A pedagogy for Blended Learning
By Tim Manson

What about learning?

I was a little horrified recently to learn that even after a lot of investment in ICT over the last number of years, "research by Ulster University has shown that Primary school teachers have reported low levels of confidence when using computers and digital devices" (from 'Digital Education in Primary schools by Linda Clarke quoted in Matrix (2020). [2] I was even more surprised to learn from the article that Northern Ireland is the only region within the UK without a Digital Strategy.

In an article called 'Implementing e-learning in Northern Ireland: prospects and challenges' , James Ujomoibhi[3] writes about the NI Empowering schools strategy, "The strategy provides a broader vision and a framework for action planning until 2008 within a context of transforming education in Northern Ireland by 2020, whilst seeking progress towards a unified e-learning strategy." He goes on to quote Johns Anderson (now with ETI) who says, "it is envisaged that the submission of work, participating in group sessions through videoconferencing and the taking of assessment could all be done online."

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[1] Image from geralt on pixabay https://pixabay.com/illustrations/learn-school-usb-plug-electronic-2099928/

[2] Matrix online at https://matrixni.org/new-report-on-digital-education-in-ni-primary-schools-published/

[3] Uhomoibhi, J (2006) *Implementing e-learning in Northern Ireland: prospects and challenges* in Campus-Wide Information Systems 23 (1) 4-14 accessed https://www.researchgate.net/publication/250914359_Implementing_e-learning_in_Northern_Ireland_Prospects_and_challenges on 01/06/2020

There is no doubt that across schools in Northern Ireland – the technology is there. The question is - **how has it been used?** Are teachers in the place they need to be in order to use the technology effectively and within the context and constraints of blended learning?

It was the Danish economist, Ester Boserup who noted that 'Necessity is the mother of all invention' and the recent COVID-19 school Lockdown created the conditions whereby teachers who had a notional understanding of how to use computers for online/blended learning, suddenly had to learn how to work effectively in an online environment.   Or, perhaps it might be better to quote the journalist Thomas Friedman[4] who said that, "Big breakthroughs happen when what is suddenly possible meets with what is desperately necessary."

Digital DNA [5] note that *"Online learning offers many benefits and advantages of flexibility as educational institutions and students increasingly recognise that when it comes to learning, one size often doesn't always fit all. Students will often devote differing amounts of time to a topic to fully understand it. And learning online has a great advantage of allowing learners to study at their own pace, as we all learn in different ways and at different rates."*

Way back in the dark ages (of technology anyway), in 2007 I wrote a piece for an education magazine that focused on the use of technology in the classroom and even then, I noted that things were moving fast,
"Over the last 10 years the world has been changing at a fast rate. We live in an instant society. When we decide that we want to book a holiday we go online and book that break. If we want food – we get onto the Tesco site and the food arrives the very next day. We buy our music, our books and our second-hand tat online, at times that suit us. Yet, we still expect our students to only be able to access learning between 9am and 3.25pm each day. The same flexibility that has crept into every other aspect of our lives needs to be in learning too. Students need 24/7 access to the information and the tools that will help them to learn. My role as teacher might end as the school gates are looked up. However, my role as facilitator of learning is only beginning. My influence extends to a wider audience – to people all around the world." [6]

In another article, I took a look at the thinking behind strategic leadership of ICT within a school. Dick Weindling (1997) noted that "strategic planning and leadership is a means for establishing and maintaining a sense of direction when the future has become more and more difficult to predict. It is a continuous process by which the organisation is kept on course." An effective school needs smart, strategic and systematic leadership.   I go on to note that,

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[4] Friedman, T (2012) quoted in the New York Times on 15th May 2012 in McGrath, A (2014) *Classroom in the cloud,* John Catt
[5] https://www.digitaldna.org.uk/the-rise-of-e-learning-in-lockdown/?utm_source=Digital+DNA+Main+Database&utm_campaign=c8e7e594fe-EMAIL_CAMPAIGN_2020_04_23_03_27_COPY_01&utm_medium=email&utm_term=0_2c65d11476-c8e7e594fe-289398493&mc_cid=c8e7e594fe&mc_eid=3083c7ce07
[6] Manson, T (2007) *Writing a web site that promotes 24/7 learning* in ICTAC Magazine available http://www.thinkgeography.org.uk/Thinkgeography/About_me_files/24%207%20web%20learning_1.doc

"The effective use of ICT has become a central focus in improvements in teaching and learning in schools.   It can promote and transform the methods uses to deliver education and open up the way to a new pedagogy. What steps then should a leader in ICT take to make sure that teachers use this technology to provide opportunities for students to partake in active, constructive, cumulative, goal-orientated and self-regulated tasks that will engage children and build their confidence?" [7]

I initially wrote this at a time before Fronter/ MS Teams/ Google documents/ Drive/ Classroom.   Derek Wise, the former headteacher at Cramlington Community High School (quoted by John Davitt in 2005) notes that, *"Too often, it has been assumed that ICT will transform learning. It won't if it is being incorporated into a traditional teaching structure, but its effects are maximised if it goes hand in hand with changes in teaching and learning."*[8]

Our use (and preparation) for using ICT within and beyond the classroom must be embedded within our planning and practice.

John Dewey wrote (in 1913),
"No one doubts, theoretically, the importance of fostering in school good habits of thinking. But apart from the fact that the acknowledgement is not so great in practice as in theory, there is no adequate theoretical recognition that all which the school can or need do for pupils, so far as their minds are concerned . . . is to develop their ability to think."[9]

About ten years ago I attended the November Learning 'Building Learning Communities' educational conference in Boston, USA and I met Will Richardson and got talking with him in relation to the role that digital learning might play in transforming learning in the future.   In 2012 he brought out a short TED book called 'Why School?' [10] which helped to challenge some of the concepts about what school is all about. In what looks sortof prophetic for the COVID-19 Lockdown that we are going through as I write this, Richardson writes,
"The world has changed – and continues changing – rapidly and radically when it comes to the ways in which we can learn, and what knowledge, skills, dispositions, and forms of literacy our children will need to flourish in their future. Plain and simple, the Web and technologies we use to access it drive those changes. And those changes are, in a word, profound. Sooner or later, that upheaval will force us to tackle the 'why school?' question head-on."

He quotes Canadian education researcher Stephen Downes who notes that, "we have to stop thinking of an education as something that is delivered to us and instead see it as something we create for ourselves."

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[7] Manson T (2008) *Leading a whole school ICT Team* in ICTAC Magazine available http://www.thinkgeography.org.uk/Thinkgeography/About_me_files/Leading%20a%20whole%20school%20ICT%20Team.doc

[8] Davitt, J (2005) *New Tools for Learning,* Network Educational Press, Stafford

[9] Dewey, J (1913) *Democracy and Education*, New York, MacMillan

[10] Richardson, W (2012) *Why School?*, TED Conferences, Kindle

Education should be something that we create for ourselves.   Now – that is something worth thinking about.   If our pupils in school were allowed to design their own learning programmes, how different would they be from what us 'learned' educators might put together for them? How different would it be from the traditional school education that we currently have in place?

Richardson then starts to lay his cards well and truly on the table, he writes,
"What doesn't work and longer is our education system's stubborn focus on delivering a curriculum that's growing increasingly irrelevant to today's kids, the outmoded standardised assessments we use in an attempt to measure our success, and the command-and-control thinking that is wielded over the entire process. All of that must be rethought."

The point that Richardson is making is that learning should be a voyage of discovery rather than one of delivery. Does Lockdown school make better learners or worse learners? What exactly do school leaders need to learn about how we can continue to shape the education post-COVID?   Are we just going to return to the same old reality or will we be able to as Richardson puts it, *"The emphasis shifts from content mastery to learning mastery. That means students have more ownership over their own learning, using their access to knowledge and teachers to create their own unique paths to the outcomes we, and they, deem important."*

I think that my question actually is – how many of our learners *want* to learn? How many learn for fun? How many are learning without a sense of obligation or because it will benefit them in the long run? How many are flexible enough to consider that learning for the sake of learning is enough? Are we failing them by not encouraging and supporting learning in the areas that interest them? What would they create for themselves?

Why pedagogy?

Andy Buck (2017) in *Leadership Matters* notes that "what the most successful schools have done is make sure that every child has a teaching experience that promotes the best possible learning outcomes right across the curriculum, regardless of which teacher they have. They have also managed, by and large, to ensure the job of the teacher is manageable. To achieve this, schools have often undertaken an internal debate: should our school have an overall pedagogical framework".   He then goes on to ponder the pedagogy and comes to the conclusion that,

"What [these] schools have done is recognise that it makes much more sense for teachers to work together collaboratively to produce high-quality schemes of work for everyone to use. This planning also needs to take a realistic and evidence-based approach to meeting individual student needs. Not only does this bring obvious benefits in terms of sharing the workload, it means the quality of teaching and learning will be based in lessons that are planned around a shared view of the best way to teach something. It also provides for the opportunity for those teachers to meet after something has been delivered, share their reflections on what went well and what didn't and make alterations next time around." [11]

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[11] Buck, A (2017) *Leadership Matters,* John Catt, Woodbridge

In their book, 'The Google Infused Classroom', Holly Clark and Tanya Avrith[12] write that Pedagogy is "the method and practice of teaching, especially as an academic subject or theoretical concept."   Their enthusiasm for all things Google knows no bounds – they continue to write that "Google is redefining what a learning space looks like, taking the traditional classroom and making it a place where we help our students visualise their thinking, give each and every one a voice, and allow them to share and publish their work." They go on later to talk about how, "a Google infusion is a fun way to partner the great tools available in the Google Ecosystem".

A key aspect to many people who aim at blending learning in this particular fashion is to make sure that Thinking and learning are made visible. We need to make sure that as we design learning activities to fit inside a scheme for Blended Learning, that we plan carefully to ensure that we are carrying the maximum capacity of learners with us.

Visible Thinking and Learning
Clark and Avrith (2017) note that effective technology integration "happens when educators ask themselves three questions:
- How can I make student learning visible?
- How can I use the technology to hear from every student in the class?
- How can I allow students to actively share their work so that they can learn from one another?"

The reality of using technology as part of learning – allows us to hear from each of our students and listen to their reflections more.   Teacher time is less taken up with instruction at the front of the class and more commenting on the work that our student submit through to us. We can ask students to reveal more about what they understand (and do not understand) and this will help improve their self-reflection and metacognition. They need to learn how to transfer their skills from paper to screen. From simple, short answers to more complex, creative answers that delve deeper into the content being studied.

One example is to consider how we challenge and improve previous knowledge that students might have held on a particular piece of knowledge.   We need to change the students' thinking from 'I used to think. . .. but now I think'. Thinking is a process that is part of the learning activity which then we can test using assessment for learning techniques to 'check' the learning.

Recently, I have been trying to think about how we can help streamline online learning.   My reflections have brought me to the consideration that guiding a student through a particular topic is like guiding someone down a ski slope. There are a series of gates or learning check points that someone needs to go through to progress and that the quality of their learning experience improves and accelerates over time. [13]

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[12] Clark, H and Avrith, T (2017) *The Google Infused Classroom*, EdTech Team Press, California
[13] Find out more about Thinking Routines found here www.bit.ly/GICThinking from Rochester Community Schools

In fact, Cleveland-Innes (2018) notes that the very first thing that we need to do when preparing to introduce Blended Learning is to, *"focus on the pedagogy, and identify the benefits of blended learning design and delivery in your specific situation. In this way, the design and delivery may provide excellent outcomes and high student engagement and satisfaction. No technology for its own sake; no blended learning without benefits."[14]*

What is Blended Learning?

There are quite a few different definitions of what Blended Learning is and how it works. For example, a simple search brings up a host of uses for this term in education, marketing, training, coaching, mentoring; all at a number of different levels too.

For many years we have relied on the traditional approach to the classroom which was extremely teacher centred. Recently, we have started to take more notice of personalised learning where we listen to the learner more, we want to measure their level of understanding (through assessment for learning) so that we know whether to re-teach a topic or whether we are good to move on. The needs of the learner have become more central to our approach as teachers.

The recent lockdown of schools has created what I think is a stunning and unprecedented paradigm shift in education. Although the cause is deeply unnerving and something that we want rid of as soon as possible, the reality is that this has forced us to re-imagine how we 'do' education. We cannot return to the way things were. We must now consider that a similar lockdown could come again, and we need to be better prepared so that learning can continue through whatever distancing measures get thrown at us.

We need to prepare for the new reality. Schools *might never* work the same way again. Classes of 30 might be a thing of the past.

TeachThought [15] note that, *"Blended learning is an approach to learning that combines face-to-face and online learning experiences. Ideally, each (online and off) will complement the other by using its particular strengths."*

Bowyer and Chambers (2017) writing for Cambridge Assessment note that Blended Learning [16] is "**learning that happens in an instructional context which is characterised by a deliberate combination of online and classroom-based interventions to instigate and support learning.**"

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[14] Cleveland-Innes, M (2018) *Guide to Blended Learning,* Commonwealth of Learning, Canada
[15] https://www.teachthought.com/learning/the-definition-of-blended-learning/
[16] Bowyer, J and Chambers L (2017) *Evaluating blended learning: Bringing the elements together,* https://www.cambridgeassessment.org.uk/Images/375446-evaluating-blended-learning-bringing-the-elements-together.pdf accessed on 1 June 2020

ATOMI go a little further[17], they note that no universal definition of blended learning exists because it is highly context dependent, but say, *"However, there is one thing for sure: blended learning is the integration of digital tools, techniques, and materials (eLearning elements); activities in face-to-face class (traditional teaching methodology); and independent study (personalised learning)"*.

One the main alternatives used to describe this approach is the 'Flipped classroom' (but this might be better described as a technique that can be used within a Blended Learning framework).

I like what Joanna Poon (2013) writes in that, *"Blended learning is usually viewed as a combination of face-to-face and online delivery methods, with the aim of each complementing the other. Such an approach should, therefore, influence students' perceptions of the learning environment and, subsequently, their study approach and learning outcomes. It is thus expected that there is a significant relationship between blended learning, student learning experiences, and ultimate achievement."* [18]

However, my favourite definition of blended learning so far comes from the Department for Education in the state of Victoria in Australia (2012)[19] who write that, ***"blended learning refers to the planned implementation of a learning model that integrates student-centred, traditional in-class learning with other flexible learning methodologies using mobile and web-based online (especially collaborative) approaches in order to realise strategic advantages for the education system."***

I don't really plan on spending too long dissecting the question of 'Why Blended Learning?' as I think that ship has well and truly sailed. It is what needs to happen. We need to learn to harness the technology in our nearly Post COVID-19 world to ensure a coherence of learning. Yes, maybe we have lost our way a little about what school is actually for - but there are things that NEED to be learnt.

McGrath (2014) [20] notes that, "the interesting thing is that blending learning models in the US school system are out-performing traditional schools in terms of raw results". He goes on to quote examples such as High Tech High School in San Diego; Rocketship Education in San Jose; Florida Virtual School in Orlando; Michigan Virtual School and Albuquerque Public Schools eCademy in New Mexico.

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[17] https://atomisystems.com/elearning/blended-learning-redefines-teachers-roles/

[18] Poon, J (2013) *Blended Learning: An Institutional Approach for Enhancing Students' Learning Experience* in MERLOT Journal of Online Learning and Teaching Vol 9, No 2, June 2013

[19] Dept for Education, Victoria (2013) *Blended Learning: a synthesis of research findings in Victorian Education* found at

https://www.education.vic.gov.au/Documents/about/research/blendedlearning.pdf

[20] McGrath, A (2014) *Classroom in the cloud,* John Catt
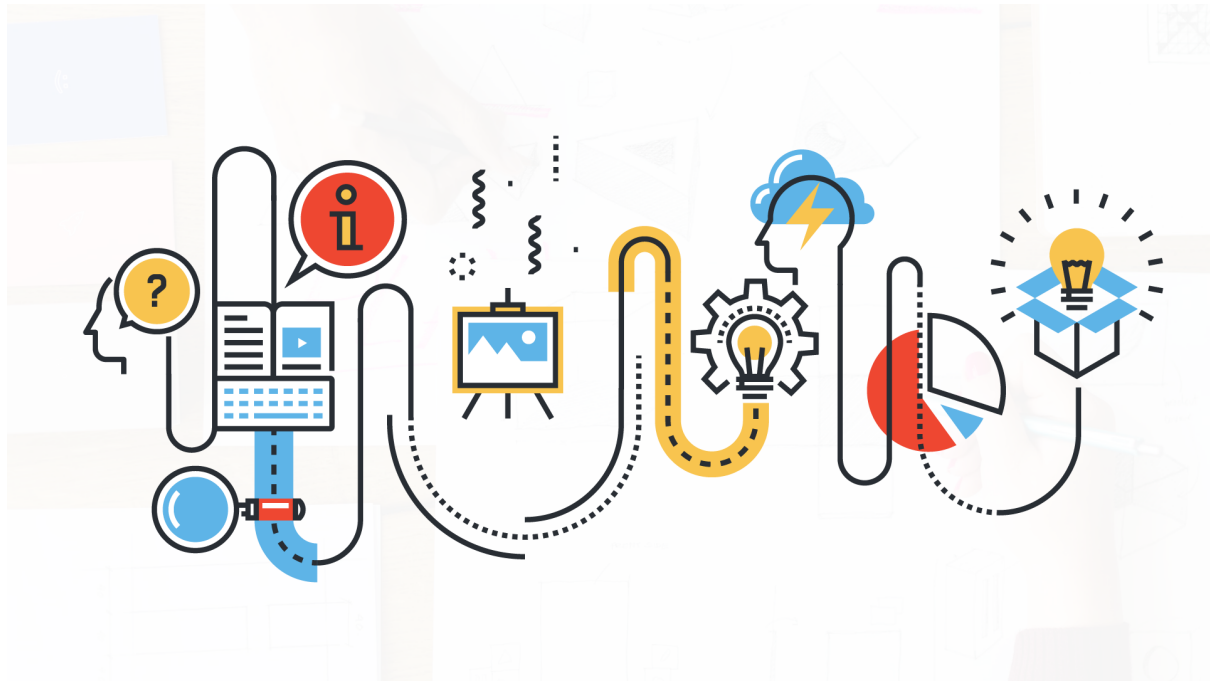
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What are the building blocks of Blended Learning?

The main way to think about Blended Learning is to try to categorise what components of what and how you teach, can be best delivered through either an online platform or within the physical classroom. Consider also, how you might be able to run both aspects at the same time.   Can you develop class materials for instruction in the classroom and follow this us with activities/homework/essays that are completed and marked online?   Can you develop extra materials that can help understanding? Can you give links to support the classroom knowledge? It's all about trying to help the student organise their learning in such a way that helps them to understand the key concepts.

For example – Blended Learning could include things like: Face-to-face training, virtual classroom, webinars, Links, Simulations, Assessment and One-to-one coaching.

ATOMI cite what they call the 'Blended Learning Model' as follows
"Known as a mix of physical and digital learning, blended learning helps to fill in the gap between brick-and-mortar schools (traditional education) and virtual classroom (eLearning). It allows learners to enjoy the best of both worlds. Based on the above definition, a typical blended learning model includes three essential components, which are:
- *Online learning materials (assigned to learners by a facilitator)*
- *In-person classroom activities (guided by that facilitator)*
- *Independent study time (using online learning materials assigned by that facilitator)"*

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[21] Picture from https://timslade.com/blog/designing-blended-learning/

Poon (2013) displays a summary of the benefits and challenges of blended learning as follows.

Benefits	Challenges
▪ Enhanced student learning outcomes ▪ Greater flexibility for students and teachers ▪ Improved autonomy, reflection, and research skills ▪ Reduced student withdrawal rate ▪ Ability to foster a professional learning environment ▪ Potential cost and resource savings	▪ Unrealistic student expectations ▪ Student-perceived isolation ▪ Technological problems for students ▪ Invasiveness into other areas of life ▪ Time commitment ▪ Technological problems for institutions ▪ Lack of support for course redesign ▪ Difficulty in acquiring new teaching and technology skills

Lalima and Dangwal (2017)[22] note that Blended Learning can incorporate the following:
- Face to face teaching
- Student interaction with course content
- Peer group interaction
- Group discussion and exchange of ideas
- Accessing e-library (either school library or access to books/articles relevant to the topic under study)
- Virtual classroom
- Online assessment
- E-tuitions (either as an individual or as part of a group)
- Accessing and maintaining educational blogs
- Webinars – online teaching/learning seminars
- Viewing expert lectures on YouTube (either directed by the teacher, or as part of a playlist curated by the teacher, or other online forums such as Khan Academy or TedTalks.
- Online learning through videos and audios
- Virtual laboratories

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[22] Lalima and Dangwal, K L (2017) *Blended Learning: An Innovative Approach,* Universal Journal of Education research 5 (1) 129-136 in https://files.eric.ed.gov/fulltext/EJ1124666.pdf

It also might be worthwhile to note how this form of learning might fit into the SAMR model and the technology-enabled classroom. Martha Cleveland-Innes (2018)[23] notes that the SAMR model offers an approach for the progressive implementation of new technology as follows:
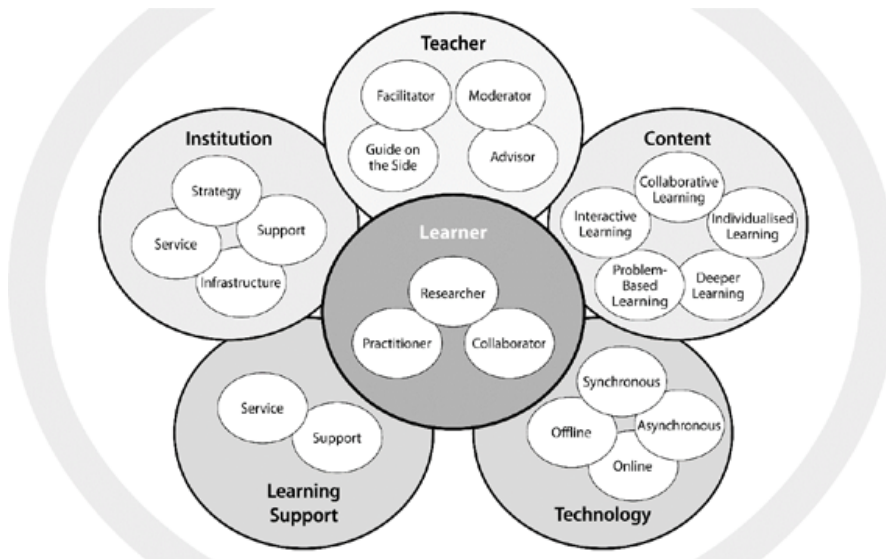
Substitution	Here, computer technology is used the same way pen and paper might be used: a worksheet is filled out, either on paper or on a tablet, smartphone or computer. There is no fictional difference, only the opportunity to use a different tool for the same exercise. This can be the learner's choice or teacher directed.
Augmentation	Here, the technology adds a dimension not available with traditional teaching tools: a computer quiz can be taken rather than a pen-and-paper quiz. The difference lies in immediate feedback, as the computer provides correct answers and additional reinforcement with video, audio or text when correcting an answer or acknowledging a correct answer.
Modification	In modifying the traditional tools, technology is used to change the function of the lesson. For example, an essay-writing exercise uses video and/or audio software to turn the essay into a story and performance. Technology offers new recording functions for peer and teacher feedback and student editing.
Redefinition	In this case, using technology is an entirely new teaching and learning activity: students use devices to search the Internet for material rather than looking in books or going to the library. Applications to help complete tasks are offered, such as spell-check or Grammarly. Wikis are used to create multi-authored artefacts and texts to complete group assignments.

She also argues for any implementation to use the CABLS framework – this Complex Adaptive Blended Learning System puts the learner at the centre of the model with all the other components acting on each other. The six elements include: the learner; the teacher; the technology; the content; the content; the learning support and the institution.

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[23] Cleveland-Innes, M (2018) *Guide to Blended Learning,* Commonwealth of Learning, Canada

The CABLS framework therefore looks like this [24]:

Cleveland-Innes (2018) then notes the six elements of the CABLS framework [25] as follows:

Learners	The role of learners changes, or adapts, as learners engage for the first time or in new ways with the elements in the system. Most important is the well-researched change from passive to active learner. This is key to the support and training of lifelong learners, a characteristic identified as important in 21st-century society.
Teachers	The role of teachers is also new in blended environments and will co-evolve with students as both engage with and adapt to each other and the other four elements in the system. The assumption is that teachers engaging in blended learning will adapt to pedagogies appropriate not only for blended learning but for learners preparing to engage productively in 21st-century societies, which are characterised by significant diversity. These "teachers" will be identified by new labels, such as facilitators, mentors, advisors and moderators.
Content	Subject matter is still an important influence on the delivery of learning. Content refers to subject matter and the material elements used to engage learners in the process of mastering that subject. The interactive, dynamic, media-rich materials available online create opportunities for teachers and learners to add content before, during and even after the course experience. The dynamic between the learner, the teacher, the technology, the learning support and the institution impacts the choice and use of content. The opportunity for deep learning of content is available via this complex engagement of multiple learning modes influenced by many elements.
Technology	Technology in general terms refers to any equipment or mechanism that extends the human capacity to get things done, the creation and use of technical means, and their interrelation with life. Emerging technologies are tested and then either adapted for new uses or discarded if not of significant value. Technology for learning requires new roles for the learner and teacher and new ways of accessing and working with content. Much research is available on technology for learning in many settings with diverse learner groups, resulting in a large range of outcomes. There is still much testing and research needed to identify the applications, challenges and outcomes of technology for learning. In this theoretical framework, the technology has to be seen as part of the system of blended learning, one that includes all elements working in relation to each other.

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[24] Cleveland-Innes, M (2018) *Guide to Blended Learning,* Commonwealth of Learning, Canada

[25] Cleveland-Innes, M (2018) *Guide to Blended Learning,* Commonwealth of Learning, Canada

Learner Support	Helping learners master the content *and* become competent learners has to be part of their education. Learner support is included in this framework to emphasise the development required to be a competent blended learner and the ongoing support needed when the system includes complexity. Support can involve technology troubleshooting, material access and learning to communicate effectively online, as well as all the other usual support around understanding content and assignments. In addition, there is a measure of independence attached to online learning that, once mastered, is a lifelong asset. However, it does require the scaffolding of support across diverse learners and over time. For Wang et al. (2015), learner support means "academic support focusing on helping learners to develop effective learning strategies, such as time management and collaborative skills, and technical support aiming to help students improve their knowledge of the technological tools and the fluency with which they use the tools to complete specific learning tasks"
Institution	Just as classroom-based learning requires buildings, desks, lighting and other accessories of brick-and-mortar institutions, blended learning requires technological infrastructure and digital janitors. Institutional support is a necessary if not sufficient condition for successful blended learning.

McGrath (2014)[26] goes into a range of potential benefits that Blended Learning could bring such as:
1. High quality learning and results become possible in areas of traditionally low quality educational provision
2. Greater range of courses available
3. Home schooling facilitated
4. More access to qualified teachers in shortage subjects
5. Flexible hours for teachers
6. Specialised schedules
7. School collaboration over courses
8. Students move at their own pace
9. Assessment made easier and promotes learning
10. Courses beyond school level for the brightest students
11. Teacher training opportunities

How can we ensure the success of Blended Learning

There are a number of different factors that work together to ensure the success of any Blended Learning experience.

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[26] McGrath, A (2014) *Classroom in the cloud,* John Catt

1. *Student factors*
   - Expectations – what are the various expectations that students possess in relation to what they will achieve through participation in any blended learning programme. Students sometimes think that less face-to-face class time means less work – when often it is the reverse.
   - Motivation – are the learners ready for active participation in a learning programme
   - Readiness – how are the learners ready (and able) to cope with independent learning. Poon (2012) notes that students must "be encouraged to take more responsibility for and autonomy over their learning". The big question is how do we manage this? Developing this type of independent learning is not easy.   If we create a series of tasks that must be completed, where we follow up consistently on anyone who fails to hand everything in – is this really *that* independent?
   - Technology – learners need to have knowledge and use of any technology that they are likely to use.   Within schools there still is a sizeable 'digital divide' between those who have access to digital devices that will allow them to process and submit work. There is also a further divide between those who are comfortable with using technology for learning and see this as an important way to keep in touch and to further their learning.

2. *Institutional factors*
   - Institutional support – has there been the development of a dedicated service to support and assist learners as they use the technology?   When the COVID-19 Lockdown hit in mid-March there was often a scramble to create Google Classrooms, to share codes and create paths for communication. But, how often did we think about how we might support those who did not know what to do or who did not know how to log on to sites? There was a lot of teachers hoping that they were replicating what an ICT might have done and hoping that all students had embedded the practice of knowing how to log on and work through online activities.   Did ALL students know how to log onto their school email from home?   Did they know how to attach work and send it back to their teacher? These are all factors that we now need to ensure that ALL students receive instruction in from an early point in their journey through school and probably need a regular reminder.
   - Training – how much training took place to prepare teachers for what was to happen.   Yes – there was a lot of rushed training to get online learning in place in a very short time.   Was it enough?   How could this be developed and embedded into the staff development programme?   What exactly do we focus on – does the school have a whole-school approach to blended learning?
   - Access – a lot of studies on blended learning suggest that both "facilitators and learners have a necessary prerequisite for easy and regular access to technology." (Poon, 2013)

Bixler and Spotts (2000) note a series of pedagogical principles that could form the basis of any blended learning. [27]They are:

1) Institutional support
2) Course development
3) Teaching and learning
4) Course structure
5) Student support
6) Faculty support
7) Evaluation and assessment

McGrath (2014) urges us to think about what blended learning actually means. He writes that,[28] "it is actually about changing the culture of the learning environment as it currently is."   He continues "Our children will need to take their place in a world in which other children have had the advantage of developing independent learning, adaptability, resourcefulness, academic rigour and a world view."

Designing Blended learning

As a school/ department, you will need to sit down to think and plan how you intend to insert aspects of Blended Learning into your Scheme of Work.   You need to think about the components of your planning and delivery of lessons so that you can strip some aspects out and keep them in the online medium.   Do you want to be consistent? Will you always have a homework/ online element? Will you set homework on a weekly or a lesson-by-lesson basis? How will you do assessment? In class or online?   Will there be any assessment completed online?   How do you expect longer creative pieces of work to be handed in? How will they be marked? How will they be returned? These are things that you should be building into your Scheme of Work.

Tim Slade relates that learning is more than just a binary choice between one thing and another. He argues [29] that, "*Learning should be a blend of experiences that promotes the four basic elements of learning: 1. Knowledge Transfer; 2. Practice and Application; 3. Feedback and Evaluation and 4. Continued Support.*"

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[27] Bixler, B and Spotts, J (2000) *Screen Design and Levels of Interactivity in web-based training,* available at www.clat.psu.edu/homes/jds/john/research/ivla1998/ivla98.htm

[28] McGrath, A (2014) *Classroom in the cloud,* John Catt

[29] https://timslade.com/blog/designing-blended-learning/

He then goes on to outline three practical tips that can be used when designing blended learning.

1. **Determine what you deliver *before* the primary learning event**
   Prior to your learners heading into the classroom, what can you provide that will enhance or prepare your learners for that experience? How can you pre-empt what is going to take place?   Is there some level of knowledge that they need to know before the class?   What is there level of *foreknowledge*? What do you expect them to know already? Is this building on other 'stuff' you have taught them before? Is there a link with learning from another subject?   What is their starting point going to be?

   I firmly believe that all learning needs to be pre-planned.   The course that students are going to follow needs to be written up within a comprehensive Scheme of Work. The various aspects of what might work better in-class or through a screen, a video or online chat.

2. **Determine what you will deliver *during* the primary learning event**
   What are the key things that you need to get across? Most teachers see this as the time to 'teach' new content or practice or apply what has been learned. This can be done in the classroom or can be done through eLearning videos, online teaching or simulations.   But, go further – what will this look like? How are you getting the key learning points across?   Do you need to reinforce the learning with examples?   Do you need to scaffold the learning or provide model answers?

   Sometimes, we teachers concentrate too much on the 'how' we are going to deliver content than we do the 'what'.   We discuss which platform is better – should we use Google Classroom or MS Teams. We get hung up on the subtle differences between Collaborate Ultra, Google Meet, Zoom or even Skype.   Maybe, we need to spend a little more time thinking about what the actual content of our learning events will actually be.   Over the last 7 weeks I have hosted a weekly video teaching session with my Y13 Geography class.   I do not think I have spent as much time planning for lessons since I was a student teacher.   I planned the overview, the content and made sure that any resources that I was using – including video and PowerPoint were all as good as I could make them.   Even though I have taught this same content for over 20 years – I wanted to make sure that the presentation was slick, ordered and helped my students to engage with what we were studying.

The fact that I had recently just been reading Tom Sherrington's new book – 'Teaching Walkthrus' also meant that I was keen to take a more deliberate and step-by-step approach to what we were learning.   Sherrington and Caviglioli (2020) note that "WalkThrus use both words and static images. Their design is based on clear decisions about what matters and what should be left out.   As a result, they make teaching know-how as accessible – and attractive – as possible. They shorten the route to understanding." [30]

3. **Determine what you will deliver *after* the primary learning event**
   How will you know that learning has happened?   How will you know that it is ok to move on to the next topic? This is the space for practice, application and feedback. Support is required to ensure that the learner has embedded the knowledge into something that is usable understanding. A more personal touch can be used through eLearning platforms such as Google Classroom so that students can submit practice answers and receive feedback and/or results.

   Over the last 20 years there has been a big focus on processes such assessment for learning which helped teachers to develop their student review techniques. Increasingly, teachers learnt how to listen to their students, to ask meaningful questions that would help monitor the level of understanding that had been developed through a session.   Teachers know intuitively that there is a need for them to always be able to be on top of the performance of their students.   There is a need to ensure that they are designing waymarkers that clearly and adequately provide solid information about their level of learning (and understanding).

In my school, Cullybackey College, we recently updated our teaching and learning strategy. Our approach was based on Barak Rosen shine's Principles of Instruction[31] (presented here by Tom Sherrington and Oliver Caviglioli) [32] where we have broken down the different elements of Rosenshine's instruction into four areas. The question now is how to we now distil this further into a format for Blended Learning.

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[30] Sherrington, T and Caviglioli, O (2020) *Teaching WalkThrus – a five-step guide to instructional coaching*, John Catt, Woodbridge

[31] Rosenshine, B (2012) *Principles of Instruction,* in American Educator, Spring 2012, accessed at https://www.aft.org/sites/default/files/periodicals/Rosenshine.pdf

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Barak Rosenshine's
PRINCIPLES OF INSTRUCTION

A thematic interpretation for teachers by **Tom Sherrington**
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REVIEWING MATERIAL

1 Daily review   **10** Weekly and monthly review

Daily review is important in helping to resurface prior learning from the last lesson. Let's not be surprised that students don't immediately remember everything. They won't! It's a powerful technique for building fluency and confidence and it's especially important if we're about to introduce new learning — to activate relevant prior learning in working memory.

QUESTIONING

3 Ask questions   **6** Check for student understanding

The main message I always stress is summarised in the mantra: ask more questions to more students in more depth. Rosenshine gives lots of great examples of the types of questions teachers can ask. He also reinforces the importance of process questions. We need ask how students worked things out, not just get answers. He is also really good on stressing that asking questions is about getting feedback to us as teachers about how well we've taught the material and about the need to check understanding to ensure misconceptions are flushed out and tackled.

SEQUENCING CONCEPTS & MODELLING

2 Present new material using small steps   **4** Provide models   **8** Provide scaffolds for difficult tasks

Small steps — with practice at each stage. We need to break down our concepts and procedures (like multi-stage maths problems or writing) into small steps so that each can be practised.

Models — including the importance of the worked-example effect to reduce cognitive load. We need to give many worked examples; too often teachers give too few.

Scaffolding is needed to develop expertise — a form of mastery coaching, where cognitive supports are given — such as how to structure extended writing — but they are gradually withdrawn. The sequencing is key. Stabilisers on a bike are really powerful aids to the learning and confidence building — but eventually they need to come off.

STAGES OF PRACTICE

5 Guide student practice   **7** Obtain a high success rate   **9** Independent practice

Teachers needs to be up close to students' initial attempts, making sure that they are building confidence and not making too many errors. This is a common weakness with 'less effective teachers'. Guided practice requires close supervision and feedback.

High success rate — in questioning and practice — is important. Rosenshine suggests the optimum is 80%. i.e. high! Not 95-100% (too easy). He even suggests 70% is too low.
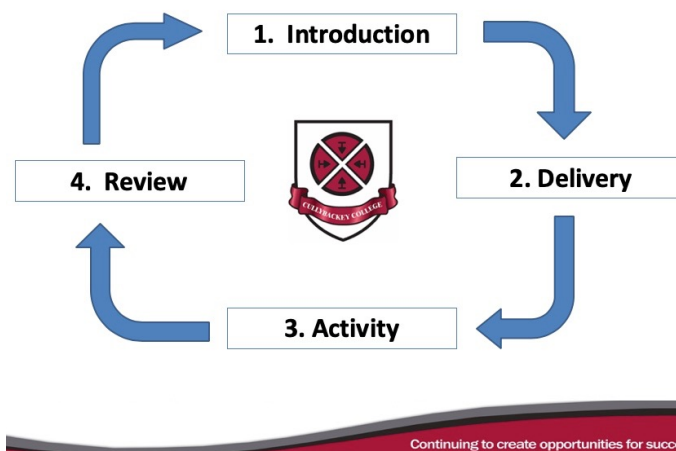
Independent, monitored practice. Successful teachers make time for students to do the things they've been taught, by themselves... when they're ready.   *"Students need extensive, successful, independent practice in order for skills and knowledge to become automatic"*

The Cullybackey Learning Cycle

1. Introduction
2. Delivery
3. Activity
4. Review

Continuing to create opportunities for success

Each aspect of Rosenshine's Principles can very easily and readily be used in either the school or online-based element and it is a matter for teachers/departments to decide how they are going to balance their approach to ensure that students get a full range of opportunities. Again, this is something that should be planned for and adapted to fit into each scheme of work.

What should our approach to Blended Learning look like?
One of the biggest issues with the COVID-19 Lockdown in 2020 was that schools found out they were going to close in a very short space of time. It was really difficult to start to gather materials and get organised. At that time, we also did not who we might be focusing on. We did not know what would be happening with the important end of year exams for GCSE and A Level student.   We focused on them first – as these were the ones who this changing pattern would have the biggest impact. However, as we soon realised that new mechanisms would be brought into place to cover this – our thoughts and attentions soon turned to Y13 and Y11 who would miss valuable teaching time and examinations. Finally, our thoughts turned to KS3 – how could we continue to keep the learning going (and attempt to manage some balance so that parents).

Teachthought[33] put forward 12 different approaches that they argue can be used as models for Blended Learning. For example some of their types of Blended Learning (amongst others) include:

- *Remote Blended Learning (or Enriched visual)*
  This is when the student's focus is on completing online coursework whilst only getting support/ meeting with teacher as needed (eg working through a vocational portfolio)

- *Flex Blended Learning*
  Teachthought recognise that the flex is included in types of Blended learning so that "a course or subject in which online learning is the backbone of student learning, even if it directs students to offline activities at times . . . the teacher provides face-to-face support on a flexible basis through activities such as small-group instruction, group projects, and individual tutoring."

- *Flipped Learning*
  This has become widely known in recent years – it is where students are introduced to content at home (maybe through an online video) and then practice working through it at school with some support by their teacher or classmates. As a result, the traditional classroom modality is 'flipped'.

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[33] https://www.teachthought.com/learning/12-types-of-blended-learning/ accessed on 1 June 2020

- *Project-Based Blended Learning*
  When I was at an educational conference in the USA ten years ago – this was the talk of the conference.   This is when students use both online learning and face to face instruction so that they design and publish project-based learning projects.   The design of the task is crucial so that students will learn through and because of the process.
- *Supplemental Blended Learning*
  This is when students will complete online work as an addition to their 'normal' face-to-face learning activities. The 2 aspects of Blended Learning are seen as have separate roles that provide separate learning experiences but both work towards the completion of overarching learning objectives.
- *Mastery-Based Blended Learning*
  Some students will rotate between online and face-to-face interactions.   They will use a series of assessment tools to show the completion of one task which will lead on to the following task.

I particularly like the Venn diagram produced by Bath and Bourke (2010)[34] to illustrate the different activities that might sit within the different possibilities for Blended learning.

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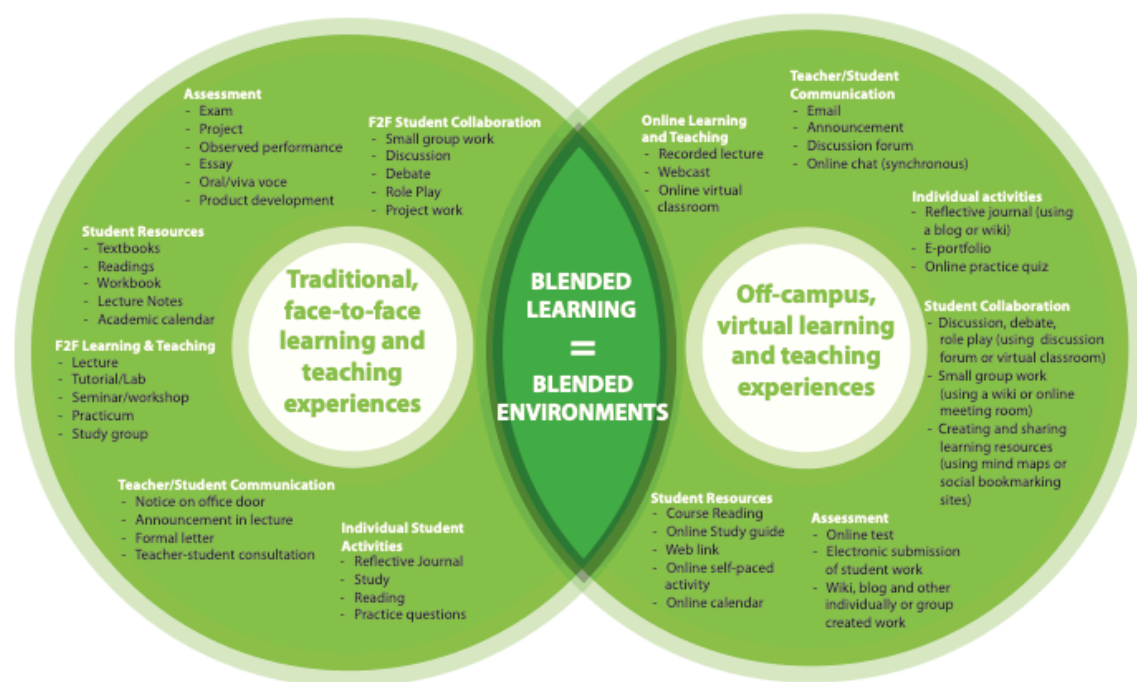
[34] Bath, D and Bourke, J (2010) *Getting started with Blended Learning,* Griffith Institute for Higher Education,

The engagement issue

The move from pretty much 100% face-to-face teaching to a pretty much 100% online learning response happened overnight on Friday 20th March 2020.   The fact that few students had been engaged in online or blended learning before in any meaningful way in any real sense was a major weakness.   We are still trying to iron out issues with engagement and the longer that the Lockdown continues – the bigger the impact that any lack of engagement involves.   Because Google Classroom is very much dependent on how individual teachers create opportunities and learn to interact with their students – there is a major issue in that students can slip through the net.   What measures should teachers take to follow up on those who miss online sessions or who fail to hand back pieces of work?   The engagement conundrum is one of the biggest issues with online learning but perhaps when we shift to a more blended approach with some face-to-face sessions – it will be easier to follow up on those who fall behind.   It's not always an access issue. It's not always an ability issue. It's not just about parents having to sit down and make sure that their child is doing their work and staying up to date.   Sometimes, pupils just need to learn a greater deal of independence.

Bowyer and Chambers (2017)[35] identify 3 elements of student engagement,
- **Behavioural** – relating to students' actions. For example – class attendance, submission of work, contribution to class discussion or participation in school-related activities.
- **Emotional** – relating to students' affective reactions in relation to their learning. For example – an emotionally engaged student might report that they were interested in their course or that they enjoyed learning.
- **Cognitive** – relating to students' psychological investment in their learning. For example, the desire to go beyond the requirements of the class and the adoption of metacognitive learning strategies.

Engagement can also be negative. Students might dislike an activity or report anxiety in relation to their learning.   Trowler (2010) [36] identifies positive and negative elements of these definitions.

	Positive engagement	Non-engagement	Negative engagement
Behavioural	Attends class and takes part with enthusiasm	Skips classes without excuse	Boycotts or disrupts lessons
Emotional	Interest	Boredom	Rejection
Cognitive	Meets or exceeds assignment requirements	Assignments late, rushed or absent	Redefines parameters for assignments

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[35] Bowyer, J and Chambers L (2017) *Evaluating blended learning: Bringing the elements together,* https://www.cambridgeassessment.org.uk/Images/375446-evaluating-blended-learning-bringing-the-elements-together.pdf accessed on 1 June 2020

[36] Trowler, V (2010) *Student engagement literature review,* The Higher Education Academy, 11, 1-15

I do wonder if there is some staged level of progress between the positive and non-engagement aspects.   Do all students always hand everything in on time?   Do they always produce work of an acceptable standard? Do they ever have blips? Plus, do we get a realistic balance of work from both the school and home setting?

How do we keep this going in the future?   What do we need to do to streamline how we make the most effective use of online learning?

Some possible guidelines for using Google Classroom

Setting up Google Classroom
1. When you set up a classroom – set this up on a class by class basis rather than a full year group as this allows you to monitor who is accessing learning
2. If you are setting up a classroom for a whole year group – consider having one teacher in the department to take a lead in sharing resources for the group. However, each individual teacher should still be responsible for marking, assessing and giving feedback on submitted work.
3. Develop a department policy on how you want to manage the google classroom. Also create a policy that looks at the frequency that work is put up onto the site. Have a policy for the frequency of tasks that require work to be submitted back by the student.
4. Do you see the Google Classroom as a separate space that keeps ticking along or are you going to integrate tasks in the classroom with face-to-face teaching?

Managing student work
1. How much work will you set? If you set work in the Stream – how will you know that it has been done? Do you expect every piece that you set as Classwork to be followed up?
2. How will you know if a student has completed the work that you have set?   What are you going to do with those who do not submit work?   Are you going to allow students with limited access to computers – to submit work in a different way?
3. How do you standardise the marking of a piece of work within your department? How much feedback do you expect your teachers to give?

It seems that the time for any discussion about whether we should implement Blended Learning is over. Now – its all about puts the building blocks in place so that a blended approach is ready to rock and roll in early September.   It's a steep learning curve – but we are ready for it and it will no doubt look and feel different in every different educational establishment to fit with each unique set of circumstances.

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