

Just-in-Time Just-in-Case Learning to Enhance Project Performance¹

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Many organizations are facing difficulties of both capability and capacity – in simple terms, having enough of the right skills and knowledge to be able to get all the work completed to sustain competitive advantage. Even prior to the astonishing developments of the last half decade and the beginning of this decade, the global landscape was changing rapidly and the pressures on individuals and organizations were becoming evident. Developments during this decade only increased the pressures on projects and individuals to have the right skills and knowledge in order to remain competitive, to learn and adapt quickly. These pressures are likely to continue and become even more severe in the foreseeable future. As entire world economies, governments, and markets reshape on a massive scale never seen before, organizations, projects and people are experiencing levels of unprecedented change. This picture is acknowledged by organizational and project leaders worldwide.

It's against this setting that the delivery of learning supporting the development of new skills, knowledge and behavioral capabilities, with speed, scale and responsiveness has never been more important. Organizational learning functions are facing increased challenges, as well as great opportunities, to re-shape their interventions to keep pace with these rapid of changes. It follows that harnessing the power of technology to provide and deliver the right training and knowledge at the right time is central to improving talent on a global scale within all parts of all organizations desiring to stay competitive in the next decades.

This paper and presentation will examine how learning can be enabled and enhanced through the strategic and innovative use of a range of learning technologies. The focus is on learning of individuals and teams within an organizational context.

Learning Challenges and Changing Business Demands in a New World

The world of learning and development professionals today was unthinkable a decade ago. Their jobs are evolving from the administration and leading traditional classroom and straightforward transactional tasks to developing and building strategic capacity and capability within the workforce to meet the goals and objectives of the organization.

The key responsibilities and challenges of learning and development professions in all organizations are strategic. Their real value lies in their strategic contribution toward meeting the current and future organizational goals and objectives. Ulrich and Brockbank's research found that 43% of the human capital function comes from a more strategic focus (RBL 2006).

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When the organization's business strategy and human capital strategy are aligned, an organization can show up to a 250% increase in business performance compared with organizations taking a more tactical focus (ASTD 2005) As reported by the ASTD and IBM research, senior level executives expect the learning and development function to be working and building workforce capability in support of the future organizational strategy. But, the fact is that the human capital functions are still focused on tactical work to meet the immediate demands of the organization. One survey found that 66% of respondents said that the human capital function was not responding quickly enough to the strategic challenges related to profitable new growth (HRPS 2007). This is in large part due to the fact that most human capital functions are understaffed and are forced to meet immediate workforce needs.

Value creation and leverage by the learning and development function is related to four strategic challenges: (1) supporting current and future business strategy; (2) supporting business growth; (3) supporting business productivity; and (4) supporting business transformation.

At the same time that human capital functions are being asked to focus on a more strategic view of the business, those business demands are changing faster than ever before, and the changes are profound. The changes are occurring in two very broad arenas: (1) the change in the volume of information; and (2) the change in the way we work.

The volume of new information that workers need to deal with is overwhelming. Many workers grumble about the sheer volume of emails they receive each day. They are essentially inundated with new data with each new email and information from other sources. The workers are awash with new, unstructured, dynamic, information-rich content in this constantly changing world. The challenge for learning and development staff is how to embed this content into their current learning approaches. The key point is the sheer volume of information flow on a day-to-day basis, which is very much unstructured and changing. Workers need to manage that information and find the right information when they need it. For many disciplines, the information supplied in training courses a year ago is likely to be dated and useless for their current jobs.

The workforce is also embracing new ways of working. Knowledge work demands that people work with their heads, not their hands. Workers rarely use a single desk in one office. They are on the move constantly on their mobile devices, giving and receiving information. They work on planes, trains, automobiles and in cafes, airports, and hotel rooms. They expect and are expected to be available 24-7. At the same time, these very same workers are dealing with more complex work demands, using more recent and tacit knowledge rather than outdated content. All these challenges demand that learning and development staffs need to re-evaluate their traditional methods of building capacity and capability. According to McKinsey, "New ways of working require new ways of learning" (McKinsey 2013)

Learning Trends for Developing Project Staff

A number of major advances have had a deep impact on learning and development in organizations over the last decade. These advances have opened opportunities for a global workforce that simply did not exist before. They have altered the way learning and development professionals need to approach the job of building workforce capacity and

capability. Foremost are the considerable changes in telecommunications over the last 25 years and in particular the Internet. This development has changed forever our approach to learning. Opportunities abound by the breaking of the richness/reach trade-off (Evans 2000). No longer are rich experiences confined to workers who attend instructor-led face-to-face workshops. They are now available globally at the click of a mouse.

The most significant development to impact organizational learning is the advent of Web 2.0 and social media technologies. This has opened unlimited opportunities for innovative approaches for both formal and informal learning in the workplace.

That Richness/Reach Trade-off

In the year 2000, Evans and Wurster researched and published a ground-breaking book, *Blown to Bits* (Evans 2000). They explained how the communications revolution changed traditional business models. New business models were changing forever and replacing the traditional ways businesses function in a transformed world.

Prior to this transformation, business models and learning and development were based on a trade-off between richness and reach. Vendors had a choice in providing services and products that were rich and lacked reach or to provide the reach but not necessarily the richness in content. For example, face-to-face training offered more rich experiences but was a poor choice of servicing staff located at a distance. The cost of distribution in most cases outweighed the derived benefits of deployment.

But in the last decade, we have seen the richness/reach trade-off dissolve in very interesting ways across many business sectors, such as newspapers, travel, retailing and many other industries. Some notable examples are the *Encyclopedia Britannica* being replaced by *Wikipedia* and Amazon's impact on retail books and retail in general.

The ease of interaction and communications in general has created immense changes in all businesses. Now it is having a significant impact in the world of learning and development and how people in the enterprise are developed. The breaking down of the richness/reach trade-off is significant for the training industry. Learning and development professions now have powerful new means to deliver impactful learning and connect learners from across the planet real time. The constraints of time and distance have vanished. This has opened up bold new ways to deliver training and knowledge sharing. The smart use of training technologies and building learner networks of learners allows for the delivery of rich new content, free of both time and location.

Going Beyond Organizational Walls — New Learning Model

Over the last thirty years, there has been a great deal of research indicating that workers learn most of what they need to know to effectively perform their roles and do their jobs in the workplace rather than in the classroom (Cross 2007) In 2006, Cross listed a number of surveys and research papers that confirm this fact. Although the surveys and research vary with respect to the exact amount, most indicate that, somewhere between 70% and 80% of learning in organizations occurs on the job. Cross contends that there is a need to realign and focus more resources on more informal types of learning.

70:20:10 Learning Model

The 70:20:10 learning model emerged in the late 1990's (US BLS 1996 & Eichinger 1996). This model has become the learning strategy and mantra employed by such notable organizations as Microsoft, Nokia, Caterpillar, NASA, and many others.

The 70:20:10 learning model has its genesis in the work of McCall, Eichinger, and Lombardo at the Center for Creative Leadership. The book by the authors published in 1996 laid the foundation and basis for the 70:20:10 learning model. The authors note: "Lessons learned by successful and effective managers are roughly:

- 70% from tough jobs
- 20% from people (mostly supervisors)
- 10% from courses and more formal methods" (Eichinger 1996)

It is important to note that the numerical model is intended as a reference theme drawn from research and should not be construed as a rigid formula or recipe for success. Each researcher is simply validating that not all learning takes place in formal classroom settings, but can happen in many and any place in the organization. Learning is no longer an isolated activity that is away from the everyday world of the workplace. Work and learning are intermixed, and the 70:20:10 learning model provides a framework for thinking outside formal courses and a formal curriculum methodology. It opens up opportunities for learning practitioners to include the entire workplace spectrum as a forum for learning.

Examples of 70:20:10 — Just in Time and Just in Case Learning Spaces

70 – Learn and Develop Through On-the-Job Experiences

- Apply new learning in the workplace after attending formal training
- Use manager's or peer's feedback to try new approach to an old issue
- New work assignment and new problems to solve within the current job role
- Increased responsibilities with managing more people with diverse backgrounds
- Increased accountability and decision-making authority
- Leading a major transformation business change effort
- Temporarily replacing a manager who is on leave
- Team member of a tough and complex project assignment
- Temporary detail assignment to another function
- Take over a major stretch assignment
- Meet with senior managers; make presentations
- Knowledge sharing with colleagues within and outside the organization
- Research best/good practices within the organization
- Lead a benchmarking team
- Apply new standards/knowledge and methodologies – *A Guide to the Project Management Body of Knowledge (PMBOK® Guide*, Prince2
- Work with internal and external experts

- Internal and external speaking engagement
- Leading a project review
- Taking over a troubled project
- Teach a course at an accredited university

20 – Learning through Others

- Informal work debriefs with manager or colleagues
- Seeking advice, asking for help or opinions, presenting novel/innovative ideas
- Coaching from manager or professional coach
- Leadership/management 360 feedback
- Participant in an assessment center
- Assessment center observer/rater/coach
- Structured mentoring
- External professional contacts
- Professional industry associations involvement and active member
- Action learning assignment
- Participate in a team simulation event
- Business book reading group
- Write a Blog, Wiki, etc.
- Actively participate in company knowledge sharing social media system

10 – Learn in Formal Classes

- Participate in the organization's formal classes
- Virtual Learning – webinars and courses
- Take a college course
- Become certified, e.g., Project Management Professional (PMP)[®] credential

From Know What and Why to Knowing How-to

There is an increased awareness and emphasis on learning-by-doing rather than just learning the “What” and the “Why.” People in today’s work need to know “How-to” apply those competencies on the job immediately. This is being driven by:

- The immense amount of information that workers need to deal with and do their jobs each day.
- The realization that most of this new information is unstructured.
- The dynamic nature of information and the fact that most information will be useless within a shorter time than ever before.

The pace of change and the flow of information are increasing as never before in our history. This makes all workers keep up-to-date with a “flow” of new knowledge rather than a content-focused type of learning. This is counterintuitive, because the answer is not to know

more, but to know less and be able to find the relevant information when needed. Brown and his co-authors describe this challenge in these terms:

“To succeed now, we have to continually refresh our stocks of knowledge by participating in relevant “flows” of knowledge – interactions that create knowledge to transfer it across individuals. These flows occur in any social, fluid environment that allows firms and individuals to get better faster by working with others” (Brown 2010)

Continuous Learning is the Only Sustainable Advantage

Taking workers away from work and into the classroom to learn is no longer the only method to prepare them to do their jobs. In fact, some argue it is impractical and not a feasible solution for most jobs other than those related to preparing them to enter the organization or some form of change in management activities. There is a good argument for not thinking of learning as enabling work, but as work enabling learning and the fact that the two should not be separated. Learning is work and work is learning.

In this information-rich and dynamic work environment, we need to think in terms of knowing where to find the information we need when we need it rather than trying to hold all the information in our heads. This concept is now termed, “outboard brain”; meaning that most work now requires some concepts and some strategies to be stored in our heads, but we don’t need to memorize all the information or knowledge to complete all the tasks. We simply need a map of where to locate that knowledge. Robert Kelly of Carnegie Mellon University carried out a longitudinal study looking at how much information knowledge workers needed to hold in the “inboard brain” in order to do their jobs (Kelly 2006). Over a 20-year period he found that the percentage of knowledge needed to do the job that was stored in a person’s mind decreased substantially over the 20 years:

- In 1986, it was 75%
- In 1997, it was between 15% and 20%
- In 2006, it fell to between 8% and 10% (Kelly 2006)

During this principal time period, the web emerged and database technology became much more prevalent because the rest they could get from the “outboard brain” when they needed it. Focusing on the ability to find information and knowledge rather than needing to store information has profound implications for learning and development professionals. Traditional approaches that focus on content and knowledge transfer need to be reviewed and challenged. Newer approaches, such as the “Find-Access” Model, describe a changed focus on content and an increased focus on “find” and other associated competencies (Jennings & Clark 2009). The evolution of learning as being focused on event-based to being primarily process-driven represents one of the most profound changes in the way organizations structure and support the development of their employees.

The move toward a more continuous learning model is both inevitable and practical. It has always been recognized that for “real” learning to take hold, it is not just event-based, but more of a time-dependent process. It has to focus on experience, practicing in real-world like environments, working and conversing with others in new ways, and having the time to reflect on how the new information can be adapted to new knowledge for on-the-job

application.

LearnScapes for Just-in-Time Learning

One concept emerging out of the 70:20:10 learning model is the concept of “LearnScapes” LearnScapes is a learning ecosystem that incorporates all the interactions, technologies, tools, relationships, and elements that make up a total learning environment. LearnScapes may include, formal structured classes and learning, but also includes informal and unanticipated learning situations

A LearnScape is the platform where knowledge workers collaborate, solve problems, converse, share ideas, brainstorm, learn, relate to others, talk, explain, communicate, conceptualize, tell stories, help one another, teach, serve customers, keep up-to-date, meet one another, forge partnerships, build communities, and distribute information. LearnScapes are where and how modern work is performed - including workplace learning” (Cross 2008).

The Gap between Learning and Performance

The changing business setting is shifting the landscape of organizational learning. The process and methods of learning are being altered with a focus on faster learning with measurable outcomes and benefits. Learning and development must focus on immediate needs — needs that are constantly in flux — and get the right information to the right target population quickly.

Organizations also need to focus on learning impact and increase their attention on developing good learning metrics for measuring business outcomes. The Return of Investment (ROI) model is useless for learning functions, because it's too financial-centric and cannot adequately measure the intangible nature of training and the “real” performance gained by learning something new. Two other measurement models exist with some promise:

- 1) Return on Expectation (ROE) is seen as a more useful model; and another one emerging is
- 2) The Return on Investment in Interactions (ROII) (as a measure of the increasing productivity and value based on the principles of Metcalf’s Law of networks.) (Cross 2009)

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