Turn your four years of college into a practice ground

for learning not just **WHAT** but **HOW**, and you'll turn your degree into something truly worthwhile for both you and your future employer.

So . . . there's much more to this transition from high school to college than you might have realized. Here at Marshall, your professors will expect you to think hard, be skeptical of information, ask questions (**BIG QUESTIONS**), be professional, own your own mistakes, experiment, appreciate points of view that are different from your own, be on time, read deeply, communicate complex ideas, tolerate uncertainty, and make connections between seemingly unrelated things.

Are you game?

Maybe. But why do I have to take courses outside my major?

Good question. You're ready to jump into your major and crank out the degree. Why not get right to the business of learning what's most important for your future profession?

Well, first try thinking about a college degree like a Swiss Army knife. It's not one thing; it's many things—a coordinated collection of tools designed for all kinds of contingencies in the "field." Going camping in the New River Gorge? Don't forget your small saw, large blade, and a flashlight. Plan on biking around campus? Keep your chain rivet setter and your spoke adjuster in your backpack. Think you can fix a bookshelf in your dorm room? Pull out the screwdriver and pliers. Did you get a splinter while fixing that bookshelf? Quick! Where are the tweezers and magnifying lens?

Or . . . you could choose to think strategically and just tuck that one Swiss Army knife in your pocket. Then you'd have everything you need.

Whatever major you choose, whatever career you pursue after graduation, you'll need more than one tool to solve the problems you've been hired to solve. If you want to work as a nurse in a hospital, you'll need to know anatomy and physiology as well as many practical skills. But you'll also need to know how to write (yup, composition), how to relate to patients unlike yourself (sociology), how to cooperate effectively with a medical team (communications), and how to ease a patient's anxiety (psychology).



And if you want to start your own business, your marketing and accounting courses will obviously help, but you'll still need to know how to appeal to a customer's sense of beauty (art appreciation), or how to compete in a market that balances economic interests with environmental ones (biology, geology, or geography).

So yes, it's important to take courses outside your major. No modern-day profession depends upon just one way of thinking or just one field of study. Here's a dare. Interview five college graduates who work fulltime in their chosen profession. Ask them to name a course that wasn't in their major--something that seemed irrelevant at the time but

turned out to be very important to their work. You may be surprised by what they have to say.

Solving a problem using the expertise of more than one field or discipline is called **integrative thinking**. In other words, when faced with a difficult professional problem, we often "integrate" one field with another, one way of thinking with another, in order to see the bigger picture. You know the old-fashioned 3D cardboard glasses, where one lens is made out of red cellophane and the other blue? If you're watching a 3D movie and you look through both lenses, suddenly the movie gains dimension, the characters reach out. You can see *more*.



Do you know the difference between college and other forms of post-secondary education?

High school graduates have several options other than college; they can enroll in trade schools, community and technical colleges and other certificate programs. Most of these involve one or two years of coursework and/or practical application (instead of the usual four years for a bachelors degree). Besides taking less time, these options require training that is limited in scope and highly practical (for example, plumbing and electrical) or geared toward paraprofessionals (teaching assistants, paralegals, paramedics) who will go on to assist professionals in the field (teachers, lawyers, doctors). Because technicians and paraprofessionals focus on applying technical or practical knowledge to very clearly defined tasks, they generally aren't expected to tackle large-scale issues or solve complicated problems on their own.

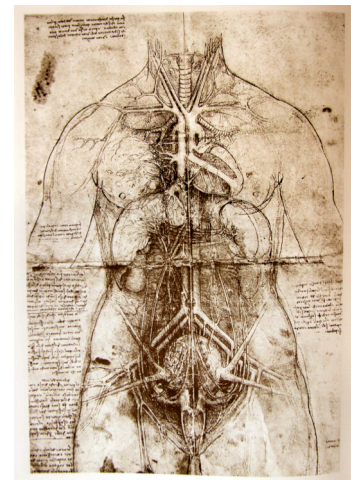
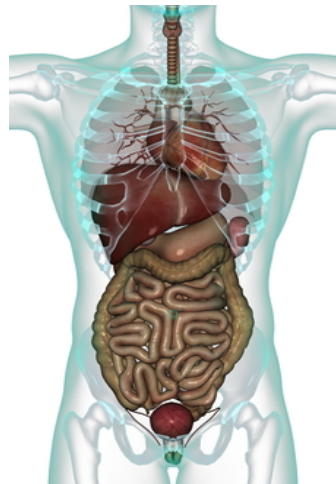
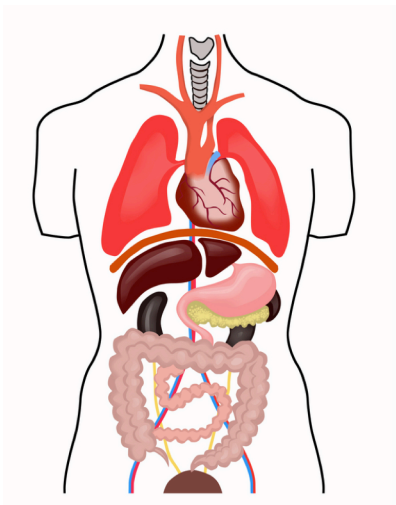
If you ever wonder why you have to take philosophy in order to major in biology, this is why. When you graduate with that 4-year Bachelor of Science degree, you'll not only be able to work for a biotech company or environmental engineering firm but you'll actually have the nuanced skill set to manage complex environmental projects whose costs include people, communities, and cultures too.

Liikewise, if you know how to think integratively once you graduate and are on the job, you will see more. And your employer will value your heightened perceptions in more ways than one.

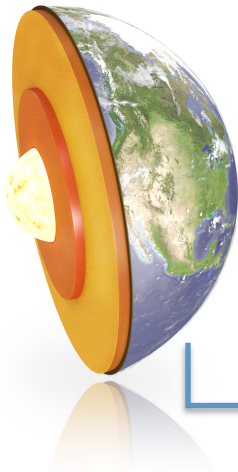
Perceiving mathematical patterns in music requires integrative thinking.



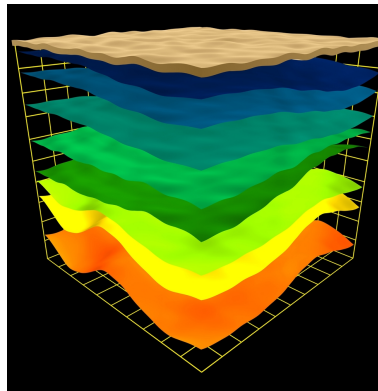
Paying attention to the aesthetic quality and anatomical accuracy of scientific illustrations requires integrative thinking.



So how do you develop these different lenses while you're in college? What courses should you take outside your major, and how do they connect with one another? Most colleges and universities require a series of courses that are classified as "general education." Here at Marshall, we call those courses the **Core Curriculum**.

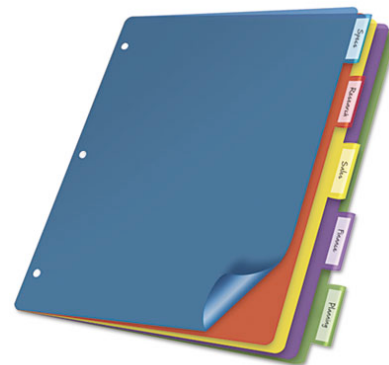


Take the earth for example. Its dense hot metal core generates the earth's magnetic field, which protects the earth from a solar wind that would otherwise degrade the atmosphere and turn the blue planet into another barren, red Mars.



The earth's crust, on the other hand, is comprised of mountains, valleys, plains and ocean beds. But such diverse, seemingly disconnected "surfaces" are anchored—through layer upon layer of "mantle"—to this singular, dense core.

Much as the earth's core is central to our planet's physical cohesion and persistence, core courses in the general education curriculum are central to every student's intellectual and professional development, no matter what your major. As you fill your academic portfolio with learning experiences from across the curriculum, remember that the core connects everything.



So here's what the Core Curriculum at Marshall looks like:

| Core I: Critical Thinking (9 hours) | | Core II: The Disciplines (25 hours) | |
|--|--------------|--|--------------------------|
| 3 | FYS 100 | 6 | Composition |
| 3 | CT Course #1 | 3 | Communications |
| 3 | CT Course #2 | 3 | Math |
| | | 4 | Natural/Physical Science |
| | | 3 | Social Science |
| | | 3 | Fine Arts |
| | | 3 | Humanities |

When you declare a major, your college or department will give you a much larger checklist called the [Academic Major 4-Year Plan of Study](#). The above requirements will be included there, among other college-level requirements and courses in your major. Most of you will complete the Core Curriculum in your first one or two years.

Despite the temptation to regard such charts, lists and plans as so many hoops to jump through on your way to the major, try thinking strategically about each of these courses. **Just below the surface or "crust" of your major is Core II**, eight courses in different disciplines. You'll find this cluster of courses in the casing of your Swiss Army Knife. This is what college graduates are expected to bring to any professional career—a tool for every occasion. If you think you won't be asked to referee personal conflict at your accounting firm, think again.

At the hot magnetic center of the Curriculum is Core I, three courses that focus on integrative thinking and critical thinking. Core I is meant to free you from mono-vision and enlarge your perspective on the problems that face human society. Core I is the magic of blue cellophane *and* red cellophane for your 3D glasses. Professionals use this kind of sharp, wide-ranging, discerning vision to navigate the "wicked problems" that face us in the 21st century: climate change, obesity, Afghanistan, the housing market, gun violence, even the thorniest problem of all: the pursuit of happiness.

A toolkit and vision. These are the secrets to your success. Don't waste them while they're yours to rehearse. Choose to experience each course that you take *outside* of your major through the lens *of* your major.

Alright. So what is FYS 100 then?

Let's say you're an art history major. You know you have to take a math course (probably because I just told you!), and you're beginning to warm up to the idea that there's some value in taking math—especially for someone who may go on to become a museum curator or gallery owner. And at least when you walk into that math class, *you know what math is*. But what in the world is First Year Seminar in Critical Thinking (FYS 100)? Or to put it in terms of philosophy, "So why are we here exactly?"

Remember what I said above about Core I courses being at the center of the curriculum? Well, FYS 100 is the core of the core. If Core I gives you practice in integrative thinking and critical thinking, FYS 100 will make you more aware of what has to happen to get

your brain to think that way at all. It's not that you don't already think integratively and critically. But you won't get better at it until you become aware of how your brain operates.

Humor me for a second. Below I have an addition problem for you, but you must work it out in your head. No pen or paper allowed. Ready? Go!

$$163 + 29$$

Got it? OK. I don't really care about your answer. What I want to know is how you attempted to *arrive* at an answer. What mental moves did you make in your head to add the two numbers together?

Did you start by adding the 9 and the 3 (mumbling to self: *9 plus 3 equals 12, carry the 1*) and so on, like this?

$$\begin{array}{r} \mathbf{1} \\ 163 \\ + 29 \\ \hline \mathbf{2} \end{array} \quad \rightarrow \quad \begin{array}{r} \mathbf{1} \\ 163 \\ + 29 \\ \hline \mathbf{92} \end{array} \quad \rightarrow \quad \begin{array}{r} \mathbf{1} \\ 163 \\ + 29 \\ \hline \mathbf{192} \end{array}$$

Or did you use estimation to reduce the amount of information you need to store in short term memory?

- 29 is oh so close to 30, and 163 and 30 would be easy to add (193!).
- But if I rounded 29 up by 1 to get to my easy 30, then I need to round my estimated answer down by 1.
- $193 - 1 = 192$

Or did you add up each column (the ones column = 12, the tens column equals 80, the hundreds column equals 100) and then add the columns together?

$$12 + 80 + 100 = 192$$

Or something else?

However you did it, did it ever occur to you that there is more than one way to do a simple math problem in your head? And that one way may be faster than another? Or that one way may lead to a right answer more often than another? In other words, have you ever thought much about *how* you think—how you form a question, solve a problem, reach a conclusion, or judge the reliability of a source of information? And do you wonder if other people do it differently? There's a fancy word for this. Thinking **about** how you think is called "metacognition": *meta* means *above*, and *cognition* means *thinking*. First Year Seminar in Critical Thinking will give you a chance to practice and perfect your metacognition skills.

Some people are always a bit more skeptical of information that they hear on the news or read in newspapers and online. And they should be. Did you know that 82% of all statistics are made up on the spot? Surprised? And did you know that I just made up that statistic? ☺ Come on. Think about it. How could I (or anyone) know—out of all the possible statistical bits of information that are circulated, *ever*—how many are made up right then, how many are the result of reliable experimentation and calculation, and how many are offered in good faith but are inaccurate nonetheless? Eighty percent of WHICH statistics? The ones that are published? The ones that are discussed over coffee? In the United States? Since the year 2008? Take a look at Chapter 2, page 50, of your textbook. There you will find out that the new Plate Glow detergent gets plates 43% cleaner!! But 43% cleaner than what? A critical thinker will always be skeptical of statistics, even if she admits that some statistics are worth paying attention to.

Asking questions like this is part of the process of learning to think critically. In high school, you spent a good deal of time and energy learning in certain subject areas (math, science, social studies, reading). But the information in your high school textbooks was what Steve Jobs once called "the results of other people's thinking."¹ That is to say, someone *else* pored over archaeological maps, arrived at a judgment about what area of the world was ripe for a new dig, excavated dinosaur bones, studied their mineral composition and their gross anatomical structure, and developed a theory about what this creature ate and how it had sex. And then a summary of that person's work ended up in your textbook. *Knowing* the results of other people's thinking is good for winning on *Jeopardy*, but your future employer is not out to hire Watson.² What about *your* thinking? How are *you* going to learn how to read archaeological maps (or novels or statistical software or lesson plans)? How are you going to learn how to arrive at a judgment about

which areas of the earth are still hiding archaeological secrets (or which novel is best suited for adaptation into a film, or which statistical data sets are significant, or which teaching technique is more effective)? How will you learn the finely tuned art of archaeological excavation, or screenplay writing, or teaching?

Why is my FYS 100 class different from my roommate’s class?

Classes taught by different professors are, well . . . *different*. Your ENG 101 class is also different from your roommate’s. So is your SOC 201. What makes different sections of the same course similar is shared learning outcomes (you know, the part of the syllabus that says, “At the end of this course, you will be able to . . .”). One professor might ask you to read the *New York Times* and follow one columnist over the course of the semester. A different professor might ask your roommate to read a novel. But both professors want you and your roommate to be able to identify your own cultural biases when you read that columnist’s work or that novel. The important thing is to know the course’s learning outcomes and try to connect those to everything you do in and out of class. Are you writing a reflection after visiting the crime scene investigation house at Marshall? What outcome does that help you to achieve? Are you comparing websites to determine how reliable their “facts” are? What outcome does that help you to achieve?

Developing expertise in a particular professional field is not just about **knowing** something. It’s also about **thinking** and **doing**. After four years of college, four years of medical school, and three or more years of a hospital residency, you can be sure that doctors know A LOT! But what does it mean to *think* like a doctor? And if the victim of a car accident shows up in the ER with a punctured lung, knowing the right information and asking the right questions is a good start, but none of that matters unless a doctor can *do* what a doctor needs to do. First Year Seminar in Critical Thinking will help you to make this transition into a new level of intellectual responsibility. Take the course seriously and you will be primed for success at Marshall.



As the “core” of the Core, FYS 100 will also give you an overview of the nine Marshall University learning outcomes. Every student, regardless of major, will be able to demonstrate proficiency in these nine areas by the time the B.A. or B.S. is earned:

1. Communication
2. Creative Thinking
3. Ethical and Civic Thinking
4. **Information Literacy**
5. **Inquiry Based Thinking**
6. **Integrative Thinking**
7. **Intercultural Thinking**
8. **Metacognitive Thinking**
9. Quantitative Thinking



These five university learning outcomes are the focus of FYS 100, but you will encounter them in other courses in the Core and in your major, too.

Don't worry. FYS 100 won't try to tackle all nine of these, but your instructor will introduce them to you so that when you encounter them in other courses, you'll have the big picture in mind.

You may be thinking that two of these university outcomes sound familiar. Yes, I've already discussed **Integrative Thinking** on page 3 and **Metacognitive Thinking** on page 7. FYS 100 will definitely give you plenty of opportunities to practice these two university outcomes and will also focus in depth on three more: (#4) **Information Literacy**, (#5) **Inquiry Based Thinking**, and (#7) **Intercultural Thinking**. But FYS 100 is only the beginning; other courses in the Core Curriculum and in your major will reinforce these five university outcomes as well as the other four. In essence, this is Marshall University's promise to you, your future employers, your profession, and your community. More than just a credential on a piece of paper, your Marshall University degree promises not only that you have expertise in a major field but that you can employ multidimensional critical thinking skills to tackle complex problems—some that don't even exist yet.

What if I fail?



There are lots of reasons to pursue a college degree. But chances are, you're here because you want to succeed at something. You want to become a successful business owner or psychologist or civil engineer. You want to make your family proud. You want to feel like you're contributing to a better world. You want to make a good living for yourself and your family. You want to be happy.

You probably also want to succeed while you're in college. And A's and B's are better than C's and D's, right? So why are we talking about failure here? In a world where only the best truly succeed, what's the value of failure? I'll give you three answers: the iPod, Google, and Harry Potter.

The iPod

The invention of the iPod is the story of serendipitous failure, the kind of failure that happens by accident but is transformed by bold, creative thinking. You probably know that the co-founder of Apple, Steve Jobs, died in 2011—and that he died, as they say, at the top of his game, worth approximately \$8.4 billion and at the head of the most valuable publicly traded company in the world.³ Since his death, Jobs' early life and business partnership with Steve Wozniak have been narrated in a best-selling biography by Walter Isaacson and is the focus of several recent movies. The short version of this story is that Jobs and Wozniak were at the helm of the personal computer revolution. They didn't invent the personal computer, but they gave everyone a reason to take it out of the office and bring it home.



Moreover, Apple was the beginning of the end of operating systems where users entered text commands on the keyboard in order to operate a computer. (Ever wonder what those old F1, F2, F3 keys are for?) Instead, Apple popularized what Xerox had already developed—a more intuitive “graphical user interface” (GUI), where visual icons were used to symbolize electronic files  and folders , and the mouse became an essential peripheral. We pretended that clicking on an icon with the mouse was like physically opening a manila folder on our desks. In some sense, you might say that GUI was the beginning of the virtual world in computing. Apple took its operating system and display improvements into the personal computer marketplace not just to *compete* but to actually change the game. Other well-established hardware and software companies, like IBM and Microsoft, would not be long behind in following the profile of the Apple Computer paradigm shift.

But despite the success of Apple in the early 1980s and the promise of a 30-year-old entrepreneur who knew how to promote the inventions of Wozniak and others, his management style did not suit the CEO at the time, and he was fired from the very company he had co-founded. In later years, Jobs often reflected publicly that what was surely a profound failure in his life was also the key to the more important and profound successes that were yet to come for him. “The heaviness of being successful was replaced by the lightness of being a beginner again, less sure about everything. It freed me to enter one of the most creative periods of my life.”⁴ Being untethered from what he had thought to be his sure future, he moved on to other projects and innovations (Pixar, for example) that would give him room to experiment with a unique combination of seductive design and consumer psychology. He would eventually challenge the notion that one must research and understand the market for a certain product before investing in it. Rather, instead of responding to consumer desire, he shaped consumer desire. He worked to improve the functionality of his products but never by sacrificing another of his priorities: elegance of design. When he returned to Apple over a decade after being fired, he spent the next 15 years transforming a financially unstable computer company into a giant consumer electronics multinational corporation—releasing various iterations of the iMac and MacBook, then on to the iPod, iTunes store, the iPhone, the App store, the MacBook Air and the iPad.

Inasmuch as a single person can effect revolutionary cultural and technological change, Steve Jobs changed everything. Even if you own an Android instead of an iPhone, an HP mini notebook instead of an Air, a Coby MP3 player instead of an iPod, the marketplace for what you *do* own was affected by the innovations of Apple.

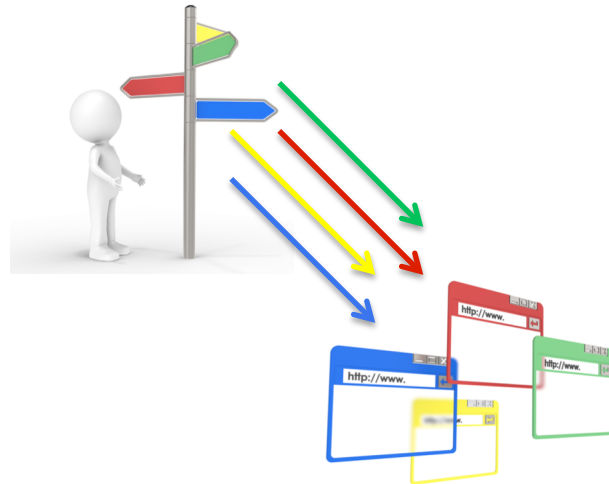
What would have happened if, after being fired, Steve Jobs had given up on computer technologies altogether?

Google

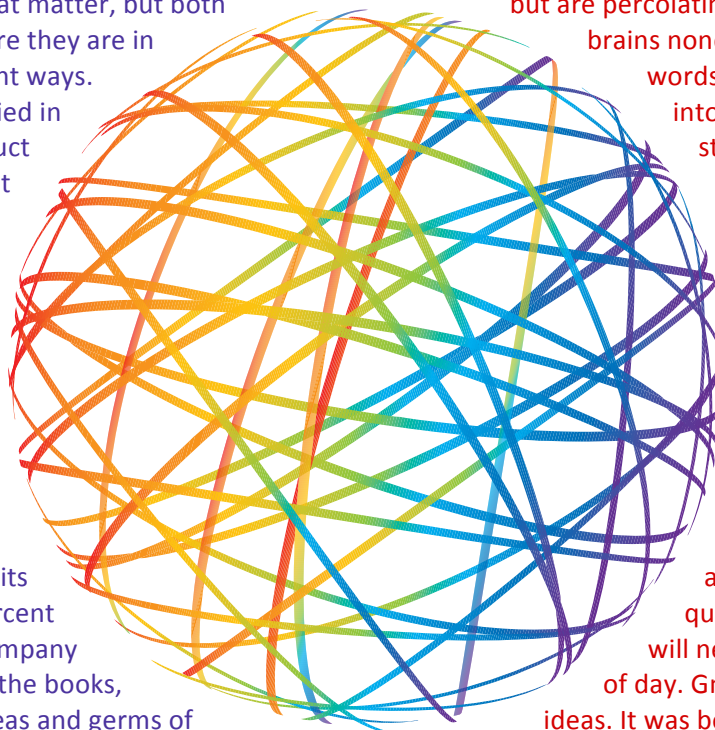
If the iPod is the result of a series of accidents and failures that pushed Steve Jobs to retool and rethink everything (even what he thought to be a viable model of success and innovation), you may be thinking that there's no way to plan for that kind of failure or for the success that might follow it. The lesson of the iPod, though, is not in the plan but in how one chooses to creatively respond to the failures that are inevitable. They need not be wasted. Unexpected failures can help us to see the underside of things, a view without which an idea can only ever be a partial one.

There is another kind of failure. The story of Google is the story of a corporate philosophy that encourages risk-taking in the service of innovation. The company's creative output is astonishing in its breadth. Like a fish in water, we are so deeply immersed in all things Google that we cannot even see what we are swimming in.

Want to know something about Steve Jobs? **Google it**. Want an email account that will follow you from high school to Marshall to your first job and your second, an account that is not connected to a particular school or employer? Then open a **Gmail account**. Need to find your way around Amsterdam or Sydney or Moscow or Huntington? Use **GoogleMaps**. Want to create your own website? Try **GoogleSites**. Want to watch that viral video of the Star Wars kid? Pull up **YouTube**. Need a way to share documents without keeping track of pesky jump drives? Use **GoogleDocs**.



Google is now ubiquitous. So is Coca Cola for that matter, but both companies got where they are in radically different ways. Google is so diversified in terms of its product suite because it **stages** failure for employees, even budgets for it, and not in the same way that retail stores plan for “shrinkage” (you know, shoplifting and merchandise damage). Google famously offers its engineers “20 percent time” to pursue company projects that are off the books, so to speak—ideas and germs of ideas that are not part of



Google’s larger product development plan but are percolating in employee’s brains nonetheless. In other words, failure is written into the corporate strategy (for one out of every five workdays, at least), with the expectation that the majority of these ideas will be awful. Google execs realize that unless designers can make mistakes without worrying about productivity quotas, the best ideas will never see the light of day. Gmail is one of those ideas. It was born in the twilight zone of “20 percent time.”⁵

And also born in that twilight is “an astonishing portfolio of failures.”⁶

Harry Potter

J. K. Rowling published *Harry Potter and the Sorcerer's Stone* in 1997. If you are 18 now, you are too young to have witnessed the beginning of the Harry Potter phenomenon—but old enough to notice its effect on older siblings and friends. And if you didn't eventually take up reading the books yourself, the movies most certainly drew you in a few years later.

Wherever you belong in the Harry Potter universe, you know that the books and movies shaped an entire generation over the last 18 years. If you have a winning idea, J. K. Rowling's story of success would be a good one to follow. As she tells it, the idea for the orphaned wizard-to-be popped into her head during a long train ride from Manchester to London in 1990.⁷ She finished the manuscript by 1995 and eventually signing a contract with Bloomsbury Children's Books. In 1996 she received a £2,500 advance on the book (about \$4,000), and in 1997 Bloomsbury launched an initial print-run of 500 copies. By 2001, the book had sold over 11.6 million copies and Rowling was reportedly a billionaire. She is the first and only billionaire to have come by her fortune through writing.

Rowling's story seems to bear out everything we believe about successful people: talent, hard work and some well-timed luck equals success. But did you notice the details? Go back and reread the paragraph I just wrote. Look at the dates.

Idea → 1990.

Manuscript finished → 1995.

Publisher secured → 1996.

In print → 1997.

Author becomes a billionaire → 2001.

Five years of writing? That's more time than you plan to spend at Marshall getting your bachelors degree. Would you risk working on a project *for five years*, knowing that it wasn't a sure thing? What about the entire year that Rowling spent looking for a publisher (with eight rejections before Bloomsbury agreed to take on the project)? When would you have stopped looking? After one rejection? Two? Five? Seven? In retrospect, can you even believe that eight publishers looked at *Harry Potter* and said, "Um, no thanks"?

If the iPod was born out of a **creative** response to serendipitous failure, and if Google thrives on strategic failure that invites employees to **play** at work, J. K. Rowling's story simply tells us to **persist**. Rejection may be about the need to hone your craft before you go out and give it another shot, but sometimes it may not be about the quality of your work at all. Maybe it's more about someone else's personal preferences or business sense or unwillingness to take a chance on your talent.

Creativity. Play. Persistence. These words are not meant to be catch phrases for a self help book on success. Flip back to the beginning of this chapter with me for a second:

Whatever your reason for being here, a college degree can help you build the kind of life you want to live. It's a step, a good start. It can help. But college is not the singular rite of passage it used to be. In 2013, it's no longer enough. If your degree is going to be worth anything by the time you graduate, you're going to need to think strategically while you're here. . . . For those of you whose highest priority

four years from now will be graduating and finding a job, how can you make your time in college *now* worth more in the *future*?

CREATIVITY: What flukes, catastrophes, and failures are ahead of you over these next four years? And even more important, which ones will devastate you and which ones will you mull over in search of unforeseen opportunities?

- Will you oversleep during a final exam and fail a course as a result?
- Will you be unable to find a part-time job?
- Will you give a final presentation in class that flops because you didn't rehearse?

Where is the creative thinker in you? Failing a course because you missed an exam may not be something to celebrate, but look around. What do you see? An idea for a different major—the field you should have been majoring in all along? A new time management strategy? A chance meeting that leads to a fantastic internship opportunity?

PLAY: Where might you find time and space to “play” intellectually? If you've ever had a dog or a cat, you know that they love to play. But what exactly are they up to? I've noticed that when I pretend to stalk my dog, she doesn't look directly at me. She looks to the side as though she doesn't even see me creeping up on her. Then at the last possible second she darts away. Then I laugh and she runs up to me and licks me in the face. It's all very funny. But I have long suspected that when we play like this, she's actually practicing. She's testing her ability to detect predators (or prey) out of her line of sight. She sees me coming, but she chooses to look away and rely only on her peripheral vision because that's what life will really be like when she reaches adulthood and is out in the wild. (Yeah, I know what you're thinking. She's not going to “graduate” from my house and move out into the wild, but she doesn't know that!)

So how are you going to play? And why? Are you going to enroll in a service-learning course that gives you a chance to learn in a less structured environment outside of the classroom? Are you going to ask a professor to direct an independent study so you can explore a topic that *you* want to study on your own? Are you going to visit your professor during office hours so you can test out project ideas in a safe place where messy thinking is expected and encouraged? Are you going to visit the Study Abroad office so you can have an overseas experience that blows your mind?

PERSISTANCE: At what point will you need to persist in spite of failures, set backs and rejections? If you are a student-athlete, you already know how that goes. Athletes don't quit every time they lose a game or a match. They get up. They practice again. They get older. They compete against more talented athletes. They lose. They practice again. They get older. And by the time we might call an athlete “successful” (in college sports, in the Olympics, or professionally), he or she has likely logged well over 10,000 hours of practice.⁸ Do the math. That's eight hours a day, five days a week, 52 weeks a year, *for five solid years*.

Hmmm, just enough time to invent Harry Potter. Yes. That sounds about right.

Notes

¹ Jobs, Steve. (June 2005). *Steve Jobs's Stanford Commencement Address*. [Video file]. Retrieved from <http://news.stanford.edu/news/2005/june15/videos/987.html>

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³ Bilton, Nick. (2011, August 9). "Apple Is the Most Valuable Company." *New York Times*. Retrieved August 6, 2012, from <http://bits.blogs.nytimes.com/2011/08/09/apple-most-valuable-company>

⁴ Jobs, Steve. (June 2005). *Steve Jobs's Stanford Commencement Address*. [Video file]. Retrieved from <http://news.stanford.edu/news/2005/june15/videos/987.html>

⁵ "Alex K." (2006, May 18). "Google's '20 percent time' in action." [Weblog]. Retrieved August 16, 2012, from <http://googleblog.blogspot.com/2006/05/googles-20-percent-time-in-action.html>

⁶ Hartford, Tim. *Adapt: Why Success Always Starts with Failure*. New York: Farrar, Straus and Giroux, 2011, p. 232.

⁷ Loer, Stephanie. (1999, October 18). "All about Harry Potter from quidditch to the future of the Sorting Hat." *Boston Globe*, C7. Retrieved August 13, 2012, from <https://secure.pqarchiver.com/boston/access/45633201.html?FMT=ABS&FMTS=ABS:FT&type=current&date=Oct+18%2C+1999&author=Stephanie+Loer%2C+Globe+Correspondent&pub=Boston+Globe&edition=&startpage=C.7&desc=All+about+Harry+Potter+from+quidditch+to+the+future+of+the+Sorting+Hat>

⁸ Ericsson, K. A., R. T. Krampe, and C. Tesch-Römer, 1993. "The role of deliberate practice in the acquisition of expert performance." *Psychological Review*, 100: 363-406.