



IN SEARCH OF ... THE NEXUS OF LEARNING

WHITE PAPER

DAVID JAMES CLARKE IV

CHIEF EVANGELIST

MARCH 2006



TABLE OF CONTENTS

IN THE BEGINNING	3
CROSSING THE CHASM	4
JUST-IN-CASE VS ON-THE-JOB	4
THE ANSWER IS “IN-THE-JOB EXPERIENTIAL LEARNING”	6
EXPERIENTIAL LEARNING IN THE REAL WORLD	7
IN CONCLUSION	8
BIOGRAPHY - DAVID JAMES CLARKE IV	9

IN THE BEGINNING

In the beginning, there was **learning**, and it was unstructured. From the primordial ooze of early man's brain came the concept of on-the-job training. One caveman would pummel an unsuspecting wooley mammoth, and then miraculously, others would follow suit. When fire was invented, Neanderthals learned quickly not to touch it, and of course, modern man quickly realized that Advil works much better for a headache than, let's say, power tools.

The point is, early learning was *unstructured* and *experience-driven*.

Then somewhere down the line, as with most things in the Universe, chaos gave way to form and function - structured learning was born. It was good. And structured learning begat the classroom. Woe to the many students who have endured the archaic babbling of unidirectional lecturing ... (much like this article, now that I think of it). The classroom has been with us for centuries.

Fortunately, the Internet came along and new learning paradigms evolved. From this 20th Century gene pool, eLearning was born. It was good. Students flocked to eLearning to escape the boring classroom. In response, the classroom gave way to the virtual classroom - a modest cyberspace improvement to the boring in-class approach.

Over time, eLearning evolved further and begat blended and prescriptive programs. Blended learning is multi-modal and tailored to each user's strengths. As you know, we all learn in different ways: some auditory, others visual, and most of us, kinesthetically - aka, "hands on". Prescriptive learning has further enhanced this model by narrowing the scope of content to the needs of each individual learner.

Prescriptive eLearning is an only-child, but Blended eLearning has begat many different modes:

- Books
- Tests
- Mentors
- LiveLabs
- CBTs
- Reporting
- Assessment

Today, structured learning is effective and organized, but it doesn't provide much experience. It seems detached from the real world. So, where do we go from here? What's Next?!!

CROSSING THE CHASM

The nirvana of learning is at the nexus of unstructured and structured learning. Unfortunately, these two parabolic continuums will never meet. The structured continuum travels from the passive classroom to the much more active blended eLearning solution. Similarly, the unstructured spectrum travels from passive observation to interactive experience.

The bottom line is - structured learning is taught just-in-case (JIC) and unstructured learning is taught on-the-job (OTJ). Both of these terms represent the apex of each continuum.

Just-in-case learning happens before you need it. This is a proactive approach to skills you may need in the future. Typically, JIC is managed at the organizational level. But what if you are wrong? Personally, I have a degree in genetic engineering, however I am evangelizing the virtues of evolving learning paradigms. Related? NA!

On-the-job learning, however, happens exactly when you need it. This is a reactive approach to skills you need now! Typically, OTJ is managed at the individual level. YOU get the skills immediately because YOU need them to survive. This is Darwinism in the workplace. A little risky to say the least. What if you fail?

So, how do we bridge the gap between JIC and OTJ? And, once we do, what welcomes us there? What will we find in the Nexus of Learning? To find out, let's study these two spectrums in a little more depth.

JUST-IN-CASE VS ON-THE-JOB

In order to discover the nexus of learning, we must first understand the two paths that we are trying to converge. First is the unstructured path with an apex at on-the-job. This is a great place to start.

So what are the pros of on-the-job training and how do they overcome the cons of just-in-case learning?

- **JUST IN TIME** - First and foremost, OTJ is timely. This approach to learning provides what you need when you need: Just In Time. On the other hand, JIC training is typically presented in an experiential vacuum: just in case you may need it. Furthermore, there can be a long gap of time between your training event and the actual point of execution. And you all know what happens to our minds over time!
- **IMMEDIATE RESULTS** - Because OTJ training is timely, it provides immediate results. This means that you always get that instant feedback and gratification: I learn, I do, I win! On the other side of the fence, JIC training provides delayed results, and like I said earlier, these delays can sometimes be very long.

(... continued)

- **“REAL”** - By definition, On-the-Job training is REAL. Simply stated, you are solving real problems with real systems in real production environments ... on the fly. On the other hand, JIC training is fake. Most structured environments employ “what if” scenarios and artificial simulations to give you a sense of reality. But like most video games, this reality is virtual. Nothing can replace the real thing!
- **MORE ENGAGING** - Because OTJ training is real, it creates a strong connection with the learner. Real experiences are engaging, virtual simulations are not - and with engagement comes retention. OTJ has a much higher skills retention rate than JIC.
- **INDIVIDUAL VIEW** - Finally, OTJ approaches learning from the individual’s point-of-view. YOU learn what YOU need when YOU need it. JIC, on the other hand, approaches learning from the organization’s viewpoint. The organization decides what skills it needs to meet the organization’s goals. Then, the organization distributes proactive learning to the right people within the organization to get these skills. While both of these approaches are important, you have to achieve mutually beneficial synergy in order to be successful.

That covers the key elements of successful unstructured learning programs. Now let’s switch gears and discover the secrets of the structured path - with an apex at just-in-case. So what are the pros of just-in-case training and how do they overcome the cons of on-the-job?

- **LINEAR** - First and foremost, JIC is linear. This structured approach fosters continuity among related skills and a broad portfolio of knowledge. $A + B = C$. OTJ, on the other hand, is dominated by chaos theory. You never know what topic you may be learning next, and even worse, you never get to build a portfolio of related skills.
- **BROAD RANGE OF SKILLS** - Because JIC is structured and linear, it promotes a broad range of learner skills. Also, learning events are typically longer and more relaxed than the “fire drills” you experience on the job. Speaking of OTJ, this unstructured, chaotic approach fosters silos of narrow skills. The prince of many skills, the king of none.
- **SKILLS CATALOGING** - And, with a broad range of skills comes the organizational value of skills cataloging. This is a vitally important benefit of the planned, just-in-case approach. Almost every organization benefits from having a skills-based human resources deployment model. On the other hand, JIC provides no skills catalog, and this can be a very big problem. Imagine all of the valuable skills that go to waste because your organization can’t document who knows what. Ouch!

THE ANSWER IS "IN-THE-JOB EXPERIENTIAL LEARNING"

Let's summarize the benefits of On-the-Job and Just-in-Case learning:

<u>On-the-Job</u>	<u>Just-in-Case</u>
Just in Time	Linear
Immediate Results	Broad Range of Skills
Real	Skills Cataloging
More Engaging	Organizational View
Individual View	

Using these terms, we can define the Nexus of Learning as:

"A just in time, linear learning program with real, engaging content tailored for the individual learner that fosters a broad range of relevant skills for the benefit of the organization."

So, What's Next?!! How can we bring all of the benefits of On-the-Job experience into the realm of structured learning technologies? Simple.

On-the-job **EXPERIENCE**
LEARNING technologies
=
EXPERIENTIAL LEARNING

EXPERIENTIAL LEARNING (ExL) is the bridge between OTJ and JIC. This engaging, real-life approach to structured laboratory environments marries all of the benefits of OTJ without any of its scary consequences. Furthermore, experiential learning can be organized into discrete learning objects and tracked by any of today's skills catalogs (i.e. Learning Management Systems).

And, now for today's PUNCHLINE ... where does the experiential learning bridge take us?

just **IN** case
on **THE JOB**
=
IN-THE-JOB

The NeXus of learning is IN-THE-JOB, not on-the-job. In-the-job learning is where experience meets the "classroom". It is a utopian state of being where learning is NOT learning. It is seamlessly integrated into your everyday, ordinary experiences. Remember Trinity on the roof of the Agent HQ in the first Matrix movie ... Neo asked, "Can you fly that helicopter?". Trinity answered, "Not Yet." Then, she called the "operator" for a neurokinetic download of flight operations for this particular whirlybird. Amazingly, in an instant, she was an expert. That is IN THE JOB learning.

Unfortunately, we are not there yet. However, we are getting closer. Experiential Learning (ExL) provides a bridge to in-the-job utopia, and there are many examples of ExL in today's learning ecosystem. Let's take a closer look at a few of them.

EXPERIENTIAL LEARNING IN THE REAL WORLD

Experiential learning enables the agile enterprise at EDS. Electronic Data Systems (EDS) is one of the world's largest consulting, IT outsourcing organizations. With EDS, people are the product. Where Cisco might treat product development as creating a new widget, EDS approaches training as their way of differentiating themselves in the marketplace. One example of in-the-job learning is the Technical Excellence Program (TEP). The TEP is a two-phase re-skilling initiative for 85,000 technical employees. In Phase I, participants choose a "coach" who mentors them through the program. Together, the student and coach develop a personalized learning program from a large library of IT-related Skill Enhancement Fast Tracks - such as Cisco, Microsoft, .NET, and Sun. Each Fast Track includes Web-based training courses, online books, and experiential labs. In Phase II, graduates participate in a 2-week on-site "TEP Immersion Workshop" which focuses on the technical direction of EDS as it applies to the agile enterprise platform.

At Thomson NETg, experiential learning drives a better life for job changers. In the consumer side of IT training, experience = a new career = a better life. In this example, we transform taxi drivers into network engineers using experiential learning as a catalyst. During training, NETg students get a chance to experiment with live equipment in pre-built production environments. This is critical, so when interviewers ask, "Do you have experience on live networks", their answer is, "Yes, I have had experiential learning".

At British Telecommunications, experiential learning enables business transformation. British Telecom is a perfect example of a company pushing the envelope of technical innovation. BT is revolutionizing the traditional telecommunications industry and re-building the entire UK communications infrastructure. To accomplish this, they must re-wire the skills of thousands of engineers. Their answer: experiential sandpits (aka, sandboxes). BT is giving their engineers access to live experiential networks so they can practice, practice, and practice before they visit customer sites.

A perfect illustration of experiential learning in the real world is the Chinese symbol for crisis. It is made up of two characters: One for danger and one for opportunity. That is quite a marriage: danger + opportunity. The danger of failure in today's competitive environment grows dramatically if you stand still. Of course, the opportunities are tremendous if you can find a way to innovate and stay ahead of oncoming technological advancements. All of the companies discussed above, believe that experiential learning will allow them to turn crisis into opportunity.

IN CONCLUSION ...

In conclusion, let's revisit the definition of the Nexus of Learning:

“A just in time, linear learning program with real, engaging content tailored for the individual learner that fosters a broad range of relevant skills for the benefit of the organization.”

So, how do we get to the Nexus? As we learned earlier, experiential learning is the bridge between structured Just-in-Case training and unstructured On-the-Job learning. Experiential learning allows you to take a structured linear training program and apply it to real engaging just-in-time tasks. The magic is in combining the two.

The next obvious question is, how do I build an experiential learning bridge? Here are some ideas to point you in the right direction:

1. Today's students are demanding relevant in-the-job learning programs. There are three major causes: a) students are more sophisticated; b) the pace of change is accelerating; and c) the world is smaller and much more competitive.
2. There are two main approaches to building an experiential learning bridge: a) leveraging technology (as Thomson NETg does with their pre-configured live network environments), and b) leveraging learning policies (as EDS does with their TEP coaching and immersion workshops).

Now, I would like to end with an insightful quote from a man much wiser than myself, “I hear and I forget, I see and I remember, I do and I understand” - *Confucius*.

BIOGRAPHY – DAVID JAMES CLARKE IV

As Toolwire's co-founder and primary innovator, David James Clarke IV brings over 20 years of industry passion and entrepreneurial spirit to his e-Learning architecture, publishing, and speaking projects. An education pioneer, Clarke developed the company's customer-centric philosophy and learning methodology, which originated the concept of live, hands-on learning for customers in an anywhere, anytime format.

Clarke is an industry expert in the education and e-Learning industries, and is renowned as the author of the Novell NetWare series of Study Guides. Prior to Toolwire, he served as a technology professor at the University of California, Berkeley. While there, Clarke developed one of the very first Multi-Sensory learning systems for graduate students in the Haas School of Business.

Prior to the University of California, Clarke founded the Computer Telephony Institute, and served as Director of systems integration at the Walt Disney Company. Clarke has designed and built data networks in worldwide corporate sites, and is a noted author with over 34 books in publication.

Clarke has a bachelor of sciences degree in genetics from the University of California, Berkeley, and a master of Business Administration, M.I.S. from California Polytechnic.