"The 21st Century Alchemist discovers a new learning laboratory"

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Introduction

"It is challenging to find a widely accepted definition of blended learning, and even more difficult to find a core set of literature on blended learning mythologies or framework." Jones, N (2008 18. P. 137)

We have four light switches in our hallway. Every morning, I try at least two before I switch on the right light. Should I mark the switches?

Yesterday, I gave my partner the alarm code to my office, so that he could (very kindly) finish off some decorating work. My only way to remember the code is visual. I look at the keypad and punch in the numbers unconsciously. So, he is surprised when I cannot remember the numbers and in what sequence. Well, he rang from his mobile with the sound of the alarm (which was blasting VERY LOUDLY) and desperately punching in the numbers I had given him. Unfortunately, only a call to my colleague confirmed that I had given him the right numbers, but in the wrong order! Should I have the code along with all my usernames and passwords tattooed on my arm?

According to a report in the Telegraph recently, in one year in England, 82 patients underwent operations on the wrong part of body. The World Health Organisation (WHO) has devised a surgical checklist, similar to pre-flight checks between pilots, designed to eliminate errors through miscommunication. Many NHS trusts have adopted the WHO checklist as a routine safety measure.

I have spent the last thirty years working in vocational education and training in the UK and believe that the time has come to build a more systematic approach to our craft. This paper aims to explore what frameworks exist to assist the design and delivery of blended learning in an increasingly complex and digital world of learning.

Objective
I set out to ***identify or create a practical and effective framework to assist in the systematic design and delivery of bespoke programmes of blended learning.***

The following aims shaped my thinking:

- To trial and evaluate creative ways to increase confidence and competence in digital literacy
- To explore ways to make better use of limited resources (in a recession) and deliver measurable results.
- To identify the most effective blended learning approaches to learning & accreditation in the acquisition, development and use of digital literacy.

The situation

In late 2009 I found myself in a bewildering and enticing world of new technologies and the need to design learning which is more effective and efficient, with reducing budgets and less learner time availability. My team of ten freelance associates were facing the prospect of reduced income due to government funding cuts and my research was related to how to use technology to save time, money and effort. Hardly a winning combination of factors especially when our learning programmes are mainly designed using a labour intensive experiential learning model!

I aimed to discover ***what components make an effective blended learning experience and take advantage of Web 2.0 technologies.*** In order to better understand the situation I have begun to learn and apply a lexicon of new terminology. The key terms and definitions which have affected my research are set out below.

- ***Blended Learning*** – "Blended learning systems combine face to face instruction with computer mediated instruction" Graham, C. (2007)
- ***E-Learning*** – "E-Learning is defined as all forms of electronic supported learning and teaching, which are procedural in character and aim to effect the construction of knowledge with reference to individual experience, practice and knowledge of the learner" Wikipedia (2010)
- ***Experiential Learning*** – "is a client focused, supported approach to individual, group and organisational development, which engages the learner, using the elements of action, reflection and transfer" Beard, C; Wilson, P (2002)
- **Instructional Design** – "the analysis of learning needs and systematic development of instruction … that if followed, will facilitate the transfer of knowledge, skills and attitude to the recipient or acquirer of the instruction" (Wikipedia, 2010)
- ***Web 2.0 Technologies*** – "web applications that facilitate interactive information sharing, interoperability, user-centered design and collaboration on the World Wide Web" Wikipedia (2010)

The context.

My company, Longden Ltd is a niche private training provider established in 1992, with a team of freelance associates from diverse backgrounds. As the Managing Director of the company and the author of this report, I am especially grateful to LSIS and the IFL for the bursary support to carry out this research project.

The focus of the research was on work carried out as part of a Transformation Fund project, "Enjoy IT Here" which aimed to "*building digital literacy in great locations" and was focused on informal adult learning.* I believe that the freedom which came from non Ofsted inspected work enabled us to be creative and to test out ideas without fear of the consequences – in my view, this is a vital aspect of innovation. One tutor commented at the start of the project, *'The design, development and implementation of blended learning within numeracy has opened up a world of opportunities and choices for the tutors and learners. It has been a steep learning curve – a bit like climbing a mountain: hard work, exhausting and exhilarating all at the same time - AND the view from the top has been worth every painful step and stumble along the way'*

The problem
My research focused on a new funded project delivering informal adult learning, "Enjoy IT Here", carried out by my company over a six month period from October 2009 until March 2010. The context of the research was also shaped by our newly created E-Strategy and the introduction of our Virtual Learning Environment using Moodle (www.longdenmoo.com) nicknamed the Moo!

This rich and complex mix of new technology, new projects, new Ofsted inspection and qualification frameworks driven by the Qualifications Credit Framework (QCF) presented us with a challenging and exciting opportunity or a terrifying and paralysing set of problems depending on your point of view. This viewpoint could change from day to day, as I discovered over the six months. A number of questions immerged over the course of the research and I aim offer some answers to these questions in this paper. The questions are:

1. How could we best **identify and understand Web 2.0 technologies and apply** to new learning situations with a team of (self professed) IT phobic associates and deliver results to satisfy the funding partners?

2. How could we apply Reg Revan's action learning principle from the 1960's **that our learning is greater than or equal to the pace of change**?

Learning ≤ Change

3. How could we **implement our E-Strategy** and still deliver successful programmes that meet the needs of the client and/or the funding partners and that do not rely mainly on face to face instruction?

4. How could the Longden team (of self confessed IT phobics) acquire the **skills, knowledge, desire and confidence to use new technologies to improve their teaching and learning practice?**

5. How could we turn all of the project learning into ***an effective framework to assist in the systematic design and delivery of bespoke programmes of blended learning*** which offers a pedagogical spectrum from E-learning to experiential?

The Enjoy IT Here project

"Enjoy IT Here" – This project which was administered and supported through NIACE, where we aimed to create an Online Village Learning Environment to enable 1000 over 50s to build confidence and competence in using digital technology to enjoy a new interest or skill. We planned to work with 10 Pass IT On Guides, a corporate partner, charities and meet in ten enjoyable venues.

We worked with a team 16 of people from our assessor pool and some new people and we worked with a range of venues to promote our informal adult learning with a total of 470 taster sessions of 1-3 hours delivered in 17 different locations.

Key features of the project

We carried out learning in a wide range of venues and delivered to groups of 2 people to 60 people. The list below summarises what we did.

1. We set up as a Virtual UK Online Centre to promote Online Basics and My Guide
2. The Volunteer Inn in Chipping Campden – Online Basics
3. Heart of England School in Balsall Common – Using the Internet and Online Basics
4. Mickleton School – Using the Internet
5. George Betts School Using the Internet and Online Basics
6. Blackheath Primary School Using the Internet and Online Basics
7. Small Heath School _ Developing Teaching aids using e-learning
8. The College Arms – Digital Media night
9. The Horse and Jockey Digital Media session
10. The Bupa Care home in Alveston, Stratford upon Avon –Wii Fit and Nintendo DS
11. The Stratford Parkinson's Disease Society in Studley Digital Media session with Wii Fit and Nintendo DS
12. PowerPoint training session at Studley Castle
13. Parent Support Advisors in Walsall to train their parents Using the Internet and Online Basics
14. Support Work in Schools Learners at the Botanical Gardens Using the Internet and Online Basics
15. Shakespeare Country members on how to use social media to boost income
16. Training for our own associates on Moodle and Digital Media
17. Ensign Centre - Blogging and creating a Ning
18. Set up "The Confident Cow" Ning for School Support Workers
19. Created an online version of our Numeracy Level 2 Skills for Life Programme
20. Introduced the ITQ qualification using Moodle

The project engaged largely with the over 50s. We decided to make the opportunity available to any age group in the end as it transpired that it's not just the over 50s who lack confidence in using digital media. The biggest fear factor was displayed by members of our own team.

"It was a personal challenge - I really struggled at the start of the project probably as I couldn't envisage the output but also due to own low level of IT knowledge, interest and confidence. This was a steep learning curve which pushed me to the limit when I experienced a period of feeling lost and uncomfortable - got through it and glad I did as I have gained immensely!" Longden Tutor

Intended Outcomes
We worked on achieving a number of improvements to the way we design and deliver our programmes, namely:

- *Enhancing the learner experience* - improved teaching and learning, and improved learner satisfaction.
- *Greater inclusion* – reaching learners who are not engaged.
- *Extending learning opportunities* – anytime and anyplace learning.
- *Improving tutor skills for learning and teaching in a digital age*
- *Application of our culture change process*
- *Implementation of our E-Strategy*
- *Streamline the design and delivery processes for effective blended learning*

Anticipated Outcomes: Hard indicators

- To have 10 tutors confident with Digital Literacy
- To assist a minimum of 20 learners who can use digital tools
- To introduce a Virtual Learning Environment (VLE) which is used by all participants

Anticipated Outcomes: Soft indicators

- Make best use of limited resources
- Maximise efficiency by enabling online assessment and feedback to cut down on travel costs
- Inform the Teaching and Learning community about the digital resources available
- Harness the power of informal learning and experiment with new ideas
- Refine our toolkit and ENJOY the process

Methodology

The research activity involved working with a sample of four associates and twenty learners over a period of six months from October 2009 to March 2010. We used Appreciative Inquiry as a means of capturing the positive aspects of our work, through two workshops, before and after the trial period.

Appreciative Inquiry (often known as AI) was developed by David Cooperrider and Suresh Srivastva in the 1980s. The approach is based on the premise that ***'organisations change in the direction in which they inquire.'*** So an organisation which inquires into problems will keep finding problems but an organisation which attempts to appreciate what is best in itself will discover more and more that is good. It can then to use these discoveries to build a new future where the best becomes more common

Cooperrider and Srivastva contrast the commonplace notion that, "organising is a problem to be solved" with the appreciative proposition that, "organising is a miracle to be embraced". Inquiry into organisational life, they say, should have four characteristics. It should be:

- Appreciative
- Applicable
- Provocative
- Collaborative

Appreciative Inquiry is a particular way of asking questions and envisioning the future that fosters positive relationships and builds on the basic goodness in a person, a situation, or an organization. In so doing, it enhances a system's capacity for collaboration and change. Appreciative Inquiry uses a cycle of 4 processes focusing on:

1. **DISCOVER:** The identification of organisational processes that work well.
2. **DREAM:** The envisioning of processes that would work well in the future.
3. **DESIGN:** Planning and prioritising processes that would work well.
4. **DESTINY** (or **DELIVER**): The implementation (execution) of the proposed design.

The basic idea is to build organisations around what works, rather than trying to fix what doesn't. It is the opposite of problem solving. Instead of focusing on gaps and inadequacies to remediate skills or practices.

We chose Appreciative Inquiry as our research method in order to focus on the positive aspects of what turned out to be a very frustrating and fast moving project. Our associates commented that the research interviews had been very positive and motivating for them.

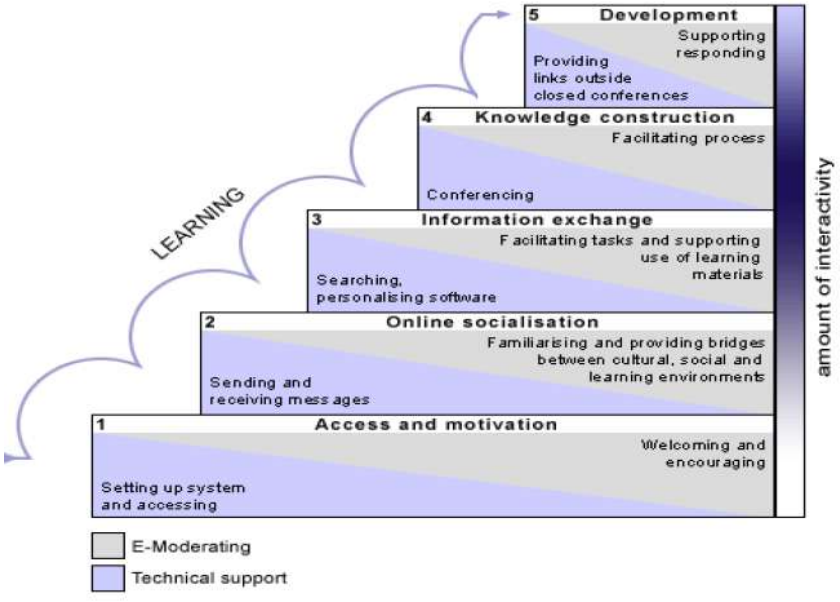
Literature Review

There are many references in the literature to the lack of frameworks for blended learning, especially for bespoke learning programmes. Most of the accepted frameworks are solution focused, on how to deliver a specific course and in my view offer a narrow perspective. There are many questions to be answered including, what is the role of the tutor/instructional designer/trainer? This question has been brought into sharp focus during this project as two of our tutors have been observed at least eight times by their tutors for their DTLS qualification. All of the assessment criteria in these observations are focused on what happens in the face to face instruction process. As a feature of a blended learning process, we have discovered that a good majority of the learning does not take place in the classroom, and yet this is not currently part of the assessment and observation process.

According to Jones (2008) "The pervasiveness of blended learning has, however, increased the diversity and debates on its definitions and models. In higher education, there is neither standard nor simple framework to scaffold blended learning for all disciplines."

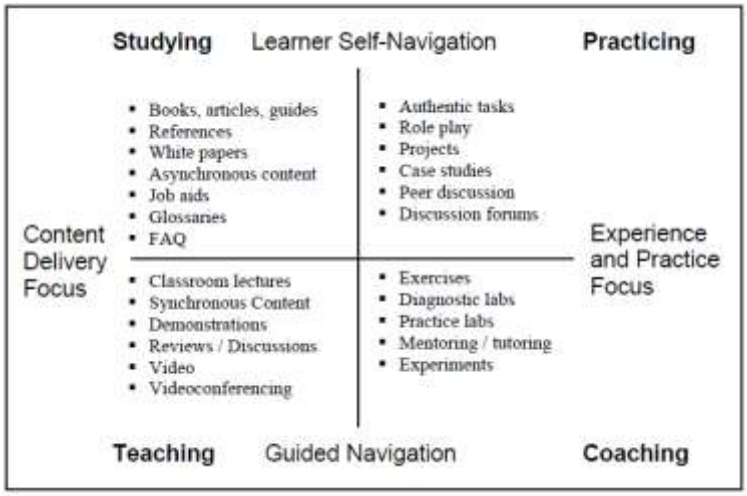
The UK Open University (OU) was founded on the idea of blended learning long before the phrase came into common use. Gilly Salmon carried out research on blended learning or online education in the UK from 2000-2007. Salmon describes how, through the social interaction, learners feel a sense of belonging to the learning group. This idea is clearly presented in Salmon's model for e-moderation. In accordance with Maslow's Hierachy of Needs model, her stage-like model consists of 5 phases as shown in Figure x.

However, the weakness of Salmon's E-moderation model is that it assumes that the primary learning method is online. I would argue that the design of the learning process needs to be much more holistic.



As we have introduced the Virtual Learning Environment and adapted our Numeracy Level 1 programme to offer an alternative online version it has become apparent that a key pedagogical concept to bear in mind is that of interaction. How do you engage learners and create a desire to learn online in a focused and motivating way. Ellen D Wagner (2006) states that 'Interaction strategies will be the conceptual glue that will hold distributed, distant, e-learning experiences together'

According to Wenger and Ferguson (2006) world-wide Sun Microsystem corporate have adopted an ecology framework as a guide to their blended learning model. This model enables them to map the current possibilities as well as new possibilities of technology and learning design for IT training in global corporate companies. The major strength of this model is that it contains a broader and stable view of the totality and at the same time takes account of changing components.



As Ellen Wagner goes on to describe, 'Blended Learning models provide essential methodological scaffolding needed to effectively combine face-to-face instruction and arrays of content objects. The ingredients of the blend must accommodate learning needs and instructional design' I believe that our challenge is to build a system which starts with organisational objectives, through to the learning domains and then selects the most appropriate e-learning and face to face methods to meet the complexity of needs.

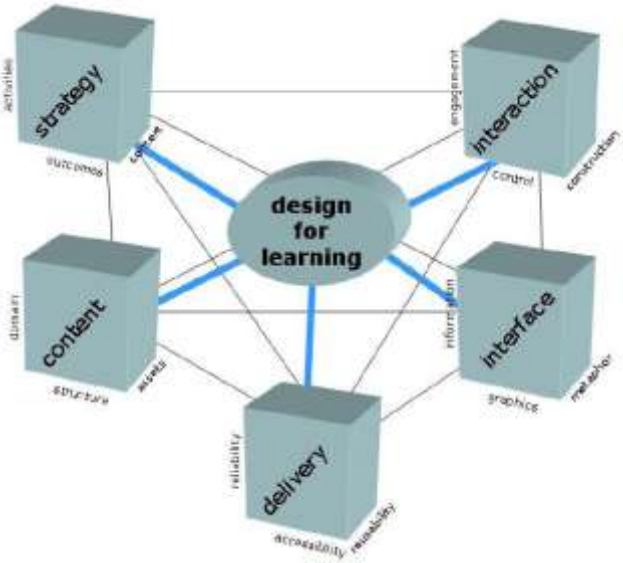
In the light of this, Charles Graham (2006) offers a useful definition, which is that 'Blended Learning systems combine face-to-face instruction with computer mediated instruction'. I feel that the word "instruction" is misplaced as much learning does not occur through instruction. My own view is that Blended Learning offers a process which mixes a range of learning methods from E-Learning to experiential.

In the USA, two new "for profit" universities have been established and Sims (2006) from Capella university offers this controversial statement ***'if instruction represents a form of delivery, and if we are beyond delivery, then we have reached a stage where we are beyond instruction'***

Prensky (2004) argued that today's learners need to be engaged or they will become enraged, and that the solution may be revealed through game-based curricula. In arguing for such an environment, Prensky identified a range of phrases and actions 'Create your own heroes … Encounter … Engage … Fly … Explore …Challenge … Master … Amass … Build … Perform … Research … Lead …Don't work alone …… concluding that these terms were not exactly descriptions of today's classrooms and courses.'

Sims (2006) reflects on the emergence of online education and e-learning as the leading contender to confront the traditions of face-to-face teaching and learning, stating that it is not only a case of better understanding the characteristics of online environments, but also timely to assess the relevance of theories and frameworks informing the design and implementation of those environments.

He offers the Design for Learning Model below;



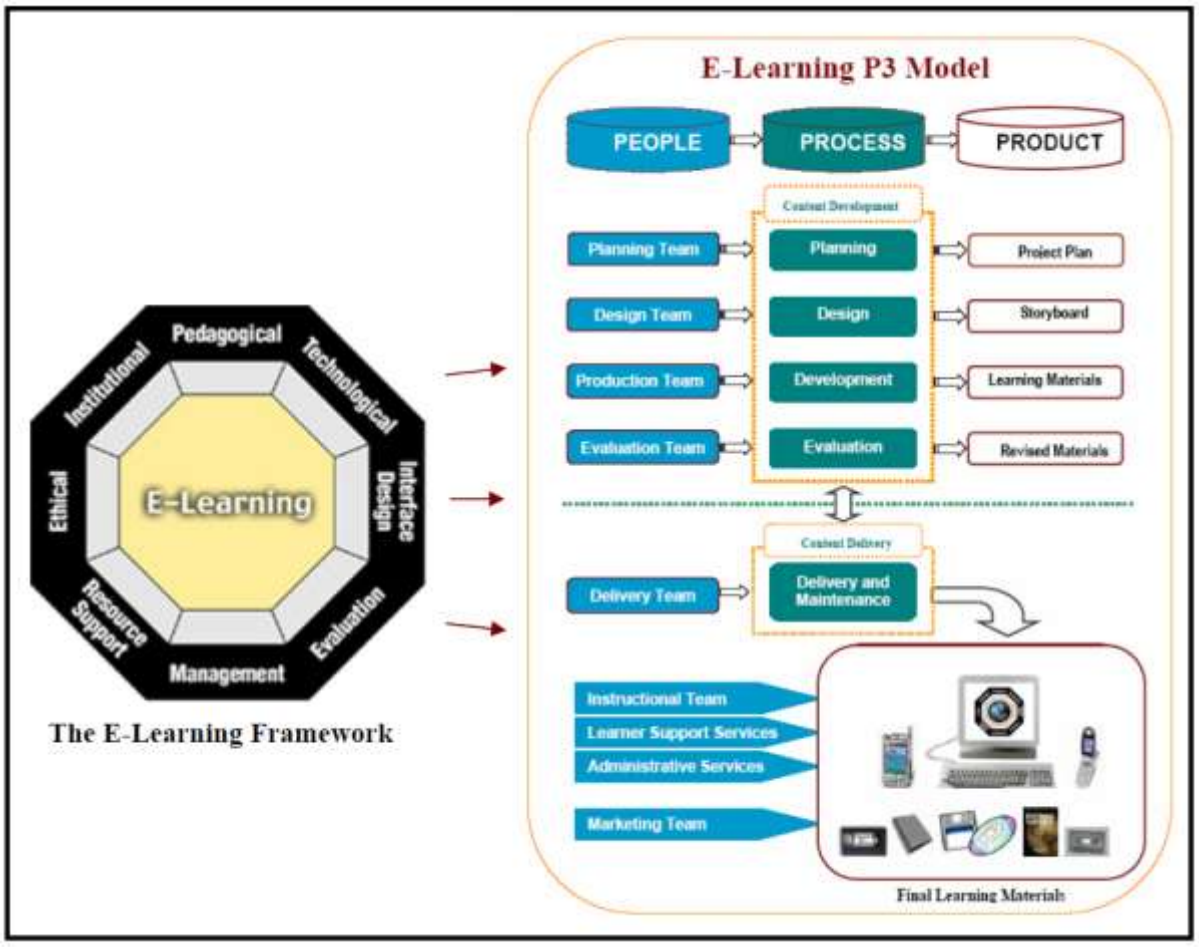
Another view is put forward in their paper, A clue, a quest and a blog - experimenting with engagement in orientation in (2007) Duff, et al, state that the blended process must be "collaborative and result in all three cogs working together – social, academic and institutional. This will achieve student engagement, retention and success."

Cogs of Engagement Model

This view is supported by the growing use of easy to use and create web 2.0 technologies for "Social Learning" A term applied to learning which occurs through social networking. The term can be confusing, however, as the term is commonly understood to mean Social learning theory Bandura (1977) explains human behaviour in terms of continuous reciprocal interaction between cognitive, behavioural, and environmental influences.

To support this view, Singh (2003) comments, 'Blended learning is not new. However, in the past, blended learning was comprised of physical classroom formats, such as lectures, labs, books, or handouts. Today, organisations have a myriad of learning approaches and choices. The concept of blended learning is rooted in the idea that learning is not just a one-time event—*learning is a continuous process.* Blending provides various benefits over using any single learning delivery medium alone.'

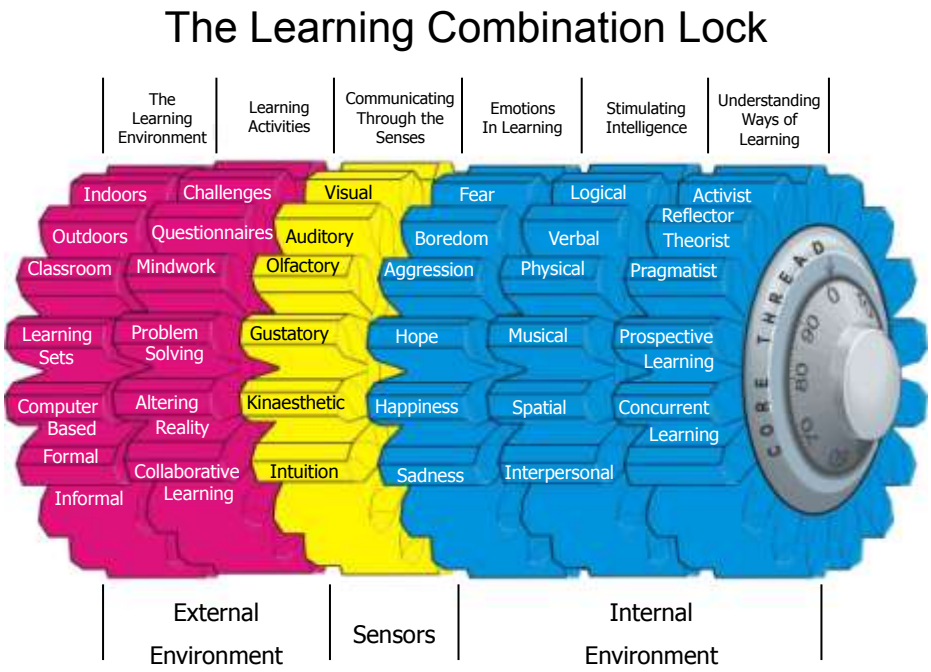
Badrul Khan's blended e-learning framework, referred to here as Khan's *Octagonal Framework* enables one to select appropriate ingredients. Khan's framework serves as a guide to plan, develop, deliver, manage, and evaluate blended learning programs. Organisations exploring strategies for effective learning and performance have to consider a variety of issues to ensure effective delivery of learning and thus a high return on investment.



The Learning Combination Lock

In the paper, Towards a Theory of e-Learning: Experiential e-Learning, Colin Beard uses the metaphor of the combination lock is used to illustrate the complexity of the many possible ingredients that may be used to unlock learning potential.

He states that one strength of the model is that there is a clear synergy between theory and practice. Pragmatic learning design questions of where (environment), what (activities), how (senses), hearts (affect), minds (cognition), and learning and change, all significantly corresponding to a consideration of learning through *being, doing, sensing, feeling, knowing* and *changing* (Beard, 2007).



The Learning Combination Lock (Beard and Wilson, 2002; 2006)
The metaphor is a strong one, but does not go on to define how this can be used to address specific learning aims and meet business needs with reference to Blooms Taxonomy.

My review of the literature has uncovered some strong concepts and tools to assist in identifying a practical and effective framework to assist in the systematic design and delivery of bespoke programmes of blended learning.

What have we found?

Here are the results of our learning in relation to the five key questions.

1. How could we best **identify and understand Web 2.0 technologies and apply** to new learning situations with a team of (self professed) IT phobic associates and deliver results to satisfy the funding partners?

We enjoyed an opportunity to 'play' with lots of new technologies, which are now available at very low cost or free. Some of the most useful are listed below.

1. http://moodle.org/ Virtual learning environment
2. http://www.ning.com/ - Social networking site
3. http://www.wix.com/ - Flash website creator
4. http://hotpot.uvic.ca/ - Learning objects creator
5. http://www.dimdim.com/ - Web based meetings
6. http://www.nottingham.ac.uk/xerte/toolkits.htm - E-Learning toolkit
7. http://www.flickr.com/ - Sharing photos
8. http://www.slideshare.net/ -Sharing PowerPoint presentations
9. http://www.skype.com/intl/en-gb/home - Free phone calls to other Skype users
10. http://www.onlinebasics.co.uk/ - 5 easy to use online learning modules
11. http://www.myguide.gov.uk/myguide/MyguideHome.do - 28 free online modules
12. http://www.campaignmonitor.com/ Email campaigns that can be easily tracked
13. http://screenr.com/ - instant screencasts which can be used for teaching

The most useful has been Moodle as it helped us to create a virtual infrastructure in four months, with one person working on it for two days a week. We enjoyed so much freedom and creativity over the last 6 months as we have played with, tested, applied and evaluated web applications that have made our E-Strategy a reality in less than 6 months. In a previous life, my company took six years to develop a Learning Management System. During this project, we used Moodle and it took us 6 days!

This Moodle site now gives us the freedom and the power to create and deliver online learning at little or now cost to be able to offer 24/7 access for learners. We opted for Moodle as it is open source, easy to use, has a support network and is favoured by many large organisations across the world. We experimented and learnt how to use the VLE, upload resources, link activities, design chunks of learning, adapt worksheets into interactive learning objects and identified existing numeracy resources which were adapted for interactive use within the VLE.

A spectacular failure on our part was to introduce of one of the easiest to use tools, Ning, to a large financial services company as a means to offer a communication tool to support a large scale IT implementation project. The Ning was built and tested with the Training and Change teams and when the Information Security Team got involved, they blocked the idea as their policy was to prevent users accessing sites other than through the Intranet. As a web-based application, the Ning was not accepted. The introduction and testing of so many new IT tools proved to be wearing and challenging to our associates. One very enlightening comment is;

'It was a good experience for me, because I have started to believe in myself again and that I can achieve more. I have become a bit of a gadget freak when I always used to shy away from technology. I now have enthusiasm to be adventurous with technology. Also I have had an opportunity for my brain to work again!' Events manager

2. How could we apply Reg Revan's action learning principle from the 1960's **that our learning is greater than or equal to the pace of change**?

Learning ≤ Change

We adopted a process of learning by doing, and sharing the learning with each other as soon as we were able to use any of the tools. This learning was reviewed formally in our team meetings. To quote Aristotle, "The things we have to learn before we do them, we learn by doing them."

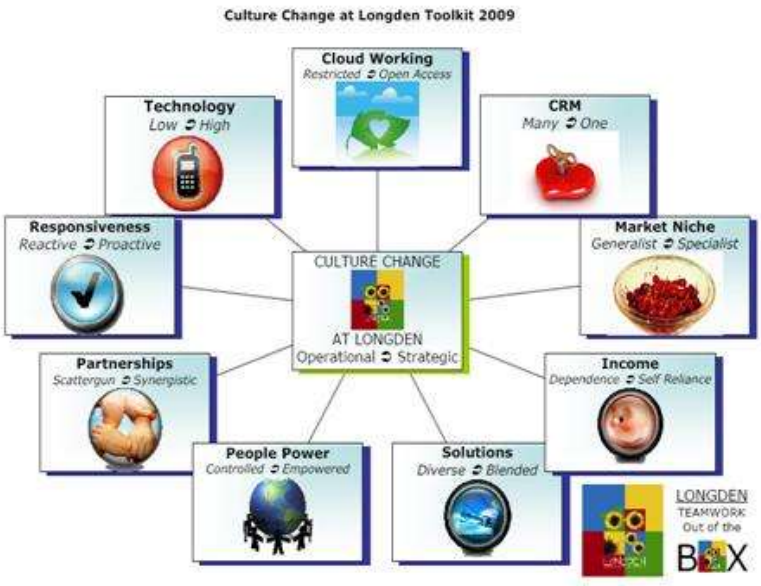
Some of the comments recorded by our team in the Appreciative Inquiry reviews are below;

'The design, development and implementation of blended learning programme has opened up a world of opportunities and choices for the tutors and learners. It has been a steep learning curve – a bit like climbing a mountain: hard work, exhausting and exhilarating all at the same time - AND the view from the top has been worth every painful step and stumble along the way!' Tutor

'The project has become all consuming and it is easy to look at what needs to be done instead of realising how much has actually been achieved. This is a change project and has all the hallmarks of the change curve as we strive to do new things in a new way. This is stretching my project management skills which I thought were quite well tuned!' Project Manager

'Every time I come into the Longden office there is a new technology thrust upon me and I am supposed to be the technology expert!' Moodle Manager

One conclusion I draw from the experience is that change is a painful process, as is learning! We had a complex Longden Change Model which was shaping our thinking and proved to be a very useful anchor point as we made significant leaps forward in a relatively short space of time.



3. How could we **implement our E-Strategy** and still deliver successful programmes that meet the needs of the client and/or the funding partners and that do not rely mainly on face to face instruction?

We used our Numeracy Level 1 programme as the main programme to test out our E-Strategy. Thanks to the hard work, determination and dedication of our Numeracy Curriculum lead tutor, we were able to implement a number of new approaches to learning without face to face instruction.

Case Study
My colleague tested all of the activities as a part of her work on the Skills for Life Support Programme. Here is an extract from her case study, beginning with two quotes by the tutor.

'Learners want to do things in between the class the learners can stretch themselves or review where they are" You can't always get people together at the same time" The learner has choice - you can have the learner do the same task in a number of ways - more for them'

'The learners initially concentrated on the IT, then quickly became comfortable with this and were focussing on the numeracy aspects – there was a subtle transition and growth in confidence in using the ILT.'

The key project team members reviewed Longden's infrastructure, staffing, culture, market focus, products and ways of working to ensure it was 'fit for purpose' for the introduction of blended learning. One team member attended a 2-day remote course via Dimdim (an online virtual meeting space) which led to confidence and competence using Web 2.0 technologies, such as Skype video-link conversations, social networking sites such as ning, blogs, twitter, dimdim online meeting space, hot potatoes interactive quiz creator, screen-casts using screenr to show websites with a voice-over commentary, PowerPoint slide sharing software (slideshare). The other key member worked on the infrastructure, system installation, product development, marketing strategy and branding.

We created a guidance document entitled 'How to use the VLE' (See Index in Appendix 1) to assist tutors in using the VLE, and we presented this at a meeting. Initial feedback was that the guidance was useful but a bit 'dry' – hard going to read a manual and they would prefer an alternative delivery method. Taking this on board, we supplemented the guidance document with screen-casts (http://screenr.com/JKh and http://screenr.com/fKh) which the tutors can click to view and listen, repeatedly if necessary. In addition, we held interactive online meetings which provided shared viewing of the presenter's live screen and real-time commentary to demonstrate how to carry out certain tasks. We also created VLE-based modules and tasks for the tutors to complete so that they experienced using the VLE as a learner, gained an understanding of the VLE's capabilities, and learnt some IT skills at the same time.

We have also recorded screen-casts showing learners how to register online, enrol on a course and submit assignments for marking – the tutors can use these to familiarise their learners with the VLE.

Longden registered as a UK Online Centre so we can offer our learners the Online Basics programme to enhance their IT knowledge and skills, thus enabling them to use the software.

We researched guidance and examples of good practice for safeguarding, equality and diversity policies across various sectors, then generated the Longden Ltd policies and uploaded them onto the websites. A hard copy of the policies was sent to the staff who were invited to see clarification, if required. The policies will be reviewed on an annual basis and whenever new legislation appears.

What we produced

- Access 24/7 to a virtual learning environment
- 'Click, watch and listen' screen-casts on how to login to the LongdenMoo.com http://screenr.com/JKh, and how to register for the LongdenMoo.com! http://screenr.com/fKh
- A Level 1 Adult Numeracy programme with curriculum-based topics presented in chunks
- Social learning environment enabling learners to communicate and share ideas and thoughts
- Facility for learners to design and upload their own numeracy learning content thus reinforcing learner accountability and responsibility for applying and extending their own learning
- Interactive quizzes, tests, drag-and-drop
- Individual Learning Plan which can be updated by the tutor and learner via the VLE between classroom sessions for tutors to comment on progress in session, give feedback and guidance on VLE-based homework activities
- Links to websites such as Move On, BBC Skillswise
- Links to online numeracy practice tests which provide instant results and feedback of gaps to the learner
- A discussion forum for learners to use for sharing and communication
- Policies on safeguarding, equality and diversity were created and embedded onto company website, VLE and social networking sites

An example of a learner teaching maths using video and posted on to our Social Networking Site, http://confidentcow.ning.com/

4. How could the Longden team (of self confessed IT phobics) acquire the **skills, knowledge, desire and confidence to use new technologies to improve their teaching and learning practice?**

At the start of this project, my company had just completed a review of its ways of working in order to compete effectively in the Learning and Skills market in a new decade. I realised that we were relying on old ways of working and that we would need to bring about a culture change if we were going to compete in a new increasingly virtual world. An important aspect of the project has to continually stress the importance of the role of the tutor in facilitating learning in a world where learners may be more confident in using new technologies than our tutors.

We created a model for Culture Change and set about implementing its key aspects. The impetus for this process came from our work on three projects with KPMG and the World Class Skills programme. Other drivers were a business imperative to offer learning 24/7 particularly in relation to Skills for Life and Management qualifications. As a small, lean and flexible organisation we have been able to trial and test technology in a way which would be challenging to larger organisations.

As a part of our Learning Revolution project we have had the good fortune to work in many and various locations to test out learning in a virtual way. In doing this research I have been struck by the blindingly obvious notion that we actually do not need a large central location ourselves. We can operate more effectively in a virtual way with a flexible team of associates who support learners to learn at their own time, pace and place of convenience.

One associate commented, *'It was a good experience for me, because I have started to believe in myself again and that I can achieve more. I have become a bit of a gadget freak when I always used to shy away from technology. I now have enthusiasm to be adventurous with technology. Also I have had an opportunity for my brain to work again!'*

To quote Arthur C. Clarke, *'Before you become too entranced with gorgeous gadgets and mesmerizing video displays, let me remind you that information is not knowledge, knowledge is not wisdom, and wisdom is not foresight. Each grows out of the other, and we need them all'*. - Arthur C. Clarke. We have discovered that the fundamental skills of designing learning programmes must underpin any choice of new technology to support learning.

Comments from our learners have helped to give confidence to our tutors, and include:
'The VLE is easy to use, fun and addictive!'

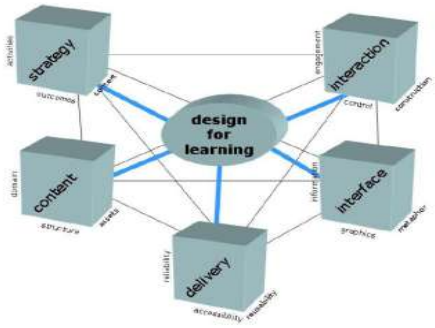
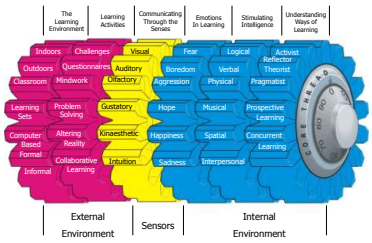
'I really like it and have got my kids onto the VLE to do some of the learning activities, quizzes, drag and drop tasks to help them learn while playing on the computer!'

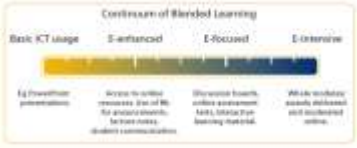
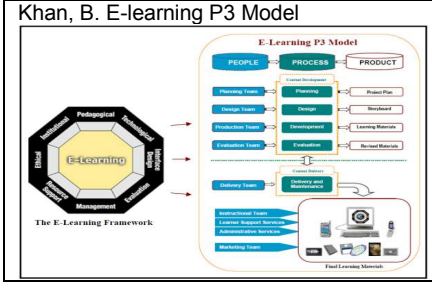
'I liked the variety – drag and drop, flashcard trainer for timestables, multiple choice questions, online practice tests from MoveOn.'

'Time just flies by because it is fun and easy to use and learn.'

5. How could we turn all of the project learning into ***an effective framework to assist in the systematic design and delivery of bespoke programmes of blended learning*** which offers a pedagogical spectrum from E-learning to Experiential.

The key frameworks and concepts which shaped my thinking during the project are below;

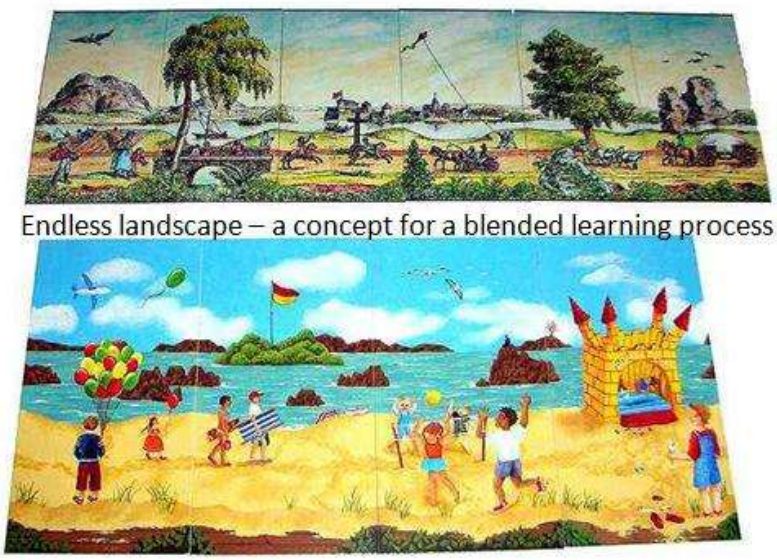
Model	Comments
Sims, Design for Learning Model 	The roles of all participants in the educational process – administrators, technicians, designers, teachers and learners – need to be reassessed to understand their interrelationship within the online context. In the face-to-face environments that are familiar to many, the design of a program or course may take place quite independently from its delivery. However in the online context, design can be something teachers and learners can also participate in, blurring what were once separate roles. The roles once seen as independent (teacher, learner, designer) now need to be understood as interchangeable. The teacher may need to take on the role of a learner when a learner introduces new content with which the teacher is unfamiliar; a designer may take on the role of teacher to develop a better idea of the impact of their design strategies; the learner may become a teacher or designer as the technology affords opportunities to adapt and change both content, learning strategies and context as the course progresses (much the same way as face-to-face classes can be modified on the fly). The rise of online education has changed the way we can teach and learn. It is not just a matter of taking existing strategies to the networked communities, but an imperative to rethink, reshape and redefine what it means to teach and learn in the online world. Given this, it is essential to better understand how to implement and evaluate the effectiveness of the interactions in computer- mediated learning environments. The Challenge Of Effective Interactivity One of the key attributes of computer-mediated environments is the explicit interaction between the learner and the course content, the learner and other course participants (including the teacher) and the learner and the computer interface.
Beard, C 2006 Learning Combination Lock The Learning Combination Lock 	The experiential learning model, based upon cognitive processing, provides the conceptual underpinning for the development of a more holistic interpretation of learning. The new model, represented as a visual metaphor and called the 'learning combination lock', responds to calls identified within the literature across a wide range of disciplines (Dillon, 2007) to address a number of 'neglected areas' such as the denigration or denial of the significance of the experience of place and space and the connection between the outer world and inner worlds of the learner. The metaphor of the combination lock is used to illustrate the complexity of the many possible ingredients that may be used to unlock learning potential. A strength of the model is that there is a clear synergy between theory and practice. Pragmatic learning design questions of where (environment), what (activities), how (senses), hearts (affect), minds (cognition), and learning and change, all significantly corresponding to a consideration of learning through *being, doing, sensing, feeling, knowing* and *changing.*
Wenger and Ferguson Learning Ecology Model 	This model presents a methods-rich framework for blended learning. Wenger and Ferguson named the methods and opportunities as "learning elements" for learners to construct the knowledge and perform social interactions. Each learning element in the diagram demonstrates the learner-focus or educator-focus idea behind. With the above spiral type of learning modalities, the ecology framework is flexible enough to tailor the learners' and educators' needs.

4 steps to concentrated blended learning 	Christa Appleton and Helen Walmsley, Staffordshire University 2009 have developed the 4 steps to concentrated blended learning. The following principles underpin the e-Design Template: • e-Learning is designed in 4 phases with a range of active tasks, activities and projects more • e-Learning includes a range of interactions between student/tutor/peers/externals more • e-Learning is designed in timed chunks with clear minute/hour/week structure more E-Learning is assessed for learning and aims to empower and engage learners more http://learning.staffs.ac.uk/sun/pg/pages/view/4391/
Jones Continuum of Blended Learning 	With the consideration for all arguments against no standard models for blended learning, Jones suggests that the continuum of blended learning is a better guideline instead of a stage-like model for institutional wide adoption. Such continuum used by University of Glamorgan is shown here and identifies that PowerPoint presentations and basic web-facilitated learning resources through VLE are the indication for the category of "Basic ICT Usage" and "E-enhanced". The next point is "E-focused" where discussion boards, online assessment tests and interactive materials take place. More online facilities are used extensively and creatively here. E-intensive is the last category in the continuum, where whole teaching and learning is delivered online with face-to-face inductions
Littlejohn et al learning activities tools and resources to guide practice 	Littlejohn et al. consider this in four levels of increasing complexity: • digital assets – normally a single file (e.g. an image, video or audio clip), sometimes called a 'raw media asset'; • information objects – a structured aggregation of digital assets, designed purely to present information; • learning activities – tasks involving interactions with information to attain a specific learning outcome; • learning design – structured sequences of information and activities to promote learning. The context within which the activity occurs; this includes the subject, level of difficulty, the intended learning outcomes and the environment within which the activity takes place. Learning outcomes are mapped to Bloom's taxonomy of learning outcomes and grouped into three types: cognitive, affective and psychomotor and are what the learners should know, or be able to do, after completing a learning activity.
John Seely Brown 	From the Web 2.0 to Learning 2.0 The "Web 1.0" that emerged in the mid-1990s— vastly expanded access to information. The Open Educational Resources movement is an example of the impact that the Web 1.0 has had on education. But the Web 2.0, which has emerged in just the past few years, is sparking an even more far-reaching revolution. Tools such as blogs, wikis, social networks, tagging systems, mashups, and content-sharing sites are examples of a new user- centric information infrastructure that emphasises participation and that facilitates innovative explorations, experimentations, and purposeful tinkerings that often form the basis of a situated understanding emerging from action not passivity.
Khan, B. E-learning P3 Model 	In e-learning, people are involved in the process of creating e-learning materials and making them available to a specified audience. Khan's People–Process–Product Continuum or P3 Model can be used to map a comprehensive picture of e-learning. For example, people involved in e-learning can be referred to as the E-Learning Team responsible for producing e-learning materials. The e-learning process can be divided into two major phases: (1) content development, and (2) content delivery and maintenance. A typical e-learning process has planning, design, development, evaluation, delivery, and maintenance stages

Findings and conclusions

Blended Learning is a complex combination comprising a wide range of elements and as yet does not have a comprehensive, easy to apply framework to assist the learning and development professional. It takes a depth of knowledge skill and experience to be able to craft an effective and engaging process of blended learning which takes account of learner needs, new technologies, shifting qualification accreditation frameworks, Bloom's taxonomy *and* meets business objectives. During this project, I have explored the literature to try to discover a suitable framework to apply. In conclusion, I believe that a new framework must be created to benefit the professionals working in education and vocational training.

In your element – putting the E into Experiential
The conclusion of this project was nearly entitled "Endless Landscapes – From E to Experiential as the metaphor which has guided my thinking up until now has been that of the Myriorama, or Endless Landscape, which is a picture whose parts can be arranged in an almost infinite number of combinations to portray different scenes. In whichever order they are placed, the result is a harmonious and continuous landscape.



Endless landscape – a concept for a blended learning process

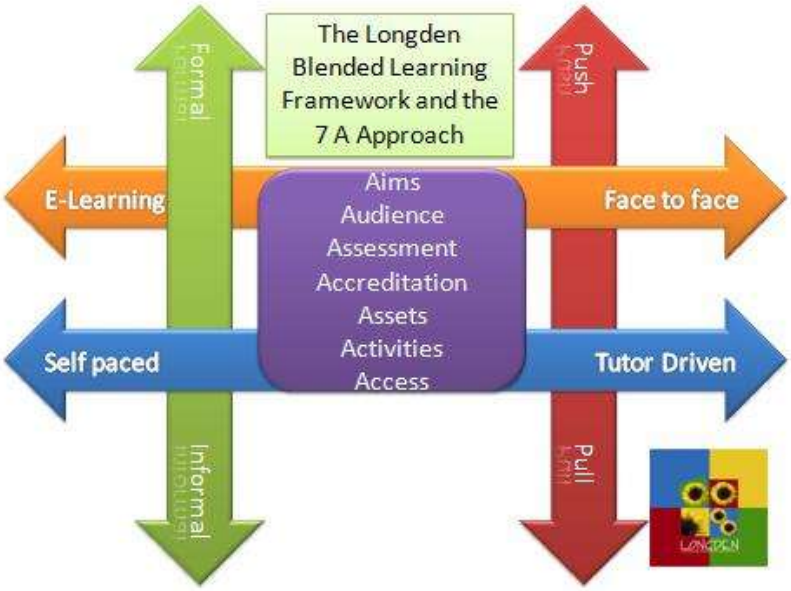
The metaphor didn't quite work as a means of describing how to create blended learning programmes as it is too simple.

During the course of this project, we were asked by a large financial services client to design and teambuilding event for 150 people. As my company specialises in Experiential Learning programmes the obvious opportunity has arisen to apply all of the learning to this piece of work. As a part of the design process we brainstormed possible themes with the client and what could we call the teams. A particularly successful event with this client two years ago had the teams named after cakes!! So the challenge was how to "top" that one and thus the theme of the Periodic Table and calling the teams after Elements came about.

This ignited my imagination and the concept of the Longden Periodic Table for Blended Learning is currently in design and will offer the missing ***practical and effective framework to assist in the systematic design and delivery of bespoke programmes of blended learning.***

Findings and conclusions

As a consequence of the research, I have developed a number of new ideas that will shape the way my company will identify, design and deliver bespoke blended learning programmes, which include **The Longden 7 A Approach to Blended Learning.**



	Questions	Reference
Aims	What are the organisational objectives? What are the measures of success? How will you evaluate the results	Balanced Scorecard Time/cost/quality Kirkpatrick 4 levels
Audience	Who are the sponsors and stakeholders? Who are the customers? Who are the end users?	Funding opportunities Initial Assessment/TNA
Assets	What learning domains need to be addressed? What skills/knowledge are available? Where are the gaps?	Bloom's Taxonomy Needs analysis
Activities	What learning methods are required/desired? What activities in each method will meet needs? Which suppliers can meet these needs?	E – Experiential Longden Blend Taxonomy
Assessment	How will you assess impact? How will you assess ability/knowledge? How will you assess application?	Formative/summative Test/Portfolio of evidence Work based project
Accreditation	What national accreditation is required? What vendor accreditation is required? What internal recognition is desirable?	QCF/NVQ/VQ/SFL Vendor certificate In-house Certificate
Access	What time/cost/accessibility constraints exist? What access/equality issues are there?	Safeguarding EO/Diversity

The 21st Century Alchemist

As a response the gap identified in this research, where I believe that there is a lack of a detailed and practical model for designing and delivering Blended Learning. I am currently creating such a model based on the Periodic Table of Chemical Elements.

And I take heart in the extract from the Paulo Coehlo book, The Alchemist, 'There is only one way to learn," the alchemist answered. 'It's through action. Everything you need to know you have learned through your journey.' We are 21st Century Alchemists on a journey to discover the elements necessary to create a new Periodic Table of Blended Learning Elements and bring about success in the current learning laboratories.

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