

**May Blog – Open minds and innovations in learning  
21 May 2007 – 1 June 2007**

**Guest bloggers**

**Bill Jarrard (Founder of Mindwerx International and Co-Director of Buzan Centre:Aust/NZ)  
Jennifer Goddard (Director Buzan Centre:Aust/NZ and Co-founder of Mindwerx International)**

**Open Minds and Innovations in Learning**

The May blog is titled 'Open Minds and Innovations in Learning.'

Please join guest bloggers, Bill Jarrard (Founder of Mindwerx International and Co-Director of Buzan Centre:Aust/NZ) and Jennifer Goddard (Director Buzan Centre:Aust/NZ)

Mindwerx International website - <http://mindwerx.com/portal/content/view/25/176/>

**How to participate**

USQ Staff - type '@staff' after your log in name (eg. sankey@staff) followed by your USQConnect password.

Non USQ users - click on 'create new account' and nominate a username and password.

**LTSU reserves the right to edit or delete any and all postings if it does not add to the topic, is offensive, repetitious or contains clear errors of fact.**

**Why open minds? Why creativity and innovation?**

Hello and welcome to the May blogging session, 'Open Minds', which will be focussing on the sub-themes of creativity and innovation.

Why choose those topics? The USQ Vision Statement refers to improving learning and increasing access through innovative pedagogy and the creative use of technology. (**Vision and Mission Statement**)

And the Group of Eight universities, in their statement on Creativity & Innovation, observe that : 'Intangible assets - our human and intellectual capitacity - are overtaking traditional assets - land, labour and capital - as the drivers of growth.'

**Creativity & Innovation.**

**Defining Innovation - A Starting Point - Bill's First Entry**

- **view**
- **edit**
- **track**

Hi, and welcome to the Open Minds and Innovations in Learning Blog.

This the first time I have been blogging so I hope I can add value and insight to the discussion. And I hope to not bore or break any guidelines in doing so. I do hope to engage you in discussion, so please feel free to add things on topic.

Also note that I have a busy week this week and am away from my computer most days, so will try to have a look each evening over the week. Thanks for your patience. Let' get started...

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We were asked to address the question of what is Innovation, and as you will no doubt appreciate this is a large topic. To start I draw on some information from our website, where we attempt to start the exploration.

What we know is that despite years of research, there is no 'one size fits all' definition for innovation. Yet it is important to understand what innovation means for you. Modern research on innovation goes back to Joseph Schumpeter (1883-1950) who said innovation encompasses the entire process that starts with an idea and continues through all the steps, from initial development to producing a marketable product that changes the economy.

Schumpeter suggested that innovation - new products, methods of production, markets and sources of supply - were not caused by the business cycle, but a cause of change outside the business cycle.

At its most basic, innovation is the application of new potentially disruptive ideas, whether embodied in products, services, or work processes in organisation, management, financial or marketing systems.

A web search quickly reveals many types of innovation. However, the following have been of value to organisations we work with:

- Product (goods and services) Innovation
- Incremental Process Innovation
- Value Innovation
- Open Innovation
- Experience Innovation
- Management / Business Model Innovation

To get more information go to <http://mindwerx.com/portal/content/view/34/185/>

Whilst studying our Masters of Entrepreneurship and Innovation we researched many types of innovation. As a result we don't believe any one type of innovation or copying others is the answer to the development of an innovation strategy. Instead we need to explore the various types of innovation and find the correct context for it.

Let's start the discussion here.

What is your experience with defining innovation? What have you seen and what have been the advantages and drawbacks encountered.

Bill Jarrard

### **Innovation and its connotations - and open learning.**

I find the mention of the word 'innovation' causes me to balk. I don't react to it as I do to 'creation', as in creativity. Inventions are fun and amazing and I am mostly either amused or in awe of those who come up with way out ideas for doing something in a different way.

Is the definition of open learning here meant to be the creative free type of learning with association and experiment? Is open learning what happens with an open mind? Or is open learning a means of presenting a curriculum to many spread far and wide, in a flexible and negotiable form? I'm not clear on this, particularly when you mention de Bono and Buzan, and we're discussing this in a university that is struggling for survival.

In public organizations like ours though, innovation - the word, and all it represents seems to connote rapid, ill-prepared-for change for the sake of being competitive. In private small business it doesn't count at all, unless you are wealthy (my opinion). Without access to innovation one falls by the wayside economically speaking.

The reader may not get my meaning here, so sorry for the inadequacy of my expression - but - what is the correlate of economy in a bodily sense? Let's say it's our existence/subsistence. I don't believe that innovation applied to life in this sense is as destructive and divisive as it is in an organization (funnily enough). As a community it gives us hope and satisfaction. Why is it that the shrinking feeling, and slightly cynical reaction I have at the thought of innovative change in an organization never goes away.

As for open learning - it used to apply to learning by correspondence or anywhere outside an institution, but using the institution's curricula and resources.

I am a bit jaded with innovations in learning, as an ex-teacher trained in 1969, who had to abandon all structure mainly in mathematics and English, to allow creative thought and deeper understanding of numbers and computations, and now am seeing the consequences with native English speaking university level students unable to write a grammatically correct sentence in English. As far as maths I am not qualified to comment.

In my area of work, librarianship, we are barely able to implement one new product or system (innovation/invention) when another supercedes it and all that training and cost has gone out the door! It feels as though I am a hamster in a hamster wheel - or more popularly, 'like a rat in a cage'

Our interpersonal relationships have suffered from too much innovation too fast. I contradict my earlier point here, but ... I can't explain this, and if anyone has read this far they won't be able to either!

#### **Innovation and its connotations - and open learning.**

Armati (I hope this correct)

Thank you for sharing your concerns and feelings on innovation. In some ways it demonstrates what I am getting at, in that in 70 years of research we may not be much closer to understanding what innovation really is. I wonder if we even can. My view is that without context it is impossible to be clear.

Innovation is by nature, new and potentially disruptive. Any wonder then why we feel uncomfortable and may resist. Many innovations are only visible in hindsight, and so some are seen as very welcome (eg. as a innovative cure for AIDS would be). However innovation is always preceded by creativity of some sort and that can be very uncomfortable as it is often floppy, strange and far fetched, causing concern and a lot of 'failure'.

These are the challenges we all face, whether in learning or business or in life.

Good luck with it.

Bill

#### **Do schools kill creativity?**

An odd question? Creativity expert Sir Ken Robinson explores the role of schools in 'killing' creativity, in his video presentation on the 'TED: Ideas Worth Spreading' site.

Among his challenging observations are: 'If you're not prepared to be wrong, you'll never come up with anything creative', and, 'We don't grow into creativity, we grow out of it'.

He explores these and other issues in his presentation, which should evoke a response from anyone involved in education, learning, and teaching at whatever level and in various contexts.

It's a short presentation, and certainly worth viewing.

### What next?

Thanks to everyone for engaging in this very challenging and interesting exchange of ideas, and I encourage you to continue. We've decided to extend the blogging session for another week, as some people have indicated interest in contributing but haven't quite made it this week.

Regular bloggers will be aware that we have in the past conducted a 'debrief' on the Friday of the blog week, but we are replacing the face-to-face debrief with the extended blog period to allow for more interaction between campuses and guests.

Further, as mentioned elsewhere, we would like to know who might be interested in us forming a Creativity Exchange Network here? (See Bill's separate blog entry and attached explanation of the scope of such a network.)

### Tools for facilitating Reflective Practice

- [view](#)
- [edit](#)
- [track](#)

One part of creativity and innovation is to reflect on the process at various stages. A colleague of mine has just finished her theses for her Master of Education at Curtin University.

Her study explored "the potential synergy between mind-mapping and the mode of reflective practice advocated by Donald Schon. Schon advocated that reflective practice should move from the rational-analytical domain, into an area which also encompassed holistic and intuitive aspects; in effect engaging both left and right brain cortical faculties. Mind-mapping is a visual learning strategy which encourages the brain to utilise both the right and left hemispheres of the brain".

What are some tools that you use to help reflect on your creative thinking?

Does anyone keep a journal? if so, what would be some suggestions for effective journal writing for the emerging learner?

Jennifer

### Reflective practice, journals etc

Hi Jennifer,

This is a timely question, as we (and many other universities) are considering the use of portfolios to capture aspects of learning and teaching, including scope for both personal and professional journals, for students and for staff too.

One of the key elements in reflection is being able to capture an experience in order to consider it from a range of perspectives, so I guess retrievability is important, as is scope to represent experiences in different forms e.g. tools which can accommodate visual, auditory, kinaesthetic (or other) aspects of learning, and thus increase the opportunities to respond from different modalities.

Marilyn

### Innovation

- **view**
- **edit**
- **track**

What can a Dean of Students with an economics background contribute to this discussion? Probably not much. But in economics we make a distinction between invention and innovation. Invention is the initial creative 'thing' that produces new technology - which is merely a 'way of doing things' that can be embodied in process or machinery. Innovation is the process by which an invention is diffused throughout an economy. The gift of the inventor is in seeing new ways of doing existing things or seeing new things to do. The gift of the innovator is to see how invention can be harnessed. Sometimes the inventor and innovator are one. In the context of higher education it might be helpful to think of inventors as those who are pushing the frontiers of thought and empirical research on learning and teaching and innovators as those who give themselves to practising research-based approaches to learning in the classroom (literal or virtual).

### **Who decides between inventors and innovators?**

Rod,

You're too modest as usual...I think the distinction between inventors and innovators is very useful. However, the boundary between is often blurred, as you acknowledge. This brings up a question of who decides who gets to invent and who gets to innovate, and according to what criteria, particularly in an organisational context, such as universities for example. I think this is an important question because the 'invention' part you refer to can sometimes take considerable time without much tangible return. At the same time, evidence suggests that an 'ethic' or 'culture' of invention needs to be nurtured for results to occur. Any thoughts on this from an organisational perspective?

Henk

### **How do you nurture a culture of intrapreneurship?**

Hello Rod and Henk,

In the knowledge era adding value through harnessing intellectual capital has taken centre stage. The question then is: how do we encourage inventions and innovations that are commercialised across the academic, industry and government sectors?

No matter whether the inventor, innovator and entrepreneur, who disrupts the economic equilibrium by bringing a new product or service to the market, or intrapreneur, who operates within an existing organisation and either adds a new product to the company portfolio or sets up a spin-off, are the same person or a team of people is involved, fostering a winning culture of initiative, collaboration and accountability across a nation is the key to facilitating both intrapreneurship and entrepreneurship.

Maria

### **Link to leadership?**

I agree with that Maria. But it still leaves the question of how do you foster a 'winning culture', and who judges and implements it. I think, particularly in an organisational context, it probably comes down to inspired leadership, or are there other ways?

Henk

**Do we need a festival to be innovative**

- [view](#)
- [edit](#)
- [track](#)

Last night we finished teaching this semester's "Creativity and Innovation" for the Master's of Entrepreneurship and Innovation at Swinburne University and one of the students asked how can he keep being reminded of all the tools he learnt?

How can we be reminded to be creative?

Is having a innovation festival a good thing to remind us to be innovative?

I know that when I first came across a lot of the tools, I kept them close on my desk and created opportunities to 'stumble' over the information. Having little handy cards and tip sheets help as well as writing in your diary.

I found the best way to learn the tools is to teach, which is why I gave up my day job to co-found the Buzan Centre and eventually become a master trainer. The main incentive was to help my brain (with dyslexic tendencies) learn and be more creative.

Though we can't all have the luxury of following our passions and there is a daily grind and all the demands on our time.

What are some suggestions you have that will help readers keep their desire to be more innovative top of mind?

Jennifer

### **Prompting creativity and innovation**

Hi Jennifer,

Your student's question raises an interesting issue: Not just how can we be reminded to be creative, but do we need to be reminded to be creative?

Are we all capable of creativity? All the time? Or are there 'environmental' factors and particular events which encourage us to respond more creatively? For example, the current changes in weather patterns, and limited access to water might be seen to be encouraging more creative thinking about a range of solutions.

Do we all have a role to play in such scenarios, or do we rely on acknowledged leaders in science, education etc?

What might happen if we all adopted and used the creativity and innovation tools regularly? Linking this idea with Bill's question about rewarding innovation (incentivation), what implications might there be with increased demands on resources such as funding to support research?

Is there such a thing as too much creativity and innovation?

Marilyn

### **The Incentivation and Rewarding of Innovative Behaviour**

- [view](#)
- [edit](#)
- [track](#)

I hope I can get lots of input back on this.

At last year's (December) Innovation Summit, the question was posed as to whether or not organisations seeking success through innovation, should incentivize and reward 'innovative behaviour'.

On the surface, the simple answer would seem to be a resounding 'of course'. However on consideration it is much harder to answer. Consider the implication.

Innovation is often simply defined as the application of new ideas that create value. That is we know it is innovative when we 'see' it as having value. That is when the thinking or behaviour has been 'successful'.

But innovative behaviour precedes that success, and is more often not recognised as innovative behaviour while it is going on. In addition, a lot of that behaviour, what I call creative thinking, does not result in a successful innovation. In other words it is hard to 'know' that a particular behaviour is indeed innovative.

This implies that we are usually rewarding the innovation or the successful outcome, rather than the behaviour.

How then can innovative behaviour or creative thinking be rewarded?

I have some thoughts on this, but would welcome your input.

Bill

### **Creativity and innovation versus organisational structures**

Bill,

You identify the main dilemma of creativity and innovation. I think that creativity and innovation need to be nurtured for the reasons you have outlined. However, this can only happen if you develop a culture of creativity and innovation, which is underpinned by the recognition that ideas may take time to produce any (economic) value. Indeed, many innovative ideas may never produce an economic return...

This does not sit well in organisational structures characterised by economic rationalism and the requirement to 'measure', 'count' and 'justify' outcomes in yearly reports. In fact, it could be argued that this type of organisational structure works in an opposite direction to creativity and innovation. If this is the case, perhaps creativity and innovation are more likely to occur outside of such organisational structures.

The example of Hollywood is sometimes mentioned in this regard. Within Hollywood's structure, innovation and creativity (and I don't want to enter into a debate here about how 'creative' the outcomes actually are...) largely occur outside of organisational structures. The creators basically need to 'sell' their ideas before they are funded. Some would argue that organisations can adopt a similar structure within their organisation.

Whether creativity and innovation are recognised is another issue, which is less likely to occur in traditional organisational structures. Recognising creativity and innovation is a particular skill, and unless a particular manager possesses that skill, there tends to be nowhere to go beyond the 'first post' for a creative idea/individual. In contrast, in the 'Hollywood model' that idea can potentially be taken to many different potential investors, and has thus more chance of getting picked up and coming to fruition.

I wouldn't say that this model is ideal, as it still doesn't reward the behaviour in a straightforward sense, but it has more avenues and opportunities to reward the outcomes.

What do others think?

Henk

## Creativity and the Hollywood Model

Henk...

Creating a culture that supports creativity and innovation would seem to be the best way to 'reward' innovative thinking. What then does this look like?

The Hollywood model is interesting in that it appears (I am not expert here) to have a 'loose-tight' approach. That is the industry is full of specialists with tightly defined roles, significant financial oversight, unbending rules on safety, union wage rates for the vast majority of people, and in some cases dictatorial direction where creativity even in actors is discouraged. And yet we get some marvelous innovation.

But of course we get much much more that fails in every sense of the word - artistic, financial etc. Innovation is usually surrounded by many failed attempts.

What Hollywood does is use strategies it knows work, patterns that are proven. On occasion it tries new things and takes risks in other areas. Then it is a numbers game - if we try 100 times we may get 5 hits. This is generally the same with successfully innovative organisations.

Of course not everyone has the money that Hollywood seems to have, and only a very small percentage of movie makers ever get all the money they need. But some of these make the odd true innovation.

My sense is that mostly we recognise the innovative outcome, and reward that rather than the behaviour which we cannot know will be successful.

Bill

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- [view](#)
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By **Bill Jarrard** at 2007-05-22 13:52 | [Bill Jarrard's blog](#) | [add new comment](#) | 49 reads

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By **huijser@staff** at Wed, 2007-05-23 09:51 | [delete](#) | [edit](#) | [reply](#)

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Bill

### **Rewarding innovation**

Marilyn Dorman

Interesting question, Bill. I note that the Victorian Government offers (monetary) prizes for scientists, engineers and innovators through the Victoria Prize and Victoria Fellowships' and there are Victoria Fellowships for early career researchers. Incentives and focus appear to vary from State to State.

Perhaps a broader consideration is the Nation's response to stages of innovation. That is, do we accept that some early attempts might not succeed, and if so, is that viewed as failure, or a step on the road? (

I think there has to be a shared ethos which values and nurtures creativity and innovation in various forms, and is able to encompass a longer-term view of creative processes. Rewards might also take different forms: payment; space and time; resources; organisational approval; even peer interest and support might be viewed as a reward. Other examples?

### **Organisational structures that encourage a culture of innovation**

Organisational culture and structure are very strongly interrelated - you can't expect a culture of innovation to flourish within traditional, multilayered rigid structures. Such structures go hand in hand with command and control cultures. Cultures that rely on compliance in fact stifle creativity, or people use their creativity to beat the system.

To stand good chances to succesffully foster a culture of innovation/intrapreneurship, we need flexible or organic structures. The successful operation within such structures, though, is in turn highly dependant on peoples' capacity/preparedness to perform in a highly challenging environment where again innitiative, collaboration and accountability are essential attributes.

BTW, given that it takes time to move from a culture of compliance towards a culture of intrapreneurship, the latter is considered to be essential to creating sustainable competitive advantage.

Maria

### **Organisational structures that encourage a culture of innovation**

Maria...

Interesting view on the need to move from rigid structures in order to create a culture of innovation. It seems clear that this is true, and certainly most would agree. It is my experience that it is so - mostly.

I have worked with very rigidly structured organisations, such as the Army, and what is interesting is that even in these highly structured places innovation of sorts does flourish. And it sometimes seems that the more rigid, the more innovative it is.

This raises a paradox that perhaps innovation is 'forced' by a wide variety of external forces. I have also seen very loosely run companies with a open structures struggle to be innovative, simply because there was no pressure to be innovative.

Certainly culture and structure are inter-related and important. But focus and need are strong motivators, without which innovation seems to be lacking.

Bill

### How upgrading our Neck Top Computers helps with Creativity and Innovation

- [view](#)
- [edit](#)
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Hi

One way to look at Creativity and innovation is the underlying thinking behind it. To use a cliché, our brains are the most powerful Bio computer but when was the last time we upgraded them? or added new software? I am sure we would all like to find the defrag button at the back of the head to get rid of some of the trivia.

I found as I was studying my Masters of Entrepreneurship and Innovation, I really needed to have powerful thinking tools that allowed my brain to radiate new ideas and make random connections as well as manage all the ideas and thoughts.

Mind Maps in particular are very helpful for this and are helpful with all round study skills.

I would be interested in who has used Mind Maps and how they have helped with thinking and or challenges in getting started.

Happy also to answer any questions on how to help free up our mind to enable creative thinking using Mind Mapping or creative thinking techniques such as deBono's Lateral Thinking.

cheers

Jennifer

### Tools and a 'toolshed'?

Hi Jennifer,

When we talk about tools (for upgrading our necktop computers', the question arises as to how to maintain those tools and where/how we might use them. On the latter point... are there optimum environments for creativity and innovation to occur? For instance, do you recommend quiet spaces, or lively, stimulating environments? What experiences do others have?

### Regards using mind maps

Hi Jennifer,

I have used concepts maps in some of the research projects I have worked to analyse and synthesise qualitative and to

generate and abstract conceptual frameworks and I often use the approach when taking notes in presentations and seminars

I also found to be innovative and creative, often merely requires one to look at a particular situation in different way and to question why are we doing something in particular way and is there a fresh and/or better way to do this

Kind regards Michael

Marilyn

### **Mind Mapping**

Hi Jennifer,

I agree that the brain can get clogged, and thus settles for rigid structural thinking. I don't think we should get rid of the trivia though; trivia can be used in creative ways!

But I agree that mind mapping is a very effective way to stimulate creative thinking. I have long used it as a technique in the classroom to get students to think beyond squares and to get them to make potential connections between apparently unrelated concepts. This is particularly useful in first classes where students don't know each other, as mind mapping/brainstorming creates enthusiasm and can work as 'social gel' (as a useful side effect).

I am familiar with DeBono's concept of lateral thinking; can you remind me what sort of techniques he suggests to stimulate this? (I think this may have gotten lost in my cluttered brain...)

Henk

### **Lateral Thinking**

Hi Henk

thanks for your thoughts - great to hear that Mind Maps can be used to help break the ice with students

The De Bono's Lateral Thinking tools is a series of individual tools that helps take our brain off the path and shift sideways (i.e. laterally. The main ones are:-

Random Association/Random Word - Pick a word at random (i.e. open the page in a dictionary and choose the first noun or strong verb) and think of its attributes, then make a random connection with your focus.

i.e. Focus = ideas for uses for a paperclip.

Random word = Hat.

Attributes of Hat = protection, keep flies away

Idea= use paperclips in place of corks to keep insects away

Why A, Why B, Why C - With the existing idea, issue, process or product, Ask Why A(Alternatives)- what alternatives are there.

Why B, - It is there Because

Why C, - What can we Cut?

Concept extraction/Concept Fan - Ask what is the concept behind this idea? and how else could I do it.

Idea for use of paperclip is earrings,

One Concept behind earrings is 'jewellery'

Other Jewellery could be - necklace, bracelet, ring etc

PO (Provocative Operation) is the other major tool and a bit hard to explain in a blog - basically you create a provocative statement by flipping an assumption.

i.e. if the focus is to generate ideas to increase circulation of a newspaper.

Assumption - people read newspapers

PO= newspapers read me

How could a newspaper read me? It could read my needs i.e. be customised to what I want to see, display in the order I prefer.

So you can see that they are simple tools and easy to learn, and need a bit of patience to play with them and open up your mind

has this been useful?

cheers

Jennifer

### **Lateral Thinking**

Hello Jennifer,

thank you for your update on lateral thinking. It started an avalanche of thoughts in me and how I used it in the past on a (nearly) day to day basis.

All creative techniques are interlinked. I normally use them intuitively jumping from mind mapping to different forms of lateral thinking and back.

The key is to get the ball rolling. Mind mapping is a good and easy way not only to brainstorm for new ideas but to group them, to create clusters and venture further. In times of need I carry a little note book around where I add new ideas or thoughts on a daily base (mostly on the toilet...). Being a visual person my mind map is normally a mixture of verbal notes and lots and lots of sketches.

If you would like to try something new as in lateral thinking try this one: If you want to create a new design for an egg cup, think of being an egg and of how you would like to feel in an egg cup of any sorts. This little example often creates quite a stirrup amongst my students but exemplifies quite well what lateral thinking is all about.

Cheers

Sven Reichelt

USQ Fraser Coast

### **Who should be involved?**

The May edition of VirginBlue's inflight magazine carried an article by Cameron Cooper, titled 'Innovate or Evaporate'. Cameron quotes Graeme Wood, co-founder of Wotif.com as saying: "You really can't have an innovative culture if you've only got one branch of the business being innovative. The others would pull it down and stop it in its tracks.'(p. 82)

Is this likely to be the scenario in universities? How interdependent are faculties, support areas, and other communities, and what happens if an ethos of creativity and innovation isn't shared?

Marilyn

### **The Creativity Exchange Network**

One of the fascinating things about working in the creative thinking and innovation space is the wide variety of approaches, techniques and tools used. My own background in the field started 20 years ago when I first met Edward de Bono and started using his tools with my management team.

Later I trained hundreds of people in these tools, along with the Herrmann Brain Dominance Instrument and Tony Buzan's Mind Mapping. For the last nine years this has been the sole focus of Mindwerx, and we also started the Buzan Centre, where my colleague Jennifer Goddard is now Master Trainer in Mind Mapping, Range Reading and Memory Development. (**slnovation in Learning**)

- **view**
- **edit**
- **track**

One of the fascinating areas of Innovation that I have been pondering in recent times is how learning is delivered. As a lecturer in a couple of Masters subjects on creativity and innovaion I often feel that I am continuing to teach in a very old model. As a corporte trainer we of course use multi-disciplines to get our messages across and involve participants and we have taken that into the classroom. But still it seems very old style.

With the advent of new technologies I wonder how far we can go in innovating the learning process. I recently had discussions with a colleague where I presented the idea of the 7 to 11 minute training program, delivered to the learner's PDA while they had a latte in the company cafe. The idea of course is not new, and the technology is available, but I wonder where and how we might realise it.

More recently I have wondered about the virtual world of learning, where perhaps places like MySpace, YouTube and Second Life (and maybe even World of Warcraft) will become learning centres. Another colleague was telling me the other day, that his company now has its own Second Life virtual world, where employees from around the world can hold meetings just as if they were together.

Where will it all go, and what is the impact of technology on learning? What experiences do you have, and what future does your Imagineering conjure up? Please share your thoughts.

Bill Jarrard

### **Conceptualising learning environments**

One of the challenges we face in university contexts is how best to prepare students for contemporary workplaces, with generic and transferable skills and knowledge, as well as specific attributes and capabilities valued by employers. Built into those generic skills should be ones which help graduates to thrive in changing contexts, and to succeed as lifelong learners. 'Initiative and enterprise' are on the list, implying these are widely accepted and valued. But is that always the case?

Are there instances where segments of society are typically resistant to initiative and enterprise (or creativity and innovation)? Are university expectations unrealistic?

Marilyn

### **Using Concept Map/Mind Map in presentation**

Hello everyone

I have just recently proposed changing the way I 'present' information to my students (oncampus and external) through the use of Concept Maps and short segments of study materials, lectures etc.

The course is in the field of computer engineering - hardware and software design. It is quite heavy with technical information and also introduces a number of significant new concepts to students.

The primary point of entry for students may take the form of a browser or pdf? -based concept map that hyperlinks to 'segments' of study material and short 15 min recorded lectures, as well as technical data, tutorial material, interesting websites etc.

I anticipate this going on CD, and if possible I'd like to also set up the material so students could load segments and view them on a PDA or similar device.

Students would be encouraged to follow their own path through the material guided by the requirements of assessments and information from the lecturer. [This could be in addition to the standard linear study materials, provided in print.]

I had also thought that I would take a similar approach in oncampus lectures, by introducing a topic area and having the class indicate where we go next from the concept map. I would give each segment of lecture basically the same as the 15 minute segments used on the CD. After each segment is covered, ask tutorial like questions or have a short discussion.

My aim is to put the student more in control of their study and have them 'investigating' the material to meet assessment requirements.

Regards Mark

### **Food for thought**

Hello Mark,

As you already know I'm very enthusiastic about your commendable initiative. On reflection, though, I was wondering how you were going to scaffold the delivery of the new model, i.e. support the process of handing some of your control over to your students? Also, are there any year 1 courses that are already building students' confidence to take more and more control of their studies?

Maria

### **Scaffolding**

Hello Maria

yes how to scaffold this is an important area.

Not having done this before, I was planning to initially 'guide' students to a few starting points in the material (via the concept map) pointing out a few elements they will need to complete the first assessment, and there after prompting them to investigate other areas by posing them questions related to the content of the assessment.

I would ideally like to have the students drive their discovery as a group through postings on a discussion area, and encourage the sharing of their findings.

In class I may have to use other means to get the class interacting with me and the content, again via the concept map approach, and maybe a packet of lollies?

Regards Mark

## **Exploiting Creativity**

Bill,

You ask some very interesting questions, and you are right that they are big questions. As Marilyn notes in a further post, creativity is increasingly valued and vital in a 'knowledge economy'. With this in mind, thinking creatively about learning spaces is very important, but I think it is only part of the picture. The ultimate goal here is to get students to think 'outside squares'. However, that is not where it should stop. Spaces alike MySpace and YouTube are full of creativity, but I think the role of a university education is also to learn how to channel that creativity into something that can potentially earn a living. In other words, I think it is important that 'entrepreneurship' is taught in tandem with creativity.

Henk

## **Exploiting Creativity**

Henk...

I could not agree with you more about the need for entrepreneurship, intrapreneurship, or just doing something - whatever we prefer to call it.

To paraphrase an old adage - Creativity without innovation and action is a lot of fun, but often a waste of time. Action without creativity, while seemingly productive, is usually just doing the same old thing.

In my courses on Creativity & Innovation we look at aspects such as creative thinking during Opportunity Evaluation, and innovation in the creation of organisational environments that support the future vision. Without this sort of context, creativity and even innovation is usually wasted.

Bill

## **Learning/Virtual Worlds/New Technology**

Bill,

I've been using new technologies for quite sometime in my T&L which is probably a natural thing given I teach computer science. What I feel now is that the mainstream is starting to catch up and technology is becoming more accessible and usable.

This introduces the problem that technology is used in T&L just because it is new and novel - not because it adds any pedagogical value. In addition, because some are so keen to use the technology they simply use it as another means of content delivery and don't use it for the purpose it is best suited. This has occurred with the mainstream use of the web where flat 2d paper-based content is put in electronic format and placed on a webpage.

The same thing is now happening with 3d worlds. My experience in creating and using 3d virtual worlds (<http://www.alivex3d.org>) is that these 3d virtual worlds simply imitate the real world. Is there any benefit in recreating a virtual representation of a classroom? I'm not saying that there isn't in the right circumstances for the correct purpose, however 3d online multi-user environments can be much much more.

When I started my 3d project the first mistake I made was to think how I could parallel everything in the real world into the virtual 3d world. e.g. what would a whiteboard look like? what would a slide projector look like? Let's make the classroom, look like a real classroom. The fact is that a 3d whiteboard or slide projection is much more difficult to read than a traditional flat one. In the real world - sure you might be at the back of the classroom and off to the side and have a poor view of the board - but why would you go into a 3d virtual world to get the same "bad experience".

Instead of going into a virtual classroom to sit next to virtual students and watch the virtual teacher write on the virtual whiteboard and give a lecture about, say, microbiology, why not be able to log into a 3d virtual environment where you are a minute bacteria and see and experience the world of microbiology at this level.

My approach now is to leave content which works best in 2d, as 2d and enhance this with embedded 3d content where appropriate.

With so many new technologies available in both 2d and 3d, online and offline course delivery my "imagineering" for a brave new world of e-Learning is a **single source** knowledge base for learning which students can "tap" by whatever means they wish.

### Learning/Virtual Worlds/New Technology

Hi (not sure of your name)

Thank you for sharing your insights and experience. Very valuable and spot on. Using innovative technology to do the same old things seems to be less than optimum, although often delivery and engagement is enhanced, which has value.

The challenge is to leapfrog experiences whenever possible, rather than just 'prettifying up' things. Of course this can be hard to do, which is why creative thinking is needed to fully exploit new technology.

We must stay in touch as this area develops. Thanks again.

Bill

## Creativity and Imagination

- **view**
- **edit**
- **track**

One of my favourite t-shirt epithets is Albert Einstein's "Imagination is more important than knowledge." It's been around for a while. Imagination is the driver of creativity.

I wonder does anyone dispute this as a truth? Without imagination, the ability to conceive of the "other", to pose "?" about the apparently immutable, then surely nothing of substance has ever been achieved in human progress.

Encouraging students to use their imaginations in the service of creativity is the daily business in the School of Creative Arts. That and giving them the discipline, and the skills-tools to enable their creativity.

Students and staff work in a mentored, project-based, team mode. In my discipline field, our creativity engages us with the big and little variations on the "living organism" known as a theatre production.

I will be very interested in this blog on one of the big, big issues in education.

### Children and creativity

Hi again,

I have just come across a report on research from the University of South Australia, which offers some insights into potential influences on creativity... (For further information on the study, go to <http://www.unisa.edu.au/news/2007/170507A.asp> )

In part, the report states: 'Children who are exposed to lots of word-based stories at a young age appear to develop far more creative ideas about the future than children who experience mostly visual stories, a University of South Australia study shows.

'Participants ranging in age from 15 to 80 years took part in the study, which looked at the impact of the stories that they heard, saw or read before the age of about 10 years...

'The children who had not experienced word-based stories through reading or being read to as young children, but had watched television instead, did not have the same breadth of imagination as the teenagers who encountered word-based stories,' Dr de Roeper said. "None of them felt they had learnt anything from their favourite stories, which were mostly television cartoons."

Dr de Roeper's findings are in accord with the comments of other researchers. Former Adelaide Thinker-in-Residence and neuroscientist Baroness Professor Susan Greenfield, in her 2003 book *Tomorrow's People*, notes that books alone can foster and tap into our imagination, while a paper published by the American Academy of Pediatrics Committee on Public Education in the journal *Pediatrics* (vol. 107, 2001) refers to research indicating that children exposed to "light screens" (televisions, computers, interactive games) do not build the sensory pathways that enable imagination and creativity in the same way as those whose early learning has been through the spoken and written word...'

Perhaps we should be considering the chronology of creativity?

Marilyn

### **Creativity and Imagination - which one is more important?**

Hi Kate,

Even though from both artistic and scientific perspectives imagination seems to be more important than creativity, I'd say that from a systems thinking perspective it is the synergy between the two that makes a difference/ adds value. If we see existing knowledge as a resource for building blocks and imagination as the magic glue that creatively uses existing knowledge to create new knowledge, then we'll find ourselves in a situation similar to the chicken and egg one, wouldn't we?

Maria

### **Creativity and imagination**

Marilyn Dorman

Kate,

Just wondering if you see a link between the 'living organism on stage' (the live performance), and the virtual world Bill refers to in his message re Innovation in learning? For instance, do both take us out of our 'traditional' ways of seeing the world, and expose us to new possibilities?

Does the creative response occur through being able to stand back and reflect (as an observer), or through being one of the performers?

Marilyn

### **Creativity, reflection and learning**

Kate and Marilyn,

I would like to take your question further Marilyn, by asking what the role of 'reflection' is, and for whom? When you ask

about whether 'the creative response' occurs for the observer or through being a performer, I think the lines are kind of blurred between those two. The observer may reflect, but that reflection depends to an important extent on how much that is stimulated by the performance (or film/video, virtual art work, etc.), which in turn is highly context-dependant. Reflection for the performer is more likely to occur before and/or after the performance.

Given the complexity of 'creativity' itself and how we define that, my question is: what role does reflection play in teaching/learning about live performance (and/or virtual performance)? (Self)reflection has obvious benefits in many educational contexts, but does it also have the potential to 'stifle' creativity? In other words, does too much reflection potentially kill off the impulse that leads to creativity?

Henk

### Reflection and Creativity

Henk, Marilyn..

I think the issue of reflection and creativity is an interesting one. In some cases we have seen the 'pressure' of time urgency, either forced or induced, spark creative ideas. This is the nature of some of the lateral thinking tools we use, where by engaging people with a specific technique in a given time, we see ideas emerge.

What is interesting is that this often creates ideas that we happily admit we would not have come up with without the pressure applied. However, we often find that those ideas must almost always undergo some form of incubation or reflection afterwards before they are developed into something innovative.

We would say that both stages of this are integral to the 'creative' process. I have no answer as to whether both are always required, but suspect that they usually are.

This then implies that one reason creativity is seldom realised into innovative outcomes is that when the 'pressure' of the brainstorming session is ended, no time is allocated for reflection and incubation of ideas.

My feeling is that too much reflection prior to creative ideation stifles lateral thinking activities, while too little reflection post ideation results in minimal output.

Bill

### On reflection...

Marilyn Dorman

Hi Henk,

One response is that reflection helps us to see relationships between potentially disparate things or events. As such this can contribute to creativity. It might be that the performance suggests different interpretations of events and meaning, compared with, say, textual representations. Daniel Pink ("A Whole New Mind", 2005) notes that 'People who hope to thrive in the Conceptual Age ... must become adept at analogy -- at seeing one thing in terms of another.' Perhaps the scenario you are posing suggests an emphasis on analysis rather than synthesis which might help to make some of those 'connections' leading to creative responses?

### Wrapping up

- [view](#)
- [edit](#)
- [track](#)

Just a note to thank everyone for contributing to the blog discussion, for the questions you posed and perspectives shared, and for those who took the time to read those contributions. We hope you have found it a useful experience, and welcome any further thoughts or feedback.

There are numerous points which could be further explored, especially in relation to learning in general, and to university contexts in particular, as well as to the wider communities in which graduates circulate/contribute.

If you are interested in participating further through joining a Queensland-based Creativity Exchange Network, please email me directly:

Marilyn Dorman, [dorman@usq.edu.au](mailto:dorman@usq.edu.au)

Thanks again for your time and interest.

Marilyn