Three part series exploring the value of knowledge and education for innovation

The Role of Education and Learning for Innovation

In this series of three articles Paul Hobcraft explores the value of knowledge and education for innovation. In part one he opens the discussion by exploring some of the biggest challenges faced by organizations today and provides encouragement to explore emerging practices.

Published: December 27, 2012

How do we advance the learning needed for innovation? In my last article I wrote about the need to prepare ourselves for some forthcoming standards for innovation. In a number of earlier articles, I have also written on a range of contributing factors that will advance innovation in its learning and adoption. In this series I want to go deeper – *an emerging treaty for innovation advancement.*

I have to be clear here, I am becoming increasingly frustrated by the lack of advancement in our understanding of innovation. Today we have a real challenge, *all of us*, in boosting our capacity for innovation. We need to achieve this 'boost' as the outcomes we will gain are both economic and social in their potential value. We need to move beyond the existing and tackle the blockages to the preferred, when it comes to innovation achievements.

We face many challenges within a highly competitive world

As we seek out fresh opportunities, locally and globally, we are becoming increasingly challenged. The world is highly competitive. The key driver to meet these 'twin' challenges is innovation, not just for the short-term results businesses are so obsessed about, but the critically important need to find the pathway to sustainable development through re-occurring innovation activities.

Much of management within organizations is mortgaging the future for today's immediate gains.

Sadly today we still marginalize innovation. We rely on incremental activities to pull us through the short-term and just keep putting off the long-term projects. Much of management within organizations

is mortgaging the future for today's immediate gains. I loved this thought, although it may not contain much original thinking but it does offer what I felt reflects on this point: "*we are simply kicking the innovation can down the road.*" This desperately needs to change for the increasing economic and social reasons looming down the same road. Innovation needs to be better understood – in what it constitutes and all the different ways it can be applied. We do need to understand it better for its significant contribution potential to solve social and economic problems.

The role of people within innovation can never be overstated. They make it happen, everything else is *their* enablers. We do need to understand what makes innovation truly work through increasing the comprehension of "combining" its many myriad parts. Innovation skills need an innovation friendly environment and we need to reform much of our existing approaches to innovation as practiced today.

We need to speed up our reforms and achieve a clear consensus of better frameworks and activities. Of course I would offer a shameless plug of the Executive Innovation Work Mat to be part of this, why not? I do believe it is part of the emerging solution. In my opinion the work mat helps educate, frame and to learn from in it's combining the critical aspects, so as to improve on our existing performance and build from this.

It is increasingly recognized that we all need to follow the lifelong learning track, as organizations increasingly insist on increasing human performance yet are constantly reducing the 'bodies' to assist in this. We need to keep relevant or we get caught up in this marginalization and have poorer potential in our future.

Technology can't stand alone

Organizations today are mistaking the promise of technology alone and this will not work; it needs people, their knowledge and experiences to apply the technology. Far too often we are not finding the time as increasing complexity is layered onto dwindling human resources. We are adding more pressure into the system by taking out the very solution we need to keep in place and utilize far more, that is our people.

We are pushed to keep up and to stay relevant; we often have to bury our personal grievances because if we surface them, we might get singled out in the next round of often mindless people cuts. We do need to reverse this board room mentality and stop cutting out the diversity of opinion that should be valued, not thrown away. We need to make our performance potential stretch even more, encouraging and sustaining these different opinions. We must find ways to break into this 'boom or bust' mentality in board rooms by reducing the very friction that stimulates greater innovation thinking.

So how can we achieve this? Openness, trust, partnership and valuing diversity readily spring to mind. But more importantly, we need to build an innovation road-map to scope out the innovation landscape and dynamics.

Building real education into an innovation road-map

One place to start is to design a more comprehensive road-map of innovation made up of its integral parts. The more innovation is seen and the people who enact it are recognized, not buried in plain sight, the more it will be valued. The more we see 'it' and what it contributes the more people become essential to their place within this mutual value proposition needed between the organization and its employees. The overarching plank of offering education on innovation is the real 'glue' as this is where the value of knowledge is central, in my view, to the way forward.

Knowledge, innovation knowledge, is made up of an awful lot of different things and this is where the real education comes in, front and center in developing new practices, in training, in educating, in

translating this knowledge into lasting value. The more people are valued, the more they become 'sticky' and the more they use their knowledge, then it becomes mutually re-enforcing as their organizations grow to appreciate their worth. We need a new social contract between organizations and the people they employ and that should be on mutual appreciation of the ability to translate knowledge into new value-generating outcomes together. The more we identify the educational parts, the more we appreciate innovation's complexity, but we also see the rich potential in the rewards that become achievable in taking this new route. Education leads, it provides the appropriate focus and this we can derive the training and knowledge to be applied, so we can improve results and innovation outcomes.

Knowledge exchange is the way forward

Organizations need to move well beyond their lazy reliance on best practice comparison and explore emerging practices. But that takes many into the realm of increasing uncertainties, and most people and organizations are not trained for this. They anticipate risk by reducing all the variables within risk and play safe with just being incremental. Is that wrong? No, as long as we have our reward systems geared to short-term performance, while we measure leadership success the way we presently do, and the shareholder just expects consistent dividends as their part of the equation and is quickly mobilized to force change if it does not meet this immediate aim, we head down the wrong path. We are not sustaining, we are destroying. We need to focus on competence-enhancing not competence-destroying. To know the difference we need education on recognizing what makes up the difference.

I can't change our prevailing system but I can point to alternatives and suggest we have other options, pursued by the few, which are more visionary and brave and often disrupting the accepted.

We need to start by reducing ambiguity

One real key for the few seems to be the ability to reduce ambiguity in concepts, visions and focus. This reduction of ambiguity improves the chances of a successful outcome because everyone involved can understand the challenges, relate to the possibilities and constantly track back to the vision to obtain and advance the evidence of its possibilities and potential with a meaningful contribution. They do this mostly through knowledge exchange.

I'll discuss this and what it means in the next article, then we will delve deeper into how knowledge is 'made up' and can be delivered to achieve a greater openness, convergence and capacity for innovation to take hold and thrive through its mutual dependencies. I'll cover the 'coupling' within the innovation system, convergence and the dangers lurking in innovation. I'll delve even further into where absorptive capacity builds our knowledge capacity and a pathway to apply fresh learning so we can all innovate better. Finally I'll explore further on how we need to recognize the layers within innovation that do need to shear against each other to generate positive innovation tension and ways to find the space to allow innovation to grow differently through an innovation learning process.

The Real Value of Knowledge Exchange

In this series of three articles Paul Hobcraft explores the value of knowledge and education for innovation. Continuing the discussion, in part two the author investigates the various aspects of modern knowledge exchanges including their psychology, mechanisms and complexities that govern them.

Published: January 17, 2013 |

In the first part of this series of posts I asked you the following: “How do we advance the learning needed for innovation?” Do we (all) agree that we need to improve the education around the subject of innovation and its management? Furthermore, can we view it as an essential discipline that should be fully recognized within our organizations? Today this discipline is not central and it is not driving the business. Surprisingly, when you stop and think about it, today it is the older, more established practices that drive the business while innovation is a responder. I think this needs reversing.

We live in knowledge-based societies and we need to constantly increase our understanding of the available building blocks for innovation. This will enable us to take hold of our endeavours, grow our wealth, and create the next generation of products or services.

Our challenges are greater and more complex today

Modern society is becoming a fairly intense place. It is growing in complexity and forcing us to constantly reduce our reaction times (i.e. we need to ‘read and react’ far quicker than in the past). We are being challenged to adapt our existing practices and processes within innovation and asked to speed up as much as possible. In fact, the CEO’s primary concern has become to quickly fill the innovation gap. Secondly, they worry over the innovation delay.

We need to find new mechanisms that allow better transfer of innovation-related knowledge

The appreciation of knowledge – its collection, its understanding and interpretation and its transformation and exploitation – is not valued as highly as it should within this need to speed up, to close gaps and reduce delay. Also, this modern context offers less incentive to promote higher value outputs that "fuel", in turn, new innovation activity.

Hence, the production and reproduction of knowledge become key actions that drive activity and give direction to innovation. As we create, accumulate and disperse knowledge we become more engaged outside our own walls. We need to constantly seek a comparative advantage and achieve this goal by embracing more and more open exchanges for it is these types of exchanges that allow the flow of knowledge to be captured.

Another observation is that we are becoming increasingly interdependent and permeable to disturb what "we think we know" to "what we need to know". Relationships, networks, dedicated resources as well as searching, collecting and assessing knowledge all rapidly contribute to our growing need for new capacities. Therefore, we need to build the appropriate capabilities to translate and exploit this new knowledge. Our "need to innovate" is becoming our sole means to survive and prosper in this highly competitive world. Thus, if we want to continue to create, knowledge is an integral part of the process.

Finally, knowledge cannot be left to chance. Instead, it needs a coherent, structured way to be captured, used and valued. Once again, "our knowledge" is our potentially most highly prized tradable asset – an asset that allows us to build, explore, experiment and ultimately produce innovations.

Content and context are the essential partners

As we look at innovation today, we often see that one of four aspects (setting, content, purpose and process) is either missing or under-served in the context of what an organization is trying to achieve. The 'setting' in which innovation is placed in is usually the most poorly described part. The 'content' on the other hand can fill rapidly, but this tends to be full of endeavour and activity as the results have not been as clearly articulated as they should. The 'purpose' and the 'process' make up the remaining two parts. Knowing the purpose comes from setting the context - this clarifies the inputs that form purpose. Lastly we have the process, or the means that allow the activities to flow through.

In most cases, none of these four dimensions is as solid or robust as it should be, and increasingly, new knowledge fails to be translated due to these weaknesses within our management of innovation.

Absorptive capacity becomes essential to understand

As we rely increasingly on our growing 'interactions and linkages', we need a system to manage this. Absorptive capacity is a concept first introduced and explored by Wesley Cohen and Daniel Levinthal in a 1990 article entitled "*Absorptive capacity: a new perspective on learning and innovation.* This concept can provide us the knowledge learning path for building a real "knowledge exchange" process.

On the practical side, we can learn to exploit both innovation and learning in the following ways:

Internally

1. *Learning by searching* – as we formalize our search activities we absorb new understanding that leads to new innovation potential.
2. *Learning by doing* – as we accumulate knowledge gained, we gain experience and the more we establish repetitive activities through exploring, prototyping methods and reduce the ad-hoc activities the more we can learn and gain from this approach.

3. *Learning by using* – as we utilize and adopt more, through exploration and adoption of new products, new technologies and methods, we are opening up to experiment and possibilities to extend this new 'experience or knowledge' even further.

Externally

1. *Learning from advances in science and technology* – as we absorb new discoveries we capitalize on adding further value or diffusing this even more.
2. *Learning from inter-industry spillovers* – the increasing value of cross industry collaboration and exchanges is going beyond 'just' spillovers, they are increasingly significant to our learning and applying different approaches that lend themselves to a greater commonality.
3. *Learning by interacting* – we increasingly go 'across' organizations and equally move 'up and down' them to seek out interactions with other sources of knowledge and growing expertise. These are further augmented by external collaborative exchanges and cooperation activities allowing for deepening knowledge, greater experimentation and interactions to deliver potentially 'richer' innovation.

Summing up, each of these six points of learning needs exploiting in the context of innovation.

We are equally in need to recognize differences and value in tacit and explicit knowledge

The distinctions and discussions about tacit and explicit knowledge are equally important to our "knowledge exchange". Ikujiro Nonaka discussed four different modes of knowledge conversion and subsequent organizational learning in his SECI model

1. Socialisation (the conversion of tacit knowledge to tacit knowledge);
2. Combination (the conversion of explicit knowledge to explicit knowledge);
3. Externalisation (the conversion of tacit to explicit knowledge); and
4. Internalisation (the conversion of explicit to tacit knowledge).

To explain this we need to distinguish between tacit and explicit I outlined some thoughts in a previous article "Tacit Knowledge Rich in its Innovation Implications" and further explored this in "Making the Appropriate Impact". The critical message here is that tacit knowledge vs. explicit knowledge is where the interaction between these two is vital for the creation of new knowledge that leads to future innovation potential.

Knowledge for innovation needs to build in both formal and informal ways

I would like to end this post by noting that absorptive capacity and richer combinations between tacit and explicit knowledge deserve to be acclaimed for the vital part they play within innovation's future health. Without new knowledge we cannot explore the potential for innovation – and this is a fact.

Reducing Confusion, Promoting Diffusion

In this series of three articles Paul Hobcraft explores the value of knowledge and education for innovation. Concluding the discussion, in part three the author reviews faulty innovation practice and argues in favor of recognizing innovation as a value enhancing and organizational life-changing event we need to move towards increasingly.

Published: January 31, 2013 |

How are we going to engage more people within the innovation process – how to get these individuals "doing"? After all, we learn far more and gain added experience when we are actively tackling a task. Still, organizations are always, it seems, consciously or unconsciously reducing the experimental part to any person's learning. We need to reverse this and encourage the surveying of new skills, the gaining of new experiences and probing of established rules to value them. We might also challenge and push them. Innovation is certainly not a friend to rules, established protocols and traditions. 'It' looks to attract the diverse opinions, the people willing to speak up and become heard as it is these people that observe and feel when (and if) something can be changed.

Coupling, uncoupling and recoupling in complex systems

Innovation is a complex system where the coupling, uncoupling and re-coupling of technology, design, product, organization, art and science, to name just a few of the parts that need to constantly engage for worthwhile things to happen, is important to recognize.

By encouraging experiences you 'form' less and 'allow' more to evolve…

Organizations have real difficulties with this 'fluid need' – or allowing innovation to evolve as a natural tendency; they often attempt to 'file away' something that can be related too much within the experiences. This is why encouraging enquiry is so important. By encouraging experiences you 'form' less and 'allow' more to evolve before you make the final judgement. All in all, innovation needs to remain 'fluid' for as long as possible – usually until the final commercial 'freeze' when the aforementioned experiences emerge as a combination new to the world.

We can also come back to the intrinsic nature of innovation. It needs different resources, skills and knowledge to come into play. It is this very diversity of opinion, that, if allowed, gives us the chances of advancing innovation and achieving a more radical solution. Perhaps we 'promote' incremental innovation far more than we realize because we don't go out and engage in broader communities due to not having the time, the inclination or the understanding of the real value of this action. One other reason is because we are simply not encouraged to do so. Hence my argument: we need a clear innovation knowledge exchange structure in place – one that has an effective absorptive capacity.

Openness and convergence

All the well-argued aspects of open innovation aside (e.g. "all knowledge does not reside in one place"), the more we interact, cooperate and network, the more we share knowledge. A frequent regret nowadays, though, is that the discussion 'brief' is getting tighter and tighter so as to speed up conversations and decision-making. The faster we use targeted searches and 'lock-in' solutions, the more we ignore weaker signals that are out there and overrule even greater innovation opportunity. In other words, we chose to push past these weak signals due to a often 'hard' metric – namely, that we work strictly on the 'brief' unless we simply trip over something so blindingly better.

Although we are certainly evolving, the more we open up, the more we do need to add slack time to explore. We are in danger of losing this opportunity in our focused intents. Open innovation will not yield all it can promise if we don't allow for more open knowledge exploration that might be out of the 'norm' but still within the parameters of what we are wanting to achieve – innovation that offers compelling competitive advantage – and we often can't achieve that if we remain blind to those 'weak signals' that knowledge exchange that is encouraged to recognize, value and assimilate.

The dangers lurking in innovation

We all speak of enhancing innovation capabilities but it can be both competence-enhancing and competence-destroying elements that we mean. We build on "preferred" routes to enhance our existing capabilities as this is traditionally viewed as the way to become 'competitive'. Actually, the very opposite can and does happen. Significant breakthroughs, changes in conditions, markets or technologies leave us increasingly unprepared. More and more disruption is occurring and with this increasing obsolescence.

We need to acquire entirely new skills not the ones layered on pre-conceived ideas and practices, but the ones that promote new "fields of activity". We need more intensive thinking processes that explore the emerging new edges of innovation management.

A great example of new fields of activity is MIX

A real valuable example of this is the work taking place within the Management Innovation eXchange (MIX) – an open innovation project aimed at reinventing management for the 21st century. The premise: "while "modern" management is one of humankind's most important inventions, it is now a mature technology that must be reinvented for a new age". This is a meeting place where The MIX is designed for all those who are frustrated by the limits of our legacy management practices. It's for all the inspired thinkers and radical doers who believe we can — and must — find alternatives to the bureaucratic and dis-empowering management practices that still rule most organizations.

"The MIX represents a pioneering attempt to use the open innovation model to help accelerate the evolution of a critical social technology — its management. Rather than struggling in isolation to reinvent the processes and practices of management, MIX members can leverage the expertise and insights of a global community of like-minded innovators. The success of the MIX hinges on the

willingness of its members to share their ideas and experiences, which depends in turn on a belief that more can be gained by sharing than by hoarding. Truth is, there's a lot more management innovation going on in the world at large than in any particular organization. Thus the MIX gives every progressive management innovator the chance to share a little and learn a lot".

Learning favours the brave

To sum up, we certainly need to educate the organization more than ever. Innovation within the organization needs not just greater recognition of its vital parts, but also of its status as a value enhancing and organizational life-changing event that we need to move towards increasingly. Innovation needs to be recognized as a clear discipline, a new expertise that is as powerful as Marketing became some decades ago.

The more we embrace change and recognize innovation demands more of our time, the more we seek out knowledge that 'feeds' innovation. And the more we 'push' for learning, the greater chance we have of thriving in a challenging world.

The expectation 'bar' needs to be raised and those practicing innovation, need to change their game. Learning and Education always should start at home. The earlier we learn, have open interactions and form linkages, the more we will be ready to advance innovation into what it must become: a discipline highly valued for what it contributes with in terms of wealth and growth potential.

We need to find the determination to underpin the capacity for innovation, lying within us all, and that comes from knowledge and education through collaborative learning. So what is your capacity for innovation really like?

http://www.innovationmanagement.se/2013/01/31/reducing-confusion-promoting-diffusion/