The MASIE Center's

LEARNiNG Perspectives 2010

Contributed by 40 Global Learning Leaders

Edited By: Nigel Paine & Elliott Masie

Published by: The MASIE Center & The Learning CONSORTIUM

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Foreword

What an exciting time it is in the world of learning! As technologies evolve, businesses and marketplaces change and career assumptions radically shift, we face large-scale learning challenges and changes.

Learning Perspectives 2010 is an open source book – in both digital and print format – written by colleagues of The MASIE Center and The Learning CONSORTIUM.

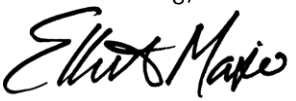
We asked a diverse cross-section of learning leaders, including members of our 30 Under 30 program for Learning 2010, to write their perspectives about changes in the learning field.

This book is dedicated to our mutual colleague and friend Jonathan Kayes, CLO for the CIA and The MASIE Center, who passed way too early in life this past summer. His spirit and learning perspectives are reflected throughout this project.

Special thanks to Nigel Paine, Learning Officer with the Learning CONSORTIUM, for being the Editor of this book. In addition, our production team included Meghan Cernera, Brooke Thomas Record and Lauren Boughton.

Finally, thanks to the 1,700 participants at Learning 2010 who created the energy and motivation for this publication.

Yours in learning,



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Introduction

We rarely take the time to pause and reflect. It is even rarer that we ask fourty people to do that at the same time, and to share their thoughts on a topic about which they are all equally passionate. The recent passing of Jonathan Kayes, former CLO at the CIA and latterly The MASIE Center, prompted our request. To honor Jonathan, we have created a book that acknowledges his passion for lifelong learning and examines the state of the learning field at the end of 2010.

Each contributor produced something that reflected his or her own personality, insights and interests. Conclusions are different; writing styles vary and perspectives shift dramatically. As you read this book, you will be struck by the health and optimism of the learning and development sector, and the feeling from everyone that the best is yet to come. Innovation is all around and everyone is preparing for significant change. That same optimism emerges from seasoned learning professionals as well as the self-titled 30 Under 30 group, whose views add spice to the book through their challenges and support.

It does not matter whether you think that the social, economic and technological changes we face are so exponential that learning will be transformed (as Wayne Hodgins most definitely asserts), or if you'd like to remind us of the continuing "truths" of Robert Gagné's theories of learning from the 1960s (as Larry Israelite pointedly does). Learning is a big issue and we will all do more of it, both formally and informally, for the rest of our lives as we seek to stay skilled and relevant in volatile, complex times.

This book divides neatly into four sections. The first section shares some new paradigms for learning. It begins with Allison Anderson from Intel, who shares with us how a new metaphor for learning (suggested, incidentally, by Jonathan Kayes) can enrich the way you think of your job and how and why you deliver learning services. Google's Julie Clow demonstrates how simple, freely-available tools can speed up the learning process and put the experts in closer touch with those who require new skills. She argues that there is no reason to do what we have always done; learning requires a radical rethink and the team who can do that is not the team that has traditionally ran the corporate learning operation. Deb Tees reminds us that much innovation actually has deep roots that extend to a number of years back and that an idea whose time has finally come is unstoppable and important. She hopes that learning is the corporate idea whose time has arrived. Her enthusiasm is balanced by Raj Ramachandran's thoughtful piece on the power of deep expertise in organizations: how you develop it to be easily shareable in order to build competitive advantage. Finally, Nigel Paine defines a learning organization,

showing how the vast majority of companies (even those who claim that title) fall far short of that aspiration and thus their potential.

The second is a collection of views of the 30 Under 30 Group, who entered into the spirit of the book by producing their visions, views and comments in a very short amount of time. There are 24 worthwhile and challenging comments from this group and it is unfair to single out any one, but this quotation from Douglas Livas' "Conscious Incompetence" sums up the thrust of their arguments:

"…the most effective learning doesn't even require a classroom at all! It happens on the job, it happens during team work/planning sessions, it happens through mentoring/coaching, it happens through trial, error and thoughtful feedback."

Even the titles of the pieces are challenging. Take Liz Scott, for example: "Learning: Converting the Crash Dieters to Lifelong Healthy Eaters". She sums up in nine words the spirit of the entire book. This is the Google generation shining a bright light on the shortcomings of today's corporate learning.

The third section presents a range of case studies based on organizations that are alive and well today. We have called it Learning in Action. The range is very broad. It starts with Patty Glines and Eric Zenor from Cuna Mutual. They show how a redefinition of the learning function into performance support can inject life into the whole learning operation. In contrast, the focus for Lisa Pedrogo from CNN is more on the new generation of people coming into the workforce. She explores the new ground rules for sharing information and learning in a 24/7 working environment full of young, enthusiastic and sometimes naive employees. She focuses on small kernels of knowledge - rather than the huge, life-shattering events – as organizational building blocks. Here, impact is about timing and relevance. Those new members of the workforce are teaching the educators what they need to do to be effective and the educators are teaching the business how to manage this change. MaryJo Swenson preaches evolution - not revolution - at Novell. There, a blended model using virtual classrooms is entrenched and effective.

Change impacts every kind of workplace, perhaps none more than the CIA (especially in the last 8 years). John Guyant explains how learning helps the Agency achieve its mission. Learning is built around four key factors. Information has to have *currency*: be current and readily updatable. Learning helps keep the employee as close as possible to expertise, however it is delivered. This is called *proximity*. The third is *relevancy*, or learning tailored to the needs of the individual wherever possible. The final characteristic is *immediacy*: learning on demand, wherever it is needed to address any challenge.

These four characteristics would strike a chord at Avon, where Stephen Barankewicz is building a technology environment to suit staff situated all over the world, all while maintaining the powerful relationship-building culture that has sustained Avon over its 125 year history. Finally, Sean Dineen describes a journey in retail, creating a single talent management department that covers employee issues from hire to retire, with learning and development integrated into that structure. He sees learning and development as the engine of talent management at every stage of career development; he looks at the ways you can make this work and the implications for learning teams.

Finally, we look at the future and focus on what will change or stay the same. Elliott Masie takes a balanced view. "Cool" needs to combine with "core" and requires research and experimentation to see what works. Wayne Hodgins' view is a bit more theoretical and further into the future. He frames his piece around his unique perspective on the emerging social, economic and political environments summed up by the recurring metaphor of a snowflake. Increasingly, our products, needs and aspirations will be unique and individual, as will our learning. Wayne sees the ultimate customization of learning as being just for you and just in time, taking us out of the era of mass production of learning (classroom lockstep) and into the era of mass customization: we have individual learning programs.

Rick Darby takes on one aspect of that change: the astonishing resilience of Moore's Law over more than forty years to double our computing power and data storage every two years. He speculates on where that might lead us in terms of learning in just a few years. That leaves Larry Israelite, who finishes the book with a wise and cautionary tale. He reminds us of the great Robert Gagné, whose principles of instructional design were laid down in the 60s. With all the change and opportunities that new technologies provide, Larry feels some aspects of learning are timeless and should not be forgotten.

So, the book is contradictory, masterful and philosophical about learning. It really is a collection of insights from those who really *do* know what they are talking about, because they live with learning every working day of their lives.

This is a snapshot: a moment to reflect, sum up and move on. It is a great tribute to the authors that they worked so quickly to produce these articles but produced such gems and golden insights. I hope that you enjoy reading it.

Nigel Paine
October 2010

Part I: New Learning Frameworks

Learning National Park, Needs Rangers! Getting to Know Bob

Allison Anderson, Intel Corporation

Four years ago, Intel was starting to shift its learning footprint from traditional, formal learning into something new and different. During this time, we used the (now-overused) phrase "Learning Ecosystem." It is an apt phrase, fitting the collaborative, symbiotic world in which many corporate employees operate.

Talking with colleagues and trying to influence learning leaders across the company, we would often talk about "Bob." Bob's story was about a somewhat typical Intel employee. Bob's was not a story about learning; it was a tale of *getting the job done* by finding people and resources, finding and consuming expertise, collaborating, mentoring, helping others and so on. We didn't use the word "learning." We talked about how Bob was going to finish a project at work, and how he contributed his own helpful hints to a common repository of information.

The story of Bob felt natural to people. We saw people nodding their heads while they listened. Bob's story could be their own. We found that this simple tale provided a good starting point to provoke a deeper dialogue.

Why "Bob?" The idea was to slip past the expectations people have when they hear words like "strategy" and "learning", particularly when they are used together, as in "learning strategy." Using the phrase "learning strategy" shuts people's minds down and puts them squarely back in the classroom. They wait for a specific, linear look at how many classes will be held in the coming year. For them, the formula is clear:

Learning = courses + strategy (well planned + linear)

What is the end result? A linear forecast of what and how many classroom and e-Learning courses we will offer next year.

This didn't add up for us. So, with the intent of breaking through the established mindsets and preconceived notions about learning, we developed a story that didn't use either "strategy" or "learning".

We wanted people to see that we were not talking about NEW learning; rather, we were talking about a natural way of learning the skills needed for their roles. We were talking about making that natural process better for our employees. We looked for ways that we could describe that natural process in a manner that would resonate with our employees, our managers and, above all, the learning groups. Even though it was a natural process, it was a change that made the learning organization uncomfortable.

Another quick example often helped people imagine the world we were describing. Anyone that works in a "cube farm" knows what it looks like when heads pop up over cube walls. In our organization, we call this "Prairie Dogging." (We might have called it "Meerkatting", but that doesn't have quite the same ring to it.) Prairie Dogging is an immediate way to gather crucial information from those around you.

Let's say you are sitting at your desk and, suddenly, your network connection drops. What's your first impulse? You pop up, put your head over the cube wall and ask your neighbor if they are having the same problem. Have a question about your departmental budget forecasting spreadsheet? Pop your head up and ask those around you how to enter in the requested information. Prairie Dogging is a way of life. It's a critical channel for immediate communication and feedback. It is our first line of inquiry when we encounter a learning need.
But in today's world, particularly in a large, global organization, the Prairie Dog channel has very limited usefulness. You may not sit near anyone on your team. You may need that information from someone you've never met or at a time when no one is in the office. In fact, the best answer could be miles or continents away. What we need to facilitate these days is "Global Prairie Dogging."

Back to Bob. The more we talked about Bob, the more we came to realize that our storyline was too narrow. There IS no Bob: no single prototype of the "standard" employee. In a world with four generations in the workplace, in a company with locations in so many unique cultures, in a place with such diversity of job roles, our story about Bob was much too simple.

So what story could possibly help us describe this complex world?

The answer came during a lively session at Learning 2007. One of my esteemed colleagues – and an all-around smart guy – raised his hand to comment and said, "You know, you could look at Bob's learning

ecosystem as kind of a national park." That colleague was Jonathan Kayes, then working as the CLO for the CIA. I understand he enjoyed a good hike now and again, appreciated nature and loved to visit America's national parks. He and I sat down for a longer discussion once the conference session was over and, as we drilled deeper into the metaphor, the story unfolded.

So, let us take a short vacation to Learning National Park.

Learning National Park

National Parks may seem an odd subject for a book on learning, but much the same way that "Bob" helped people put aside their preconceived notions about a *learning strategy*, Learning National Park gives us a manageable way of seeing the enormity and complexity of learning. New learning-speak is to say that learning is "a process, not an event." This is very true. But we might also say learning is a *journey* and those we serve are travelers.

Real life travelers are all different and each one has a unique trip: what they notice, who they stop to talk with, what they write home about and the photos they take. They have sites they want to see and places of interest that they stumble upon that take them in directions they did not anticipate. Travelers to Learning National Park are just as unique. Each one has a specific need and a unique path they will take.

Some visitors will show up with little more than an idea to "see the park." For example, they may have an end goal of visiting Career Development Canyon but have little idea how they will get there. Other visitors arrive with a detailed, hour-by-hour plan for their trip. They spend months planning their journey, studying maps and planning each day. They stick to this pre-determined tour of specific spots. In much the same way, our employees vary greatly in their approach to learning.

Many learners want a detailed plan that is built for them, suggested by the learning organization or based upon some specific criteria. They want the structure of a course or curriculum. Other travelers take a different approach. They don't come with a detailed plan, nor do they want one. They may "arrive" at learning simply because they need help with a specific task. They may not want the structure of a detailed learning plan prefer to explore a topic or idea through many different formats and options.

Like many National Parks, Learning National Park is huge – seemingly infinite in size. There are multiple entrances. There are paved roads, which are officially placed and maintained. There are the rougher hiking trails and foot paths, also provided by the park. Often, people find their own way and make new paths. They discover a shortcut to a river. Their long, scenic route takes them past a hidden meadow or a camp site created by a previous traveler. If it is a particularly good path (or, in our case, a particularly good learning resource or experience), others will begin to follow that path to the river.

Some show up and ask the Park Rangers for their recommendations. They want to know from the "official source" what roads to take, what sites to see and where to eat. Other travelers show up having done extensive research on the web, reading what previous park visitors have to say about this vista or that activity.

How did we even know to visit Learning National Park? Perhaps we had lunch with a friend and they suggested a good fishing spot. Maybe we looked at maps and photos online or reviewed the campgrounds. Learners seek out recommended resources and, in turn, (we hope) they contribute some of their knowledge when others need help.

Other parts of Learning National Park that we might consider:

Learning National Park has vistas: areas specially marked for fantastic views and photo opportunities. Signage helps people dig a little deeper into a certain spot. Trail markers help people navigate through rough terrain. There are Visitors' Centers – gathering places for travelers to experience the park together – and, of course, there are Park Rangers to help travelers get the most out of their trip.

That is my new role. I am a park ranger. I keep an eye out – from my ranger station, which doubles as my lookout tower – and I have a view of the whole park. I see the new trails that visitors have made and the shortcuts to the falls that go right by the hidden meadow. I am looking to see which of those visitor-made paths we may put on future maps and vs. the ones that are actually taking people through large batches of poison oak.

My role as a ranger of Learning National Park should be to know the park as well as anyone possibly can and to know what other visitors have liked most – and least – about the park. I need to understand how things are working, what new paths and sights our learning travelers have found (or, better yet, created), what trail damage needs to be repaired, etc. We continue to worry about the dangers of open content. Why then don't we get *involved* in the

open content? Why don't we take our ranger roles seriously and get out on those "dangerous blogs" to contribute information? Why don't we get involved in how people *experience* Learning National Park?

I want to greet them when they arrive at one of our designated gathering places and help them when they need directions. I want to connect them to fellow travelers with similar interests or needs. Above all, I want to get out of their way when they choose to travel on their own.

We need to change our vistas. We need to see the larger landscape of the park. When we can see Learning National Park for what it is – an infinite number of paths, sites, discoveries and experiences – we can begin to recognize challenges and roles that we may not have attended to before.

So, I am a Learning National Park ranger: one of many in my organization. Our travelers are employees, who have needs ranging from repairing tools on the manufacturing floor to developing better communication styles to preparing to sell new products. My role as a ranger is to think about the ways that we can guide employees and help them take their desired journeys while taking the trip that they need. I am a moderator of conversation, a connector of people and a purveyor of content. I will sit around the campfire and tell stories of early settlers, take people on tours and point out new trails that visitors before them have made. I will keep designated areas clean and free of litter. I will get out of visitors' way, let them have a good time and help them (when I can) truly experience their journeys.

One last point, and this is important: this is not about Bob. It is about Bob, Louise, Raj, Changmu, Azita and Eduardo. It's about the factory worker, the marketing project manager and the technical supervisor, to name a few. My role is ranger of Learning INTER-National Park. Even the phrase we've used above – "National Park" – is misleading. We are really talking about a park as large as the world itself and learning across the globe and many cultures; we are talking about being global prairie dogs.

I am very grateful to Jonathan for sharing that idea and helping me on my own learning journey. You can learn a lot from your fellow travelers; even park rangers are forever continuing their own journeys!

Allison Anderson is a Learning Innovation Strategist at Intel Corporation, and thought leader on the topic of social and collaborative learning in the corporate environment.

What Problem are We Really Trying to Solve?

Julie Clow, Google

New technology is often inspired by the goal of optimizing or improving existing products or processes. For example, early adoption and use of computers was largely driven by word processing: a revolutionary improvement over the typewriter for getting text to paper. But, as we all know, technology becomes magic when it creates entirely new ways of interacting with the world. The Internet fundamentally shifted computers from tools for typing to entry points to the world and its information.

We are at this turning point in the realm of learning. e-Learning served to provide a scalable alternative to classrooms for training delivery but - let's face it – it is still pretty much the same thing. The time is ripe for us to revisit *exactly* what it is that we are trying to do in the learning space and to use technology in entirely new ways to accomplish this.

What if carpenters were called hammerers instead? It would be mighty hard to expand beyond the simple work of creating structures through wood, hammers and nails. We have been blinded by our particular hammer. We have chosen to name our profession with the name of our tool: training. Not surprisingly, we automatically jump to classrooms or e-Learning – traditional training solutions – any time someone needs to learn new information. But if we step back for just a second, we should be asking, "*What is the problem that we are really trying to solve?"*

This is how I see it: as learning professionals, our ultimate role is to facilitate the transfer of repeatable information and skills from those who have learned it to those who need to learn it, at scale. If you read that a few times and squint your eyes just a tad, you will start to see that there are many solutions to this problem and we have only started to scratch the surface. I will throw out a few to get the ball rolling. Then, it's up to you!

New Ideas for Learning's Future

Remember, our goal is to transfer the learning process of one person to many people. What if, instead of capturing all of the information from our experts' heads to translate it back to learners, we simply empowered the experts to directly share the paths they took to learn something? I like to think of this as crowd-sourced learning paths. We're starting to see

tools to help in this process. For example, Google Bookmarks [https://www.google.com/bookmarks] can serve as a social bookmarking tool, similar to delicious [http://www.delicious.com/]. But, Google Bookmarks has an additional and little-known feature called "Lists" that enables users to create a related set of bookmarks, which can include comments and subsections: everything an expert would need to create a learning path for a specific topic.

An expert can simply string together the path of resources they used to learn, in the order they used them, perhaps with a short comment for each to provide context. The barrier to creating a learning path is far lower than that of creating a presentation or a class, but it still solves our learning problem statement. The learning paths could easily be distributed to a wide number of potential learners through a search on keywords (pull) or as a link in a course catalogue (push).

If we took this learning path notion one step further, we can think about automating the capture of learning paths. Web analytics have come a long way in enabling us to understand the paths people take through a website and around the web in general. (Side note: If you've never explored the power of Analytics [http://www.google.com/analytics/] to understand how users are *actually* navigating through your e-Learning courses or learning websites, this is an endlessly entertaining exercise – well worth the 30 minutes or so to set up an account and embed the code on your web pages.) We could start by understanding the "intent" of users. For example, users searching on "web design 101" might all presumably want to learn basic principles about web design. We could then aggregate the videos, articles, sites, images and other resources these users access, arranged in optimal order: the most typical or most well-worn path through these resources as captured by analytics tools. As a learner, you would find this auto-generated learning path extremely informative and much more efficient than staggering down your own path through dead ends, bad resources, SPAM-filled web pages and inaccurate information.

We can also think about social media through our learning problem lens. Social media can serve as a useful window into other people's worlds: what they are reading, what they find interesting, what they are blogging about, what they are recommending. Let us say, for example, that I am fresh out of college and starting a new job in marketing. I might find great value in reading the Twitter stream of marketing gurus. Twitter Lists (yes – more lists!) [http://support.twitter.com/groups/31-twitter-basics/topics/111-features/articles/76460-how-to-use-twitter-lists] make this an easy prospect

by enabling you to subscribe to (or create) an organized list of Tweeters. Rather than following a group of marketing gurus one by one, Twitter Lists make it easy to follow them all at once, which also makes it easier to see the patterns emerging from their tweets and links over time. You might think of this as scaled mentoring: you get first-hand access to their words of wisdom and insights throughout the day, every day.

Think about the potential application of something like Twitter Lists within your organization. If I am a front-line manager aspiring to become a director, I would want to know what information directors are paying attention to. I would want to know what articles they are reading, what training classes they have attended, what publications they subscribe to, etc. Their perspectives, in aggregate, would serve to teach me how to think at a higher strategic level. This kind of nuanced information transfer is something we could not begin to capture through traditional learning formats.
Taking a different turn with technology, another interesting development is in the realm of music. The advent of Pandora and Apple's Genius feature in iTunes are both examples of "music discovery." These tools go well beyond the Amazon-like recommendation engines (even those provide some interesting ideas for our LMS!). Music discovery tools use algorithms to find the connections between music I like and music I have never heard but that, in all probability, is akin to my musical tastes. If we use these models to think about *learning* discovery, some interesting things emerge. As the saying goes, you do not know what you do not know. What if a learning algorithm could suggest new topics or skills that would be complementary to a skill you are learning? You would get exposed to new concepts and topics you had no idea even existed! *This* is the kind of learning that can drive innovation within organizations. Exposure to new topics and concepts spawns ideas simply through combinatorial factors. Perhaps we could create emergent learning.

Learning Solutions that Won't Change (well, maybe a little…)

Classrooms, e-Learning, mentoring and job aids/reference tools will continue to play roles in solving the learning problems of our organizations. They will never be fully displaced by new learning solutions and, in many cases, they will remain the best tools for the job. But we have made a few assertions about these methods that I think should be challenged.

First, we are very careful to create a barrier between "subject matter experts" and our learners. We are deathly afraid of the possibility that our experts might bore people, talk over their heads and otherwise corrupt the learning experience. So we painstakingly extract the information from our experts for sanitizing, smoothing and polishing, feeding it back to our learners in ever-so-

carefully-measured doses. In our zeal to treat learners with the utmost respect and handle them with kid gloves, we are also spending a huge amount of time and potentially robbing the learners of color and nuance that only the experts can convey.

At Google, we have actually made the conscious decision to tear down the boundaries between our experts and learners. First of all, we cannot possibly provide classes, courses, resources and other learning deliverables to cover all of the information, tools, technologies and skills that our employees need in order to be successful. Secondly, we intentionally hire smart people, who have a lot to teach to other smart people. Our learning teams have created highly successful programs to encourage Googlers to teach other Googlers. Anyone and everyone is an expert at something and our goal is to create a pathway into the learning opportunities that Googlers are creating for others.

Our course management system, CloudCourse (open sourced and available for any organization to use), enables any Googler to create and publicize a learning activity and then find their own audience. We do not place any controls on the process but we create transparency around course survey scores so that teachers are naturally incentivized to deliver quality learning experiences. In our culture, when Googlers see a void, they fill it. So we can rely on our employees to know exactly the information that others need to be successful in their jobs and to pitch in to share the knowledge.

Another assertion that we have made about our learning experiences is that they must look a certain way. We spend a great deal of time designing participant guides, workbooks and handouts, formatting slides, editing video, creating slick and standard interface designs (down to the little buttons!) and otherwise tying pretty little ribbons around our training experiences. I personally wrote a 100+ page style guide to govern the look, feel and style for a large-scale e-Learning initiative for the Navy, and I was proud of it! (Although I hate to admit it, I still am!) I never even stopped for a second to consider that maybe learners do not care about this. Furthermore, the ROI for all of this effort does not result in a significantly better learning experience for our users!

We tested this hypothesis in creating a leadership program for early-career Googlers. We did not have the time, budget or resources to develop a high-fidelity, polished leadership program. We needed something quickly, but we needed to reach lots of people: a few thousand Googlers spread across the globe.

We made an early decision to tap into the vast treasure trove of leadership resources that are freely available on the web, such as Harvard's leadership

videos on YouTube, articles on leadership from the best of the best leadership thinkers, even movies that show leadership concepts in action. We felt that it was utterly unnecessary to suck up all this content, re-process it and package it into a traditional course. Instead, we drafted a series of simple emails. Throughout the span of 4 weeks, participants received a few emails each week that provided some basic context around leadership themes along with links to the various leadership content pieces. Each email required only a few minutes of time to read an article, watch a video or answer a few questions: they provided micro learning chunks, so to speak.

We engaged our audience through some interactive exercises using simple Google Forms. We asked them to think critically about what they learned, share back a story or an idea using the form, and upon submitting their assignment, they were exposed to the answers from all of the other participants. We kept participants on track by holding virtual, synchronous debrief sessions at the end of each week, which also built a sense of community within the cohort. Our learning design required little more than sourcing the content, sequencing it and drafting the emails to provide the context, objectives and big picture of the leadership concepts. We used no fancy binders or shiny interfaces.

So did it work? We think so! The program, which has been running for almost two years, consistently receives course feedback scores in line with our "high fidelity" leadership programs. Our learners are engaged! Participation and completion scores for each cohort fall in the 80% - 90% range: far higher than typical e-Learning completion rates! Demand for the program is strong, which is a sure sign of success and acceptance by Googlers. (Bad reputations kill things quickly in our culture.)

The Key Challenge for a New Vision

Fantasizing about cool technologies and new learning solutions is fun, but I concur with the conjecture that we are not in any position to deliver on these ideas in today's Learning and Development organizations. We simply do not have the right people on our teams. If we aspire to create a whole new world for learning, we need to think about the roles and skills we would need in our staff to pull this off.

We are instructional designers, trainers and project managers. We are optimized to create traditional learning solutions, and we do that well. But we stutter and stammer and are slow on the uptake with new technologies *because this is simply not our strength*. If we were to envision a new learning organization, here are the kinds of people I would hire:

- Strong innovators: the people who are really good at generating ideas, thinking outside the box, prototyping/experimenting and pushing for innovation. We all know who those people are. I bet you can rattle off a few names in your organization, who may or may not be in the learning organization. I recommend the book *10 Faces of Innovation* to learn more about innovator roles. We need them in Learning and Development.
- Software engineers to turn ideas into actual tools and products to aggregate and filter learning content, and develop algorithms to simulate the learning process.
- Analytics gurus to extract valuable insights out of the mountains of data available that provide perspective on the learning needs of the organization.
- Instructional Design coaches: people who understand learning and are strong in coaching and developing others. They can consult with employees and teams, empowering them to create and deliver high quality content.
- User experience experts to design applications that engage learners and encourage participation in the learning culture as both contributors and users.
- Behavior analysts to craft an environment with built-in incentives, motivators and reinforcements that encourage active participation in the learning process throughout the organization.

We have the opportunity to completely rethink what we do as learning professionals and usher in a grand new model for organizational learning. We need to remember to step back and think at the meta-level about the problems we are trying to solve and how technology can address these in exciting and scalable ways. Innovation demands that we loosen our grip on our favorite tools and add a few new ones to our tool belt. This could lead to an exciting future that is just around the corner.

Julie Clow is a co-lead at Google for non-technical learning and development programs for Google Engineers

An Idea Whose Time has Come

Deb Tees, Lockheed Martin

From Idea to Reality

Is the Washington, D.C. area Dulles Metrorail a great *new* way to help minimize traffic? Is it an innovation derived within the last few years? Is it a new study of transportation dynamics produced by Harvard Business School? No – it is simply an idea whose time has come, *47 years* following its initial proposal.

The Dulles Metrorail case study has implications regarding the future state of learning. A frequent topic causing consternation in our field relates to how we should prepare ourselves for the uncertain future. How can we anticipate what will be new and different? How will our lives change? What measures should we take now that will help us keep pace with these changes? I believe that all of these questions are valid, but perhaps we are looking in the wrong places to find the answers. The next "big thing" won't appear from thin air; it will simply be a manifestation of an idea whose time has come.

So let's further explore the Dulles Metrorail project. Construction is currently underway for a 23-mile transit system in the rapidly growing Dulles Corridor in Virginia (to include the Dulles International Airport). The railway system will result in travel time savings between the corridor and downtown D.C., expand the reach of the existing regional rail system, offer a viable alternative to automobile travel and support future development along the corridor.

Although many residents in the area believe the Metrorail project started in 2009, when ground was broken and construction began, the idea for this project was proposed in the early 1960s. The vision has long been to enable more direct access to key locations throughout the region, thus providing greater freedom of movement and a broader range of options related to work and home locales. More than 40 years ago, visionaries knew the benefits that this type of expansion would bring. Despite this enlightened point of view, it has only been through a consistent evolution of ideas, technology, research, funding and political landscape transformations that this project has begun to materialize. So, although the development of the railway system will perhaps have its most significant visible impact in the implementation stages, the real effort, in fact, began over 40 years ago.

Evolution of the Idea

There are no new ideas (well, very few). Take movies for example. How many times have we seen iterations of the movie *Robinhood*? *Dracula*? *Cinderella*? In fact, *Cinderella* is one of the most remade movies of all time. The classics do not die; they are simply recast into a new time and place with increased relevance, re-imagined for a new era and a new generation. It is the seed of an idea that is critically important, as well as the ability to see it through and make it meaningful in the current context.

Manifestations of learning over the next 10-15 years will likely resemble the evolutionary concepts illustrated by classic movies and the Dulles Metrorail. It may, therefore, be useful to look at ideas that have surfaced throughout the history of modern learning to understand the ways in which they might come to light in a future context.

Evolution of Learning

Think about the concept of social networking and user generated content. Social theory has been around for ages. Studies of human and animal relationships date back to the earliest psychological and anthropological studies regarding attachment, learning and social networks. Man has always been a social creature. Even in pre-historic times, humankind was sharing ideas, passing along information primarily through pictures and the spoken word. These are not new concepts, but they have been revisited in the context of our new environment. Instead of cave walls, our canvas is the Internet. In addition to sharing knowledge within the traditional family structure, we now have far reaching social networks like Facebook, Twitter and MySpace. The question is not necessarily what new ideas will arise, but how existing realities will be placed into new context and culture.

Assuming that the notion of recontextualizing ideas is valid, what might the future hold for a day in the life of a typical learner? I believe one key difference from our current learning environment will be that learning tools and technology will cease to be a series of independent, incongruent resources. They will instead become part of an interwoven fabric of learning. Apple provides a great example of this. The user has only to hold an instrument of technology in his or her hands (e.g. iPhone, iPad), and the rest is a seamless, intuitive experience. That experience is almost completely guided by the user's imagination. The concept of "apps" even further empowers the user to fill perceived gaps by creating and adding to the already vast library of tools. In combination, these elements allow the user to create something that is unique and "just for me".

In the organizational context, it becomes a bit more complex: legacy systems, outdated technology, security issues and firewalls require special attention, and finances are usually in short supply. It will take ingenuity and partnership behind the scenes to create the "Apple experience", but we can almost taste it.

A Day in the Life

Imagine…as a learner, I log into my computer at work and I can see all my customized web parts on the screen (for those not familiar, web parts enable end users to modify the content, appearance and behavior of Web pages directly from a browser). These web parts provide critical bits of information that equip me for my busy day. Throughout that day, the interface changes to reflect the work that I am doing and the knowledge critical for my success is present at each moment. I decide that I need support on one of my tasks and a world of experts is at my fingertips, ready to jump at the chance to answer my question. In the process of IM and threaded discussions with one such expert, we discover a new application for critical knowledge that leads to an innovative product line, which, of course, gets shared with executive leadership through the innovation and collaboration forum available on the Intranet. As I take a well-deserved 20-minute lunch break, I watch a streaming video about the keys to success in leadership and interact with three other co-workers online who happen to be watching the same video. I add some of my newfound knowledge to the Leadership Wiki, and then I return to my work, leaving my desk for an important meeting. A colleague in the meeting is wondering about the best way to facilitate our discussion, so we call up the virtual facilitator available through the company's online resource center. Once our productive meeting has concluded, we part ways and contemplate how many more hours remain until we might leave the office - that is, for those of us who are in a brick and mortar Dilbert-style office. In the remaining hours, system performance support tools guide me through mundane tasks that I only need to complete every other month, thereby conserving my precious brain space for other important things in life. Finally, I wrap up my day with a virtual meeting with 10 colleagues from across the globe. As they fly around the room in Teleplace, we watch videos and post notes on walls to brainstorm the best approach for our upcoming team event. Ahhh…another day in learner paradise…

So what's different? The activities of the day described above are not so drastically different from our current experience, and all of the technologies mentioned exist in some form or fashion today. What is different is the absence of a separation between work and life. There is no mention of an LMS, an LCMS, textbooks or tests. There is no mention of instructional design,

although learning professionals can architect all of the experiences described. There is no time wasted searching for information, only to be defeated by the endless sea of words and websites. Learning is integrated into everything. The bottom line? Learning is not an activity to be held separate and apart from work, nor, for that matter, from the personal experience of life. Learning is about *how* we live and work.

Learning Environments

In order to build an integrated future, we should consider a few key elements. The first of these is the current landscape of your particular organization.

In order to explore the concept, we can look to the common practice of benchmarking. Think about how frequently companies share best practices with each other. At first glance, that practice might seem to create a competitive disadvantage for the company sharing its core knowledge with another organization. Why are colleagues from different companies so willing to benchmark with each other, especially in the learning industry? In part, it is because we know that success is as much about implementation as it is about the idea itself. Boilerplate solutions don't work: success is dependent upon what works *in your environment*.

Consider the world of horticulture. Climate and soil conditions are the primary dictators of which plants will thrive in particular locations. It is quite difficult to grow tropical plants in arctic climates; the plants reject the environment and ultimately die. Plant selections must be tailored based on which ones are most likely to flourish in the given location. Similarly, you need to choose your learning infrastructure, tools and approach according to your company's climate. There is no prescription. We cannot definitively say that we will move to corporate universities, centralized or decentralized models, specific technologies, standards of collaboration, etc. Of course, there will be trends, popular ideas and rebranding or reiterations of existing constructs. Ultimately, however, we may be asking the wrong questions if we try to anticipate the future without first considering the readiness of our own environments.

Other Key Elements

Three other key elements can smooth the pathway for an enhanced future state of learning. These elements transcend individual organizations, are available today and allow us to increase readiness. They are relevance, research and cross-functional partnerships, all three of which are necessary for advancement in the world of learning.

- *Relevance*

Visions of the future that fail to speak to a specific company's weaknesses and pain points will usually fall on deaf ears. Relevance of thought, behavior and ideas will capture the attention of the corporate executive. A discussion of how a new approach, tool or initiative will alleviate a current or impending problem will open the door (and pocketbook) for forward progress.

- *Research*

Few companies are willing to live on the bleeding edge. So, in the majority of organizations that are at best cutting edge, sound research and benchmarking studies provide stepping stones. Documentation from multiple sources about what has been done before, both in similar and different markets, provides important insights. Why have others succeeded? Failed? Is it possible to pilot a new idea and measure both cultural fit and impact prior to pitching it to executive leadership? Data and relevance coupled with a context-appropriate approach can be a powerful duo.

- *Cross-functional Partnerships*

Finally, the power of collaboration cannot be underestimated. For example, one of the most critical partners for the learning professional is the CIO of an organization. Creating a shared vision related to available technology, risk tolerance and future possibilities can provide the keys to the kingdom. One has only to look to examples of success or failure related to LMS implementations to know this is true. Other cross-functional partnerships are also vital to enable learning integration. Building a coalition of leaders who believe that learning and development can alleviate their business pain provides a springboard for actualization of those long-simmering ideas.

What is the Role of the Learning Professional?

So, how will the role of the learning professional transform? What is changing that will allow us to reinvigorate those brilliant ideas from the days of yore? In these times of growing uncertainty in the business climate, the readiness of organizations to tap on the shoulders of learning professionals will steadily increase. As the pace of change accelerates and information flows at record speed across the globe, knowledge optimization and learning agility have become even more essential for organizational survival. In addition, John Seeley Brown points out that the half-life of a given skill is constantly shrinking, and it has become even

more difficult to predict future needs. Skills required for success in business and leadership have evolved and will continue to do so at record rates. "Human capital strategy" and "capability development" are buzz words that dominate executive leadership seminars and corporate offsite events.

What better profession to serve organizations in this time of need than the one that has long prided itself on preparing people for a new future? Those learning professionals who have dreamed of the day when business leaders would leverage their collective wisdom will see that dream become reality. It is our time to seize the opportunity and live up to our potential. Just as the visionary promise of an expanded Dulles Metrorail will soon transform that region, so too will our ability to transform the landscape of modern life through the power of learning position us as the ***profession*** whose time has come.

Dr. Deb Tees is Director, Learning and Capability Development at Lockheed Martin.

The Power of Deep Expertise! DEVELOPING EXPERTISE IN A CORPORATE ENVIRONMENT

Raj Ramachandran, Accenture

Context

The state of the economy is potential cause for consternation for most of today's global workforce. Major causes for concern may be described as business climate related (globalization, recession and regulation) and involve changes in the workforce (multiple generations, teamwork and retiring workers), organizational dynamics (restructuring, mergers/acquisitions and leadership changes) and technology (the proliferation of mobile devices and social networking technologies). Research done in collaboration with Accenture's High Performance Institute began to demonstrate certain potentially disruptive forces in the evolution of learning functions themselves due to these business changes. These include a growing recognition of the importance of informal learning in organizations and the influence of new learning 2.0 technologies that both deepen and accelerate the surge of information across organizations. Also included are the changing learning needs and expectations of new generations of employees, along with the need for employees with deeper skills and specialized knowledge.

These disruptive forces call for transformative change in the learning function itself. We believe the learning function must adapt and help the organization continue to build and sustain a competitive advantage. In this article, we will describe why we believe that deep expertise is at the core of this competitive advantage and what organizations can do to help develop a culture of deep expertise within their organizations.

Setting the Stage: The History of Expertise and Expert Development

Our research on expertise revealed that this is not a new concept. It is actually an ancient concept that goes back to the time of the Greeks. It was carried forward through the medieval times through the apprenticeship model: a notion that an individual gains expertise through the stages of apprentice, journeyman, expert and master. Today,

expertise appears to be considered as a phenomenon, meaning it appears to be more of a novel concept and something that only a few people can achieve. In order for organizations to truly tap into the best of *all* their people, the learning function should cultivate learning environments where deep expertise is nurtured and rewarded.

Leading researchers in this field, like Florida State University's Anders Ericsson, define expertise as *the knowledge, skills and characteristics that distinguish experts from less experienced people*. This is an important distinction, because Ericsson defines expertise as a relative concept. It could be argued that "experience leads to expert performances of representative tasks that capture the essence of the respective domain" (Ericsson, 2006). So how does one obtain the requisite experience to attain expert performance?

According to research, extensive experience in a given domain is necessary to attain superior expert performance. For all the wide-ranging theories on expertise and expert development, almost everyone agrees that anyone who seeks to become an expert must get firsthand experience; they must seek out challenging assignments, work for more experienced individuals and learn as much as possible (Thomas, 2008). In fact, Ericsson states, "there is surprisingly little hard evidence that anyone could attain any kind of exceptional performance without spending a lot of time perfecting it" (Ericsson, 2006). But, as Bob Thomas of Accenture's High Performance Institute professes, "experience by itself guarantees nothing" (Thomas, 2008). Extensive experience is shown to be a prerequisite to obtain a stable level of performance, but only specific types of domain-related experiences are shown to lead to performance improvement.

Ericsson and his co-authors noticed another theme that emerged in research on top-level performers: no matter who they were, it always took them many years to become excellent (Ericsson, 2006). Apparently, the relationship between experience and expert performance is that many thousands of hours of specific types of practice and training are required to reach the highest levels of performance. According to Zimmerman's research, one can describe the development of expert performance as a function of age and years of experience (Zimmerman, 2006). Furthermore, it is arguable that peak performance of experts is nearly always attained in adulthood, many years after initial exposure to the domain (Ericsson, 2006). Even the most talented individuals require ten years (or 10,000 hours) of experience in a specific domain in order to become an expert (Gladwell, 2008).

Developing Individual Expertise: The Four Elements of Deliberate Practice

In study after study of composers, basketball players, fiction writers, ice skaters, concert pianists and chess players, this number comes up again and again, but this fact "does not address why some people get more out of their practice sessions than others do; yet, no one has found a case in which world-class expertise was accomplished in less time" (Gladwell, 2008). Arguably, not all experiences lead to perfection. One needs a particular kind of experience – deliberate practice – to develop and maintain this level of expertise (Ericsson, 2006). What are the elements of deliberate practice?

FIGURE 1: Elements and Definitions of Deliberate Practice

4 Elements of Deliberate Practice	Defined
Grasp of method	…a place to start, fundamentals or foundational knowledge of the concept, mind you that it can be taught, in fact it must be taught
Repeatable	…requires a lot of opportunities to practice in your domain of expertise (10,000 hours)
Requires feedback	…need a qualified teacher, coach, mentor to constantly guide you through it
Personal motivation or ambition	…because it is difficult, you need a high degree of motivation to sustain the levels necessary to become an expert

According to research, "four ingredients are essential for progressing from novice to expert: thorough grasp of method, repeatable instruction, feedback and ambition" (Thomas, 2008). The grasp of method relies on the notion that individuals with great native talent will progress only so far without mastering the fundamental methods that define domain expertise. Essentially, the practice that one must do to become an expert must continuously stretch an individual just beyond his/her current abilities; this requires someone to specifically design the activities required to improve performance. According to Thomas, "without grasp of method, students may well spend precious time inventing tools and approaches that already exist and risk blunting their ambition in the frustration of trial and error" (Thomas, 2008).

The second key element is repeated instruction. These deliberate activities must be repeated frequently. Participants must be given multiple opportunities to practice their trade. According to research, high repetition is the most

important distinction between deliberate practice and simply going through the motions. What make look easy takes a great deal of practice for someone to get to that level of performance.

A third element that can accelerate performance is instructive feedback. People who achieve expertise routinely seek out the best teachers they can find because "a great teacher or coach can bring a wealth of experience, an objective eye and an ability to match instruction and pace to the personality and learning style of the performer" (Kegan, 1982). The feedback should be immediate and continuously available. Again, this requires either a teacher, a coach or some other mechanisms to quickly collect the feedback and present it back to the individual so that he/she can improve. According to Thomas, "feedback, especially immediate feedback, is vital to anyone who ventures into the world of expert performance" (Thomas, 2008). Despite the current plethora of performance management mechanisms - 360 degree assessments, employee surveys and balanced scorecards - there is no substitute for immediate feedback.

Ambition, the fourth and final element, is perhaps the most critical. According to Champy and Nohria, ambition is defined as "the spirit of success, of striving for something worth achieving" (2001). Deliberate practice is essentially difficult to sustain and therefore requires a high-degree of motivation (Colvin, 2008). In conclusion, without ambition, one's desire to improve may not be high enough to drive him/her to continue the repetitive grind.

Developing Organizational Expertise: How does an organization develop a culture of deep expertise?

The four elements of deliberate practice can help describe what an individual can do to help develop expertise, but what can a learning function do to help drive expertise throughout an organization? We believe that learning functions should take five considerations into account when developing a culture of expertise to help make expertise a competitive advantage for the entire organization.

First, while leveraging the concepts of deliberate practice and working in collaboration with HR and the business, the learning function should help define organizational expertise and what expertise development could look like for its employees. In addition, for those employees who are looking to become experts in their given domains, they should understand that this process has no end-point and is a journey to continuously hone their areas of expertise.

Some learning functions believe that classroom learning environments can be replaced by informal learning. In our analysis, we believe that this should not be the case. Our second consideration is to emphasize that formal, classroom-based instruction should continue at higher proficiency levels. Blended learning environments should be in place to augment the classroom learning experience through virtual learning experiences, even at the higher proficiency levels.

A third consideration for implementing a culture of expertise should be around clearly defining success criteria for your expert audience. Based on our research, these success criteria should be aligned to organizational leadership dimensions as published expert articles, customer feedback, the creation of expert knowledge assets, teaching and coaching. There should also be a greater emphasis on specific metrics that would measure how these experts contribute to the organization and how they continue to grow their expertise.

A fourth consideration should be around developing a culture for immediate feedback in the organization. One of our key findings was that organizations believe existing feedback mechanisms are sufficient for the development of expertise; however, according to our research findings, frequent and candid feedback is vital to anyone who wishes to sustain expert performance. In addition, there should be a greater emphasis on the source of this feedback. A powerful tool with great potential to help increase immediate feedback for experts is the U.S. Army's after-action review process (AAR) (Colvin, 2008). The concept is simple: after any significant action, project members get together immediately to discuss what worked, what could be improved and what they would do differently. Part of the AAR's strength is that it yields candid feedback. When people understand what happened, they are keen to try to do it better. Implemented properly, this process reinforces the principles of immediate feedback and deliberate practice.

A fifth consideration is to strike a proper balance between intrinsic and extrinsic motivation factors for employees who are interested in becoming experts. Research in this area suggests that some people believe extrinsic motivational criteria, like compensation and recognition, are more important to attract and retain experts in the organization; however, based on our research, we believe that experts at higher proficiency levels are often motivated by more than just extrinsic factors. Having the ability to develop other experts, practice expertise, hone skills and work in continuous learning environments also provides great motivation.

Case Example: Developing Deep Expertise @ Accenture

Deep expertise is what drives Accenture's overall competitive advantage. Accenture's CLO Don Vanthournout puts it this way: "If a company is to leverage its workforce to create a distinct competitive advantage, it must develop a strategic talent management function that can advance its employees faster and more reliably along a clearly defined path" (2010).

Accenture believes in its CLO's statement, including for novice-level capabilities to more advanced levels characterized by deeper and more specialized expertise. For that to happen, however, we must bring more structure and rigor to bear on a host of activities - from mentoring to on-the-job experience to collaboration - that take the organization and its people well beyond the boundaries of traditional, formal training.

Accenture's Capability Development group has created a "deep skills" and "specialization" strategy, especially for customer-facing and first line management roles. Capability Development is leading a program that will have all Accenture consultants assessed and mapped to five levels of proficiency among hundreds of key skills – what Accenture calls a "deep specialization roadmap."

Advancing toward more specialized skills and capabilities is not the same thing as advancing up the career ladder. Typically, employees' skills grow and become increasingly specialized at one level of their careers, but when they take the next step up the ladder, they may become beginners again. Overall, the five-step path to specialization is generic. Accenture's internal learning function works with the business stakeholders to flesh out this scaffolding into a specific "roadmap." This defines what the various levels mean for a given job, putting in place the enablers that can most effectively advance workers toward those levels and accurately assessing when a worker has achieved a new level of specialization.

The roadmap provides an Accenture employee with ongoing developmental guidance that includes specific programs and activities. Capability Development further works with organizational leadership to define the body of knowledge and sources of expertise that are considered part of the canon for a given specialty. They also define the skills, competencies and expected levels of mastery for that area. This resulting skills model for workforces and workgroups (see Figure 2 below) creates a basic framework that encompasses the core, functional and specialized skills needed by every Accenture employee across the enterprise.

FIGURE 2: Expertise Development Activities (Detailed) by Proficiency Level

	Expertise Development Activities		
	On-The-Job Experiences	**Formal Learning**	**Collaboration Activities**
P0 - Trained	Having some prior project or client experience in the specific domain of expertise Participating in job-shadow programs in the specific domain of expertise	Attending virtual or self-paced web-based training sessions in a given domain of expertise Completing independent study activities such as reading business books, reviews, and summaries in a given domain of expertise	Subscribing to internal discussion forums and Communities of Practice (CoP's) in a given domain of expertise Completing internal profile page, external profile pages (i.e. Linked In, Facebook)
P1 – Novice	Creating the deliverables for projects in a given domain of expertise Fostering a strong relationship with your project team and implementing feedback on your deliverables	Attending internal training (online) in domain of expertise (i.e. virtual boot camps)	Actively participating in internal discussion forums, CoP's and Wiki's in a given domain of expertise Seeking a mentor (internal) in a given domain of expertise
P2 - Proficient	Completing projects in a given domain multiple times Reviewing and providing feedback on deliverables in a given domain of expertise created by members of your team	Attending internal classroom training in a given domain of expertise	Posting key deliverables or assets to internal discussion forums, CoP's and Wiki's in a given domain of expertise Coaching others in a given domain of expertise Attending a conference in a given domain of expertise Seeking a mentor (external) in a given domain of expertise Joining professional organizations in a given domain of expertise

P3 - Advanced	Getting involved in the sales process/solution architecting of solutions in a given domain of expertise Ensuring the team is following all appropriate methods in a given domain of expertise	Teaching an online session or classroom course on a topic in a given domain of expertise Getting certification in a given domain of expertise	Leading internal discussion forums, CoP's and Wiki's in a given domain of expertise Coaching others in a Becoming an (internal) mentor in a given domain of expertise Contributing to professional organizations (external) in a given domain of expertise
P4 – Expert	Shaping and architecting complex and large solutions in a given domain of expertise Understanding connection points to apply broader footprint to solution in a given domain of expertise Focusing on developing new tools and new assets in a given domain of expertise	Leading faculty for a course or subject matter expert for the topic Getting an advanced degree in a given domain of expertise	Managing/governing internal discussion forums, CoP's and Wiki's in a given domain of expertise Leading internal assets and methods development in a given domain of expertise Speaking at an external conference in a given domain of expertise

Employees can access their specialized Accenture Skills Profile from their *myLearning* portal to see which skills they have, which skills they need to acquire and which learning and development activities will get them closer to the goal of deep specialization. Going forward, the team is working to create more complex and multifaceted definitions of "mastery" and "excellence" to build out the skills model in a rich and powerful way. These definitions will go beyond skills to encompass behaviors, experiences, connections, networks to find information, and patterns of work.

By focusing on deep expertise, Accenture is merging development and knowledge management in an exciting way. Ultimately, organizations will be judged on their level of expert knowledge (and how quickly they can bring key staff up to that level). Already, Accenture is successfully merging performance, skills, deep expertise and learning to develop a sustainable, competitive advantage that positions the business for a bright future.

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Learning Organizations: People Power?

Nigel Paine, The Learning CONSORTIUM

IBM once had a neat way of describing the future direction of IT systems. It was called "autonomic computing" and referred to computers and networks that had four distinct features: they were self-configuring, self-healing, self-optimizing and self-protecting. It may be that this glimpse into the future of computing shines a light on the future direction of the very best and most successful companies. Does that mean that we are all going to become like computer chips in the vast corporate circuit board that will be modern working life? I hope not. In fact, it will be very different from that.

It is a simple truth that the ubiquitous "knowledge worker" cannot be forced to be productive. He or she decides every morning whether to check their brain at the reception desk or take it with them for the day. The old "command and control" model that dominated employment structures will not invigorate a modern organization where most of what we make cannot be held, boxed-up or dropped on someone's foot.

You get the best out of people by creating an environment where they feel autonomous, empowered and connected - where they can network like crazy -which is hardly command and control! But, if you ask the simple question, "Do you feel that your employer is getting the best out of you?" the number of employees answering an enthusiastic "yes" is well below 50%, and anything less than 80% - 90% means you are wasting your human resources: pouring money down the drain and making people feel lousy to boot.

In knowledge industries, you would think that learning is at the heart of what makes them tick, but while many claim to be learning organizations (and it was Drucker who first coined that term a decade or more ago), under close scrutiny, very few actually fit that description. We have the seeds of new possibilities still being constrained inside old ideas and models. If we want really productive people, do not treat them like machines. Spend a bit more time on the "people side" of things.

Lew Platt, the celebrated former head of Hewlett Packard, once said, "If HP knew what HP knows, we would be three times as profitable." And if you substitute HP for virtually any company - whether public or private

sector, government department or charity - that still holds good: three times as profitable, three times as effective or three times as creative. You pick. Most of us do not even know that we do not really have a clue about what our staff knows! We can count pennies precisely, but we have very little idea of what is in our collective brain bank.

Learning organizations have a much clearer picture of that bank and build structures that reward knowledge sharing, making it easier to find out what employees already know (before embarking on something new). Learning organizations trust that staff members will seek out information and fix problems without being prodded to do so. They do not slice up their learning budgets at the first sign of trouble on the horizon. On the contrary, they increase their learning investments to drive staff productivity and resilience.

Learning organizations display a number of distinct characteristics. The first is they respect learning. Second, they learn from within and from outside their organizations. Third, they share knowledge quickly among staff, key stakeholders and customers (these are quite leaky places!). Finally, they create environments where ideas and creativity are at a premium and where failure is seen as a necessary, intrinsic part of success. You cannot pick just one of those characteristics for your learning organization: you must aspire to have all five!

It is not enough to tell your staff that they are your greatest asset if the line manager is shouting at them for being late back from your pep talk or if junior staff cannot be trusted to say the right thing outside the company without prior permission to speak. Nor should your "greatest assets" feel unchallenged, bored and unable to remember when they last learned something at work!

A move to become a learning organization is more than a development plan on the company intranet: it impacts the way you think and the way you do everything. That is why these plans are so difficult to fully implement. The rewards, however, are truly staggering, which takes us back to IBM's vision. It is possible to have a business that can work out what is wrong and put it right (without recourse affecting consultants' and senior management vacation time). Why? Because your staff will be fired up and look forward to coming to work to actively tackle those challenges every day. Knowledge will spin continuously around the four corners of the company and new ideas will be sucked in from the outside and pushed out to partners and suppliers.

Learning is the killer "app" for the next iteration of work. It does and will continue to differentiate between winning businesses and honorable mentions. For the very first time, the tag line "learning organization" might well be the welcome card to the future and organizational survival. Not a bad prospect indeed.

Nigel Paine runs his own company, specializing in leadership, learning and technology and works with The MASIE Center as their Learning Officer.

Part II: Under 30 Perspectives

Learning: Converting the Crash Dieters to Lifelong Healthy Eaters

Liz Scott, ZS Associates

As a whole, western learning, much like western medicine, is reactive instead of proactive. Rather than a generative, organic experience, learning is at times a knee-jerk solution to an immediate need or discomfort. In its most ego-driven form, learning becomes an antidote to a disease rather than a daily ritual of health.

A high school student who hasn't implemented learning into the daily routine, who seeks out a tutor the night before a test as a last ditch effort to pass a course; a development team scurrying to patch up an on-site training audit that exposes incompliant training courses; an under-performing school that pushes curriculum focusing on passing standardized tests rather than teaching content. These are all symptoms of a systemic weakness in the body of our learning doctrine.

How do you teach people to learn? How do you convert chronic crash dieters to lifelong healthy eaters?

Because learning starts with a moment of need, planting that moment is critical to reducing the necessity of reactive learning. Identifying viable learning delivery modes, carving out time to exercise learning, and developing consistency in a learning routine is what converts crash learners into lifelong learners.

Once the infrastructure of learning is in place, the opportunities – however fleeting they may appear to be – can be more readily taken advantage of when they arise. Failure to create a fertile environment for learning can turn it into a grueling task for all (developers, instructors, learners) involved.

In order to shift our learning paradigm to an active experience, we need to champion learning. No amount of intricately designed curricula or elaborate instructional design can make up for the lack of a positive, healthful leader.

As a young learning professional, I see evidence of reactive learning occurring all around me and find it disheartening. Those who have an MBA or who have achieved early in their careers find that they can discontinue learning or internal training since they have paid their dues. They treat learning as an achievement in and of itself rather than an active way of life.

Think of your coordinators, designers, and instructors as personal trainers and nutritionists rather than emergency surgeons. Learning is a lifestyle, not crash course. Take it in stride.

Inspiration and eLearning

Linda Backo, PPL

Geek by day, guitarist by night -- I find inspiration in the craziest of places. Take this reflection paper, for example. Originally, I wrote a dry, white paper about all of the technical speak surrounding inspiration and eLearning. Trust me, you wouldn't have been inspired. You probably would have skimmed it and kept on going to the next article.

Then, on the drive in to work this morning, I heard a song that changed it all. Why this change? Two reasons:

1. It changed my mood and set my day off with a bang.
2. This is the first time I've heard the song and I can't get those lyrics out of my head.

I'm not sure this was the greatest song I've ever heard, but it hit me in the right way, at the right time. Sounds a little like Just in Time Training, doesn't it?

Maybe inspiration in eLearning is as easy as writing a good hook. We need something to pique the interest of the learner, something grabby. My co-worker calls this shock value. I'm not into shock, so for my purposes, we can call it moving.

There have been dozens of books written on the subject. In my experience, this can take the form of a personal testimonial from someone who is affected if the job is done incorrectly or unsafely, or an insightful message from a worker who had a near-miss.

Perhaps this is my marketing undergrad coming to the surface, but if I have to reflect upon the state of eLearning today, I think we need to breathe the life back into most of it. We have to really sell it and leave them wanting more. We have to make them walk away humming our tune and carrying our message back to apply on the job. Not only that, we have to make them inspire others. Make them want to share that message, contribute to that discussion board, pass on that mix tape.

And let's face it, although we are a strong medium, we could always use more fans.

Do I have you inspired? Want to learn more? Can't live without knowing what that song was? Come find me in Florida!

Access and Opportunities

Ben Betts, HT2 Ltd

Mobile access to the Internet is growing at twice the rate than desktop access ever has. The human race spends more than three billion hours a week playing online computer games. One in ten people in the world has a Facebook account. I believe that trends in Internet technology like mobile, gaming and social media are way more than just fads. These emergent technologies have taken a fascinating grip on society because they hook into the visceral emotions that underpin our very motivation to create new meaning.

I believe author Dan Pink summarized it best when he highlighted the three keys to our enduring motivation as Autonomy, Mastery and Purpose. Let me expand a little more on these terms.

Pink tells us that Autonomy is fundamental to our engagement in a given environment. He's not alone in his thinking! When Traci Sitzmann investigated the role of 'control' in Web-Based Instruction, she found online learning to be more effective when learners had a higher degree of control of the content, pace and sequence of content. But Autonomy goes deeper than this. When Professor Ellen Langer gave care home patients more control over their daily routine, not only did their happiness improve but they actually lived longer than their nursed counterparts. Control can make you live longer, that's how important it is.

Mastery is something which we all desire says Pink; we have a drive to get better at something that matters. Mihaly Csikszentmihalyi showed us the path to Mastery with his theory of Flow; the concept of being "in the zone". Jane McGonigal tells us that games have the power to create epic moments; events that are so overwhelmingly positive as to have never even been thought possible to achieve by the player. The ability to engage people in a flow-like state to achieve great things is exactly what game designers play off in order to create best selling titles, which absorb us for hours, days and weeks.

Finally, Pink believes that the pursuit of Purpose is our destiny, our reason for being. Abraham Maslow told us that whatever a man can be, he must be. To become fulfilled people must reach higher, give back to others and influence beyond their given boundaries. Tom Malone added

to this saying that we also seek Glory; that others might see us doing good and associate us with that deed.

For me, Autonomy, Mastery and Purpose are synonymous with Mobile, Gaming and Social. Mobile internet gives us the ultimate control over our learning. Games allow us to get better and better at something that matters. And Social Media gives us the opportunity to seek out Purpose, to contribute back and to be recognized for doing so.

These technologies are here to stay because they represent so much more than the ability to phone, to score points and to poke. We must embrace them in our efforts to help others learn more effectively because, for once, the research tells us that these things work!

It's Curtains for the LMS

Joe Beaudry, Verizon Wireless

As non-traditional forms of learning take center stage, the Learning Management System (LMS) will need to exit stage-right and make a quick wardrobe change. On-Demand access to valuable self-directed learning is more accessible than ever. Social networks, videos, blogs, podcasts, forums and wikis are now our first stop for enlightenment; the LMS must adapt.

One major reason a company chooses to use an LMS is to track the learning and development of its employees. More and more, this learning and development is taking place outside of dedicated learning applications. The LMS of the future will be tasked with tracking multiple data points across disparate systems to provide a concise report far beyond course completion percentage.

Much like the web has evolved from simple hit counters to deep contextual analysis with campaigns inside Google Analytics, so too will the LMS of the future face a similar evolution. More meaningful analytics much like those that Google collects would greatly benefit training organizations. To effectively track the learning and development of employees, the LMS of the future will provide a big picture view of employee activity across all knowledge transfer systems, traditional and non-traditional. The simplistic reporting features of most Learning Management Systems will be replaced by visual representations of the various data points in a more useful way.

Training organizations will be able to create learning campaigns on anything from products and services to policies and procedures. The analytics provided on these learning campaigns will provide a way to identify knowledge gaps and training opportunities. For example, the learning campaign of a new process might identify employees who scored high on formal training and those who are constantly answering questions in a Q&A forum. By aggregating this data, an updated training module could be released using the newly identified subject matter experts to provide real world insight on the process.

There is one additional major change on the horizon for the LMS. Learners will no longer interact directly with archaic LMS user interfaces designed without aesthetics or ease of use in mind. Training and learning events will be deployed when and where they are needed. An e-learning course might be launched directly from a company intranet news article or a mobile learning course might be launched from a smartphone or tablet at a job site. Gone will be the days of logging in to a Learning Management System to

access your training. Traditional and non-traditional training will seamlessly blend into the tools and resources already in use.

The LMS of the future will become invisible to the learner while providing a more relevant analytical overview to the training organization. It will also provide contextual analysis and a complete view across all knowledge transfer data points. The next act has begun and the crowd is waiting. Let's hope the actors know their places.

Engaging Learners Through Gaming

Lacey Grande, Ogilvy & Mather

Advancements in technology have not only changed the way people communicate with one another, but also how they learn. Companies quickly adopt the latest trends in eLearning and social networking to try to create virtual learning experiences that we think will engage and excite our employees (guilty as charged), but are we using these tools to the best of their capabilities? Are we too quickly trying to step away from traditional methods of learning in order to embrace social media that we neglect other forms of engaging with learners? The one area we should be focus on for the future of learning is the use of gaming in eLearning design.

Virtual learning in any format is a powerful tool, especially when it gives the learner full control over when and how they learn. That kind of control allows for flexibility, convenience and limited distractions that serve to enhance their learning experience. More often than not I notice instructional designers revert to synching lectures to PowerPoints, add in a quick interaction and push it live. Realistically, how much information is a person retaining when they're watching PowerPoint slides that automatically advance? How can we virtually push learners beyond familiarizing themselves with the content just so they can pass the quiz at the end of the module and move on to the next?

The answer: the adoption of gaming techniques in eLearning instructional design. We've all created game-like activities in a live classroom setting, and school teachers have been using games to teach children for years. Why then wouldn't we strive to create similar activities online? While often overlooked because of a few negative stereotypes, the online gaming industry has had it right all along. Gaming creates a virtual action-learning environment that challenges players to take risks and make discoveries on their own.

To reach a level of proficiency and unconscious competence of a skill or new information, a learner must reach a desired outcome without realizing how they got there. What better way to do this than through game-like experiences where learners are repeatedly rewarded by successfully completing challenges? I challenge instructional designers (myself included) to start experimenting with the use of gaming techniques in the design of eLearning courses, so we can find best in-class practices to teach through entertaining our learners.

Learning Together To Change the World

Elizabeth Musar, InsideNGO

To me, learning is social. If I don't learn something from another person, then I can't wait to teach it to another person. There's a moment of communication where information becomes knowledge, and knowledge can launch a movement.

From my seat in the international, non-profit world, I'm excited about how we in the learning profession can create the environment to empower that communication that can change the world. I've been lucky enough to see the huge impacts of small-scale, locally-based initiatives on the day-to-day lives of community members. From microfinance, ecotourism projects to community health initiatives, the leaders of the movements are eager to share their successes, challenges, and tactics with the larger global community. They want to shout from the rooftops, hoping for a reply, an answer, or just a new perspective from the big, wide world – they want to know they're not alone. But unless that rooftop is connected to the right website, network, or listserv, they're just shouting into the wind, and we miss another opportunity to move forward.

If the Digital Age was about the democratization of information, then let's make this the Learning Age and the birth of the democratization of education. We've been steadily laying the groundwork for a global network of learning and collaboration – we have wikis and Facebook walls and Google searches aplenty. The online tools exist to gather the crowd and start the sharing, but we are still missing something. We're missing the universally empowering call to arms, the open invitation to share and learn with the one goal of progress. We're missing the equal access and acceptance for every learner to come as they are and seek their own path. The learning community can help create this shift, though.

When gazing into the crystal ball of global change, I'm excited about the idea of designing the tools that create a space for conversation and then opening the floor to anyone who wants to speak. Let's share ideas, concerns, results, and failures in a classroom that isn't just connected by wires or walls, but instead by motivation and mission. The conversation will happen because we've empowered local communities to think of themselves as global teachers with the right to a global classroom. More importantly, we all have the right to a global education – in the Learning Age, we have the right, the expectation, and the means to learn from one another, regardless of borders and barriers. Once we can tap into that human desire to share and connect, I'm hopeful that all we, the learning professionals, need to do is open the door and then get out of the way.

Learning is social, so let's start the conversation and change the world.

Underemployed or Unprepared?

Kaylea Howarth, Alliance Pipeline

Born into a world infused with technology, Generation Y has been anticipated as creative, adaptive, and eager. We live and breathe technologies, and as a result: we read and write differently; we learn differently; we interact differently. But as the first wave of digital natives to enter the workforce, the impact of our technology-dependent development is revealing itself under the fluorescent lights of the modern American office. In fact, many employers are seeing the esteemed technological fluency of our generation as the one bright spot among a sea of deficiencies.

Today's high school and university graduates are being ushered into an economy boasting the worst youth unemployment in decades. Yet the economy isn't the only one closing doors – employers expect young people to arrive in the workplace with a set of basic and applied skills, and research shows our generation is simply not living up to the expectations.

According to a study performed by Corporate Voices for Working Families, employers are reporting that entry-level employees, ranging from high school graduates to those holding bachelor's degrees, are drastically unprepared to operate in the modern workforce, lacking the soft skills required for them to succeed. Particular sore spots include oral and written communications, professionalism, work ethic, and self-direction.

Honestly, this shouldn't come as a surprise. We learned to take shortcuts at the same time we learned 'the long way of doing things.' Our preferred method of communication at a developmental age was disjointed and expedient, and it has hindered our ability to construct cohesive written communications. Our dependence on text-based communication is so extreme that many kids today can hardly hold eye contact, let alone harbor the skills to succeed in face-to-face or telephone interviews. As a generation, we struggle with professionalism, work ethic, and self-direction because our (well-meaning) baby boomer parents have worked to remove every obstacle from our lives of convenience, protecting us from the struggles and responsibilities they faced as children. As a result, we've missed out on fundamental situational learning experiences that may have cultivated these skills.

In the face of the current skills gap, the business and education communities need to partner to close the gap with recent graduates and give successive generations a fighting chance by introducing sustainable learning opportunities to students at a younger age. Where students are failing to develop the necessary skills in our modern society, we need to ensure they've at least been given the right tools. Employers could provide remedial skills training as part of a new employee's onboarding as well as arrange on-the-job mentorship where

necessary. At a younger age, the importance of written and oral communications, including effective business writing, needs to be reinforced. Necessary behavioral applied skills transcend the walls of just one classroom, but a business and education partnership could produce a series of relevant interdisciplinary projects, after-school programs, work experience arrangements, and seminars.

With much of the workforce nearing retirement, it's crucial that we harness this knowledge and use it to equip future employees with the necessary academic and behavioral tools to not only succeed in the workplace but to revolutionize it.

Conscious Incompetence

Doug Livas, Moss Adams, LLP

They say if you're not part of the solution, you're part of the problem. And if what they say is true, then I am just another "part" of what I see as the problem…

Every year near the end of September, I find myself in a similar mood. The same bittersweet taste in my mouth and aching in my legs. The summer "busy season" behind me, which entails (among other things) the coordination and delivery of numerous multi-day, live classroom instructor-led conferences that reach 500+ total attendees and the use of 25+ practicing professionals who take time away from their "day job" and billable hours to facilitate.

Of course there is a certain sense of accomplishment and relief after having delivered the conferences on schedule, within budget and with what is viewed as "good and relevant content." I've even learned to laugh at the evaluation results that focus on the "uncomfortable chairs," "terrible food" and "cold classrooms." But I can't help but to ask myself, are all the time and resources that we invest in the development of the presentations and/or activities for the classroom really worth it? Or what kinds of simple and effective "support" could we supplement the classroom event with, both prior to and afterwards, that would make that investment yield that much more?! And for that matter, how can I evaluate the yield on the investment at all?!

Whether it's Knowles' theory of adult learning, the 6 D's of Breakthrough Learning or Kirkpatrick's model of learning evaluation, etc, EVERYONE READING THIS ARTICLE knows that there is so much more to an effective learning experience and changing behavior than what happens in a classroom. And in my observations, the most effective learning doesn't even require a classroom at all! It happens on the job, it happens during team work/planning sessions, it happens through mentoring/coaching, it happens through trial, error and thoughtful feedback.

But if everyone reading this knows this, why do we constantly put resources into classrooms instead of taking a step back and looking at the bigger picture? How can we get the learner's manager/supervisor involved in support of the training? What "content" can we take out of the classroom and provide via some other delivery method so that the time in the classroom is spent on more meaningful things than "death by PowerPoint?" At what level are attendees performing at prior to the training event and at what level are they performing after the training event? How do we as a learning organization and/or a company as a whole define a successful training event - is it an average of 4.5 out of 5 in our Level I evaluations?

I'm afraid I've raised more questions in this article than answers. But remember I'm just as culpable as any of you. If while reading this article you said to yourself "he must be talking to someone else," please look me up because I'd love to hear and learn from your story!

Exciting the Learner

Aviva Leebow, Pacesetter Steel Service, Inc.

Boring ¨ Lecture ¨ Classroom ¨ Power Point ¨ Books ¨ Waste of Time ¨
Irrelevant ¨ Pointless ¨ Extra Work ¨ No Rewards

These are the initial impressions that come to mind when training, education, and development are mentioned to someone outside the world of learning. These are the obstacles that we as learning professionals must overcome for our programs to be successful. We are not just educators, but more importantly we are motivators. We motivate others to look at themselves and see room for continual growth and improvement through exciting new challenges. It is all about the perspective and attitude that we as learning leaders must provide to those we serve.

One might say that you can't change attitudes or people. To some extent that is true. Nobody will change, if they do not want to change. But we can provide people with reasons to see things differently. Our challenge as learning leaders is to change the perception of learning in general. We want the first words to come to mind after you say training or education to be:

Exciting ¨ Fun ¨ Creative ¨ Innovative ¨ Challenging ¨ Engaging ¨ Interactive ¨
Growth ¨ Opportunity ¨ Future ¨ Dreams ¨ Endless Possibilities

So how do we get from boring to fun and exciting?
From no rewards to endless possibilities?

We show people that learning is not what they remember from middle school, high school or college. People shutter at the idea of new educational experiences because they remember sitting in the classroom listening to teachers while the material went in one ear and out the other. They had to memorize things for the sake of memorizing. They had to learn things that had no practical use in their lives. It was boring. But because it was does not mean it needs to continue to be.

We need to give people a reason to change their ATTITUDES.
We need to MOTIVATE them. We must show them that learning is FUN.

All learning experiences should be relevant to a purpose. They should be delivered in fun and innovative ways. Games, activities, interactive classrooms, discussions, hands on practical applications, etc. are all extremely useful tools. They engage the learner and keep them interested on a more personal level. They give the learner a role in their learning experience, which empowers them.

We must remind others that learning surrounds us. Education does not solely happen in a classroom or a formalized activity. It happens through everyday interactions. Discussions with others, mistakes we make, things we read or hear, etc. Learning is a continual process, if we embrace it. Every moment includes something to be gained. However, it's easy to take moments for granted and pass up on amazing opportunities to follow our dreams. If we can send the message that learning is about personal growth, that it does not have to be formalized, and that it can be exciting and fun, we can fight those initial impressions.

"Question? Try Twitter!" My Take on Social Networking

Rachel Donley, BGSU Student

Social networking in the workplace has become a hot topic recently, with most organizations and employees having a strong opinion either for or against its use. Certainly every organization needs to evaluate the benefits and risks, but let me add my opinion in favor of social networking as an educational tool. More specifically, I believe the need for Learning on Demand is increasing, and social networking is a powerful tool available to deliver this as part of a blended learning environment.

Even the most effective learning leaders cannot deliver training for every situation an employee will encounter, and Learning on Demand provides a solution to cover those gaps. It generally consists of electronic resources, such as databases, eLearning Modules, and video clips, that employees can access when needed. But what if the answer is not in the database? Many of us would try to find someone who is knowledgeable about the topic and may have the answer. Often, the best source of information is another employee, and that's what makes social networking such a powerful tool.

Social networking provides almost unlimited connection potential to knowledge sources. It also provides a tool for groups of colleagues to discuss and share their ideas and findings, allowing new solutions to be invented and distributed. Imagine tweeting a question regarding a particularly difficult problem and having the CEO respond with his/her opinion! Social networking breaks down traditional boundaries, allowing information and knowledge sharing to occur across departments, countries, and levels within an organization.

Many organizations are hesitant to allow open access to social networking based on valid concerns. Foremost among them are privacy and security risks. Employees must be careful not to disclose proprietary or confidential information on an open social network, including links to such content. A clear policy should be in place to provide guidelines and, in certain industries, it may be advisable to utilize a company-specific social networking site to eliminate outside access. Additionally, information accuracy is a concern. Similar to consulting a co-worker, the source of the information needs to be considered. Employees should utilize social networking as a tool for communication and collaboration, but critically evaluate all information before taking action.

With guidelines in place, appropriate use of social networking can be a valuable tool for learning and development. Most individuals are already utilizing some form of social networking for personal and/or professional development and this will only increase as younger workers graduate and enter

the workforce. The shift to utilizing social networking for Learning on Demand would, for most, be an easy one, and may indeed be a natural evolution of Web 2.0 technology. As we look to adopt new technological tools, my hope is organizations will keep an open mind regarding social networking and its benefits as a learning tool.

Learning by Falling

Jen Vetter, TorranceLearning

I love learning. I love watching others learn even more. I especially love when those learners are five years old or younger.

No, I don't teach five-year-olds about sales or policies and procedures. In my spare time, I coach a Learn to Play Hockey program at the local ice rink, and my learners are…well, you guessed it: five years old.

There's something incredible about watching a child learn, especially when it's a physical skill you can see. When a young player (let's be honest, or an older player) is learning how to skate, there's a lot of falling. A lot. Imagine: you step out onto a cold, glistening sheet of ice in boots with steel blades, along with equipment covering your body (it weighs as much as you do)… and then you fall. Most of the time, there are a lot of tears involved.

But the beautiful part is that you get back up. And that time that you spent on your backside? It's already in the past, because now you know that leaning backwards in your skates is never a good idea. So, you keep moving. Fall, learn, get up…Fall, learn, get up… Before you know it, you're zooming around on the ice. And each time someone falls, or collides with another player, everyone involved learns something from the mistake.

I find it a little strange that this method of learning seems to fade as we get older. As adults, we see this in exams or evaluations where you have one shot to show what you can do. We are expected to learn at a moment's notice, with little or no ability to "fall" and then learn from the choices we made. But isn't this exactly how we discovered so much at such a young age? I remember hearing so many adages growing up that reinforced this idea (these sayings normally involved falling off horses or bicycles). What changed?

My favorite type of course to build or take is one that gives the learner an opportunity to fail first. What's the harm? As trainers, it's our job to create a safe environment where our learners feel comfortable to jump in feet first. In my mind, it's what learning is all about. Otherwise, how would we ever know what the consequence of a bad decision is? At my work, we've implemented this idea in eLearning courses just by using quiz feedback that is focused on the why, and not necessarily the right or wrong answer. It's okay if the learner gets the question wrong.

As a trainer, you can give your learners the power to take their education into their own hands, and learn from their mistakes. Learners can receive so much more than just instruction. This way, they have the opportunity to achieve and discover more than they ever would if they were never allowed to fall off the horse…or the bike…or the skates…

What Happened to OJT?

Michelle Thompson, Poole and Associates

With the big push in organizations to "e-ify" everything, many learning methodologies are getting pushed aside for the latest and greatest new technologies that deliver training. But, does new always equal better? How does this affect the segment of the workforce that is not technically literate or does not have access to these technologies in their line of work? How does this affect learners with various learning styles or learning disabilities?

Since the beginning of time, on-the-job training has been an integral part of preparing the next generation of workers. A father teaching his son how to plow the earth, so he can learn to farm. Apprentices learning trades like blacksmithing or woodworking. On-the-job training is effective, cheap, and easy to implement. So, why are so many companies turning their back on this tried and true method? Is the allure of flashing graphics, text, and videos too much? E-Learning is a powerful and effective tool to train learners anywhere, anytime, and any place, but it is not the only learning tool we have available.

As learning professionals, it is important to keep an objective eye and make sure we are implementing a holistic approach to learning. This means developing a complete learning package that takes advantage of all the learning methodologies and accommodates the various learning styles, so that each person is effectively trained for their job. Learners readily have access to their peers on the job so it is just as easy and advantageous to use the knowledge these workers, who have been there and done that in their job and can transfer their knowledge to the next wave of learners.

Incorporating a standardized (which is key to ensure every learner is getting a similar learning experience) on-the-job training initiative is not only beneficial to the learners, but is also a way to actively engage all of your workers in the learning process. Who knows, perhaps the teacher will learn something from the student as they exchange their knowledge and skills. This would benefit the organization as a whole, not only from the exchange of knowledge, but also the teambuilding that occurs.

Ultimately at the end of the day, they just need to know how to do their job effectively. Whether they learn it from sparkly buttons and fireworks or the office sage, they just need to know it.

Get Out of Your Comfort Zone: Developing Training for the Learner

Emily Fearnside, General Mills

Is there anything worse than sitting through a class in which the trainer simply reads the on-screen bullet points verbatim to the audience? Have you ever regretted the arrival of eLearning more than you do when feverishly clicking through one hundred slides just to answer one multiple choice question at the end? While we may have all answered "no" to these questions, we continue to deliver exactly those types of trainings.

Too frequently as trainers, we choose whichever delivery format creates the least amount of work for us, whether it's eLearning (to eliminate interaction with our learners) or an abundance of bullet points on a slide (so we don't have to rehearse what we intend to say). If we are uncomfortable with technology, we choose standard classroom training. Conversely, if we feel out of place standing in front of an audience, we may be tempted to create online learning to avoid our fears.

While eLearning may be an excellent tool for raising general awareness around a certain subject matter, we need to proceed with extreme caution to be sure that we are developing eLearning for the right reasons and not just because it's the newest tool available. As members of Generation Y, we are often tempted to create a massive library of eLearning on various subject matters. Who can argue against the benefit of training that is available on demand, in the learner's moment of need? However, we should consider what stands to be lost if all training is online: being in a classroom with other learners who can add to a rich discussion, offer their own subject matter expertise and provide real-life examples of concept application.

Classroom training is one of the most effective methods of delivery that we have available to us, and yet we refuse to give it the attention it deserves. Rather than spending a significant amount of time practicing our "pitches," we wait until the last minute to put our thoughts into an organized list of bullet points and then rely heavily on what appears on-screen to remind us what it is we need to be teaching. I am challenging you to instead use your bullet points in the "notes" section as memory joggers and dedicate your valuable visual space to images, graphics or video clips; anything that will create a mental image for your learners to grasp and apply what you're teaching them when they're back in their daily jobs.

In order to deliver training that captures our learners' attention, allows them to actively demonstrate changed behaviors on the job, and stands out in their minds as "the best training I've ever received," let us put the needs of our learners ahead of our need for convenience and comfort.

Just Ask

Katie Mack, Westinghouse Electric Company

Recently while I was instructing a conflict resolution course I was struggling to explain the rationale behind the "yielding" option during a conflict. I tried explaining how I would apply this principle but it was not resonating with my learner. All of the sudden, advice that a very wise person (my mother) once told me popped into my head, if you take the time to ask questions and listen to the responses, you'll be successful.

Snapping back to the classroom, I thought "why not?" and I started asking questions: "what might the benefits of yielding be?"; "why yielding might a goodwill gesture?" As we worked through the answers it was fantastic to see the moment when the learner heard his response to my questions and "got it." I was able to navigate the learner to my ultimate end goal (recognizing the benefits of yielding) but rather than forcing the issue, he was able to self identify the benefits by listening to his responses to my questions.

Looking back on this experience, I am amazed at the way a series of simple questions really opened up the discussion between me and the learner. It would have been very easy to for me to continue the lecture or put forth my own opinions but by involving the learner I was able to gain commitment for the rest of the session. For the rest of the day this individual was willing to share ideas, perspectives and ask me questions. I'm convinced that this was due to his experience in answering my questions and my willingness to listen to the responses. This learner was able to teach himself why this concept was important and because of this, I believe his motivation to learn was increased because he was able to put learning into his own words. The best part about this experience was that this questioning and engagement was contagious, once the rest of the class saw the "ah ha" moment of the one learner, they became more questioning and engaged themselves.

So many of the learners that I have in the classroom are constantly being pulled in a million different directions by BlackBerrys, email, Instant Messager, managers' demands, and the list goes on. So how can I capture their attention and focus? After this experience, I've used questioning as a way to pull the learners into the material and consistently it works. There is nothing better than watching as someone gets it, or figures out how he or she is going to apply these skills or knowledge on the job.
Too often I believe we as learning professionals get so caught up with staying on time, following the lesson plan and covering the topics in the order presented, that we lose focus of our learners. By focusing on one of the fundamental instructor skills, asking questions, we are better able to engage and guide them to achievement of our end results, the application of knowledge and skills. Doesn't it seem worthwhile to question?

Passion for Learning

Sarah Carr, Google

It is time for us to drastically change the way we approach education. Our current educational infrastructure is still modeled after the factory-style education of the Industrial Revolution. Experts dispense pieces of content; students absorb the information. This is a gross oversimplification to prove my point, but there must be a dramatic shift of philosophy and practices to reach the next generation of learners. I don't want to discredit changes that have taken place, but it's neither fast enough nor extreme enough.

The necessary change is this: Our teachers must become facilitators. Our students must become learners. We must stop teaching and training and start facilitating.

It is not the specific words that I'm attached to -- it's the philosophy. You can use whatever educational buzzword that tickles you. No, I am much more passionate about creating an educational environment that supports the way many of us already learn.

Gone are the days when teachers are the definitive subject-matter expert. We've been inundated with content, overwhelmed with words and images, movies and diagrams, so much so that we're swimming in a flood of data. Today's teacher must develop the ability to facilitate discovery and bring meaning to the glut of information.

Facilitators can help learners determine which sources are useful. They make connections to other disciplines, contexts, and thoughts, helping a learner fit content into the complex mental maps he is building. But, most importantly, the facilitator helps the learner evaluate how he learns and where gaps exists in his knowledge.

Shifting our attention to the learner, it is this self-reflective process of examining what you know and what you don't know, called metacognition, that separates the learner from the student. A learner is empowered to seek information and expertise. Instead of relying on someone to provide the answers, he expects questions and guidance along the path to discovery.

Imagine the power the learner has gained; he is the master of his educational destiny! No longer must he wait for someone to teach him. Instead, he communicates what he wants to know and how he wants to learn it to anyone willing to listen. I think William Butler Yeats said it best: "Education is not the filling of a pail, but the lighting of a fire." Too many students struggle to connect what they learn to their everyday lives and our teachers fail to make the

necessary connections. It is this passion and excitement for learning that will revitalize education in this country, for children and adults alike.

And while shifting to these new roles is a positive start, the flexibility to move between these roles is absolutely critical. The best facilitators are often the best learners, and vice versa. It is only in creating a collaborative environment where each person has the opportunity to learn from another that we'll succeed.

You're here because you're passionate about learning. Then ask yourself this -- what have you done lately to cultivate a fire in your learners? What could you do tomorrow?

Gamifying Learning with Social Gaming Mechanics

Enzo Silva, Oracle Corporation

"It is paradoxical that many educators and parents still differentiate between a time for learning and a time for play without seeing the vital connection between them." - Leo F. Buscaglia

A simple definition of a game is "a series of enjoyable yet challenging meaningful choices" a player makes throughout the experience. This concept also relates to learning design in general: educators help learners make several choices throughout their learning experience as they move from one challenging task to the next and through problem solving, reach the goals which are clearly stated at the beginning of the experience. Experts in Education have a growing interest in adopting game design principles and mechanics in the design of instruction.

Even though video games have come a long way in the past decades with the advent of new technologies, a current trend in gaming seems to be going back to the basic underlying principle of creating a fun experience: the fact that the nature of play is social. It is the expansion of social gaming. Some examples of services with social gaming experiences are social check-in services such as Foursquare and Gowalla and real-time simulation games such as FarmVille and GodFinger.

These services share a set of common elements based on basic behavioral psychology which could be applied to learning experiences in order to "gamify" them, increasing motivation and engagement.

- **Customization:** On FarmVille and GodFinger, for instance, players can customize their own world/farm. Customization can create a higher sense of attachment between the player and the environment, increasing the changes of long-term engagement.
- **Community interaction:** Players interact not only with the environment as they progress through tasks and challenges but also with other players. It is common to have a form of market amongst friends in the game which lets players request services from other players for a reward.
- **Leaderboards:** In the case of Mafia Wars which is a highly text-based social game played on Facebook, players compete against friends and people they know. Competition is a great motivational factor present in several game genres.
- **Rewards and collecting:** In Gowalla, for instance, players can collect items at certain locations. Items are left behind by players who

want to become founders of a venue. Also, badges are a common way of rewarding players for achievements, allowing players to express those achievements to others in the community.

- **Location-awareness:** Mobile platform-based social games and applications can gather data from the players' surroundings, making it possible for them to check-in and interact with other players around them as well as retrieve contextual information specific to that location. This can lead to community formation and knowledge sharing.
- **Mobility:** Several social games are available on an array of mobile platforms, having players' profiles and achievements shared across devices.

Designers and developers in the learning field should pay close attention to how social games are structured so that similar principles of player motivation, retention and sense of achievement

Incorporating the Human Touch in Online Education

Jessica Sanderson, Cleveland Clinic

Building relationships is a key part of learning. Often in online education learners and educators feel a disconnect from one another more so than in face to face education. In a classroom you can see body language, facial expressions and different personalities, but those characteristics are sometimes not as evident online.

Incorporating the human touch into online education is key to engaging your learners and filling that disconnect learners and educators often feel. Using discussion boards, videos, images and other multimedia can help close this disconnect and bring your online education to life.

Discussion boards are a great way to communicate and share thoughts with one another. So often learns believe that there is robot somewhere grading papers, and not considering the educator or peers on the other end. Creating a forum, or a question and answer area within a online environment will help show there is a real person on the other end providing feedback. As the communications continue and relationships build, you start to paint a picture of the people you've been communicating with.

Adding a profile picture or sharing family photos is another way to bring the human touch into online education. Often I hear "It's so nice to put a face to the name" when I've been communicating with someone online. Providing a space where learners and educators can share photographs will take the guessing out of painting that picture.

Words on a screen and photographs sometimes are not enough to fully remove the disconnect. Part of the classroom experience is hearing the teachers voice and watching their mannerisms as they instruct. Videos are frequently used to bring content to life, but we can also use them to bring ourselves to life. Adding video introductions or summations into your online environment can help to fully close that disconnect learners and educators often feel.

So ask yourself, as an educator how can I incorporate my human touch into online education? As a learner, what disconnects do I feel between my peers and educator? Answering these questions will help you fill the disconnect in your organization.

The changing expectations of learners and the LMS

Connor Gormley, FM Global

Where would you go learn how to install a wireless network in your home? How about finding ways to fix a leaky roof? If you are like most people, you will likely go to Google, YouTube, or a similar resource. The whole process to find the desired knowledge will likely only take a few clicks. Now think about how you would find information from online training available within your organization's LMS. You will possibility navigate internal web pages, login to the LMS, browse the training offerings, and then locate the piece of the training you need within a course. Locating and navigating to learning assets within an LMS is typically many more clicks than other technologies that we use every day.

The ease of access to knowledge has become an expectation of learners that needs to be recognized by organizations. Web 2.0 technologies are moving learning to new places, mostly outside of the LMS, and we need to make sure that this shift doesn't result in the LMS layers decreasing access to learning. Most organizations are so focused on uploading online courses to their LMS that they may not consider the changing technology expectations of learners.

While there are criticisms for learning management systems, I don't discredit the successes they have enabled in the education and training industries. Students in rural school districts can participate in courses through an LMS that they would never have the opportunity to participate in otherwise. Corporations are providing consistent and cost-effective training to a global audience through learning management systems. Most importantly, the LMS provides us with functionality today that we can't get by using a decentralized learning strategy of stand-alone web 2.0 tools. The LMS helps us organize, measure, and track learners and learning initiatives which is critical for assessing student progress or analyzing ROI. Yes, providing ROI data is critical to ensuring support for the growth of distance learning, but how much data is enough? As we keep layering access to our learning content, utilization is unlikely to reach peak.

Does the LMS limit learning today because of the learner's changing technology expectations? I would say it is starting to, and is becoming increasingly limiting every day. The LMS needs to adapt to system capability expectations that we as learners gain from the other technology we use

throughout our day. If I can search content on Google to go directly to the knowledge I need, I expect to be able to search the content of online courses in my LMS.

The gap between learner's technology expectations and the functionality of learning management systems can result in frustration, which discourages learners from getting to content. There is not a single solution to this problem, but we need to take steps toward making on-demand learning assets easily accessible. As learning professionals, we need to strategically plan for the changing technology expectations of learners. The role and functionality of the LMS will need to change.

Getting Beyond the Formal Classroom

Grant Velie, Farmers Insurance

Learning is more about what happens outside the classroom or virtual session than it is about the actual training. This leaves Learning and Development needing to adjust our methods to become true business partners that not only facilitate events, but contribute to performance improvement. While there are many formal and invasive mechanisms used to try and accomplish this (think organizational structure changes), there are actions L&D professionals can take on a daily basis to harness informal learning.

Management Participation (Not Just Approval)

All too often, management participation is used to describe situations where the management team "signed-off" on a given project. While necessary, going the next step and getting them involved is the key. Having the leadership team participating from the beginning not only ensures we are focusing on the correct knowledge, skills, and attitudes to generate positive business outcomes, but also puts the leadership team in a position to take what is accomplished in the classroom and provide the right mix of incentives, coaching, and performance management to allow these behaviors to flourish.

Peer Mentoring

Who better to have as a resource than someone the management team has selected as an exemplary employee? Throughout the onboarding process, connecting a new employee with a peer mentor gives that individual an additional outlet for questions and an opportunity to hone the new skills they acquired. This is a win-win situation – the new employee gains another resource and the tenured employee gains experience coaching (something useful when new leaders are needed in the organization). Having a peer to lean on builds the confidence of new employees and decreases the time it takes them to get up-to-speed and producing business results. This also encourages team building and generates a stronger, more self-sufficient team.

Social Learning

For every organization, the topic of how to handle social networking and social learning is rising to the forefront. Some organizations have embraced it, adopting new tools and online platforms to promote it. Others have been resistant to these new techniques due in part to the perceived fear surrounding loss of control. Whether they want it to or not, however, social learning is taking place. The successful organizations and L&D departments are those that are able to integrate new social learning solutions (wikis, blogs, discussion boards, etc.) within their existing learning infrastructure to enable individuals to more effectively and efficiently manage change. There is a wealth of

knowledge within our subject matter experts, and finding ways to tap into this expertise in an informal and collaborative manner is crucial.

The bottom line is that Learning and Development needs to branch out beyond the classroom and partner with leadership teams to harness the learning that takes place on the job. While these are three techniques that worked in my world, I challenge you to look at your organizations and identify what will work in yours.

Establishing a Training Culture – Moving from Data Deluge to Learning

Jennifer Wright, Alstom Power

My transition was far too easy. What struck my colleagues as a significant fork in my career-path turned out to be a smaller diversion than even I expected. On the surface, the business world seemed a vast departure for a foreign language teacher but I soon discovered the corporate classroom environment was eerily similar to the High School French room I had left behind. Students were just as distracted, just as ambivalent and only slightly better behaved than their teenage counterparts.

Soon I encountered a far more disturbing revelation: the "trainers" were equally disaffected. No one had the motivation to establish a true learning environment since training was viewed as an interruption from "real" work. This needed to change and some key people within the organization knew it, but they also knew it would not be easy. I was hired to work as part of a group tasked with replacing the company's casual "data deluge" training with a more cohesive learning program.

When I arrived, the approach to training was somewhat haphazard - simply an information transfer exercise. Managers would ask widget experts (or whoever was available and knew a lot about widgets) to train the new recruits. The trainer would then book a room and present the slides he had whipped-up: usually an extremely detailed slide deck documenting everything there is to know about widgets. Trainees would leave – usually overwhelmed – hoping they correctly identified the important parts (since remembering everything was out of the question).

That was it. There were no assessments or evaluations, no classroom activities, no tracking or objectives. To be fair, I wouldn't expect such formalities since most training was impromptu. Someone thinks, "There's bound to be a lot of questions when we roll out this new system. We should have a training session…Bill you seem to have a good handle on it. Why don't you lead it?"

This informality was deeply ingrained in the corporate culture because it was what most employees had come to expect. The best way to change the culture is to change the expectations of what training should be. If trainees leave an engaging session feeling confident in the material, it begins to shift their ideas of what training ought to be. And if we work with subject matter experts to establish learning objectives and application exercises, they are more likely to see the results of a well-equipped work force. This works to further erode the belief that the recipe for training is 1 room, 1 expert, add students, and stir. Our goal is to make our training group jump to mind whenever a training

opportunity arises and the more success we see, the more that happens organically.

Since I started, we have had more success each year. Management supports our efforts and we're continuing to train trainers, develop interactive learning experiences (both classroom and e-learning), and evaluate the training we've implemented. I can see the progress we're making and our full training portfolio is evidence that the culture is changing.

"Y" not Mentor?

Danielle Sagstetter, Capella University / PACT

Behind every successful person, there is one elementary truth. Somewhere, some way, someone cared about their growth and development.
–Anonymous

Mentoring is a topic I feel passionately about because somewhere, someone cared and invested in my development. And I would like to share my experience in hopes that you and your organization find it advantageous. While there are benefits to each type/style of mentoring, I have found that the richest ideas and superior critical thinking have occurred when I have partnered with a colleague or mentor.

Mentoring is a development relationship focused on the intentional transferring of knowledge or a skill set from a mentor to a mentee. The most common type of mentoring is traditional or upward, meaning that a more experienced, upper level mentor shares the desired skill set with a less experienced, usually younger, mentee. The benefits of this are limitless to the participants and the organization.

Reverse mentoring is becoming more popular as Baby Boomers recognize that Gen X/Y'ers have skill sets that some Baby Boomers lack. This type of downward mentoring is fundamentally similar to traditional. However, the mentor is younger, less experienced or has a lower employment status than the mentee. Through this, the younger mentor inevitably develops their communication and leadership skills. And as a trainer, you are already aware that you don't really know about something until you have to teach it to someone else. An example of this type of relationship was best demonstrated when a colleague shared that she was going to create an all new LinkedIn account because she received a new position. Although she had more working experience and was older than myself, I was able to partner with her to show her how to professionally leverage social networks by creating a personal brand and virally marketing herself.

While both traditional and reverse mentoring can be hugely impactful, I would suggest building a peer to peer mentoring relationship that is based on desired skill sets despite age or status. For example, I reached out to a colleague that was new to our organization but had more working experience than myself. I wanted to gain access to her fresh perspective and wealth of experience. In exchange, I was able to help her develop her technical skills specifically related to eLearning. The downside to this type of mentoring is that often times more work needs to be done before the relationship is initiated. Both parties may find it beneficial to take skills assessments and talk through the guidelines of their relationship.

In conclusion, I have been both a mentor and a mentee in all three of the above mentioned mentoring styles and have found that each one serves its purpose. But if you truly want a relationship teeming with fresh ideas and different perspectives, the relationship should neither be upward or downward, but instead a partnership of shared needs between colleagues despite age or position.

Common Constraints

Meg Hunter, CFA Institute

Through research I've realized that the constraints trainers face at my organization are not at all unique; many learning professionals must work with or work around the same issues. But something I've wondered as a novice trainer is, "Why does it have to be this way?" It's hard for me to read about the challenges many companies and organizations grapple with – which affect workplace efficiency as well as the emotions and motivation of employees – and sense that no permanent solution is in sight. As Seth R. Silver relates in his article, "Transforming Professional Relationships":

> For all of our supposed progress over the past 40 years on participative management, quality of work life, situational leadership, TQM, diversity, empowerment, customer first, seven habits, good to great, employee engagement, and more, we still have a long way to go before our workplaces are truly characterized by "dignity, meaning, and community" (ASTD Training + Development magazine, December 2008, page 64).

But why? Why do we still have such a long way to go?

I don't have any formal education in instructional design and I had minimal training experience when I was promoted last year to my current position as training and development specialist for a customer service center. However, my professional priority the last several years has always been to foster healthy, positive relationships with my colleagues where open, sincere communication is key, and I make an effort to grow from constructive criticism and feedback so I can serve my team better. Consequently, the staff members I train are confident that I have their best interests in mind, and they are more open and willing to learn with me.

Because this strategy has produced good results, I've wondered if a lack of prioritizing healthy workplace relationships contributes more than we realize to workplace dysfunction. Silver has reassured me that others are making similar observations:

> In effect, workplace relationships are like the threads of the fabric we call organizational life. They are everywhere: interwoven and stitched into what we do, and for whom we do it. For better or worse, workplace relationships greatly influence how we feel about our work, and how effective we are at that work (page 64).

In an increasingly chaotic and unpredictable world, anything my employer can do to minimize stress and increase stability, as well as anything I can do

likewise for my colleagues, should help increase trust and emotional wellness among employees. I suspect that healthy workplace relationships can play a significant role in achieving these goals. However, the key is not only getting staff at all levels on board with this idea but getting them to practice it consistently as well.

What I've discovered about learning professionals is that we genuinely care about people and want to help others succeed, and we make an effort to understand the dynamics and relationships across the groups that we support. Therefore, maybe it's us who are best-positioned to model how we work on a larger scale and start influencing workplace culture.

Students have a say too!

Joshua Smith, Department of Veterans Affairs

I once had a college professor that told my class, "If this was a perfect world I would be teaching this class from my house and you would only be there if you really were interested in the topic." Most of the training that we take in our work life, we only take because we are forced or required to take it. Most of the training that I completed in the past year I volunteered to take to further my workplace knowledge. Talking with some of the other participants in these classes, I learn that most of them don't want to be there but their boss is making them attend.

It's never nice to just identify a problem and not offer any kind of solution. I don't have a solution for this problem but I have a few ideas on how we can start creating one. My favorite psychology test that I read about in my undergraduate program was Pavlov's dog. I wonder if it is possible to associate mandatory training with a desirable reinforcement. Just off the top of my head, that might work for the late Gen Xers and Gen Yers, is to offer them a day off to take all of their mandatory training from the comfort of their home. If my peers are anything like me, they would take their day on a Monday or Friday, sleep in then do a marathon of training events just to enjoy the rest of the day to themselves. Other option to the day off is to make it a staff retreat that incorporates the training. The idea is to get the staff out of the office.

Another thought to rant about is for the ability for learners to have a bigger say in the planning phase of their learning curriculum. Having the students develop their day-to-day schedules based on the overall content will not only get the student's buy-in, but also prevents the all too often drowsy feeling everyone feels listen to someone drone on about a topic they stopped caring about hours prior. Learner's buy-in will drive the desire to participate which will (hopefully) enhance their retention rate of the material and make them want to attend the class. This would, hopefully, solve my original rant which brings everything back to a full circle.

Learning That Makes a Difference

Julie Thompson, Xcel Energy

There is something to be said about experience. Think about all the experiences you've had in your life. Which ones stand out? Why do they stand out?

The experiences that stand out in my life are those that are directly related to the things that excite me, that I'm passionate about, feel strongly about, are deeply rooted in my core values, and that I believe I can and have made a difference in.

The value of learning comes from just that – excitement, passion, is based on our values, and driven by our legacy or life purpose. Our unique talents are what drive us to feel excitement and passion, to inspire and to be inspired. It draws us to look at what's really important.

With that said, I feel that today's culture of learning is moving in the right direction. The right questions are being asked, the right people are asking those questions, and companies – both large and small – are recognizing the value and importance in learning that makes a difference, rather than implementing training and calling it learning.

So the question is, "What is learning that makes a difference?" In my experience, learning that makes a difference encompasses the following:

- Motivates you to make a change
- Memorable – not easily forgotten
- Frequently useful
- Available – something you can go back to and reference, share with others, customize to fit your needs

It's not practical to create a one-size-fits-all solution. I believe the answer lies in the variety of methods and avenues in which people learn. By giving managers and employees several learning options to choose from and showing them how everything is aligned and links back to the corporate values and strategy, employees will not only be able to choose how they learn, but will hopefully be able to make a difference in their work based on what they've learned.

I think about when I have most effectively learned something new. I learned how to facilitate training in front of a group of employees and be an effective facilitator. Instead of attending a class, I learned from experiences – both past and current. Another example was when I learned how to milk cows. Yes, I grew up on a dairy farm in west-central Minnesota. The first time my dad had me milk the cows alone, I had a lot of questions like, "How do I hook up the milking unit?" "How does he carry this thing so he's not tripping over the hoses?" "How does he know which cow to milk next since it doesn't just go in order?" My dad taught me a really valuable lesson throughout this experience. When he knew I could do it myself, he left me alone to do it myself. He enabled me to do it; he trusted me to do it.

I think the key for everyone about learning is that we need to enable and trust learning so that it can and will make a difference.

Part III: Learning in Action

The Impact of Knowledge Management on the Workplace Learning Organization

Patty Glines and Eric B. Zenor, CUNA Mutual Group

Today's business organizations are challenged by competition, globalization, the economy, regulation, outsourcing, advances in technology and the rapid creation of new knowledge. Many companies are also feeling the impact of the retirement of a tenured and highly skilled workforce with a less than optimal pipeline of talent to replace it. Due to these pressures, we believe that traditional training organizations must refocus their strategies and develop their employees to focus on task-related performance solutions like knowledge management and performance support. These solutions address the challenges stated above because they support organizations in leveraging their current intellectual capital to increase their competitive advantage.

The evolution of CUNA Mutual Group may provide insights into what other departments, who have not yet embarked on this journey, may experience. In 2005, our company centralized its training function into a single shared service. Prior to this centralization, learning was primarily instructor led. Once we centralized into a training and performance support model, we dove headfirst into e-Learning by creating and/or hosting hundreds of online courses delivered through our LMS and maintained by our organization.

At the onset of our journey, our organization's skill sets demonstrated an abundance of talent and experience with traditional instructor-led and web-based delivery mechanisms. Historically, there was little intervention with how the day-to-day knowledge requirements of the business areas within our organization - namely our client base - were managed. Our clients saw value in what we could deliver when it came to new hire training or periodic classroom training to deliver updated product and procedure information. Our goal, though, was to improve the capability of the overall organization by providing mechanisms that enable performance in both strategic and tactical knowledge applications. Now, anyone familiar with Gilbert's Behavioral Engineering Model knows that training can be a relatively small component of enabling performance. While some of our training was based on performance or tasks, we saw overwhelming opportunities to increase capabilities and support business goals by using performance support mechanisms to affect individuals' *daily* performance.

In many traditional blended training programs, it is assumed that the student will be "front-loaded": they will be given all of the information they will need to handle any situation after they "go live." Considering the number of tasks and amount of product knowledge required for many of our clients, this approach was inefficient, costly and not maintainable given the frequency with which the information changes. In our traditional model, we essentially gave the student a bucket of fish rather than teaching him/her how to fish. In the new model, we provide a well-stocked and continuously maintained fishing pond, and then we teach the student how to fish. We also teach the business area how to adequately maintain the fishing pond.

This shift from traditional training to performance support has addressed a number of common business concerns but also presented a challenge to how our learning organization works with clients to develop and sustain performance. When looking at how the dozens of business units within our organization manage content, it became very clear that we had A LOT of content, and it was everywhere. There was no consistency in how much content was structured or delivered. It was frequently duplicated in multiple locations with change management becoming difficult at best. Content often did not have a clearly defined owner, or the recognized owner was no longer accountable for ensuring its accuracy. As more and more content was placed into online courses, it also became evident that our lifecycle maintenance processes were becoming larger and more complex. In many instances, the content used to deliver LMS-based courses was developed in tools like Captivate and Articulate. As such, it was not maintainable by the business when changes to processes or procedures were made.

Likewise, there has typically been a disconnect between the content used for traditional onboarding of new employees and the content used by tenured employees to do their jobs. Part of the justification for pursuing a more robust knowledge management strategy has been to close this gap and provide the same knowledge repository for both communities. Let us repeat that point: the material used by tenured staff should be the same material used for initial training. We hope you are beginning to see what a huge impact this approach can have in streamlining content ownership and maintenance.

There were additional concerns related to the content maintained by individual business units to support day-to-day functions. In many cases, the content was tailored to a specific, well-trained, highly knowledgeable audience. As such, it was inappropriate for a new hire. Learning a new job role often means first learning how to hunt for information in a completely unique and foreign environment. Content is often accessed using a "one-size-fits-all" approach, with no redundancy. What we mean by that is that

individuals will often have unique needs based upon the context in which they need to find information. For example, locating a product by referencing an alphabetical list of product names may be fine in one instance but may not work well if the product needs to be located based upon a specific price point or applicability to a specific task. Providing multiple or redundant ways to access the same information based on context is critical in establishing a system where the user can find just what they need, when they need it.

In the past, when we discussed business requirements with different areas of our organization, we often discovered that much of the information used by employees was tacit or head knowledge. Individuals had been performing their jobs for so long that much of what they did was never documented. This, of course, resulted in an untenable situation for the business if a portion of the staff was suddenly unavailable. This has become one of our core business goals for pursuing a more robust knowledge management strategy in these uncertain economic times.

Like many others, the insurance industry is heavily regulated. Actions taken by employees may result in legal proceedings where the processes and data used in a given instance may become discoverable in a court of law. Many business units find this to be a compelling reason to ensure that their day-to-day processes are thoroughly documented and discoverable in accordance with compliance auditing regulations.

One last concern involves the overarching perspective often lacking in typical documentation. While documented procedures may illustrate low-level, step-by-step actions, many do not illustrate a broad-brush perspective that takes into account all of the job roles and hand-offs that occur between different business units. One goal of our knowledge management strategy is to provide this "wing-to-wing" perspective wherever possible, and the best way to do that is to create ubiquitous delivery mechanisms that access a centralized repository to a shared knowledge pool.

Enabling a performance support strategy has provided our organization with a framework to address all of these concerns. Individual business areas have developed a new-found appetite for dissecting the needs of their staff and organizing information into a "one-stop-shop" environment, enabling them to support both formal and informal learning requirements. These environments provide information framed according to an immediate and user-defined need. Standards provide for similar islands of information in and across each system. At minimum, each system must organize information at the department (who we are), product (what we service) and task (how we provide the service) levels. Additional sections may be added

based upon business need. If the need is to know how to perform a task, then an appropriately-scoped task description or walk-through is available. If the need is to understand product information, the system provides access to the information in a manner that considers how the initial question will be asked. Essentially, the consumer - not the training curriculum - determines what is needed and when. Business areas continue to discover new ways to integrate collaborative tools into their performance support systems, enabling their staff to share informal knowledge that would otherwise get lost in emails or not be shared with other members of the team.

Our own learning organization staff was able to apply existing knowledge and instructional design capabilities to this new model with little difficulty. Many of the same management and design skills are used, such as the application of the ADDIE model and the tools used for analysis and design. Likewise, the development process is quite similar; however, implementation and evaluation take on new areas of focus. The implementation process more strongly emphasizes change management considerations while the evaluation process is more closely aligned with actual performance. There is now a closer alignment of Kirkpatrick's level 3 and 4 data with the deliverables produced to support the business. Training materials no longer get shelved post-training.

As mentioned earlier, performance support requires a framework for both novice and experienced users. Traditional curriculum options help provide foundational support where appropriate: for common, high-level organizational training; for introductions to the business unit, job roles and products; and for potentially high-level overviews of the systems used to perform daily tasks. The system overviews are navigational in nature (i.e. a tour of the main areas of functionality). Each subject area is accompanied by appropriate skill-checks. Additional performance-oriented deliverables - task-based scenarios, expert checklists, task-specific tools or job aids that are developed to support training, etc. - are embedded into the performance support environment used by the staff during training. Once the student has completed the training and is in production, the information he or she used to complete that training will continue to support their daily decision-making process. This facet of the architecture is unique to this type of program and one of its greatest advantages.

Typically, the courses a student uses during training are not subsequently referenced during production. They are taken once and then only used again for new students. Why would we want to create material that typically contains a tremendous amount of useful information but has an inherently short lifespan? Information in traditional courses tends to become outdated

very quickly and is generally not structured to allow quick retrieval of small chunks of information. Moving the content into a performance support environment resolves both of these issues. The content becomes part of the business unit's day-to-day activities, is maintained by the business unit to ensure accuracy and is segmented to allow "just-enough, just-in-time" delivery. Additionally, the student's transition from the training environment to production is seamless.

Successful integration of a complete performance support solution into the daily operations of each business area has been varied. Some business areas view the prospect of preserving and organizing business knowledge as a step toward achieving their goals. Others view it as an extra project that simply ties up resources and has little impact on the business. Managing this perception seems like a straightforward issue of first identifying worthy business goals, then correlating the benefits of the system to those goals. This is not always the case. Familiarity with Kotter's Change Model tells you that establishing a sense of urgency is essential in successful change management. Some of our clients still view performance support as something used as an initial training mechanism rather than as a daily resource. This yields a sense of urgency only when new hires need to be trained. At other times, unfortunately, the system sits idle and often becomes outdated.

Communicating the overall business goal of preserving intellectual capital, integrating common and frequently used references and sustaining the movement by empowering broad-based action is essential to successful adoption. A vision and strategy can be developed within the learning organization, but to be successful, both must be understood and communicated by senior management across the entire organization. The strategy and vision must be shared with people leaders and reinforced at each organizational level. This must be done consistently and in the business language. We must also find ways to integrate change management into the business areas' daily tasks. These mechanisms may differ among business areas, depending on each area's workflow. For example, a contact center representative, who is negatively impacted when taking time away from the phone, will not be a likely adopter of change management unless those negative consequences of shifting their focus are eliminated. Other business areas that regularly use online reference materials but have difficulty organizing or scoping them to the correct audience will view this change as a positive step and will easily adopt this type of system. The bottom line is that the overall change management strategy will be consistent throughout the organization, but the specific change management processes may be customized to fit unique business workflows.

As we boldly move in this new direction, we see many opportunities for growth. Our clients have recognized the need to provide enhanced, collaborative mechanisms that blend with the ways in which their staff members conduct their day-to-day operations. Those mechanisms can collect and distribute types of tacit, often experiential, knowledge. The performance support environments that today are largely job/role-focused are developing new relationships with similar support environments that are product-focused. The increasing standardization by which business areas are accessing knowledge is leading to the recognition of new ways to develop and deliver other types of information. For instance, with standardized business area profiles, necessary details that were once difficult to find - or non-existent - can be shared among business areas. We now have a standardized framework that lends itself well to discerning patterns pertaining to specific informational needs, as well as a means to distribute this information in a targeted and consistent fashion. Big-picture elements, such as cross-functional workflows or business-to-business handoffs, now have pools of information that can be farmed to complete the picture. Standards in how content is structured, stored, delivered and maintained are continuously evolving to bridge the gap between chaos and organized complexity.

The goal of enhancing workplace performance for our clients, as well as our learning organization, has been shaped by a clear vision of our desired results. As workplace learning professionals, this vision is shaped by the needs of our learners. Those needs are not diminished when leave our classrooms; rather, they persist and change as learners progress through their careers. We must change with them.

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The New Ground Rules: A Collision of Knowledge at the Speed of Light

Lisa Pedrogo, Turner Broadcasting/CNN Best University

Right now, there are two major phenomena impacting our business learning environments, the likes of which have never been seen before:

- The millennial workforce entering the marketplace
- The cross-convergence of easy-to-use, immediately available technology across all media platforms.

Either of these on their own would have a profound effect on workplace training and education. Combined, the pairing of these tools with a user group that is defined by its effortless, limitless consumption of metadata and megabytes is driving innovation across all business arenas, including education. This change moves at a speed the business world has never dealt with before, because the drivers themselves are the early adopters and the advocates. As educators, the pressure to meet users' expectations for innovation in learning has never been greater.

The fact is, in the endless quest to stay ahead of the customer, demand has already exceeded capacity. Most mature organizations have been catering to a particular type of student-employee for whom a scripted PowerPoint combined with a hands-on demonstration and/or classroom experience make the grade.

Our millennial generation is full of paradoxes. We have graduated students who reach for a keyboard first to communicate information or ideas, even if that keyboard is on a telephone. For them, global reach means being able to text their telephone address book or their Facebook friends *right now*. They have always had access to a computer in the classroom. Ironically, they often type better than they write (unless of course, you were hoping to read words). Many entertain few personal space/boundaries (but are shocked they are not getting jobs because a potential employer has found their youthful indiscretions documented on Facebook). They are often the first students in any class to play with an application, before you even tell them which icon to launch on their screen. They generally have zero tolerance for anything that is not designed to be played with, and they have developed applications that teach users intuitively

through a global rolodex known as the Internet. In other words, they like to learn by doing and they do not necessarily want much of a tour guide. When they do want help, they usually reach out, literally to the world, and collect a wealth of ideas in bits and pieces from places a Baby Boomer would never even think to look! And they gladly share what they know when a "Facebook Friend" asks for help. Who knew it was possible to have 30,000 friends at one time?

In the business world, this presents an exciting opportunity to energize an otherwise stale market, particularly in light of emerging thinking around the role of team diversity and its powerful impact on business innovation. It also introduces significant risk for businesses, both culturally and practically. Project teams are often made up of several generations of workers, some of whom just do not "get" the youngest generation, with their "flip flops, jeans, and lack of respect for people with experience." For the first time, the people who know how to "do stuff" - use the tools - are not necessarily the ones armed with the right amount of knowledge and experience to use them well. Tweeting is not conducive to keeping corporate secrets. Re-tweeting a tip as an "FYI" to the global community may inadvertently give credibility to what turns out to be a false lead, and the business' name is on it. How do you deal with this enigma/dichotomy?

In a word: education. HR policies aside, corporate responsibility starts with teaching all employees the new ground rules, including teaching even those who pride themselves on never having tweeted before in their lives. Learning organizations cannot do it alone. Employees themselves have to partner with each other to make the most out of every project and pairing. Those with experience need to work with those who have the technical skills to make any business vision happen in real time, while sharing their knowledge of the industry. Millennials need to take a lesson from their more experienced counterparts on the "social" part of social media - the "face" part of Facebook. They need to develop people skills to succeed in a customer service-oriented world and not always hide behind that keyboard.

The fact is, social media sites are a reality in every workplace, especially if you supply employees with a computer and an Internet connection. Ignore them at your own peril. The line between work life and home life is blurry, with PDAs keeping everyone connected all the time, anywhere and everywhere. Keeping up with this - learning the new rules, developing new ways of teaching and still maintaining your quotas - is becoming increasingly difficult.

Did I mention the time constraints? People are more productive than ever because of technology; yet, they have less time than ever because of technology. PDAs and laptops have turned every user into a task machine. Reading email, answering the phone, researching a topic and setting up a date frequently happen in the same two-minute window in today's offices. If ever a clock ticked on training, now is the time to embrace short, blitz, educational sprints. Customers simply cannot step away from their work for extended periods of time unless they are focusing on soft skills improvements.

Technology also presents some challenges for educators. In the past, tools used in business, especially those for capturing video and sound, were approved by the right people and distributed in an orderly fashion, always after training had been successfully completed. Now, a good media kit with all the bells and whistles costs a fraction of what it once did and can be purchased at any local electronics store. Millennials grew up with video cameras on their cell phones and they can capture a moment and distribute it instantly to the largest audience out there, namely the Internet. It is not uncommon for them to approach us trainers in a business environment and ask what tools we recommend for such purposes and what classes we provide. They do not understand the challenge of educating and supporting just one of these devices, much less every flavor of it available at your local Best Buy.

So What's Different in 2011?

Speed. Believe it or not, decisions will have to be made faster if you want to stay competitive. Businesses will need to deal with these issues in real time. Technology and Social Media teams will need to function on a regular basis within large organizations in order to stay ahead of trends and develop corporate policies that protect the business but still promote the cultivation of new ideas. Businesses can no longer afford to wait several months while a consulting firm analyzes options and scenarios. You need experts in house who can give you material insight into the implications of new media as they evolve so that executives can make informed decisions.

Learning Leaders' Core Roles & Corporate Diplomacy. You can no longer afford just to educate. You have to actively embrace learning on many fronts, especially your own. If you operate relatively autonomously within a small, core group, you have to widen your circle. You must, as a learning leader, have a comprehensive understanding of your company's business strategy. You must also be in a position to share parts of this with your team as you work to make decisions around learning priorities.

Learning leaders are evolving into corporate diplomats because they are at the crux of where all these issues collide. While advocating learning at all levels of their organizations - from global users in their various locations to the executive suite - they must also navigate the legal, human resources, business strategy and technology departments successfully in order to manage this change.

Change Management. There is one thing you can count on in any organization in 2011: the business will change. If you Google "change management", you will get 170 *million* hits in less than two seconds. At Amazon, there are 12,151 resource books for sale covering this topic. Managing change in business is such a hot topic that executives know they have to do it, but managing users' experience through it can be daunting. Learning leaders are strategically positioned to manage change because they interface with users every day and know how they think. Managing change effectively right now means you can answer "yes" to the following questions:

- Did the clients learn what they needed to learn?
- Did the business executives accomplish what they needed to accomplish?
- Did my team exceed all expectations?
    - Were we as educators on point with curriculum?
    - Did we manage time effectively for ourselves and our students?
    - Was the learning fun? [Or, at least, as fun as it could be?]Was the learning accessible to everyone?

In 2011, you can add the impact of millennials and social media into the mix of questions, and the related compliance and business education around it.

Relationships & Collaboration. Learning leaders today must maintain excellent relationships across the entire business. If you are not building relationships with key managers in core areas of your organization, you are invisible to your company. You are also then working harder than you have to. Many other groups are putting together materials and information for your student base that relate directly to learning. Work with them so you are not duplicating efforts. If multiple groups within a corporation have to train on similar curriculum, take the time to coordinate content, identify what is the same for everyone and share the burden of developing those relevant parts. Spend your resources customizing for your individual student groups as needed. We get so caught up in what we are doing with our own teams that we forget to reach out to others to see what they have done! This is

particularly important now that our education content has changed due to social media and similar tools.

Traditionally, HR departments bore the brunt of corporate standards and practices training. With the introduction of social media, technical educators are now obligated to promote the responsible use of tools in a way not previously necessary. That means:

- Integrating basic information into our technical curriculum that notifies users to behave responsibly with these tools and in these open environments
- Ensuring that as part of the class you provide, the student is obliged to acknowledge that they know corporate policy.

You may not need to take on the challenge of providing the policy training directly, nor should you, as the groups responsible for it already have curriculum in place. Instead, you will remind users that policies in place must be followed and emphasize where to find that information if they need it.

Do you collaborate effectively? Here is how you know if you do:

- How quickly can you get information you need that impacts your training?
- If you have to call someone in Legal, HR or anywhere else in the company, do your counterparts know who you are?

Engagement. Carpe Diem! If there is a small piece of education involved in an initiative or project, volunteer your team to help. The worst thing that can happen is you will get more work. Is that really such a bad thing in this economic climate? All learning leaders and members of their teams must promote education all the time, and the best way to do this is to demonstrate how learning opportunities are all around us. Do this by actively participating in project teams on key business initiatives and by facilitating critical meetings where *business change* and *business strategy* are significant topics of the event. Broadening the scope of the learning team in any way that works within your own business means you increase your value.

Taking on additional work is not wasted effort since it positions educators to be on the leading edge of managing change within their own organizations. Many learning leaders are taking on additional aspects of their businesses to help manage change, from project management to facilitation. In doing so, educators stay ahead of what is coming and can prepare for whatever

curriculum is required. This promotes your team's visibility to the executive level of your organization, a level whose individuals have probably not attended a training class in recent years.

Leadership. As the leader of an education team, your responsibilities increase as well. You must keep an eye on the big picture without losing sight of your core curriculum. You must demonstrate new ways of sharing that information globally without necessarily increasing your travel budget. This means thinking outside of your current comfort zone, whatever that may be.

Do not let fear of the unknown keep you from:

- Planning your work. You must map out what lies ahead for your team in your organization and prioritize business needs. This will enable you to manage client expectations. If you cannot support something because you lack the resources, what can your team contribute?
    - Can you provide documentation templates for the customer to utilize as they create their own training class?
    - Can you help your client develop a Subject Matter Expert who can rehearse with a member of your team as they practice teaching a class from their own outline?
    - Can someone from your team consult with the client as they develop curriculum or work with a vendor to buy the right amount training?
    - Can you host their training documentation materials on your website?
- Educating your teams on all of the new media and the impacts of change on learning in your organization.
- Getting to know your team well enough to learn their strengths and weaknesses (and how to play to those). You must exploit the entire skill set of your team, even if you never thought to implement someone's previous job skills before. If they have it, you should figure out a way to use it effectively to grow your own organization.
- Saying "no" if it is something you cannot deliver well or support effectively with your current resources. Then add that to your "to do" list as far as team development is concerned.
- Managing your group from a distance if your travel ultimately helps your team. Not everyone can go everywhere and do everything; however, as the leader of your team, you may have to represent your group at trade shows, conferences and in

company events or meetings. You need to be confident when participating by video in a meeting with your team from wherever you are.
- Imparting to your teams the strategy behind taking on all of this additional work. You cannot promote such an aggressive agenda without buy-in from your team.
- Developing online learning tools that can be accessed without a trainer 24x7x365.
- Looking at stale curriculum and "shaking it up." Pull it apart, analyze what is really necessary and start looking at short "blitz" classes you can offer employees to reinforce the skills they already have, or just to remind them of a few underused features on the system they use.
- Creating the infrastructure you need [or the relationships with your technical support teams] to handle online training tools for a variety of uses, including streaming video, Captivate, etc. This is a critical component of managing the current supply and demand scenarios being played out in training rooms across the world.
- Investing in your team. Do not be pennywise. Be able to do a return-on-investment on tools and software your team requests. If saving $300 on a piece of software costs a member of your team 10 hours of work, did you really save anything?

The bottom line is that you need to face your fears head on, whatever they are, and encourage your teams to do likewise. Otherwise, you may not survive the next decade as an educator. Re-invention is key to our success. Innovation is more than a buzzword. It is what actually happens when we consider all the viable options in front of us and take a few risks on something that may be outside of our comfort zone.

Learning Leader's Check List for Navigating Change

- Learn something every day.
- Put people first.
- Emphasize customer service within your team. After all, aren't all educators there to serve their students?
- Show gratitude for even the small wins.

Remember that learning does not have to happen in huge, life-shattering events. Usually the small kernels of knowledge have the most significant impact on employees because those kernels made a difference to them *when they needed them*. Every single person who has a positive

experience with a member of your team, even if for only 2 minutes, becomes an advocate for you and your group.

It is a privilege to be a learning leader in 2010. Next year promises to be exciting for business because, for the first time, there is vast opportunity opened up for us as educators by this convergence of technology. The millennial workforce sits at a desk outside your door or is networking into your system from wherever they are at this moment in the world. They are, in their own way, teaching us educators what we need to do next. We, in turn, are teaching our businesses how to manage that.

Lisa Pedrogo is the Director of CNN's Broadcast Engineering and Systems Technology University.

The Blended Future of Learning

MaryJo Swenson, Novell

As I started thinking about learning today and its future possibilities, my mind wandered back to my childhood and how we learned back then. Many of my most valuable lessons did not occur in the classroom with a teacher dictating how and what I should learn. Truly, the valuable lessons happened in the dirt lot or yard during softball, kick-the-can or any of the other games we played without the supervision of adults. We made the rules and established our roles. We all learned valuable lessons about how to work together to achieve goals, lead and be team players.

Today, most young people who play games do so in a supervised environment with established coaches, referees, rules and defined roles; adults organize all engagement. Gone are the playgrounds of the past. In place of those empty fields and dirt lots appear the Internet and gaming, which require each participant to choose a role, or even various roles, and try them out virtually! In these environments, "kids today" learn about themselves, how to lead, to be part of teams, how to advance ideas and make rules. We see this new "playground of learning" infiltrating the established environment of traditional learning and fundamentally changing the ways in which learners interact.

Needs of Today's Learners

In looking at the learners of today, both in the worlds of business and academics, I am struck by their approach to learning. As an ongoing process, learning appears to be instantaneous and immediately rewarding, but individuals are still driven to look further and deeper. They have easy access to information anywhere, any time; yet, they continue to look for validation from experts, instructors or facilitators.

Students today are constantly paying attention to several tools at once. Whether they are texting, chatting, watching something on TV (or on their computer screens) or exploring Facebook, they are simultaneously interacting with multiple technologies; however, in recent conversations, students have shared that when they really want to concentrate and study, they frequently opt for a book. This single-function device allows them the choice to turn off all other distractions.

To me, these approaches reveal that, as we develop new learning tools, whether online or as eBooks and mobile device modules, we must also continue multi-day, face-to-face training activities with instructors and choices of tools. For me, the most important element of any of these training modalities is that, underlying the offer, there must exist strong instructional design. If we lose this element in any of these offerings, we will not be able to adequately serve our customers.

What do these observations mean for the future? I believe they demonstrate a move into a learning world based on what we currently call "blended learning." Again, learners want the ability to make choices about the tools they use to learn and accomplish the objectives of a course or offer. The role of instructor will change: it will not diminish in importance, but instructors will act more as guides to or facilitators of sharing information rather than being the "founts of all knowledge."

I believe universities will face a real challenge in preparing the instructors of the future. Classroom management techniques will change, as will interaction with students, but instructors will still be held accountable for their students' accomplishment of goals and objectives. As more information appears on the web and we see online communities continue to form, everyone will have increased opportunities to post information. Learners will need access to facilitators who can help them understand what exactly is real, right or relevant to their goals. "I found it on the web" is the new "I heard it through the Grapevine!"

Norm Kamikow, Editor in Chief of *CLO Magazine*, recently shared his observation that "By 2010, more than 53 trillion digital pages will exist online." Technology will undoubtedly play a huge role in learning, but it cannot play the only role. Learning still functions as a social activity. We can learn as much from informally interacting with one another as we can from reading an article, sitting in a class or completing a web-based course. Yes, we will see more web-based, game-driven and project-oriented learning with teams spanning geographies.

Sharing of information will be commonplace, and those who share will be most valued. Still, someone - some Subject Matter Expert (SME) - will need to monitor postings to inform the consumers of their true value. What I have observed while working with various technical companies has convinced me that on-the-job training is constantly occurring, meaning that if the wrong information is passed along, everyone touched will gain and perpetuate the same misunderstanding.

The effects of misinformation may not be immediate but, in the long term, severe issues and problems can arise. With that said, informal learning often tends to be extremely effective, especially when related to the task at hand and served on a need-to-know-basis. Learners retain this information because they can immediately apply it. Still, issues remain over who is monitoring "informal" learning and whether that monitoring is necessary.

Measuring Success

One recent popular topic is measurement and metrics. A common question running through the minds of leaders is, "How, in a world of informal learning, do we measure success?" I personally believe the success of learning will be tied to performance objectives. Other questions include:

- Can we measure onboarding effectiveness within employees' first six months on the job?
- Can we measure an increase in performance using S.M.A.R.T. (Specific, Measurable, Achievable, Realistic, Timely) objectives?
- What are the learning tools and programs used by an exemplary performer versus those used by an achieving performer?
- How will we assess learning styles to point people in the right direction so they can most effectively and efficiently acquire the information they need to become successful in their roles?
- How will we measure competence?
- What scale will we use to measure performance and tie that back to the learning paths each learner has chosen?

The answers we search for reflect that, as we move to blended, learner-driven education, the variables affecting success expand and adapt. The variables can be unique to individual learning styles, making it much harder to measure and set standards. An additional element of increasing importance as we move to a learner-directed environment is motivation. We question whether a learner-directed environment means that each person chooses what to do or if, instead, the prescription for learning offers a variety of styles and paths from which learners can choose.

If you are familiar with Daniel Pink's work, you know that motivation involves mastery. Learning and experience lead to mastery. I believe that initial assessments of a learner's current abilities and knowledge will lead to a prescribed path. The path will contain some elements of traditional

learning, along with options for contemporary learning: a blend of e-Learning, virtual classroom, articles, videos, webinars, conversations, projects, assessments, gaming technologies, simulations and live labs. The job of "course" development is greatly impacted. The focus will not be on the design principles or the actual writing of content, but rather on modules and consumable learning articles delivered via the web or mobile devices.

If someone asks a question and merely needs the answer, he or she should be able to easily get a response and move on from there. If a learner is interested in a degree or certification to prove they have the knowledge needed for a specific career, the impact of learner-driven education will be much greater. I believe that certifications and degrees will continue to be importance and hold value in the marketplace. These credentials validate a person's knowledge and aptitude for delivering successfully when measured against performance metrics.

Even with credentials, many times individuals are considered "entry level." After getting the job, some credentials require constant updating to remain current and relevant. It is in these areas of keeping one's skills valid that e-Learning and modular learning, whether web-based or through a virtual classroom, become very effective. We can respect the existing knowledge and skills of learners as well as their time and financial restraints while taking them from demonstrated competency to the next level.

Virtual Learning in Action

At Novell, we have moved our Advanced Technical Training from a face-to-face traditional model to a virtual classroom model, which impacts the ways we develop materials for our IT professionals. Development for a traditional multi-day course usually begins with a focus on the overall goal of the course. We then break the goal down into what can be accomplished per day. One important piece of Advanced Technical Training that we never want to lose is the large amount of time spent working in live labs. We have to shift our focus to the modules and objectives within, while also maintaining the lab work as an intrinsic component of the learning experience.

When we began our move to the virtual classroom model, we had to cut our presentations into half-day modules and deliver critical content within the timeframe of the 4-hour course. As we became more comfortable with the new environment, we experimented. Please keep in mind that our

audience is made up of IT professionals: engineers who spend their days and oh so many nights working strictly on computers. Using the Internet and online technologies both at work and at home, they are exceptionally comfortable in front of a computer for long hours. We began to extend the virtual classroom training to one full day, then on to two days and we are now up to 4 days of successful virtual classroom training.

We use Metrics that Matter to measure customer satisfaction and we are finding that our scores have not faltered. Now, we do include a few additional support elements prior to class: we send reminder notes and we have learners test their equipment and bandwidth to make sure they are ready to go. One day prior to the beginning of their class, we send PDFs of course materials and workbooks because we find that some learners prefer to print out those materials.

We have delivered this training successfully not only in North America, but in Europe and even as far away as India. Our US team works out the time challenges. In addition to the instructors, who may be located anywhere in the world, we have a facilitator in Utah who manages the classroom from a technical standpoint. This allows instructors to focus on interacting with and conversations between learners.

From a corporate standpoint, the virtual classroom has been extremely cost effective: we no longer ship equipment and manuals, travel and living expenses for instructors are greatly reduced and we are reaching more learners globally. This has been very successful for our customers, especially as their need to stay current on the technologies they support remains as their travel budgets diminish.

Blended Solutions

I see the use of virtual technologies playing a fundamental role in the future of learning. All of the new technologies that will emerge in the next few years, with capabilities we cannot yet imagine, will shape the future of design and development. I believe that blended learning will be one successful model for the next several years, though we still have a long way to go before we build truly measurable and successful blended learning responses.

Shorter sessions, too, will play a big role as time becomes the currency of training. Respecting and understanding the various learning styles of the younger generation will be critical to our success. Our traditional classroom techniques have remained fairly constant for a long time and

they do appear "stodgy" to a young person who has grown up with newer technology. Perhaps through blended solutions, we need to bring the excitement of discovery and mastery back to our learners, allowing them the autonomy to decide which of the various tools they want to use to learn.

The role of instructor/guide/facilitator will continue to be extremely important, although it may take on different features going forward. Learning continues to be a social activity and the leader role remains critical. I also believe that if we want to be successful in the future, design is key; incorporating new development tools will enhance design elements. The future of learning is at a very exciting crossroads with endless possibilities for learning ahead. Yes, we will stumble, fall, get back up and try something else. But, in those cases, we will fall forward and create the future of learning together.

MaryJo Swenson is Executive Director, Novell Technical Training Services.

Learning to Meet the Mission

John Guyant, CIA University

Even with 23 years of experience across many parts of the CIA, I have not seen it all, but I have been fortunate to see a whole lot more than this Midwestern-raised kid could have ever dreamed. My career has been exciting, challenging and rewarding; yet, in an ironic sense, my job has been quite simple - namely to *support the mission*. For our workforce, our mission, well, *is* the mission. Our mission is why we have thousands of applicants every month. The mission is why our officers are willing to make tremendous sacrifices. Their mission is why so many of our employees continue to pursue their careers with us.

Over the years, I gained an appreciation for what it takes to accomplish our mission. While I do not possess the pedigree of an education professional, I have certainly been a lifelong learner. In my career I have seen the necessity of learning for domain expertise; yet, as our mission takes on new challenges, I have also become convinced of the need to prepare our workforce for greater complexities and uncertainties. Having recently led our recruitment organization, I saw more than just a glimpse of our future workforce. Not only do they bring with them incredible talents, but a new set of work-style expectations as well. As for the underlying basis for how I approach the future of learning, I intend to:

Prepare the workforce of the future to better accomplish our mission in an uncertain future through innovative learning that is adaptive to evolving employee needs.

Employee, meet your mission

At the risk of being characterized as having an amazing grip of the obvious, I stress the importance of keeping simple realities squarely centered as you build your strategy. Let's start with a couple of these realities:

Reality One: Employee approaches to accomplishing work and meeting workplace expectations are changing.

Reality Two: Mission demands are becoming more complex and more ambiguous.

Recognizing the critical role of learning in fostering the ability of employees to succeed in their work, from those realities come both challenges and opportunities for learning.

Challenge: As mission demands on the workforce are changing, the traditional training model is insufficient.

Opportunity: Learning can enable an agile workforce to be successful in an ambiguous and uncertain future.

In what I will refer to as the traditional training model, the established relationship between instructor and learner is often structured with a pre-established program, developed and delivered to meet the common needs of a large group of employees. In order to meet their expectations and deal with challenges of their missions, learners will need to more directly effect the customization of their learning experiences.

Pardon the pun, but this came very close to home for me as my family moved this summer after 18 years in the same house. As I was going through our attic, I found multiple boxes of 3-ring binders from courses early in my career. Some of these binders were up to 4 inches thick with as many as 3 binders for a single course that may have only been 4 weeks in length. Since I did not have the space at work to keep these resources and also had other ways of referencing necessary information, these binders were kept in the attic.

Today, the expectations of our future workforce and the challenges of our future mission cannot be met by the classroom setting training model with a prescribed curriculum and static content binders. We need to follow a learning road map - a *learnway* - if you will.

The 4 "Y"s of the Future of Learning

Employees need their learning experiences to possess certain characteristics that both match their expectations and are applicable to what they learn in their work flow.

Currenc-y

Information must not only be up-to-date, but also readily "updatable." Traditional training is often adequate in being current if and when content refreshing is designed into ongoing course offerings. Often, the greater challenge lies in providing learning that does not remain static.

Fortunately, mobile devices, web 2.0, video, etc. make adaptability much easier than does a 3-ring binder.

Proximit-y

This has become a true mission imperative for the workforce. Taking significant time away from the press of business to attend a course away from the workplace is a source of frustration for both the employee and the manager. Additionally, employees need to be able to tap into the expertise that was available in the classroom from the instructor, subject matter experts and fellow students. I want to re-frame the idea of "distance learning" to "proximity learning", since through technology, distance really is not the issue. Rather, technology provides the ability for the employees to be close to the expertise they need to accomplish their work.

Relevanc-y

Even quality instruction with very relevant topics suffers from the student pressure to have "just what I need". How often have we heard someone say, "It was a great course, I only really needed to be there 2 of the 5 days" or "I sat through the whole video, but only needed a 3-minute segment of it to get the information I needed"? It is critical that learning providers understand learners' needs and that it is okay to have those needs be tailorable by the employee.

Immediac-y

This characteristic has nearly become a cliché in our world of impatience, but as stated earlier, we cannot avoid realities and this is certainly becoming increasingly true in both employee performance and learning. Learning opportunities must be available on demand whenever learners needs them.

Not the Latest Fad

A variety of assumptions are often associated with those four critical characteristics. Certainly, as content development and delivery technologies continue to mature, learners will encounter experiences tailored more specifically to their needs. With that said, technology must be viewed as the means to an end, but not the strategy itself. I actually question some of the conventional thinking about differences across the various age generations.

Employees of all ages need capabilities that provide currency of information, proximity to expertise, relevancy to their activities and immediate availability.

Let's examine how someone of any demographic would go about learning how to fix a household item such as a faucet with a leak. There are videos online, manufacturer websites, etc. When searching for content, he or she will likely look at the peer reviews to assess what is useful or trustworthy. The person might ask a neighbor for help or maybe even call a friend who has fixed a faucet in the past. The point is, these are diverse ways of learning that involve varying degrees of technology, but none include enrolling in a plumbing class.

Employees will approach learning and problem solving in the workplace in ways similar to other personal endeavors. They are demanding a learnflow that fits into their workflow: not one that is entirely separate. The question is, how do we in the learning community keep pace with employee practices? Even though technology and non-traditional learning will not replace all forms of today's training, they will still need to become more prevalent and more effective. In fact, traditional and non-traditional methods can serve in a complementary fashion.

In the future, employees will likely go through some entry-level training in a classroom or through a program facilitated by an online instructor where they can find the information they need when they have a number of questions or need to gain awareness. Then, later in their careers, they will know where to turn for expertise with the information made available according to those four previously mentioned characteristics. The resources may be in the form of a videos generated by peers and rated by other peers. They may sit on an internal collaboration site with social network features so that experts can quickly provide suggestions. I envision employees driving more content creation, interaction and critiquing in the workplace as they do outside the workplace. This is an opportunity for learners to have more compelling content available that can gathered from numerous sources independent of the platform.

The Future Really is Now

I have discovered that the future of learning is often discussed more than it is actualized. We must move beyond the discussion to the implementation. Based on my experience, I believe that a series of incremental successes over time will result in greater progress than setting milestones that may be revolutionary but take years to implement. Less than dependable resource

streams combined with turnover can create opportunities for derailment instead of building upon achievable, phased success.

The key to success will be to couple learning strategies closely with the organizational priorities. To become a learning organization, learning must be seen as not just a good idea, but a priority that positively affects the performance and potential of employees. To this end, the learning enterprise still needs to ensure the availability of top-notch instruction but must also foster personal learning environments. An employee's learnflow must become less divergent from their workflow. By embedding learning into the workflow, we can really make progress towards the goal of lifelong learning. To strive for this end, I am using the following strategic focus bins: *People, Access, Agility, Learning Effectiveness and Enterprise Learning.*

People

While I look to affordances provided by advancements in instructional design and delivery by means of technology, we still have to keep focused on the underlying drivers for learning, which are the workforce and its improved ability to meet the mission. The workforce will engage in learning activities because employees and their managers see the compelling professional value of learning. Managers and employees must find formal learning experiences and resources to be responsive, timely and suited to their circumstances. Employees will also be able to turn to informal but well-established learning communities of colleagues, experts, instructors, mentors and other individuals important to their disciplines. Learning events must be commensurate in value to the valuable time employees give to the experience.

There must exist a means for employees to quickly recognize what opportunities and resources exist for them to acquire the necessary knowledge, skills and abilities to meet the competencies expected in order to achieve success in their jobs. Beyond an LMS, I would like to see a personal learning tracking system. The tracking will be vital to building an organizational culture where employees assume a greater responsibility in recognizing the role of learning in successful job performance, beyond simply building an impressive collection of training courses throughout their careers. Likewise, management must provide evidence of their support for learning, even of non-traditional and informal training/experiences.

Access

Employees will easily, and just in time, find and participate in the most applicable courses and other learning events for their job and career needs. A diverse range of learning resources and opportunities will present a menu of options to employees. This access will include a range of available learning mediums, such as instructor-facilitated online courses, tutoring and advising, disability support and the technical means for employees to create, share and find non-traditional learning opportunities while having ready access to expertise.

The challenge in this area will certainly be content management. In traditional teaching models, the enterprise has significant control over what content is provided. In non-traditional, sometimes peer-generated training, the proliferation of content can lack standards for what gets disseminated, stored and retrieved. To avoid chaos, the learning enterprise should take the lead in advance of content creation. This does not need to stymie innovative learning, and can actually simplify and make its use more effective.

Technology is not the strategy in and of itself; yet, it is an essential enabler for employees to access the learning they need. Technology, when smartly leveraged, allows employees to affect a personalized, active learning experience. Technology should lead to learning opportunities that:

- Adapt to learner expectations
- Approximate mission scenarios
- Are affordable in terms of cost and time commitment in both development and usage
- Enable custom feeds of content and provide effective search/find functionality
- Are embedded at the point of need and integrated into the employee workflow
- Facilitate peer generated and critiqued content while remaining manageable

Agility

Training for specific domain expertise will continue to be a critical product line for learning providers but is not sufficient for a mission that is becoming increasingly complex and more uncertain. Learning opportunities need to ensure that the workforce is ready and able to respond to the unknown. In a knowledge economy, critical thinking skills must be required throughout training. Employees and managers must rely on learning events and

resources that prepare them for an uncertain future and ambiguous circumstances that are part of their missions, especially in anticipation of new mission requirements that will emerge with minimal warning at best.

We need to find more effective ways to incorporate failure (not just "lessons learned") into our learning environments. This may be particularly practical as the use of gaming and simulation activities evolve. Taking a lesson from gaming products, a player does not typically advance multiple levels the first time he/she plays a game. Rather, it is by failing (losing!) that the player becomes aware of the unexpected pitfalls and becomes better attuned to look for them in the more advanced levels.

To become an agile learning organization, knowledge must be provided for employee access and also weaved into how work is accomplished. The case study method has been an effective learning tool for individuals. Similarly, organizations can make use of historical studies to learn from the past.

Increased cross-functional training can bring in-process insights from other parts of the organization. Employees can be encouraged to challenge the status quo in order to incorporate change. Organizations can also benefit when their employees learn from stretch assignments that take them out of their areas of familiarity. This can help the organization respond more effectively to unexpected crises because its employees already have the experience of performing in a new environment.

Learning Effectiveness

We need to ensure that independent of the learning "how," the learning "what" leads to improved performance on the job. From onboarding through retirement, learning effectiveness must be rigorously linked to the curriculum and other opportunities for the tradecraft, substance, values and skills that employees need for success. Ongoing assessment and evaluation will be necessary to confirm that learning outcomes have been met in courses and that performance outcomes have been met in the workplace.

We cannot lose sight of the need for quality design, development and delivery of training upon which the workforce depends. Even with employee-generated videos that go viral, a means for ensuring the usefulness of the videos is important. This could be accomplished in a variety of ways, such as limiting their length (e.g., to 7 minutes or less), peer reviews and ratings, tagging functionality, etc. Being overloaded with content that lacks utility is inadequate and found to be counter-productive: the result can be a loss of significant resources and the organization can suffer a set-back in making

learning strategy progress. The "Wild West" approach can be exciting but is not necessarily the most effective or sustainable.

An additional subset of learning effectiveness now gaining attention involves finding ways to improve the cognitive capacity of employees. Increasingly convincing research has arisen in this domain that I believe will lead to significant improvements in how we can "learn to learn." Talk about a value proposition: the prospect of being able to learn content more rapidly and with greater retention. Likewise, science may help us find more effective means for skill maintenance. For example, with foreign language proficiency, there may be those periods in one's career when a skill is not frequently used and/or it has been a long period of time since the applicable training was taken. As research validation of diagnostic and treatment methods becomes more reliable and applicable, I believe this could be the personal learner's equivalent of technology gains, thereby increasing processing quantity and speed.

Learning Enterprise

My final bin of strategic focus is the learning enterprise – a "learnplex" – that ensures the organization has learning opportunities integrated throughout employee workspaces (at the desktop, in the field, in workgroups, etc). This learnplex will truly integrate learning design, development and delivery with greater efficacy for the learner, regardless of the platform. While I am advocating a deliberately increased emphasis on the learner, I also recognize the importance of developing a strong cadre of learning professionals who see their roles as critical to the mission and beneficial to their careers. Successful professionals in this field will not simply be "sages on the stage."

Instructors cannot simply transmit knowledge. Learners must be actively engaged in processing information in personally meaningful ways so that they are more likely to remember and apply what was taught. Instructors must become dramatically more proficient in the science of design and savvy in the use of technology. Facilitating online learning ought not to be viewed as a new method of teaching. The learning enterprise must be supported with the correct infrastructure, administrative assistance and training in instructional design and delivery skills.

Program management cannot be seen as only applicable for engineering major systems; it must be viewed as a fundamental area of expertise development for all learning professionals. The enterprise must have an effective governance and quality assurance regimen. In an environment

of competing resource allocations, efficiency gains must be realized and converted into learning priorities.

Time to Act

What an exciting time to be a learner. What an exciting time to be in the field of learning! The combination of a compelling mission and a highly capable workforce provides the opportunity to take on the challenge of the changes that we face in both the mission and that workforce. I believe that an effective learning strategy can do just that. The future of learning must have the success of the mission as its primary focus. Organizations can embrace the latest and greatest learning technology trends and enablers, not because of their coolness factor, but because they can meet the needs of employees. They can have learning opportunities that provide them with immediately available, current information that is highly relevant to their job performance and proximate to their points of need. Success can come in not just trying to predict the future, but by designing and building it. A great learning opportunity awaits us. The time to act is most certainly now.

John W. Guyant became the third Chief Learning Officer (CLO) of the CIA in March 2010.

Blending Avon's 125 Year Old "Social Network" Into Our Learning Approach

Stephen Barankewicz, Avon

An opportunity like the one I have at Avon comes but once in a lifetime. From the ground up, we are creating brand new training programs and establishing a learning culture. This new creation allows for broad creativity as well as the institution of discipline and standards. The experience has taught me patience, since, in this situation, you cannot boil the ocean and implement everything in one day. Along with patience comes focus, along with the ability to understand the business and prioritize training according to need. Although this may sound like common knowledge, we also need to respect Avon's 125-year-old culture as well, which is unique as it reflects our business model and consequently has an influence on our training approaches. My story then consists of two parts. The first involves how we address training at Avon. In order to adapt the training to the culture, most efforts blend traditional methods with a sprinkling of learning technologies. In the second part, I will touch upon how we are beginning to leverage technology for the future.

Over the years, we have made great progress at Avon and have stretched the term "blended solutions." In building our learning culture, we first needed to educate our business partners as to what training can and cannot do. We also adhere to the 70-20-10 development methodology and, as a company, pride ourselves in the 70% by offering employees an array of critical experiences and special projects to push their skills. But learning by experience alone is time consuming and, in today's fast-paced world - with rapidly changing economies, a dizzying array of new technologies and the push to expand into new markets very quickly - we need to prepare our employees in a shorter amount of time.

There is a lot of buzz again around about Corporate Universities. Avon is not immune to the worldwide educational issues that every corporation faces, especially as we continue to expand into emerging markets where the skill levels are not yet mature. I would not describe our work as setting up a University. Instead, we are focused on creating a few targeted programs aimed at distinct roles and business units. I consider these programs as directed at enhancing or accelerating the skills and capabilities unique to Avon's business model in order to sustain our growth. Sounds like a

Corporate University framework? Maybe, but the difference is how we limit the development of these types of programs, incorporate highly selective criteria for our participant groups and place a sharp focus on the business goal. These programs are a risky investment. Avon is willing to invest and place risk on developing specific people and, in return, participants risk exposing their weaknesses. There are those participants who earned expanded responsibilities or promotions; unfortunately, there were also participants who decided to pursue other opportunities as a result of these programs.

The structure of these courses is blended with components like instructor-led skill building, simulations (specific to the Avon business) and use of personal development assessments. Participants are also assigned a team (action learning) project, several of which have been implemented as a new process at Avon. These teams are purposely structured to be dispersed in order to immerse members into working virtually. We also build in opportunities to activate the "20%" (learning from others). Our key executives play roles as faculty, mentors or coaches, and they are on-hand to network with as well. And yes, technology plays a role in sustaining the learning. Webinar sessions are offered to expand on topics or provide just-in-time knowledge related to a subject area. These virtual learning sessions occur between scheduled class sessions and extend after the completion of the formal program.

Until now, most of our training programs have been based in the classroom, with minimal use of learning technologies. This decision is not due to a lack of e-Learning experience within our core training team; it has more to do with Avon's culture. Being a direct selling organization, our business model is all about establishing relationships (between the Avon representatives and the purchasing customers). This type of face-to-face interaction is the original "social network." The ideology around building relationships is well ingrained in Avon's corporate culture as well, which is why the classroom experience works so well. Instructor-led training allows for face-to-face networking, discussions, team projects, etc. I have witnessed the conception of new business solutions occur right before my very eyes when we bring cross-functional groups together for a classroom-based program.

Incorporating learning technologies into Avon's culture

So far, this approach has proven to be successful, but in order to continue operating in a growth mode, we need to address new skill demands that will unleash Avon's direct selling model for the future. We are faced with expanding on our formula, but in a way that is chunked and delivered in smaller bits – rapidly – while we expand our reach to include more Avon

employees and maintain our relationship-building culture. At this time, we are attempting to expand our pipeline to create more growth instead of taking a blind leap of faith. This is where learning technologies will play active roles (in ways that are more flexible than traditional channels), promoting the trickle-down of more information, new standards and updated operating procedures. We are expanding our use of webinars in order to generate alignment and increase general functional knowledge of the business. e-Learning initiatives will be targeted to address specific business needs, thereby bringing more people up to speed in a shorter period of time (as compared to classroom sessions). Our objectives remain clear: we are not trying to set up a vast library of self-paced courses. Instead, we are targeting our efforts to address the knowledge and skills needed to propel Avon towards the future. Self-paced e-Learning will have its place within our business. The challenge continues to be finding that balance between how much knowledge is tolerated by independent learning and when to build skills and share experiences in order to foster and maintain relationships that are core to Avon's culture.

I described earlier how Avon's ideology around relationship building and face-to-face contact constitutes the original social network, and that classroom training matches Avon's culture; however, we also realize that the world is becoming flatter and that the expanse of technology, communication and conducting business virtually cannot be ignored. Through internal surveys, we know that the typical Avon associate uses various technology-driven "social networks" in their personal lives; therefore, we are now leveraging similar tools in our corporate lives. Being a worldwide, matrixed organization, we operate daily as dispersed teams. Therefore, Avon's culture is beginning to evolve to include and accept the modern social networks.

Virtual leadership skills have also become increasingly valuable. From a training perspective, we focus more on the behaviors required to be a successful leader within a virtual environment than on the tools used while working virtually. If you think about all the skills that make up a great leader - communication, motivation, coaching/feedback, teambuilding, etc. - how well do you see these behaviors being executed in person, every day? In what manner do your line managers conduct an in-person PMP conversation? Forget for a moment the technology being used. How are leadership behaviors coming across in a virtual environment where body language is not known, where there are no physical doors for an "open-door" policy, where you have cross-cultural considerations and business/people development continues to progress? Chances are, if line managers and other leaders do not successfully handle all of this in person, their behaviors are going to come across even worse when they operate virtually.

Let me be clear: I am a proponent of technologies and incorporating them into the learning environment. It's a blast trying out different mobile apps and watching the tablet wars unfold. I enjoy thinking about how these tools will increase learner engagement or make it easier for learners to access knowledge. I consider the possibilities of what can be done with whatever is placed in front of me; however, I still maintain a dose of realism. Instead of being caught up in the hype and "gotta have it" mode, I ask, "Why?". What are the benefits of this device (application)? How will it help improve the performance of an individual or team? Is there a competitive advantage to the device (application)? What are the behavior changes necessary for this technology to be successful?

It is not the tools that make a great leader; rather, it is the exceptional leader who embraces technology, builds and strengthens relationships and expands/leverages social networks. In this way, the power of employees to be their organization's competitive advantage is unleashed. This is the vision that holds true for me and the one we aspire to at Avon.

Stephen Barankewicz is a Senior Manager of Global Training & Development at Avon.

Is Learning & Development being lost in the Age of Talent Management?

Sean Dineen, Luxottica

Let's set the stage: the economy of the past two years has created a challenging business environment in which organizations must operate and grow. We have seen a number of restructuring efforts, layoffs and budget cuts in order to deliver the bottom line and weather the economic storm. All of this has impacted Learning & Development, how companies view talent and what part these areas play in driving business results. We now begin to see the rising focus on Talent Management as a process to support organizational strategy, but what does that mean for Learning & Development?

That was a question I faced when I joined a global retail organization as its learning leader eighteen months ago. My organization had concluded that it needed to focus on developing its internal talent to ensure employees had the skills necessary to manage in the current environment and prepare to grow in the future. This was an ideal situation – I had senior leader support and a focus on learning – so how could I ask for more? I found that I could. As we began to develop our learning strategy, we saw an opportunity to expand our reach across the talent lifecycle and impact everything from talent acquisition and performance management to career development, leadership development and succession planning. Early in 2010, we restructured all of those departments into one Talent Management team, which was to focus on associate development from hire to retire. This is not exactly "cutting edge", but it is an emerging trend within our industry that has many questioning whether Learning & Development will get lost within the new "Talent" process.

My belief is that this is not a question any of us should be losing sleep over. I think what we are seeing is a natural evolution of Learning & Development from a stand-alone, specialized discipline to one that is part of an integrated, holistic approach to talent development and growth. This is not all that different from what many of our organizations have done with business units, namely combining multiple functions to deliver a greater experience for customers and results for the company. As HR and Learning have evolved over the years, our ability to demonstrate the value we add to the business has grown. As part of Talent Management, we are one step closer to being a

"part of the business" rather than aspiring to be a partner IN the business. This distinction is the key to expanding the reach and effectiveness of Learning and to creating a compelling case for engaging and developing our associates/employees into contributing leaders.

Just think of Learning & Development as the "engine" of the new Talent Management. We now have the ability to engage and focus our development at every stage of the talent journey, from educating the applicants on why they should want to work for us to continuing to engage and challenge the seasoned employee in their current or future roles. So, Learning does not become "lost"; rather, it becomes the light that guides us in each phase of the talent life cycle.

If the integration of Learning & Development into Talent Management is imminent, what will we see on the horizon? I think we saw the first "shot" across the bow a couple of weeks ago when Taleo purchased Learn.com, SumTotal purchased Softscapel and Kenexa purchased Salary.com: the Talent Suite technology integration has begun. As companies move to a holistic Talent Management strategy/structure, they are looking for that comprehensive, integrated software suite that can deliver metrics and services to manage internal/external talent pools effectively.

Just as we saw in the explosion and then contraction of the LMS market a few years ago, the Talent Management Suite creation/consolidation is beginning. The companies operating in this space understand the desires of the market and are reacting accordingly. Saba, Plateau, SuccessFactors, Kenexa and many other major players continue to expand their offerings and capabilities to meet market demands. These most recent acquisitions will continue to push others to shore up their capabilities or be faced with lost market share. Just as the competition in the LMS market led to better solutions, expanded use of social media and innovative informal learning, so too will this trend lead to new ways of viewing, developing and planning talent for organizations and individuals.

Another challenge that persists is Globalization. As we broaden our view of Talent Management, our ability to look at and engage associates/employees from around the globe expands. This is not a new trend but continues to be at the top of Learning leaders' priority lists. This is where Learning can drive the global Talent Management process by integrating the diversity of thought that exists in different cultures to develop associates into well-rounded leaders. As we look to leverage global talent pools, we capitalize on the foundation we have built with distance learning and collaboration to look at our work teams differently.

In the increasingly global market place, the importance of helping leaders understand how they manage their increasingly virtual teams to drive innovation and productivity will continue to rise. Think of the benefit of creating a cohort MBA curriculum derived not only from different companies, but from different continents. We might use learning and technology in a new way, creating virtual and global stretch assignments for employees that may not otherwise have such opportunities. The challenge is, how do we expand on the foundation we have built with global and distance learning to drive global talent development and planning with an innovative mindset?

If Learning & Development exists as the engine of Talent Management, what are the implications for Learning professionals? I believe we have been given a new stage to leverage our progress to date on an even a greater stage. The past two years have reinforced the need for Learning leaders to solidify their place in the business. For years, we have heard that we needed to justify our "seat at the table" and run our Learning departments like other business functions. When I think of all of the talented Learning leaders that lost their jobs recently, I am unsure we have made as much progress as we thought. I think of the transformation from Learning leader to Talent leader as a second chance to demonstrate how we can drive results for the businesses we support. We will be forced to expand our view of Learning and how it drives the Talent process.

This change will re-focus our ability to measure the effectiveness of our hiring, development, engagement and workforce planning implementation efforts. We will be encouraged to constantly learn and test new ideas to drive results. I see an exciting future ahead with boundless opportunities to demonstrate how an investment in Learning and Talent can provide a ROI that any Marketing or Research & Development department would be proud. One thing is for sure: in the style of the well-known Oldsmobile ad, *"This is not your Grandfather's Learning & Development department anymore!"*

Suggestions for Success

- *Re-engage with your Business/Organization*

Every organization has experienced challenges over the past few years; many require new strategies, plans and tactics. When you consider the amount of change that has occurred, the question becomes, "How well do you know your current operating environment?" As a learning or talent leader, what a great opportunity to re-engage with your business

and re-assess the talent/learning needs of today. Get out in the business: not as a visitor, but as a participant! In retail, this means foregoing the "VIP" visits and connecting with store and field leaders to work a day in their shoes. Ask questions and dust off your needs analysis skills to uncover what is working - or not working - in all aspects of the operation: not just what impacts your function, but what all that has changed in the business. This insight and experience will provide the foundation to credibly connect with key stakeholders and discuss what solutions may drive the greatest impact for the organization. Don't stop with a single experience; make this part of your, and your team's, annual objectives/expectations.

- *Find Development Throughout the Talent Lifecycle*

As you examine the different parts of the Talent Lifecycle, from acquisition to succession, you realize that development is part of every stage. It can begin with educating potential candidates on your organization, building on their experience once hired, preparing them for future roles and enabling their ability to develop others. When you consider all of these development opportunities, you see the importance of learning to future organizational success and associate engagement. This is where you can evolve your success as a learning leader into talent stewardship, enabling talent development by providing experiences and assignments geared at driving individual growth and organizational results.

- *Rip Off the Rear-View Mirror!*

To quote Marshall Goldsmith, "what got you here won't get you there." This is as true today as when it was first published. As we consider the changes our organizations have endured, what are we doing differently today? This has been an ongoing discussion with my team; we have had great success with the programs, systems and processes we have put in place over the years, but are they enough? We are examining our future by forgetting the past. In other words, we are ripping off our rear-view mirrors to ask a simple question: "What if?" This is a great activity following the process of re-engaging with your business. It doesn't mean that you need to change everything, but maybe you should question whether you are delivering what your organization needs to move forward. So, challenge everything!

- *Let Your Process Define Your System*

The great news about the Talent Suite integration is the functionality it provides to assess, plan and implement programs/processes to drive organizational health and growth. The problem is that we can lose sight of our process in the midst of all the "bells and whistles" of new technology. Just like buying a new car, I like all of the available features, but they aren't all necessary for what I need today or in the near future (with the exception of heated seats and navigation). So, when you rip off your rear-view mirror, take the time to determine the right processes to enable your organization today and align them with your overall business strategy. Once you have determined those, start to examine the system needed to achieve that vision. There's no need to employ an entire suite at once. Start with the modules that optimize your current processes and will demonstrate immediate value. That will allow you the success to implement additional functionality, building on your customer satisfaction and adoption. This process will bring additional insight to your organization and reduce the anxiety associated with these types of enterprise system changes. After all, you never get a second chance to make a first impression!

Sean Dineen is the Vice President, Talent Management & Organizational Development at Luxottica Retail

Part IV: Learning Changes

Combining "Cool" with "Core" in Learning.

By Elliott Masie, Chair - The Learning CONSORTIUM
(This article first appeared in the September 2010 issue of *Chief Learning Officer Magazine*.)

There are many very "cool" new devices, technologies and platforms that are catching the attention of learning professionals. I have my iPad with me 95% of the day, my Skype connection is easily putting me in touch with colleagues from around the world and my cloud of social networks ranges from Twitter to Facebook to LinkedIn. It is a great time to be experimenting in the world of learning and these new and often "cool" innovations are clearly agents and products of change.

Yet, the conversation about the "cool" is strangely disconnected from the "core". Every day, hundreds of millions of employees around the world need to learn information or new skills in order to do their jobs. To teach them, their organizations use a set of "core" approaches, including classroom instruction, on-the-job training, manual reading, traditional e-Learning modules, mentoring, assessment and managerial feedback, to mention just a few. These "core" approaches are central to the learning processes used by most of the world's organizations.

The new, "cool" innovations have intriguing abilities to extend, stretch, enhance, refine and, in some instances, even replace a "core" element. But, the conversations about Twitter, wikis and Web 2.0 are increasingly flavored with a desire to define the "core" as "uncool", industrial-aged and almost irrelevant to the coming revolution in learning. I confess my own contribution to this problem when I have been swept away by the opportunity and affordance that an emerging technology has to offer, without reflecting on the change management of adoption.

It is time for us to take a strategic step forward (not back)! Two good examples are Second Life Virtual World and collaborative wikis. When Second Life hit the scene, I was one of the early adopters. We spent over $60,000 building a virtual learning island and designed a very "cool" Elliott avatar. Predictions flew around that "all meetings would take place in virtual worlds" and major corporations bluntly hyped the technology. Does it allow for interesting interactions? Yes! Are there elements that will evolve and be integrated into learning? Yes! Is it a significant part of the current learning

landscape? No, and much of Second Life is a ghost town of overstated expectations. Will we have 3D design capabilities that may use avatars to create learning environments in our future? Yes, but it will take work to get from the hype of today to the really important work of tomorrow. Navigation will have to be accessible to all of our employees, not just those that play video games after going home. And, we will want to apply great design (including instructional design) knowledge to this brave new world.

The same goes for wikis. They provide simple and very powerful ways for a group to write and create processes collaboratively. Wikipedia is an awesome resource and wikis can be a powerful component of an in-person or on-line learning design. But, the language of many wiki advocates would have you believe that a wiki will evolve, in a rapid and revolutionary way, from "cool" to "core". That may happen, but it is not the current reality. In fact, elements of wikis are showing up in core tools with evolving functionality in online Microsoft and Google office apps.

The challenge is to embrace the possibilities and "affordances" that today's and tomorrow's innovations will create and to experiment in that wonderful "let's try this and see what works or doesn't" way. Let's label our "cool" innovations as just that: potent triggers for invention, re-invention and change. Let's reduce the statements that "learning will forever be different" because of the "cool" and let's do the hard work of running research, experiments, beta projects and honest after-action analysis on the true impact of the "cool".

I am personally very excited about the ability of our organizations to leverage video, user-created content, collaboration, tablets/mobile devices, social media, location presence, gaming, 3D environments and community publishing as tools for our current and future learning designs. We are already seeing gains from the use of small, thin apps and open source technology to make our learning processes more agile and responsive to business/learner needs. Let's not waste these opportunities by positioning the "cool" as replacements for or as enemies of the "core". Our designers need fluency in both to create the future assets that learners are already demanding. Our learning leaders need to frame learning innovations as being in critical need of experimentation and integration with core technologies and learning models. We need to collect evidence about how these innovations actually help real workers learn.

Let's combine the "cool" with the "core" to create a pathway to continuing learning improvement.

What Shapes the Future of Learning? The Third Industrial Revolution

Wayne Hodgins, MASIE Learning Fellow aboard the Learnativity

The Snowflake Effect & the Third Industrial Revolution

The overarching theme that will shape the future of not only learning but most all of our societies, organizations and communities is the escalating transformation of our society from one that is shaped by mass production to one that is shaped by mass personalization. For several years now I have synthesized a large number of major trends and patterns into this massive global and societal shift - which I refer to as the Snowflake Effect - that is driving a complete reset of the world as we know it.

Within this context of transformation to mass personalization, a new revolution is coming into focus: a third Industrial Revolution. As with the previous two Industrial Revolutions, this third version is both sculpting and being shaped by an emerging society resulting from the mass exodus from a world governed for over a century by mass production to one made up of societies, communities and organizations characterized by pro-active individual members. These people take on increasingly direct roles in the design, creation and use of the new forms of learning. They feed a constant stream of real time data about their reactions, thoughts and ideas, which provide feedback loops for evolutionary self-improvement cycles.

The Snowflake Effect

The Snowflake Effect started with the simple observation that we are all unique individuals: no two are alike, just like snowflakes. What's more, so too is each moment in time, each situation we are in and each group of people we are with unique. They are distinctive combinations, just like the crystals of a snowflake. This is certainly not a new observation or condition and has arguably been true for as long as we have existed; yet, this poses the intriguing question:

If our uniqueness as individuals is so obvious and has been so true for so long, then why do we live in a world designed on the assumption that we are all the same?

This question has haunted me for many years now, like the small irritant of a grain of sand that causes a pearl to form in an oyster. In this case, my articulation of the Snowflake Effect is the resultant pearl.

One of the results of technology improvements over the past 50 years is that our world is getting smaller as distance and physical separation become lesser issues. We are more connected with more people in more ways than ever before. While we need to continue to work on distributing access to these advances to all of the world's populations, it is increasingly true that we can communicate, socialize and work with anyone anywhere. We can access food and other products no matter where they come from or what season it is. We live in a world of increasing abundance and the rate of change is exponential. It has hit a tipping point, triggering immense and often seemingly impossible transformation all around us.

From Mass Production to Mass Personalization

In many ways, we can trace this focus on sameness back to the first two Industrial Revolutions and our transformation from an agrarian to an industrial society. Initially, mass production only applied to manufacturing, but over the course of a century or more, mass production has expanded and extended to the point where it now permeates and, in many ways, defines the world in which we live. Our thinking and assumptions are largely based on the principles of mass production. Consider for example how we design almost everything. We typically start with a problem or a need that is shared by a large group of people. Given the usual time, energy and cost that creating something new requires, the larger the group, the better. Once we have the design for a product, it is mass produced. If the design is for a service, we put together a process and supporting resources so that same service can be delivered to as many people as possible. This is how most governments, businesses and schools work. Consider how most education models work: with standard objectives, text books, curriculum and schedules. It's no coincidence that our education models were largely created at the beginning of the first industrial revolution to meet the demands of a new factory work force.

Prior to the first Industrial Revolution, only a privileged few were able to get just what they wanted, whenever they wanted it. With the advent of mass production, it became possible for many people to buy a car, a home and become educated; however, this highly scaled model was made possible by mass producing and delivering the same solution for everyone.

Mass production worked very well and we have spent over 100 years improving and refining it to become a very efficient model. In many ways, we have mass production to thank for the transformation of our world into one of abundance for more and more people. But, in spite of - or perhaps because of - this abundance, the predominance of a mass production mentality is no longer sufficiently meeting our needs. It is at odds with our uniqueness when we only have mass produced choices which must be, by definition, compromises for the solutions we really want. This gap is now being closed as we shift from mass production to mass personalization.

The Snowflake Effect is largely about context-based design and the notion of personalized fit. It is about getting things just right. Products and services have the greatest value when just the right people have just the right things at just the right time in just the right way in just the right place. Just as the answer to most questions usually begins with "it depends", so too does all design need to be dependent upon our unique personal contexts: the unique sets of conditions and characteristics of any situations that determine how well a solution of any kind fits each of us as unique snowflakes.

In the past, we have accepted any mismatch as perfectly reasonable and the best we can expect within typical constraints like budgets, time, community, family, etc. After all, to think otherwise, to imagine a future where most things are just right for you would mean that we'd need to have a different solution for every person, every day - in fact, most likely many times every day! At the time I am writing this, almost seven BILLION people inhabit the planet, and there are 24 hours in a day. That equates to at least 168 billion unique solutions per day and at least 61.32 trillion unique solutions per year! We all know that is impossible.

Or is it? Such outrageous and exponential scaling certainly will be impossible if we continue to rely on our existing mass production mentality and models, but we are increasingly surrounded by more and more examples and evidence of new models where extreme mass customization is not only possible, but already happening on a previously impossible scale. There exists proof that, both as unique individuals and as groups, we can have just what we need, when, where and how we need it. We are increasingly surrounded by examples of what Kevin Kelly succinctly called "impossible in theory, but possible in practice". Look at some examples in our everyday life: we are increasingly able to get just the right fit for the music we listen to, the news and information we consume, the clothes we wear, the products we buy and the way we can often find just the right information when we need it. This doesn't happen often enough, but it is occurring more frequently. Check out the developments in areas like personalized manufacturing with 3D printers

and 3D scanners, real time information, recommender systems and others you have probably recently experienced. While it is still very early in this transition and we are still surrounded by more mass production than mass customization, the new models and our new behaviors are evolving with accelerating velocity.

Two key enablers of the Snowflake Effect are mashups and modularity. Mashups, a relatively new term but not a new idea, are a unique assembly of pre-existing items to form a new integrated whole. Modularity refers to having things in very small and interchangeable modules. This can be compared to simple Lego™ blocks, which can be used to create almost anything imaginable by snapping together new combinations of these pre-made plastic blocks. Think about, for example, how you find and listen to music today: you find individual songs rather than whole albums and you put together your own unique playlists based on personal recommendation systems (that are built upon your unique preferences and recommendations from others). This stands in stark contrast to the previous "mass production" models of buying albums and listening to top 40 radio stations. Similar transitions toward mass customization are happening with what we read, what we watch, whom we converse with and how we organize ourselves. Mashups and modularity enable the infinite scalability required by the Snowflake Effect for every person, every day.

Note that mass customization and getting things just right does not eliminate and, in fact, includes some products and services that will still be mass produced and remain the same. There will still be "hits" and fads. We will still have some songs, movies, books, presentations and keynotes that millions, even billions, of us are universally drawn to and find valuable; however, these will no longer be the most common or the most used resources. Instead, we will have a very full spectrum of the "Long Tail", a concept from retail that describes a strategy of selling a large number of unique items in relatively small quantities, usually in addition to selling fewer popular items in large quantities: http://www.longtail.com/. These range from huge hits on one end to completely unique, extremely personalized items on the other end. The big change will be an inversion of where the greatest volume of solutions, products and services are found along the curve of the Long Tail, with the vast majority of what we each choose to use coming more and more from the unique end of the tail. The total volume of low popularity items already dramatically exceeds the volume of high popularity items in areas like books, music and video. This trend will dramatically increase; we will continuously find individual items and mash them together in the marvelously messy mix of choices we make.

The 3rd Wave: Industrial Revolution 3.0 = Learning Revolution 3.0?

The third Industrial Revolution is driving this change. I make this observation in part based on a book published in 1980 by Alvin Toffler called The Third Wave. I have long believed that Toffler was an extremely prescient author, seeing the changes looming ahead. I also believe that even he underestimated the time it would take for these changes to visibly emerge along with the effects they would produce. I've most often referred to Toffler's earlier book Future Shock, published in 1970, where he created the portmanteau word "prosummer" by combining **pro**ducer with the word con**sumer**. Toffler coined this term to describe the future society he saw where we would not be neatly dived into categories of active producers and passive consumers; instead, these would blur and merge as we all became inextricably and intimately intertwined with the processes of creating. While this has taken much longer than Toffler anticipated, everyone reading this article is a living example of a prosumer. We are all becoming much more active and passionate participants in designing and building our respective futures. I can't imagine a more positive pattern that bodes well for all of our futures to be bold and bright.

It is Toffler's book Third Wave, however, which contains the most significant and relevant observation affecting the future of learning and our world. Toffler did not directly refer to a third Industrial Revolution and simply referred to a Third Wave, however he did outline just such a revolution. The Wikipedia entry defines the three waves as:

- Toffler's First Wave as the settled agricultural society which prevailed in much of the world after the Neolithic Revolution which replaced hunter-gatherer cultures.
- The Second Wave was the Industrial Age society, which began in Western Europe with the Industrial Revolution and subsequently spread across the world. Key aspects of Second Wave society are the nuclear family, a factory-type education system and the corporation.
  Toffler wrote:
  "The Second Wave society is industrial and based on mass production, mass distribution, mass consumption, mass education, mass media, mass recreation, mass entertainment, and weapons of mass destruction. You combine these things with standardization, centralization, concentration and synchronization and you wind up with a style of organization we call bureaucracy."

The Third Wave is the post-industrial society. Toffler says that since the late 1950s most countries have been in transition from a Second Wave society into a Third Wave society.

Thirty years later, this Third Wave is in fact a Third Industrial Revolution. It started back in the 1950s and has been slowly but exponentially increasing. We are now at its tipping point and seeing the more startling and dramatic changes being produced. Contemporary examples include such things as 3D scanning and 3D "printing", which enable us to copy, modify and print any physical object, including those that are complete working assemblies, like motors, pumps, watches and anything else that strikes our fancy.

The third Industrial Revolution will require an equal or greater revolution in education, training and learning to fulfill and drive the new forms of creation and our new societies. What does this really mean in terms of learning and performance? One good outline of some skills and competencies required by this Third Industrial Revolution can be found in Daniel Pink's book A Whole New Mind. Dan describes the shift from skills and competencies required by the former Industrial Revolution - which are mostly associated with the left side of the brain (i.e. analysis, sequential reasoning and text) - to a focus on right brain skills and competencies (i.e. synthesis, holistic reasoning, context, images, design and pattern recognition).

The question for learning professionals and organizations - the question the rest of this book explores - is what will YOUR role be in this process? Will you lead or follow? Will you shape or be shaped? Will you be part of the solution or part of the problem?

The Snowflake Effect on the World of Things

The Snowflake Effect is causing dramatic changes in the world of things as they rapidly transform from being mass produced to mass personalized and, in the process, become snowflakes themselves. Flexible manufacturing was one of the initial enablers of this transformation, but that was just the beginning. With the advent of more computer-controlled design and machining, and, more recently, the introduction of affordable 3D printers and scanners, we are seeing an increase in the personalization of individual items that can be designed and produced to match the unique context of an individual person/situation for no more - and often for less - cost than previously mass produced things.

This is about disruptive innovation: not disruptive elimination. We do not want or need everything to be unique. Large scale items such as airplanes and

cruise ships will likely continue to be produced in quantity; but even now, these items are uniquely built to match the individual customer and be adapted to match some specific routes or conditions. Many large scale items are already being designed and built so that they can be changed over time to match contextual changes, whether predicted or not. For example, several of the world's naval forces are building their newest ships so that they can be reconfigured to match different contexts of use, like switching from a configuration best suited for military situations to one that better accommodates response to natural disasters.

There will likely always be a need for some mass produced parts. We will still want large numbers of exactly the same thing (like fasteners, screws, nuts, bolts, etc.). There will be instances when many people will want to have the exact same thing and there will continue to be fads around popular books, songs and movies. But these will be at the front end of the Long Tail and small in number. As you move down the curve of the Long Tail, you find that more and more things for more and more people have less and less in common.

For example, even if I really like the pen you just showed me and we can "print" an exact duplicate for me, I might want to modify it a bit - to be shorter, heavier or more curved to better fit my hand and match the way I write. The same dynamics will play out for coffee cups, eyeglasses, shoes, chairs and certainly our learning in both process and content. In this way, there will be an equivalent Long Tail of things and it will be a spectrum with products falling at all points along the exponential curve towards uniqueness. As we are seeing with the Long Tail effect on music, movies, books and the like, the transition will be such that the volume of objects at the unique end of the tail will rise dramatically and become the majority in terms of instances, business and learning.

Above and beyond being mass customized and personalized by their design and production, things are increasingly connected to each other and us as we use them. One version of this is often referred to as "The Internet of Things". A commonly cited example is the way in which home appliances are being connected to each other and the Internet for everything from monitoring energy use to setting thermostats and timing when to turn things off and on. All the items in your fridge are able to dynamically update their status in terms of how full they are, their expiration date, peak freshness and so on to help you choose what's best to make for dinner tonight and what to pick up at the grocery store on your way home.

Start to think smaller and smarter: imagine and prepare yourself for things like "smart" and digital dust, dirt, pixels, locations, ink dots and paint. Products or "things" are going to increasingly be snowflakes themselves; alike, perhaps, but no two exactly the same. Just like us, as things become more like snowflakes, they too will start to have their own identity, networks, conversations and even their own "social networks". Indeed, if you're paying attention, many already do! But it is the more far reaching and latent effects of these changes - especially those on how, when, where and what we learn - that are most exciting.

The revolution in the world of learning is upon us and it is as daunting as it is exciting and powerful. The best way to predict the future is to design your own; therefore, we can strategically and serendipitously lead the transformation of learning, training and education rather than have it happen to us. By exploring and better understanding current trends and directions of the Snowflake Effect on the world of "things", we will be able to bring the power of mass personalization to the world of learning. Each of us will be able to experience great learning moments every day.

Living & Learning in a World of Exponential Change

We have little experience or logical models to help us deal with and understand exponential change. While we have long been familiar with examples like compound interest (and we know how to do the math), when we are confronted with new instances of exponential change, our reaction is one of disbelief. For example, if you fold a piece of paper, you double its thickness and therefore each fold increases its thickness exponentially. So take an ordinary sheet of paper and fold it in half. Then fold that piece of paper in half again and then in half again. After about seven folds, the paper is about the thickness of a notebook and you are soon physically unable to fold it any further, but mathematically, if you were able to do so, you'd find out that after about ten more folds, you would get something about the height of your house. Ten more folds after that, you'd get to the outer limits of the atmosphere. Sixty folds after that, you'd be at the diameter of the solar system. You can see how this kind of progression is something that we just aren't very good at estimating.

Cable and satellite TV enabled two channels to grow into ten, ten into one hundred, and one hundred into thousands. While that was a very steep rate of change, it felt more like a linear rate of change as we had more and more choices of what to watch. With some of the more recent changes, like the introduction of VCRs, recordable DVDs, PVRs (Personal Video Recorders like TiVo), YouTube and TV via the Internet, the increasing abundance hit its

tipping point. Today, we have what is effectively an infinite number of channels and choices of what to watch.

Does the concept of a "TV channel" seem almost irrelevant when you can watch almost any show at any time in any place? What you have today might be thought of as a set of personal channels that have just what you - and only you - want to watch. The tipping point of television or video abundance obviates the whole concept of a channel. This is typical and only one example of the way in which the Snowflake Effect is causing such fundamental changes.

Lastly, consider that revolutionary change is very far reaching. Mass production not only affected manufacturing: it has indelibly altered and predominated our entire society by changing such diverse aspects as government, education, housing, clothing, medicine, styles and design. We can and do expect the Snowflake Effect changes to be even more pervasive and profound

It is increasingly critical to acknowledge the need for not just diversity and abundance, but also uniqueness. The needs of every person are different every day as they face new and often unexpected situations: not just people in rooms with desks and computers, but those on trains, in the fields, on job sites, in cars (under cars!). This applies to everyone, everywhere, every day.

Living and Learning in a DIY World

One of the many examples of change is the evolution of a DIY (Do it Yourself) economy and society where we as individuals (and in small groups) are directly involved in or are taking full responsibility for the design, development and implementation of everything from our food, clothing and shelter to our learning. Let's first be clear that DIY does not imply that you do it BY yourself; rather, a DIY model fosters more interaction and interdependency but does not foster an environment where we simply let others design and create everything for us while we passively consume.

This evolution to a more DIY model has been on its exponential curve for a long time. We create our own documents. We create our own slides for presentations rather than asking AV departments to create them for us. Other examples include accounting, writing, Emails, home repairs and renovations.

Learning is also migrating to a more DIY model; yet, when it comes to examples in more "formal" education and training, there is a distinct lack of acceptance of – never mind fostering – a DIY approach to learning. You may

know of examples where the DIY approach to learning is actually discouraged or banned, where learning professionals and departments are in denial of how deeply the DIY model is embedded into everyday living and working. It is worth repeating that DIY learning does not mean learning BY yourself! There is, in fact, a greater role for a greater number of people to assist DIY learners and doers. It does not mean that surgeons and pilots or those learning how to drive a car should follow "figure it out yourself" models; rather, DIY learning is about putting the learner in charge of their own learning so it is just right, just for them.

Augmented Intelligence

The initial stages of this cognitive augmentation will involve the use of technology. Examples include ways we are using technology to let us, as individuals, make faster and better decisions about everything from the best choice of camera to finding just the right song to listen to at that moment. Technology like pattern recognition is also enabling us to see and react to patterns in our organizations, industries and society such that we can design and develop solutions to match and take advantage of these patterns.

Soon we will have augmented intelligence, which uses biological and chemical means to enhance our intelligence. This also has the potential to both disrupt and improve our world and intelligence by orders of magnitude. The velocity and density of human learning has changed very gradually and relatively little since we started drawing on the walls of caves, so these new ways to increase our intelligence will result in significant changes to learning itself.

Imagine the results of an "X-Prize for Learning" that turned this into a contest along the lines of the other X-Prize examples we've seen in recent years, like the Ansari X-Prize for suborbital spaceflight or the DARPA Grand Challenge for autonomous driverless vehicles. Both prizes were awarded for seemingly impossible feats that have already resulted in stunning cascade effects. Turning our attention to learning, imagine what it will mean when you can "download" the ability to speak a foreign language or operate a piece of equipment you've never seen or used before and become fully fluent or competent in minutes rather than years? As with all the other trends and patterns outlined here, this will take years to fully develop, but it is most likely accelerating towards us much faster than we believe. Now is the time to ask these questions and make our preparations to best take advantage of such capabilities.

Perfecting the Irrelevant

As oxymoronic as it sounds, this is a trend to avoid. Unfortunately, history does not offer much promise of us doing so. Examples exist like the failure of railroad companies to transition into the airline business (other than by after-the-fact mergers and acquisitions) or the fact that no ice delivery company made it into the refrigeration business. It is clear that all such past examples confused their activities with their value proposition. The value proposition of an ice delivery company was not the delivery of ice, but rather food preservation or simply keeping stuff cold. This seemingly minor change of view is as simple as it is profound. How will those involved in learning, education and training avoid perfecting the irrelevant?

Readiness for the Unexpected

Being skilled at synthesis more than analysis, being adaptive and drawing more on so-called "right brain" rather than "left brain" skills are what is needed more and more to successfully live and work in the future, not only to survive but also thrive. A critical skill of the future would appear to be that of readiness for the unexpected: being skilled at reacting quickly and well to unexpected challenges, opportunities and unexpected change.

The Future of Content

The Snowflake Effect on content has been happening for several years now and profoundly affecting not only formal publishers and the mass market but even more so individual producers of content - including you and me. You Tube is but one example: millions of "video products" are now easily published, distributed, found and watched by billions of snowflakes.

The vast majority of content will be mostly made up of new collections of pre-existing pieces that are chosen, assembled and delivered to be exactly what individuals need (when, where and how they need it). This is finally binging us the promise of multimedia where we can choose from every form of content - from text to drawings to video to audio - and assemble mashups from this vast and essentially unlimited selection pool. Changes taking place agonizingly slowly and painfully in the magazine industry will serve us very well and should be on your content radar screens. Look at examples like Wired magazine on the iPad. Keep an eye on the Digital Publishing that Adobe is developing, which is being used to create the iPad version of magazines like Wired.

Beyond the possibility of having text, full-color illustrations, high-resolution photos, video and audio, it is incredible that the pages intelligently transform themselves to take advantage of portrait vs. landscape orientation, that you can search for specific bits or rapidly scan the whole magazine, and that new conventions are being explored for when it makes more sense to scroll vertically or horizontally.

Start to imagine and start preparing for how you will take advantage of these capabilities to design, develop and assemble multimedia mashups of content for learning.

The "Social" Factor: Powering Mass Personalization Through the Lens of our Friends

As noted previously, I like to make the point that Do It Yourself (DIY) does NOT mean you have to do it BY yourself. This is very true for personalization, where we don't have to rely upon just ourselves to do the personalizing. We can increasingly call on other people with whom we have some connection to help us. This is a powerful point in that we are not merely "outsourcing" the work by getting others to do it for us (Tom Sawyer-style); we are tapping into the collective wisdom of those around us via their perspectives, opinions and experiences.

Similarly, it is no longer the domain of an elite few, the rich and famous, or for commercial advertising and marketing to determine what goods, services and brands are cool, hip or in fashion. Those elements will continue to exist, of course, but now they become options available to choose from and we have exploded their quantity and quality by enabling literally anyone, including ourselves, to be "experts", trend setters and trend spotters. We are able to augment our decision making, in part, by the increased use of so-called "social media" such as blogs, Facebook, Twitter, Buzz, LinkedIn and the like, which enable us to dramatically extend our scope. We can reach to find and be found by others who have some specific interests, habits, attitudes and concerns in common with us. Being able to easily and often see these trends – to know the preferences, experiences and opinions of others – and to tap into these increasing amounts of rich and unlimited streams is empowering each of us to make faster and better decisions.

One of the most powerful examples of this for me has been the ability to tap into the learning of others. When I am interested in purchasing a new product or service, finding a good hotel, solving a vexing problem or trying a new technique, I am no longer restricted to the often suspicious claims of those who are directly connected or just the loyal customers. I can now learn

from the direct experiences of others with such products, services, activities, etc. and get their invaluable insight, tips and tricks, and their recommendations for what they would do next time.

This additional army of helpers is yet another way in which personalization can be up-scaled. When you pause briefly to "do the math" on this - multiply all the moments in a day with all the abundance of choice we have - and apply this to the world population, your first reaction is that it simply isn't possible to achieve this kind of scalability. Yet, every day we are confronted with more and more examples of how things are scaling at these kinds of rates.

Only a few years ago, it would have been deemed impossible to be able to talk to anyone anywhere, often with video included and at almost no cost…for this to be so simple and easy that anyone could and would do it. But that is now a common occurrence for more and more people around the world every day.

As the examples and perspectives presented here have shown, we are now seeing more examples from fields as diverse as music, medicine and manufacturing, where mashups provide extremely powerful, infinitely scalable and sustainable models with which to pursue the grand vision of the Snowflake Effect. By continuously demanding, designing and applying such conceptual models, mass personalization for all becomes a realistic and obtainable goal.

"The Best Way to Predict the Future is to Design Your Own"

That quotation from John Sealy Brown seems to be just the right to end my contribution. With the focus of the Snowflake Effect being on profound personalization, you might have expected my conclusion to be just this: it is all up to you now! Only you can decide which parts and pieces you choose from this book and its references, which questions you will ask, how you will answer them and how you will combine them all into infinite mashups as you move forward. Only you can use the DIY model, assisted by the collective intelligence of all those who surround you, to design, develop and implement your own future plans. Only you can contribute your experiences, observations and insights into the feedback loops that will enrich all the other snowflakes out there doing the same thing in their own worlds.

After thirteen years in public education and over twenty years as Autodesk's Strategic Futurist, Wayne now spends all his time wondering, pondering and wandering the world while living aboard his sailboat s/v Learnativity.

Trends in Learning Technology: The View from Late 2010

Rick Darby, Rollins University

It is an exciting time for learning technology. The infrastructure is finally catching up with the promise that electronic learning systems have held for the past three decades. Ever since you could show pictures and run motion video on a PC, people have dreamed of building training that can really show people how to do things.

Advances in adult learning - like the recognition that performance support is more powerful than traditional training and that mentoring, tutoring, informal learning and collaboration offer powerful new models for training people to perform complex tasks - have come at an auspicious time. They parallel the evolution of a genuine world-wide learning infrastructure.

It is now possible to provide real-time access to libraries of how-to performance aids to deliver just-in-time and just enough bite-sized learning when and where you need it. And, much of it is free! Huge content libraries are being built on YouTube.com. Smaller libraries, but ones more specific to training, are being built on *howcast.com, ehow.com, videojug.com* and *wonderhowto.com*. Organizations can now do the same for their employees. In fact, their employees can do the same for each other, too. The whole process is really that cheap. I want to examine some basic trends to see how we got here and then speculate about where this will take us.

Back to the Future

Predicting the future is best done using hindsight. We are still waiting for our fold-up space plane that the Jetsons promised us. By the way, where is that nuclear power plant in every home that just needs a uranium chip replacement every five years, as promised by the power companies?

Despite those incorrect predictions, it is always worthwhile to examine current trends and see where they are likely to lead us. Learning technology benefits from digital electronic technology in many, many

ways and the same trends affecting digital electronic technology will definitely affect learning technology progress.

One of the most fundamental trends is Moore's Law. Gordon C. Moore, co-founder of Intel, predicted that computer power would double about every two years. That has held true for forty years. Although there is some concern that scientists may hit a wall at the atomic level by 2020, Intel marketing folks have assured us that they are working on alternatives that are not hampered by those constraints. Moore's Law could possibly hold true for many more decades.

This doubling of computer power has a number of corollaries:

1. Computers keep getting cheaper.
2. Computers keep getting smaller.
3. Storage costs keep dropping.
4. Communication costs keep dropping.
5. New computer interfaces become possible as the computing power needed to drive them becomes affordable.

Since these trends are likely to continue, their affect on learning technology will persist: computing power will become even cheaper and more portable; computers will be able to store more and more; their ability to communicate will grow.

Critical Price Point

One additional concept is that of critical price point. For any application, there is a price below which the application becomes cost justified. So as technology costs drop, new opportunities arise to apply solutions that have just recently become cost effective.

Many applications that were not practical last year will be eminently possible next year. Our digital capabilities double every two years. The popular holiday purchase of the $1,000 flat screen TV of 2006 became the popular holiday gift of the $100 digital picture frame in 2008. In 2010, a high resolution version of this has been repackaged with a 1 gigahertz processor, multi-touch capacitance interface and up to 64 gigabytes of storage for $495 - otherwise known as the iPad. Already, competitors of the iPad have been announced for half its price (some less than $100). In 2008, supplying all company sales representatives portable, personal, digital video displays with enough storage to house

promotional and training videos on the entire company product line seemed impossible. Now companies are running pilots using iPads.

Computers Keep Getting Cheaper

In the early days of computing, a single "mainframe" computer serviced hundreds or thousands of users running many applications. Computer timesharing companies sold shared computing power by the millisecond. Now, a typical smartphone has half a dozen dedicated "controller chips" working to optimize many functions for just one user. Instead of selling computing power by the millisecond, everyone can have personal computer power at their fingertips that is cheap enough to turn off when you don't want to be disturbed.

Knowledge workers generally use desktop computers as their primary knowledge tools. If they are a mobile force, laptops are their choice. Both are getting cheaper. Companies can purchase relatively robust desktops for $600 or less. Comparable laptops cost $990 or less. These machines are capable of running popular office suites (MS Office, Star Office, etc.) and storing several years' worth of business documents. Heavy multimedia like photos, mp3 audio or mp4 video will require extensions of memory and disk storage, but these are minor upgrades.

Now, machines in the $1,000 range can become high-powered video and audio editing stations, allowing small businesses and departments of large businesses to produce highly interactive multimedia learning modules. Machines in this price range easily deliver the resulting learning modules to learners. In fact, Linux-based system units started appearing in 2008 in the $199 price range and were fully capable of delivering multimedia training. Netbook laptops and even some full-sized laptops have hit the sub-$250 price level. They, too, are powerful enough to deliver multimedia training. This critical price point has been reached in just the last 12 months and opens up new training possibilities to new generations of workers.

Computers Keep Getting Smaller

Computers keep shrinking, as do their associated support devices. This phenomenon has given rise to whole new categories of consumer devices, such as the iPod, mp3 player and the mp4 player. Intelligence is now embedded in everything from toasters and irons to autos and microwaves.

Mobile phone technology has been advancing as well. Though the iPhone costs about $900 (unlocked), competitors like the HTC HD2 and the Samsung Galaxy cost about $550 in unlocked versions. All are capable of displaying multimedia training with the added advantage of having a real-time wireless connection for automatic updates on the go.

Never before has our ability to deliver just-in-time and just the right amount of up-to-date training been greater. This will continue to improve as long as Moore's Law holds true.

Key tasks in your organization could benefit from just-in-time learning or electronic performance support. Even if they require high mobility and real-time connections, the critical price point has now been reached.

Storage Prices Keep Dropping

Because digital memory is based on related technology, digital storage has also progressed at this same amazing rate, doubling every two years. It is most obvious in the personal computer mass storage market. August of 2010 saw 2 terabyte disk drives hit the $100 retail price point. Only ten years ago, companies were boasting about assembling mainframes with one terabyte of online storage, which was necessary to store the large image databases of Earth's surface. Now your personal computer can be armed with multiple terabyte databases of Earth, Mars and Venus.

Small, portable devices like digital stillframe cameras and digital video camcorders have benefited from the amazing increases in storage capabilities of digital memory cards. SD cards that hold 32 gigabytes are available at your neighborhood pharmacy. Cameras are no longer held hostage to rolls of film and their development cycles. A $49 SD card holds as much visual information in compressed form as 100 rolls of film or eight hours of video. The images are available immediately with no development costs. This means that learners and facilitators can now communicate with visual imagery and motion video, unimpeded by traditional media costs. New image databases and video catalogues can now be built at dramatically lowered price points. Visual and video databases can now document and archive masses of material for future learners.

Low-cost digital camcorders like the Flip and Kodak Zi8 have been released and take advantage of these high-density memory cards. For $150 or less, you can carry a high definition video camera in your shirt pocket that is capable of "taping" hours and hours of HD video. These

low-cost devices now empower legions of videographers to provide video recordings of all manner of events, big and small.

Communications Costs Keep Dropping

Digital communications rely on computing power to manage and route the transmissions, process the signals, separate information from noise and assemble the signals back into bits on the other side. All of these processes benefit from Moore's Law. We have seen terrestrial digital connectivity costs plummet recently. The consumer Internet market is an excellent example. Regular high-speed Internet access (six megabit per second download rates) has dropped to $15 per month in most markets. Some markets are now spinning up ultra high-speed access of 24 megabits per second download rates.

The cellular digital data markets have made great strides as well. 3G cellular data access of one to two megabits per second is available in nearly all major markets just as 4G is beginning to appear. These high-speed data rates allow digital video to be delivered to large populations of smartphones and portable devices, making the vague promise of real-time updates a reality. Now, even if your smart device doesn't have enough storage for all the data in your database, you can quickly get the information you need from anywhere in the world that the Internet reaches. Web-based training and performance support are now truly empowered.

But not all information comes from a single source like a database on a server. The toughest problems and thorniest issues frequently require the collaboration of experts. This collaboration is being managed and coordinated by a whole host of software applications residing on the Internet. Examples include the Web 2.0 tools of social media like Facebook, Linked-In, Twitter and Wordpress. They include virtual meeting software that enables virtual collaboration like WebEx, Adobe Connect, Live Meeting, Interwise, Blackboard , DimDim and Google Apps.

Groups in your organization could benefit from virtual collaboration. Considering that the entry versions of Google Apps and DimDim are free, the critical price point has already been reached.

The new term of "cloud computing" helps us understand that true collaboration is not just a single service from a single person or a single computer, but an ensemble of services and people from a variety locations and backgrounds.

As the infrastructure of the world-wide web expands in processing power and reach, an extremely important secondary effect occurs: the economic incentive of software development explodes. Now, the markets for software can be measured in the hundreds of millions of users. Even small software price tags can earn millions of dollars for the developers. This is occurring at a time when the development platforms are dropping in costs, making them available to millions of developers world-wide. To further spur expansion, distribution costs are plummeting and software distribution methodologies have been developed to deploy software and data via the Internet itself. Incentives for software innovation are at historic highs and promise to increase as the world-wide web expands further.

New Computer Interfaces Become Possible

The man-machine interface has been evolving right along with the computer itself. There's no question that keypunch machines were an improvement over wiring panels. Direct wired teletype machines were an improvement over keypunch machines. Though the keyboard remained the common man-machine interface tool for more than two decades, the mouse interface was a major leap forward.

After experimenting with many versions of touch screens on the Palm and Windows Mobile phones, the multi-touch screen, coupled with gesture-based interfacing, is poised to take over. Best exemplified in the iPhone, it surpassed the Windows Mobile installed base in September of 2009. This same multi-touch, gesture-based screen is now available on the popular iPad. The mouse's days are numbered. There is a better way to point at a specific location on the screen: with your finger!

Each improvement in interfaces has been made possible by the successive leaps of Moore's computing power to make them practical. It takes a lot of calculation to keep track of a mouse. It takes more calculation to keep track of a touch screen location. It takes even more to keep track of a multi-touch display. The Moore's Law march of increasing computer power has made these advances possible.

There are, of course, even more interesting interfaces on the horizon. For example, there are a number of projection display goggles and glasses that use hand and finger gestures to control their projected displays.

Of course, there are also efforts to eliminate the interface altogether, like devices that read the brain directly. Displays are becoming three-dimensional

as well. In fact, projected displays now augment reality: Second Life meets real life.

Learning immersion takes on a whole new meaning when it is based on a 3D simulation or projected onto your physical surroundings. All it takes is more calculation.

The Future is Here

So what should we be thinking about as we plan out the next generation of learning infrastructure?

We are on the verge of being able to create whole new learning experiences. The ability to think of a request for help – or perhaps simply look as if we need the help – can summon up vast databases of informational assistance, link us with intelligent agents that can find us the help or connect us to mentors and collaborators to discuss the problem. If this sounds too expensive, just remember that, in two years, it will be half the price. In four years, it will be a quarter of the price. Computation is getting faster, cheaper, more communicative and more interactive by the second.

Consider performance tasks that can be helped by computation (even those for which that would have been cost-prohibitive last year).

Consider performance tasks that could be helped by small, portable, intelligent devices (even those for which powerful enough computers would have been too big or bulky last year).

Consider performance tasks that could be helped by having large stores of information at your fingertips (even those that require huge databases).

Consider performance tasks that require multi-party collaboration (even if the cost was out of the question just last year).

Now, such constraints do not seem so restrictive because we have crossed thousands of critical price points. Our infrastructure has surpassed most inspirations of traditional methodology. We now better understand how adults learn and have the technology to do even more amazing things. It is time that instructional designers and designers of performance support systems set a much higher bar for themselves and organizational learning as a whole!

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The Times They *May* Be A'Changing: From Sizzle to Fizzle in Learning Technologies

Larry Israelite, Liberty Mutual Group

For as long as I've been talking or writing about the nexus of instructional design and new technologies, my mantra has remained remarkably consistent: new learning technologies become part of the ever-growing set of tools that instructional designers have at their disposal to create training products that result in learning. The shrillness of my message increased or decreased, depending almost entirely on the degree to which the proponents (or perpetrators) of the new technologies claimed that said technologies would eliminate the need for instructional design and, by extension, instructional designers. Things being what they are, of course, I probably spent more time at the higher end of the shrillness continuum than anyone liked! But I felt, and still feel strongly, about this issue, and think that I was probably more right than wrong in my point of view.

As it turns out, some things have not changed all that much over the past 30 years. We still identify learning needs. We design, develop, and implement solutions. Then, we measure whether or not they worked and figure out why. Along the way, we analyze the learning and learner context and select the instructional technologies, which may or may not actually involve hardware and software, that will help the learner (or client) achieve the desired goals. Please note that the word "training" does not appear anywhere in this paragraph, so the entire range of performance improvement solutions is included here.

On the other hand, it would be difficult and somewhat disingenuous to say that many other things have not changed during the same time period. In 1983, Robert Gagné and Robert Reiser published a book titled *Selecting Media for Instruction* (Educational Technology Press, 1983). The table of contents is quite revealing. It mentions media such as the following:

- Interactive Television
- Sound Motion Picture and TV Cassette
- Slide/Tape and Filmstrips
- Slides and Overhead Projection

You get the idea. The computer gets one page. This is, of course, a scant two years after the release of the IBM PC, so while many of us talked about

computer-based or assisted training, we didn't really understand the role this new (in 1983) technology would eventually play in learning, let alone our lives in general. Imagine if there was a second (or 10th) edition published this year. What would the list of instructional media include today?

In fact, what was most interesting about this book was not the information it provided about what are now quaint, but not particularly useful, instructional media; rather, the methods the authors devised for making the right media choices during the instructional design process were of most importance. Grounded in learning research, theory and Gagne's events of instruction (*The Conditions of Learning*, Holt, Rinehart and Winston, 1965), Reiser outlines a concrete method for optimizing media choices for the five kinds of learning outcomes, also developed by Gagné. What Gagné and Reiser created was a repeatable and markedly less arbitrary process for making media decisions that had a solid foundation in learning theory.

Until recently, I would have argued that what has changed most in the 27 years since *Selecting Media for Instruction* was published is the media. The breadth, depth, complexity, flexibility and capability of the technologies that support learning in 2010 is nothing short of astonishing and, in many ways, barely believable. Until recently, I would have argued that this is all that has changed. We have many more choices of technologies that can do many more things, but, in the end, we are still just matching media characteristics to Gagné's kinds of learning. But maybe I am wrong. Has more changed?

For the first time, the pundits, the literature and the conference circuit are rife with articles and speeches in which the central theme is that learners have changed. Usually, they describe why instructional design is no longer relevant or used as it was in the past. While I continue to believe their second point was and is still wrong, their first point about learners is probably correct and deserves further consideration.

In 2001, Mark Prensky coined the phrases "digital immigrants" and "digital natives" (in *On The Horizon)* to describe one's experience with technology. Simply put, digital immigrants have learned to integrate technology into their lives after their basic behavior patterns and mechanisms for dealing with daily life were formed. Digital natives just grew up that way. It is like the difference between someone for whom English (or Spanish or Chinese) is a native language versus someone who learned it after being fully and completely fluent in another language. An immigrant can become very adept at behaving like a native, but it is just not the same as growing up as one.

Since Prensky identified this concept almost 10 years ago, why has it not become the basis for discussions about corporate learning? I contend that it is because we are a product-driven culture. I have described the phenomena as our innate attraction to toys. We like toys when we are young; we like them more when we are older. As they say, "The only difference between men and boys is the size of their shoes and the price of their toys," though I expect there is complete gender equity on this issue. We are too easily attracted to shiny objects and our desire to do good work sometimes clouds our judgment.

But there is another issue. The vendor community's first message has always been, "Look at how cool our new technology is," which is followed by a story that essentially says, "instructional designers need not apply." Their operating theory has been that cool technology and the professionals who know how to deploy it could eliminate the need for the people whose stock in trade is using technology to create meaningful learning solutions. And - shame on us - we want to believe them. We want to be faster, more efficient and less expensive. We desperately want to deliver incredibly effective and creative solutions to our customers. Unfortunately, in most of those situations, the sizzle turns to fizzle and we are left trying to figure out where to go next.

There is one other challenge worth mentioning. Explaining how a fundamental change in learners influences how we design learning solutions is complicated, somewhat arcane and, honestly, not all that interesting to most people. So it has been easier and much safer to focus on the things that people are attracted to – new technologies – and avoid the more esoteric discussion of learning theory and instructional design, which is, by far, less appealing. But if our goal is to explore how instructional design will change over the next few years, it is a conversation that can no longer be avoided.

The first question we need to answer is simple: what characteristics do new learners possess that differentiate them from prior generations of learners? Here is a short list; feel free to add to, delete from or argue with it. I know there are more, but these will do for our purposes.

New learners:

- Are digital natives: This has been discussed, but it would be unwise to underestimate the impact this has on how they deal with the world.
- Search early and often: As conversant as they are with technology, new learners have also developed deep expertise in using technology to find information (I deliberately did not use the term

"learn" here; more on that later). And, more importantly, they are undaunted when they do not know an answer because they are confident that they can find it as long as they have a screen and an Internet connection.

- Network with reckless abandon: It appears as though new learners have broader and, perhaps, deeper connections with others than have previous generations of learners. This is not to say they have more or better relationships; some argue that the exact opposite it true. But, knowing of and being able to find and interact with friends of friends and acquaintances of acquaintances is much easier and more commonplace than it used to be. I would argue that, in a learning context, networking is analogous to search in that new learners can search online or search their networks, often without distinguishing between the two.

Although I have not included it on my short list, it would be foolish to completely ignore multi-tasking. We hear about and see this all the time, and anyone who has children know that they do their homework, listen to their iPods, talk on the phone and text their friends almost simultaneously. On the other hand, we have multi-tasked for years. My father used to listen to the radio, watch TV, read a newspaper and carry on a conversation. It drove my mother nuts! When I was in college, I would read, listen to the Rolling Stones and talk with my roommate, all while doing something else I probably shouldn't describe here. But let us just accept on faith that new learners have taken this art to an entirely different level. I might mention here that there appears to be a growing body of evidence that multi-tasking actually inhibits learning, but we will leave that for another day.

The next question is a little more complicated: how do these characteristics influence the design of instruction? To answer, I want to focus on two of the three elements of the short list mentioned above: search and networking. It's not that being a digital native is not important, but, in many ways, the former are a direct result of the latter: search and networking are, to a large extent, enabled by technology, and everyone agrees that technology is second nature to new learners.

The term "fingertip knowledge" was coined to describe the phenomenon created by search and, according to Elliot Masie, represents the ability to "type your way to a piece of knowledge." It is hard to argue with this description. We have access to more information that we can possibly use and, I suspect, we search the Internet and our personal networks every single day to get the information we need to do our jobs. What is not as clear is

how often this process results in either knowledge or learning, and therein lies the problem.

I would argue instead that search and networking have provided us with "fingertip information." When we need some, we look for it online or in our networks. When we find it, more often than not, we act on it and then forget it. I am not sure this is always a good thing. Take phone numbers for example. It used to be that I learned them. I could pick up any telephone (even phones that I did not use frequently) and call dozens of people. I now find that I rely almost completely on the numbers I have stored in my various phones. I have memorized (learned) very few of them. If for some reason I have to use someone else's phone, I am in deep trouble. To call someone, I usually just hit a button: no knowledge necessary other than knowing what button to press. When that button is not available, I am unable to perform. And all that I have learned is the location of the number, as opposed to the number itself. This is certainly convenient, but I am not sure it is better.

One could argue that technology has freed me from the need to clutter my brain with useless information. I would argue instead that search (or something like it) has made me less, not more, effective because, in some weird way, I have substituted instant gratification – fingertip information – for something of enduring value, which is learning. And this describes precisely the challenge that instructional designers now face. What types of performance outcomes are best supported by fingertip information (or knowledge, if you prefer), as opposed to those for which real learning is required?

Telephone numbers represent a very simple example of a more complex problem. Here is a more complex situation. Customer service representatives at heath insurance companies might receive phone calls from the insured and/or their family members, benefits administrators and medical personnel (like doctors, nurses and office administrators). These callers may display a wide range of emotions (profound sadness, anger, frustration, indignation), represent all ages and educational levels, and may or may not be native English speakers. When the phone rings, the representative must be prepared for any combination of these characteristics. The rep cannot do a search on "angry senior citizen whose wife just died" to figure out how to handle that type of call; rather, this must be a learned skill that can be applied when required. Managing phone interactions is what might be described as a situational skill, meaning that it must be continuously adapted based on the conditions present in any situation. I suspect that you can come up with many other job performances that mimic this example and require a more traditional approach to learning, as opposed to fingertip knowledge or

information. It might even be the case that performance outcomes that involve other human beings almost always require learning.

Some of you are rolling your eyes. You are saying that no one would ever conclude that fingertip knowledge is a substitute for communication skills training. I would counter by asking you to remember a few things. First, we are not always the masters of our own fates. Our bosses and their bosses hear things, read things and expect us to do them, regardless of whether or not they make sense. Second, sometimes we get caught up in the hype. We ignore the little voices in our heads that tell us things that sound too good to be true probably are. We have done this before and we will do it again. In these cases, we need to be especially vigilant.

Clearly, there are situations for which relying on fingertip knowledge is appropriate and others when a more traditional learning design approach is required. Designers have to figure out the difference. Below are a few 'rules.'

Designers can take advantage of fingertip knowledge when:

- Performers always have available to them a fast and accurate source of information (technological or human) on which they can draw and rely to address their needs.
- The speed with which information, policy and/or practice changes is rapid and unpredictable.
- The impact of errors caused by misinterpretations or misunderstanding of information accessed through search is minimal and/or manageable.

When these conditions are present, relying on search is a reasonable strategy, which is not to say that training is not necessary. Rather then focusing on the content, the emphasis should be on process and practice: determining the best methods for finding the required information and extensive practice in doing so. The focus of learning assessments here should be speed and accuracy. Can the performer consistently find information quickly and use it correctly?

Designers should use a more traditional approach to learning when:

- The performance requires the application of a skill that is situational, meaning that it must be instantaneously adapted and adjusted based on what is happening at the "moment of need".
- There are (frequent) conditions under which the performer will have limited or no access to the sources of required information

- The information found through search requires significant interpretation or contextualizing that is not obvious to the performer and the impact of errors resulting from failure to do so is potentially significant.

Under these conditions, designers should focus on both content and process, applying the same principles and practices of instructional design and learning that they have used for years.
All robust instructional design models require an extensive analysis of the the desired performance, the content to support it and the context of performance and the learner. Neither the widespread availability of search nor the characteristics of new learners has changed the need to complete each of these important steps, but both influence how we carry out design tasks.

For the first time in a long time, many would argue that learners have significantly changed. The key role that technology plays in the workplace (the performance context) and the degree to which we rely on it must not be ignored. Clearly, instructional designers cannot ignore either of these very important developments. They must understand them and fully embrace them as they develop learning solutions that achieve desired business goals and fully engage learners. Failure to do so will, in fact, make design and designers irrelevant.

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終身學習

"Lifelong Learning"

This book is dedicated to
Jonathan Kayes

March 2, 1957 - August 5, 2010
Chief Learning Officer (CIA and The MASIE Center)

The MASIE Center in 2011:

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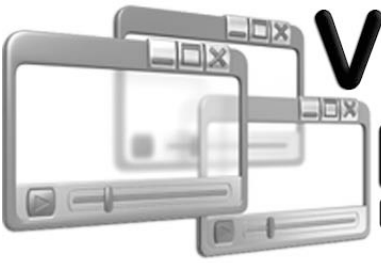

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