



Designing for Just-in-Time Skill Acquisition

A Management by Design Brief

By Daniel W. Rasmus
Principal Analyst
Serious Insights LLC

Executive Overview

Businesses need skilled workers to meet their business goals. Building business skills in today's global market requires more than mastering appropriate processes, knowledge of steps and familiarity with technology. Business skills also require context which suggests how-and-when to apply a process, and how outcomes are best communicated. Today's fast-paced business environment often require Just-In-Time learning to help people build skills in realtime so they can immediately put their newly acquired capabilities to work.

It isn't always easy to anticipate what an employee will need to know in a particular situation. Global trade, customer support and innovation rely on a solid foundation of Business English as a framework for communicating, collaborating and operating in a global economy – across boundaries of language, supply chain and product/service innovation. It is important for organizations to facilitate learning experiences that permit the employee to engage in just-In-time learning that combines peer-based support with a comprehensive set of on-line resources. These two factors also require support to assist the employee to engage in learning every step of the way – how, when and with what they need, anytime, anywhere. Human interaction proves pivotal in the process. Without support, employees rarely engage fully in the acquisition of a new language, to the detriment of many business outcomes.

Individual contributors run the risk of being left behind if they can't deliver their expertise to customers effectively, or communicate the value of their work within the organization.

This research was sponsored by



Embracing Just-In-Time Learning

As with most things that can become digital, the Internet has changed everything about learning. From going to class, to sitting at a PC, learning was often an experience that had an educator, distilling and disseminating knowledge. In the classroom they stood at the front of the room—on the computer, they arrived via audio or video, often from a CD-ROM or some other technology that required a local installation.

The Internet has made those resources available to anyone with a connection, wherever they have access to a computer. The rise of mobile devices like smartphones and tablets means that people now truly have access to learning resources anywhere, anytime.

Access to Just-in-Time Learning

Just-in-time learning isn't a technology. It is the application of learning across the technologies that comprise the Internet. Here are a few examples:

- Search engines allow people to rapidly discover information from multiple sources.
- Knowledge management systems share good practice that others can learn from quickly. Knowledge management systems also help avoid reinvention of practices and techniques that already exist.
- Wikis and other shared editing spaces facilitated co-creation of content, and learning within the creation environment.
- Social networking helps people build trusted relationships that can be called upon to answer questions or provide insight even across company boundaries.
- Instant messaging, SMS and other communications methods allow people to ask questions, and receive answers, almost immediately.
- On-line learning content and learning environments, like Khan Academy, Pearson English Business Solutions, Udacity, Coursera and edX provide on-demand courses.
- Question and answer systems, like Quora and Yahoo Answers provide platforms for learning.

The Flipped Classroom

Many educational institutions have started experimenting with what has come to be known as the “flipped classroom.” At its most simple, the educator flips the lecture to homework, and homework to class time. This way the student can learn the basic ideas on their own, and then work on practicing those ideas with the educator and other students.

This “flipped classroom” has created two interesting opportunities for just-in-time learning. First, flipped classrooms require content, and much of that content is

published openly, which means new content becomes available daily for the curious learner.

Second, a lot of work is being done on the “flipped classroom” and practices to support it. Professional development departments within organizations should leverage public and private higher education experiences to offer their workers enhanced variety as well as better efficacy than in traditional learning experiences..

English for Just-in-Time Learning

If your organization leverages just-in-time learning or not, your workers probably are. Guidance for almost any business need exists on the Internet, examples include how to create a marketing plan, ways to improve customer service, practices for good employee coaching, how to create effective presentations, selling techniques and many other ideas and concepts. The best guidance often exists only in English.

It is estimated that over one billion pages of English-based content exists on the Internet. That means that if someone is trying to find a topic to learn about, they are more likely to discover resources in English. These resources may be written, such as documents, presentation files or course materials, or they may be audio or video. English is required to discover and to engage with this content.

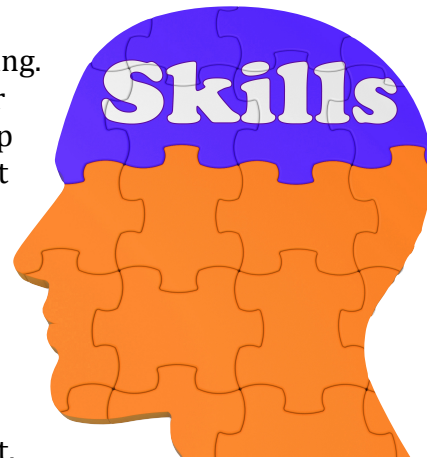
Acquiring Business Skills

Dynamic work environments where specific business skills cannot be easily forecasted provide one of the main reasons for companies to embrace just-in-time learning. Particular customer service, engineering, scientific or other issues may present themselves, and it will be up to the person to whom they appear to figure out what they mean, and how to deal with them.

Just-in-time skill acquisition does not necessarily mean that learning takes place in the heat of a crisis. Just-in-time learning also applies when an individual decides that *the time has come* to learn something based on a new situation anticipated at work, or because they are preparing for advancement.

Although any skill can be acquired just-in-time, the more general the skill, the more likely a variety of sources will provide guidance. Specific skills, such as working with a particular piece of software, may be more limited (unless it is something like Microsoft Office) and more difficult to find outside of the software creator’s site, or sites delivering specialized training, which often don’t give away their content.

Fortunately, advice on general skills are easily available. Here is a list of skills where just-in-time materials are easily available on the Internet:



■ Communications skills	■ Intrapreneurial, entrepreneurial and innovation skills
■ Time management	■ Strategic thinking
■ Writing	■ Programming
■ Personal organization	■ Managing difficult situations
■ Goal setting	■ Teamwork
■ Delegating	■ Research (internal and external)
■ Public speaking and presentation skills	■ Basic accounting
■ Relationship building and networking	■ Math (particularly statistics and probabilities)
■ Business etiquette (including online etiquette, politeness, civility and respect)	■ Decision making frameworks

Some skills, however, like critical thinking and domain specific pattern recognition (such as understanding market conditions in a trade) are better learned with a recognized mentor.

Mentored skills and those acquired through self-direction are not independent. Critical thinking is crucial, for instance, because despite the wealth of free information on the Internet, all sources are not of equal value; so, individuals must apply critical thinking in order to decide when something is a waste of their time, or just plain wrong.

Just-in-time-learning doesn't always offer practical experience necessary to really understand a concept. Take for example the last item on the previous list: *Decision making frameworks*. Just-in-time learning can

Pearson English Business Solutions Skillshops: Just-in-Time Blended Learning

Although many skills can be acquired by individuals seeking content on the Internet, or through learning departments curating for employees, organizations will increasingly seek just-in-time capabilities from recognized learning firms that can offer quality content, progress reporting and a variety of learning models.

One example is the recent introduction of Skillshop by Pearson English Business Solutions. These one day courses combine online assets with coaches. Skullcaps are designed to achieve results quickly, to make preparatory content available seven days a week, twenty-four hours a day, and to greatly reduce the cost of traditional face-to-face training while retaining critical personal coaching from experienced educators.

provide a wealth of information about these frameworks, from Blanchard & Peale's Ethics Check to Ross's prima facie duties framework. However, just-in-time learning will not provide practical feedback on how different frameworks perform in specific situations faced in a particular workplace. This is where learners will need to take the risk to apply new ideas themselves, or to seek out mentors to provide insight into how various ideas have been applied in the past.

The development of software-based simulations is growing in sophistication. Skills like marketing and customer service can now be acquired through virtual interactions and gaming environments developed by companies like SimVenture and cesim.

Human resources must pay particular attention to English skills in the recruiting, retention and development of key employees. HR not only needs to know current skill proficiency for those being hired, but the must be able to align their business objectives to guide new language mastery objectives. In most cases, this is going to involve integrated learning that ties to coaching, mentoring and performance management systems designed to help ensure the success of the employee. English often becomes the language that describes and defines what new employees need to learn, and the mastery of English is often on the list alongside other skills.

English, Design & Just-In-Time Learning

It is not enough that a company declare Business English as its operating language. Companies as far ranging as Airbus, Daimler-Chrysler, Nokia, Renault, Samsung, Microsoft Beijing, Rakuten, Fast Retailing and Technicolor have already declared

In order to increase efficiency, manage complexity, lower transaction costs and provide high levels of customer service, many organizations decide they need to adopt English as an operating language

English their operational language. Business skills already learned, or those needed, won't be translated into English overnight, nor will new skills be delivered immediately in Business English.

But the fundamental assertion that a common operating language is required is a good one. In order to increase efficiency, manage complexity, lower transaction costs and provide high levels of customer service, many organizations

decide they need to adopt English as an operating language, or to a lesser degree, as a primary language for customers and partners, and other external interactions.

Not all companies that declare English as their operating language find this path easy or quick. In a May 2012 *Harvard Business Review* article, Tsedal Neeley reported that in one company she studied, 70% of people were frustrated with the implementation of the English language work environment.

In order for organizations to successfully deploy English as a platform for operations and innovation, they need to design learning experiences that allow people to not only become familiar with English through traditional forms of learning, but also to maintain balance between the needs of the workers and the needs of the business in order to maintain engagement and ensure employee retention.

Design thinking helps organizations consider all of the issues related to developing work experiences, including those related to acquiring skills.

Acquiring Skills: A Management by Design Approach

My book, *Management by Design*, offers an experience design methodology intended to create great work experiences to complement the work many organizations already do for customer experiences. The methodology helps organizations define the elements required for good design, think about their work experience design opportunities holistically, and effectively incorporate their new designs into policy and practice, technology and space in order to ensure they move from intention to implementation.

Finding Balance

Management by Design begins with the idea of balance (see figure 1). This is a very important concept when designing for English as the language of business because it implies that the assertion of English needs to be balanced against other language considerations, for instance local culture and community.

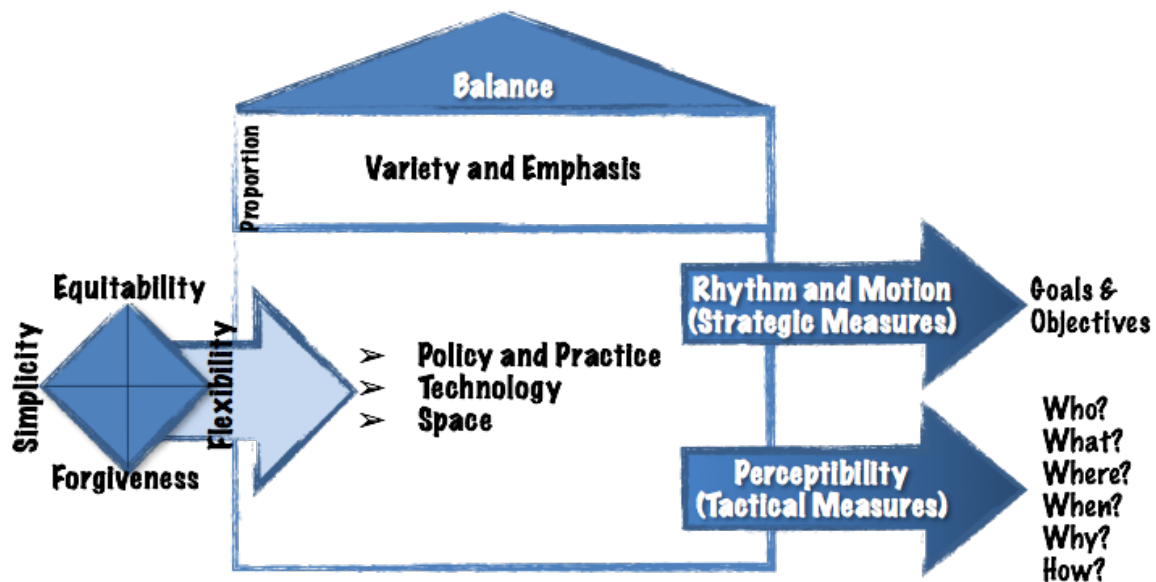


Figure 1. Management by Design Methodology Overview

Work experience designers should clearly communicate that the use of English is a business choice made to enhance the work experience, including operational efficiency, but that it also presents access to additional learning opportunities for individual workers. Another area of balance can come from bi-directional learning. Even if English is the chosen language of business, it doesn't hurt for managers and teams in other countries to learn some of the local language.

This dual benefit cultivates a mutual understanding about language learning, which results in fewer, more negotiable misunderstandings. A 2014 *Fortune* and *Travel +Leisure* poll indicated that 66% of respondents said exposure to new places and cultures was their favorite part of business travel.

Organizations that want a predominantly English-speaking work environment need to understand these areas of balance and bi-directional learning by explicitly thinking through the variety and emphasis phase of the methodology. The creators of work experience need to understand where it is crucial to use English, such as in a manufacturing or engineering discussion, and when a local language is acceptable, even preferred, such as a management feedback session where subtle inter-personnel issues may be better expressed in a native language so that the employee is able to really say what he or she wants to say. Working through resolutions can be done through bi-directional translations and clear acknowledgement that what was said was heard.

The actual design of work experiences, the combination of policy and practice, technology and space, is a key area where English comes to the forefront. If policy and practice are not developed and understood in a common way, then the operational implementation of those policies and practices may be applied inconsistently. On a more conceptual level, the holistic work environment that manifests itself from the application of policy and practice, technology and space, often referred to as "company culture," won't find a foothold if all people involved don't share a common understanding, even a common mental model, for the rules related to that work environment.

Variety and Emphasis

It is important to note that these "mental models" co-exist with other models. The idea is to create a common work environment, not to overturn other models. In *Management by Design*, the *Variety and Emphasis* design elements help ensure that organizations find a way to leverage the unique perspectives of individual employees, which can help drive understanding of markets and provide innovative insights. These two elements transform the tensions outlined in the *Balance* exercise into a context that reflects the stresses and realities of the real world work environment.

The recognition and inclusion of other mental models also creates a sense of variety to help engage individuals and teams. *Emphasis*, counter balances *Variety* by describing under what circumstances one item of balance needs more emphasis than another. In the case of language, it may be English over the native language. In a

meeting experience it may involve how much “talk at” time managers deliver versus how much time is spent on questions and feedback or personal sharing.

Variety and Emphasis guides the design process so that no one influence overwhelms other important influences.

Perceptibility

The two blocks on the right of the *Management by Design* methodology address communications. The first, *Perceptibility*, focuses on how teams communicate their work to other teams, horizontally, across the organization.

Perceptibility focuses on communicating the following basic concepts about a project, task or function. The idea behind *Perceptibility* is that a project, task or function can design how they are perceived using a very simple formula:

- Who: Who is the team?
- What: What is the team working on?
- Where: Where is the team working?
- When: When does the team work? When are their deliverables due?
- Why: What does the team exist? Who chartered them? With which execution strategies are they aligned?
- How: How do they get their work done (tools, communication channels, skills, etc.)?

You can see from this list that employing a standard operational language is key to developing an understanding for what various teams and functions are doing across an organization. It is equally important that they have a firm understanding of the common language so that where and when conflicts exist; they can negotiate toward a solution that benefits the organization.

Rhythm and Motion

The second communication area, called *Rhythm and Motion*, suggests that work experience design needs to include alignment with strategic management intent (i.e., how does management intend for people to align with and support a particular strategy), and how teams and projects provide feedback about their alignment, along with the protocols for negotiating change when misalignment occurs. The detail, depth of business, technical, even political knowledge assumed by the *Rhythm and Motion* portion of the methodology begs for an operating language that can ease the already conceptually difficult ideas of competition, differentiation and regulation.

The Design of Learning Experiences

So what does all of this have to do with just-in-time learning? For effective learning to take place, organizations need to design for a specific outcome. As the Lewis Carroll quote goes, “If you don't know where you are going,

*If you don't know
where you are going,
any road will get you
there.*



Most organizations, for instance, deliver policies and practices online. They can be read and learned, understood and referenced. Just-in-time learning provides an ideal model for the incorporation of these ideas or skills.

Further, the application of technology in experience design helps organizations develop learning experiences which include videos, online communities and learning assessments that create more engaging and more useful experiences.

Management by Design suggests that too often organizations “just let work happen.”

Technology, however, can't determine if people are actually doing the right thing day-to-day. For a design outcome that expects people to follow policy and apply approved practice, then external measurements like peer feedback and mentor guidance need to supplement the technology.

Management by Design suggests that too often organizations “just let work happen,” rather than designing it. Obtaining a skill without testing for understanding creates dysfunctional assumptions that lead to operational inefficiencies, even workplace accidents. It is critical that organizations adopting English as their operating language work through their policies and practices so that they aren't just written to be understood, but that they are actually understood and consistently applied. While balancing for efficiency, the organization must recognize that it takes time to acquire new skills and even more time to master them and apply them in the desired way.

Just-In-Time Learning for English

Interestingly, the concepts for just-in-time learning easily apply to language acquisition, including English. Just as one can learn a new skill or practice, they can also learn a language using the same tools and techniques.

Just-in-time tools from companies like Pearson English provide general English skill acquisition as well as functionally specific skills. Their systems provide self-paced learning, along with more guided approaches.

Just-In-Time Assessment

It may be that people seeking to learn English just-in-time do so for general purposes: they want to better converse, understand and provide value to their English-speaking managers, peers and colleagues. Understanding progress requires assessment.

Assessments can be contextual, helping people who think they know something avoid reinforcing mistakes, or they can be diagnostic, helping people figure out their level of proficiency and then making the best choice of tools available to meet their needs.

In business situations where learning English is critical to performance, safety or reaching a business outcome, it is important to deploy systems that provide assessment information to the learner, as well as to learning managers. These systems should evaluate progress and identify any issues hindering learners from meeting the competency level required to perform their work. While just-in-time learning for personal growth may be self-paced, applying just-in-time learning to critical business situations, or to meet specific goals, requires more traditional feedback mechanisms, assessments and points of intervention should those be required.

Avoiding English: The Risk For Individuals

All organizations that adopt an English language-based operating environment need to answer an important question for each of their employees: “what’s in it for me?”

It isn’t sufficient to just say this is the way things will be. Organizations, through their management structures, need to communicate that using English for business purposes is an opportunity to take that new skill and use it to acquire other skills. Organizations should consider, for instance, creating some curated learning opportunities hosted with their online English-language learning center so people can take what they have learned and experience as they learn another skill. People should also be encouraged to seek out relevant content outside the company and share what they find through the internal knowledge management and learning platforms. Not only does this encourage people to apply their new skills, but it helps create a learning environment that goes well beyond language proficiency.

Organizations need to be serious about their implementation efforts. One of the biggest reinforcements for strategic change comes from informal communication systems (the gossip channel). When people aren’t promoted, aren’t given new opportunities or are let go, and the reason ascribed to those actions involve their unwillingness to adopt the operating rules of the business, then others will realize that the use of English isn’t just a wishful direction, but a real principal.

The most important reason for people to acquire English is the ability to communicate their own value. Businesses design work experiences in which perception of a group or team become important in coordinating work. For the individual, the perception of their skills is seen by their work experience which is communicated through websites like LinkedIn, through resumes and through work experience portfolios. Those who master how to represent themselves effectively using English will have better opportunities for growth and mobility than those who shun it.

Why English Matters Now

In a technology-driven world, business relies on people who can understand technology, and more importantly, on people who can help other people understand technology. In 2000 over 95.9% of scientific papers were written in English. That means the latest insights about physics, the environment and information

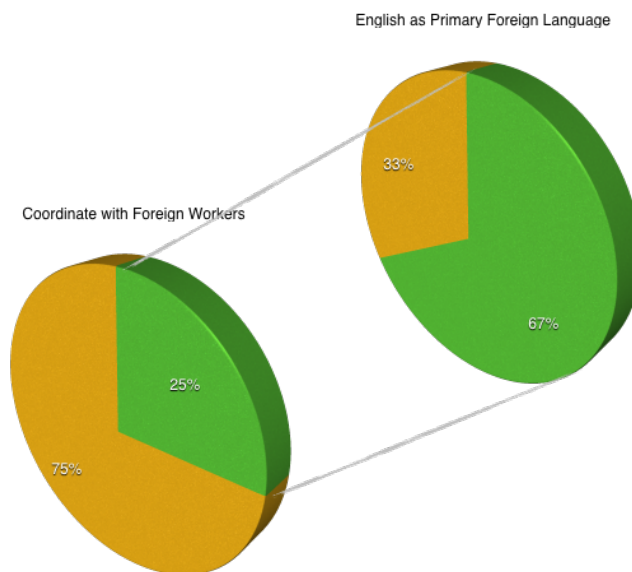
technology can more readily be discovered in English than in any other language. It also means that the evolutionary and revolutionary insights that drive innovation are also available mostly in English.

The historical accidents that thrust English into its role as a dominant language do not matter. For those who want to thrive across national boundaries, contribute to the invention of new products or the delivery of new services, English will be the primary language used for the development of those products and services. Even if the target market is non-English speaking, the development of those goods and services will be facilitated in partnership with English-speaking engineers and designers, managers and educators.

The following list outlines many of the areas of business where English-based content predominates.

■ Science and math	■ Regulation
■ Research	■ Business relationships
■ Customer service	■ Technical and business information
■ Law	■ News

Overlay these content sources on the enterprise, and areas like customer support, engineering, human resources, legal, marketing and many other line-of-business functions clearly require English competency simply to understand what is taking place in the world around them. Missed discoveries in science can lead to under performing products, while misunderstanding a legal ruling can lead to sanctions and other disruptions in the flow of revenue generating goods and services.



IPSOS: 25% of Employees in 26 Countries reported that their jobs required interactions with people in other countries. Two-thirds of that group listed English as the language they used most often.

It is incumbent upon organizations to meet the needs of their customers, their markets and their employees. The global nature of commerce is driven, to a large degree, by English language laws and regulations. The single largest consumer market, the United States, expects that goods and services are delivered and serviced in English. Many international efforts, from disease outbreaks to asymmetrical conflicts, from world trade agreements to disaster relief, are negotiated or executed to one degree or another through English.

For the foreseeable future, English will be a critical business skill for those who want to thrive in the world economy. And by mastering English, all of the other skills required to succeed in business instantly become more accessible.

A Language Caveat

Although this brief focuses on English as the language of business, it is not the only language of business. Mandarin, for instance, is on the rise as a business language, with over 845 million native speakers. All of the rules discussed above for English should be applied to an organization adopting Mandarin, French or Dutch as its native language.

Just-In-Time Recommendations

The following recommendations provide guidance for organizations seeking to establish some level of English-based operations supported by just-in-time learning environments.

- Embrace just-in-time learning as a valid approach to obtaining new skills, including language skills.
- Consider the “flipped classroom” model for professional development, so people can learn concepts on their own time and apply them under the supervision during their limited in-house training opportunities.
- Don’t just hope that English is adopted, but design for English-language work experiences that take into account the current situation as well as the need for native language support in certain areas.
- Write down policies and capture practices as straightforward and simple as possible.
- Deploy just-in-time learning tools to support policy and practice implementation and feedback.
- Develop policy and practice support that gives motivated learners time to explore the application of their new language skills.
- Provide language skills assessments so that individuals, and their managers, can monitor progress, better align proficiency with job roles, and co-create the right learning experience.

About the Author

Daniel W. Rasmus, is the Founder and Principal Analyst at Serious Insights. Rasmus uses scenarios to analyze uncertainties in society, technology, economics and politics in order to discover implications that help organizations put their future in context so they can more effectively develop and refine products, services and experiences.

Rasmus is the author of *Listening to the Future*, which explores his scenario work at Microsoft. His latest book, *Management by Design*, documents an innovative new methodology for work experience design.

Rasmus is the former Director of Business Insights at Microsoft, where he helped the company envision how people will work in the future. Before joining Microsoft, Rasmus was a Vice President and Research Director at Forrester Research.

Rasmus's thoughts about the future of work have appeared recently in *The African Business Review*, *Chief Learning Officer Magazine*, *Talent Management*, *KMWorld* and on the *Harvard Business Review* blog.

Rasmus is an internationally recognized speaker. He has addressed audiences at Enterprise 2.0, CeBIT, UBTech, ProjectWorld, KMWorld, SAE International and Future Trends. He was a delegate to China's World Cultural Forum in 2012. Rasmus writes regularly about the future of technology and culture at *Fast Company*, *iPhone Life* and *PopMatters*.

Rasmus is a member of the Pinchot University faculty academy in Seattle, WA where he teaches influence and strategy. He attended the University of California at Santa Cruz and received a certificate in intelligent systems engineering from the University of California at Irvine. He is the former Visiting Liberal Arts Fellow at Bellevue College in Bellevue, WA.

