



# Towards an Effective Model for Whole of School Blended Learning: A conceptual paper.

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Over the course of the past decade, governments across the globe, together with their respective education systems have grappled with changes in society that are unprecedented in modern human history. In this paper, the authors detail the plans of a school that seeks to come to terms with such a circumstance by introducing a school-wide approach to teaching and learning through Blended Learning. In effect, the school seeks to refocus its curriculum and its delivery mechanisms, the 'look and feel' of the school and its classrooms, the work of its teachers, and the study modus operandi of students to graduate young people who embody the traits required for such a changed world. The paper examines in detail the underpinning conceptual Blended Learning model, its associated elements and the disruptive agenda that this whole of school initiative represents for schools and education more generally.

Key terms: Model, Blended Learning Schema, Teacher Capabilities, Student Dimension, Teacher Dimension.

## Introduction

Governments across the globe, in association with their respective education systems, are grappling with changes in society that are unprecedented in modern human history (Brynjolfsson, McAfee, & Spence, 2014; Christensen, Horn & Johnson, 2011; Fullan & Hargreaves, 2012; OECD, 2013; Lynch, 2012; Sahlberg, 2008). Further, global competition in education achievement (Scheerens, 2013), spurred on by the advantages that high performing education systems generate in terms of trade and socio-economic outcomes, has compelled governments of all persuasions to enact plans for positive educational results that are accountable, measurable, effective and sustainable in their respective jurisdictions (Darling-Hammond & Snyder, 2015; Hanushek & Woessmann, 2009; 2010). These pressures have resulted in a corresponding increase in accountability regimes for schools and teachers, typically through the introduction of standardised testing regimes, in an attempt to focus teacher attention to improvements (Higgins, Miller, & Wegmann, 2006; Lomax, West, Harmon, Viator, & Madaus, 1995; McTighe & Brown, 2005). The key point is that a new imperative for schooling is emerging as a Knowledge Economy circumstance redefines work and home life implicating schools for direct and immediate actions (Brynjolfsson, McAfee, & Spence, 2014; OECD, 2013).

In this respect Sahlberg points out that we now “live and work in a world of information, knowledge, and innovations. Indeed, many societies are labelled as knowledge societies that are driven by ideas, creativity and ingenuity” (2008, p.47). This encapsulates the modern transference from an ‘industrial society’ to a ‘knowledge society’ (OECD, 1996), and the emerging ‘networked society’ (Dirckinck-Holmfeld, 2016; Vom Brocke, 2016), which are characterised by ongoing technological innovations that have generated seismic shifts in the global flow of people, ideas, services, goods, finance and information (Brynjolfsson, McAfee, & Spence, 2014; Manyika, Bughin, Lund, Nottebohm, Poulter, Jauch & Ramaswamy, 2014; OECD, 2016). Schools prepare young people for work and life in future society and so it is no surprise that they are being called upon to provide an appropriate response (Lynch, et al, 2015a). This call for an appropriate response is the catalyst for the Blended Learning initiative that is outlined in this paper.

## Responding to the new imperative

Repositioning schools in and for a world which places a premium on knowledge and a personal capacity to use it in new and interconnected ways requires an organisational approach that concentrates the creation of conditions for the development of both student and teacher capacities (Zhoa, 2012; Uzunboylu and Karagozlu 2015; Hargreaves and Fullan, 2012; Lynch, et al, 2015a). In this respect it is conceivable to think of a high performing school as one where students are extended beyond the ‘basics’ that standardised testing tends to encourage, to one where students are capable of operating in a world that requires skills associated with problem solving, innovation, creativity, entrepreneurship and the like: skills that lie at the heart of life and work in a Knowledge Economy. Correspondingly an environment that supports teachers from what can be called ‘traditional classroom approaches’ (see Lynch, 2012) to those more attuned to Knowledge Economy circumstance teaching and learning (Paltasingh, 2012; Zhao, 2012; OECD, 1996, 2013;



Lynch, 2015a; Willis, et al, 2017). This premise represents a rapid departure from the era of schooling in which most current teachers were raised and later trained, and further emphasises the disconnect between more traditional and “new imperative” positions concerning the role and function of teachers, schools and school leaders (Uzunboylu and Karagozlu, 2015; Hargreaves and Fullan, 2012; Lynch, 2012; Lynch, et al, 2015a). It also raises the issue of how schools are able to respond to the new imperative concerning future success in a manner capable of modelling effective, high quality knowledge society centric learning outcomes.

These issues lie at the heart of the conceptual discussions that we now present in this article. More specifically this paper details the plans of an international school in Japan that seeks to come to terms with the demands, of what can be termed, ‘new imperatives’, through the introduction of a school-wide (K-12) approach to teaching and learning in the form of a *Blended Learning* pedagogy.

### **Blended Learning**

For reference, Horn and Staker (2015) define Blended Learning as “any formal education program in which a student learns at least in part through online learning, with some element of student control over time, place, path and/or pace” (p. 34).

One aspect of Blended Learning that has become increasingly familiar to educators over the last decade is the ‘Flipped Classroom,’ which has shown promise as an effective model for new imperative teaching and learning (Chung Kwan & Khe Foon, 2017; Uzunboylu & Karagozlu, 2015). Essentially, in a flipped classroom content acquisition occurs outside the classroom whereas application of the content is located within the classroom. This is by no means the only approach to Blended Learning, but it serves to illustrate how a fundamental principle of Blended Learning might be operationalized. Further, it serves to illustrate how the architects of this paper’s focal school commenced the conceptualization of their whole of Blended Learning pedagogy.

In terms of implementation, the school seeks to: refocus its curriculum and delivery mechanisms, the ‘look and feel’ of the school and its classrooms; refocus the work of its teachers and the study modus operandi of students; graduate young people who embody the traits required for global leadership, entrepreneurship and innovation, effective communication, wise risk taking, and effective problem solving. These traits represent five descriptors which comprise the school’s core values. For reference purposes, this project and its associated model is known as the *Collaborative Blended Learning Model* (CBLM).

Collaboration is stressed both in the CBLM and in the project’s implementation. This is a critical aspect that differentiates the model from previously published ones that feature individualisation for students, but did not necessarily account for the impact collaboration has on learning outcomes (Alavi, 1994; Chen, Wang & Lin, 2015; Ewing & Miller, 2002; Yamarik, 2007), or on the benefits it brings to the school improvement or change process (Harris, 2014; Hattie 2015).



In dealing with the CBLM we first outline the conceptual model that is proposed by the focal school. We are assisted in this process by an extensive literature review conducted by Willis, et al (2017) and the works on Blended Learning by Horn and Staker (2015), Hew and Cheung (2014) and Picciano, Dziuban, and Graham, (2013).

To further illustrate the CBLM, additional explication is provided through an associated *Blended Learning Schema* (BLS) that has been developed to outline what teachers in this school will focus on, manipulate and innovate on, and engage with for new and enhanced student learning outcomes (see Appendix A). In more simple terms, the BLS attempts to illustrate and, thus, make explicit for teachers what will be different in classrooms, and in teaching practices, when the school's CBLM is fully implemented.

The BLS is also used by the leadership team to guide teacher professional learning, and in this respect acts as a mechanism to check and evaluate progress. The BLS is an attempt to illustrate the visionary attributes that encompasses the CBLM so teachers can contribute in the development, implementation, and evaluation stages with confidence and coherent insight. Thus, from a school leadership position, the BLS generates a clear set of attributes and elements to assist in leading teacher professional learning through the CBLM model. We will now describe and explain this model in more detail.

### **Collaborative Blended Learning Model**

With teachers and students having been conceptualised at the model's centre, the CBLM can thus be understood as having two key and interrelated dimensions. The first dimension represents a focus on the student (Diagram 1) and the second, that of the teacher (Diagram 2). Taken together, these two dimensions provide an overall visual representation of how teachers and students, and their associated elements, relate to one another and interact for overall CBLM effect.

Note that in Diagram 1, the focus is on the interplay between student learning and a set of associated elements related to the learning environment. These elements include student-centred learning, an inquiry context, enabling the use of digital technology, and the impact of face-to-face teaching interactions. For purposes of the CBLM, the effective use of these elements is referred to and thus implicates a set of specific *teacher capabilities*.

Diagram 2 shows the interplay between four key elements underpinning the development of these teacher capabilities. These elements include the role of school leadership, data informed decision making, coaching, mentoring and feedback processes, and a professional learning program that specifically targets Blended Learning. As Diagram 2 shows, these four elements occur within the context of *Teaming*, which sits within whole-school Teaching Intentions. *Teaming* encompasses the positive impact of collaboration on professional growth and school improvement and *Teaching Intentions* represents the clarity required at various levels of the teaching and learning process to achieve the desired student level outcomes. We explore the relationship between teacher capabilities and student learning in more detail in the following section.

### **The Student Dimension in the Model**

As shown in Diagram 1, the Student Dimension has five informing elements: *Inquiry Context*, *Student Centred Learning*, *Digital Technologies*, and *Face-to-Face Interactions*, each of which is focused on a central element or goal of *Student Learning*. Student Learning is at the centre as it indicates the importance and centrality of maximising student learning for the work of teachers and school leaders. We need to point out that while these four outer elements are outlined individually for purposes of clarity, each element in action relies on and is referenced to the others for overall effect. This means that the school and its teachers will be required to learn how to strategically orchestrate each element in planned measures, in order to create a cohesive and goal focused approach to teaching and learning.

We briefly provide an account of each of the four elements that contribute to the central element of *Student Learning*.

#### *1. Inquiry Context*

As an International Baccalaureate World School, inquiry is at the heart of school's philosophy of education and how the school approaches curriculum design, classroom practice, and structure of desired student outcomes (IBO, 2014). Inquiry at the school is driven by a pedagogy that begins with open-ended questions set by teachers as well as by students. Students then work collaboratively, and with the teacher, to determine what they need to find out or be able to do in order to answer these questions.

#### *1. Student-Centred Learning*

Student-centred learning in the context of this school requires students to be actively involved in goal setting and reflect on achievement throughout the learning process. Whilst student-centred learning at the school implicates strong differentiation for individual student needs, it also sets up conditions whereby collaborative learning is expected. With regards to the CBLM, this means a central role for the students or student teams in deciding the path, pace, and place of learning engagements is present as an expectation for all stakeholders.

#### *2. Digital Technologies*

Rather than focussing on technology as an end to itself, digital technologies in the CBLM are used as tools to leverage increased teacher effectiveness for student learning. The tools are deliberately selected to enable increased student control of the learning path, pace, and place. They also facilitate extension beyond the classroom, connecting students to the world in meaningful and informative ways.

### 3. *Face-to-Face Interactions*

'Face-to-face interactions' in the model encompass the relational elements of teaching and learning, and the instructional practices employed by the teacher - but as experienced by the student - that 'maximise learning' during these interactions. Being an element of the student dimension of the model, we note it is the student's experience in this element that is of primary importance.

The relational elements include how the teacher manages groupings and interactions in the class environment by setting high expectations for students, establishing class routines, norms, and protocols about how the learning environment functions.

The importance of how the student perceives the learning task, its relevance, and his or her ability to successfully complete the task, are also important factors in these face-to-face interactions (Dean, Hubbell, Pitler, & Stone, 2012; Marzano, 1998).

Student self-efficacy and teacher emotional support are also factors considered in this element (Hattie, 2009; Komarraju & Nadler, 2013; Kuo, Walker, Schroder, & Belland, 2014; Martin & Rimm-Kaufman, 2015; Wolters & Hussain, 2015).

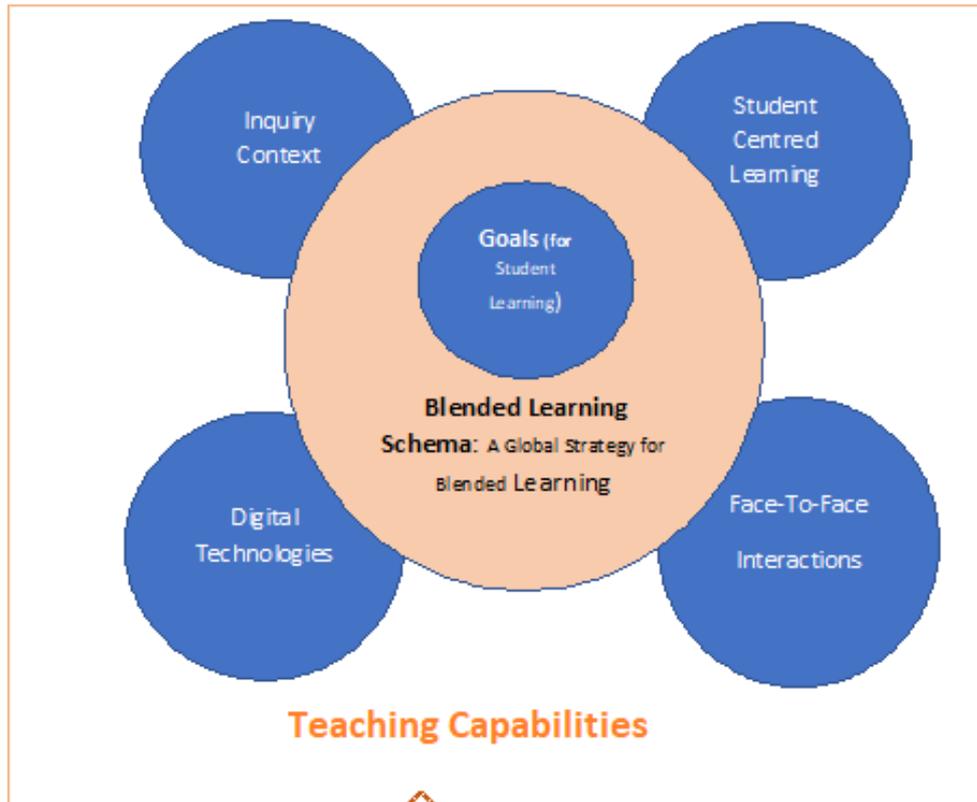
#### **The Teacher Dimension in the Model**

The 'teacher dimension' as represented by Diagram 2 is captured by the term *Teaching Capabilities*. This dimension is firmly centred on the knowledge and skill required of the teacher to operate as an effective 'Blended Learning teacher'. This dimension takes its cues from the work of authors such as Fullan and Hargreaves (2012), Hargreaves and Fullan (2012), Dean et al. (2012), Hattie (2009), Lynch, Madden, and Doe (2015a), Robinson (2011), Sell, Lynch, and Doe (2016), all of whom make the point that it is the quality of teaching that makes a fundamental difference for students in the processes of learning.

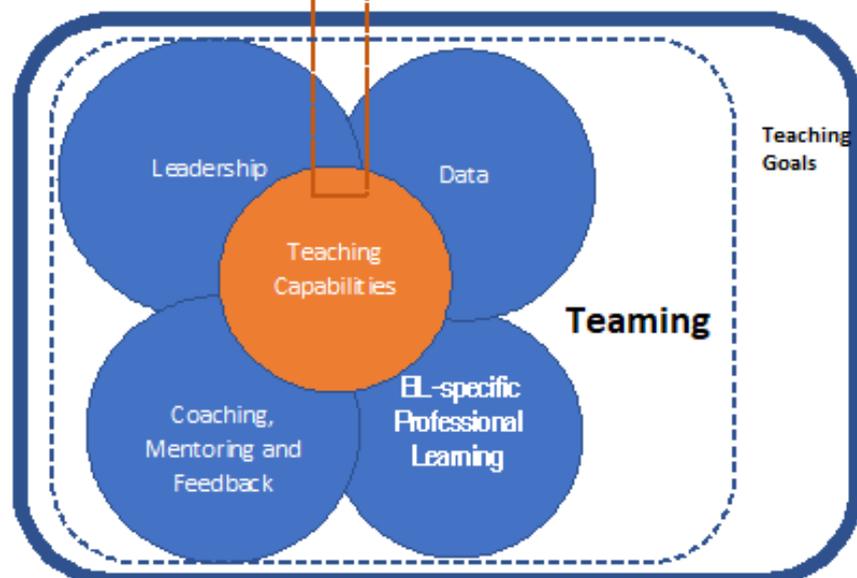
The premise of *Teaching Capabilities* in the CBLM is understood as a collaborative process designed to position teachers to embrace with confidence the intent and aims of the CBLM, and importantly, to develop the required knowledge and skill sets required to teach effectively in such an environment. To that end, *Leadership, Data Informed Decision Making, Coaching, Mentoring and Feedback*, and a *Blended Learning Specific Professional Learning Program* are the key elements within the context of *Teaming* and *Teaching Intentions*.

Teachers having or developing the required capabilities to deliver on the overall project intent is an important success ingredient, and is therefore the central focus for implementing the CBLM in the school. We now briefly provide an account of each element for points of reference. We begin with Teaching Intentions.

**Diagram 1: The Student Dimension**



**Diagram 2: The Teacher Dimension**





### 1. *Teaching Intentions*

In the CBLM *Teaching Intentions* encompasses three considerations; staff alignment to the strategic direction of the school; clarity about the curriculum and the intended outcomes in a lesson or unit of work, and explicit and coherent application of appropriate pedagogical practices.

At the macro level, Teaching Intentions in the CBLM provide the explicit focus for what must be achieved in the school – the product, if you like, of schooling – and thus what teachers will be accountable for achieving. In the project school, this is articulated through the five core values and high level abstract thinking skills previously outlined. This alignment is essential in achieving school-wide and organisational outcomes, as it is fundamental to ‘talent optimisation’ (Lynch & Smith 2016; Schiemann, 2012; 2014), in essence getting the best from the people who will deliver on the desired outcomes.

Therefore, providing clarity as to what is important to teachers during the change process is embedded in the teaching intentions element. From a teaching performance perspective, the CBLM becomes the vehicle through which the teacher applies specific teaching knowledge and skills to achieve these intentions.

The school’s curriculum is referenced to the International Baccalaureate (IB) program (IBO, 2014). Within the IB’s Primary Years Programme, Middle Years Programme, and Diploma Programme, an established body of knowledge, concepts, skills, and attitudes that define and focus what teachers must teach - and thus what students must successfully learn - is made explicit. The benefits of a viable and explicit curriculum are well documented in the literature (cf. Marzano, 1998; Dean et al., 2012), and the International Baccalaureate clearly meets these requirements for the teachers and students of the school.

Importantly, there remains little dispute concerning the evidence of what constitutes effective pedagogy (Dean et al., 2012; Hattie, 2009; Marzano, 1998). Research over the last few decades has defined and clarified ‘quality teaching’ and teachers have access to information about instructional practices, the impact of these practices, and their appropriate application.

Teachers’ application of instructional practices may include direct or explicit teaching episodes, specific interventions targeted at individuals, groups or the whole class as learning needs require, or in the facilitation of student-led inquiry. Fundamental is the teacher’s capacity to apply appropriate teaching strategies dependent on the student’s current performance, the intended or required learning outcome, and the relationships established in the learning environment.

### 2. *Teaming*

Teachers in the CBLM model work in teams. This arrangement is deliberate in that it seeks to build the social capital required to sustain authentic collaborative practice and learning (Hargreaves & Fullan, 2012). This means that teachers collaborate in the



planning, implementation, assessment, and evaluation of their teaching and learning programs. In doing so, the aim is to generate teaching capacities, drawing on the diversity of learning profiles and abilities of the teachers themselves, and to create an environment in which teachers can work and learn as a community of practice (Wenger & Lave, 2003) through a professional learning process described as ‘teacher as researcher’ (Madden, Lynch, & Doe, 2015), a process of collaborative inquiry. In part, it has been identified that this process supports the development of teacher capacity and, thus, the ability of teachers to contribute to a school’s change agenda (Sell, 2013; Sell & Lynch, 2014).

We now examine the four primary elements of the Teacher Dimension.

### *3. Leadership*

The school leadership literature is rich with studies detailing the important role played by the leaders in a school, especially in processes of whole school improvement and change (Creemers & Kyriakides, 2008; Doe, Fradale, Lynch, Mason, Quinn, & Sell, 2017; Hargreaves & Fink, 2006; Leithwood, Harris, & Hopkins, 2008; Louis, Dretzke, & Wahlstrom, 2011; Marzano, Waters, & McNulty, 2005; Mulford, 2008; Pont, 2014; Robinson, Hohepa, & Lloyd 2009; Sammons, Gu, Day, & Ko, 2011; Scheerens, 2013; Sell et al., 2016; Supovitz, 2015).

Harris (2014) illustrates how a distributed leadership model builds social capital and enhances a professional learning community capable of building capacity for school improvement. In this respect the school has placed a premium on leadership capacity in the school that occurs in a distributed manner.

Cohort-based teaching teams have been established along with the identification of a designated Team mentor. These pedagogical specialists are responsible for mentoring the teams for direct in-classroom effects. The role of these two leadership team members is to work with teachers to lead the classroom implementation of the CBLM. These ‘front line’ leaders play a key role in assisting organisational outcomes. Feser, Mayol, and Srinivasan (2015) suggest investment by front line leaders in four areas can account for up to 89% of the variance between low and high performing organisations.

According to Feser et al. (2015) these four leadership practices are:

- Solve problems effectively through systematic thinking consisting of gathering, organising, and considering information to inform decisions.
- Place an emphasis on results that focus leaders and team members towards achieving the vision and objectives of the organisation.
- Seek different perspectives to better understand the contextual and cultural features and trends influencing changes in the organisational that, in turn, inform analysis for decision-making related to organisational capability building.

- Show empathy, trust, and a sincerity towards others' interest in them, and dispel concerns about external threats to avoid them generating internal conflict between employees.

In basic terms, an effective front-line leader provides a supportive teaching context (Hargreaves & Fullan, 2012) by showing a sincere interest in those around them in order to build trust, collaborative practices, shared responsibility, motivation, and commitment to professionalism and the task at hand (Bryk & Schneider, 2003; Bryk, Sebring, Allensworth, & Luppescu, 2010; Hargreaves & Fullan, 2012; Harris, Caldwell, & Longmuir, 2013; Leana & Pil, 2006; Lynch, Madden, & Knight, 2014).

#### 4. *Data Informed Decision Making*

The importance of the use of student data to drive school improvement is well established in the literature (Bishop & Bishop, 2017; Sharratt & Fullan, 2012, Sharratt & Planche, 2016; Sun, Przybylski, & Johnson, 2016). Data Informed Decision Making can be understood as the systematic process of collecting, analyzing, and synthesizing 'data' from a variety of sources within the school, and then making corresponding teaching decisions (Lynch, Madden, & Doe, 2015b). In a practical sense the teachers' use of data is one important mechanism that provides evidence of pedagogical impact. There is a direct interface in the data process with the development of the 'classroom teaching plan' and the element of 'Intent', in that such 'decisions' come to frame and inform what the teacher and their team members do next. From a whole-of-school perspective, progress in the overall school's mission, and the Blended Learning project more specifically, can be objectively assessed in this way, and then modifications made to ensure success.

#### 5. *Coaching, Mentoring, and Feedback*

The terms coaching and mentoring are synonymous with the world of business, but are relatively new to the in-service professional development of teachers in schools. The business literature tends to use the terms mentoring and coaching interchangeably, but for purposes of clarity we define mentoring as a structured, sustained process for supporting professional learners through significant career transitions. Coaching is defined as a structured, sustained process for enabling the development of a specific aspect of a professional learner's practice. In this project the emphasis is on developing teacher skills with respect to Blended Learning as articulated in the BLS. Feedback is clearly defined in the literature "as information provided by an agent regarding aspects of one's performance or understanding" (Hattie & Timperley, 2007, p. 81). The scope of information includes things such as student learning data as discussed in the previous section, formal and informal teacher appraisals, and information and data collected as part of engagements with the BLS.

In the project school's Blended Learning model, the coupling of mentoring with coaching and feedback for effects on teachers has been designed to "help individuals to improve their performance in various domains, and to enhance their personal effectiveness, personal



development, and personal growth” (Hamlin, Ellinger, & Beattie, 2008 p.291), and this has been operationalised in terms of the BLS.

The school has chosen to include Coaching, Mentoring, and Feedback as an element in their CBLM because, as Hamlin et al. (2008) conclude, “truly effective managers and managerial leaders are those who embed effective coaching into the heart of their management practice” (p. 326). Further, Cordingly and Buckler (2012) point out the “positive impact on both teacher and learner outcomes of mentoring and coaching, with the most important message being that the processes typically involve sustained collaboration, embedded in real-life learning contexts, and supported by specialists” (p. 221). The addition of feedback provides objective parameters through which performance can be judged and remedial actions targeted and assessed for impact. With these points in mind, the BLS provides the framework in which all this is considered and focused upon. In summation, the use of Coaching, Mentoring, and Feedback comes to represent the one vehicle through which each teacher’s professional growth and development in CBLM is facilitated, monitored, and sustained.

#### *6. Blended Learning-Specific Professional Learning Program*

As an adjunct to the Coaching, Mentoring, and Feedback regime, a Blended Learning-specific Professional Learning Program has been developed by co-opting the expertise of a University. This program consists of four Masters level study units, which provide a structured and sequential set of core learnings in Blended Learning theory and practice. The program itself is delivered as a Blended Learning exemplar, in which teachers are involved in work online and face-to-face, mirroring the intent of the CBLM. Each unit has been designed with the assessment comprising a developmentally staged ‘teacher as researcher’ centric project, which is conceptualised, implemented, and evaluated in each teacher’s respective classrooms/ learning environment. This becomes one of the foci of the team meetings, whereby the use of the Coaching, Mentoring, and Feedback protocols come into play.

This approach to professional learning is supported by a recent examination of the characteristics of activities that bring about improvement in practice. Jensen, Sonnemann, Roberts-Hull, and Hunter (2016) outlined the features of effective professional learning for teachers as being characterised by the following:

- Offers extended opportunities for learning over a period of time
- Engages teachers in real practice-related content
- Is focused on how to better support student learning
- Is undertaken in collaboration with other teachers
- Involves active inquiry, challenge and critique
- Has external input
- And has coherence with current research (Jensen et al., 2006, pp. 32-33).



- Having defined these details concerning the Teacher and Student Dimensions and their associated elements, we now provide an outline of the Blended Learning Schema (BLS).

### **The Blended Learning Schema (BLS)**

To this point we have detailed the CBLM, its two interlinked dimensions – student and teacher – and each dimension’s associated elements. This detailing provides a technical insight into the concepts and their attributes that have been identified from an extensive literature review on Blended Learning and teaching effectiveness (Lynch et al., 2015a; Sell et al., 2016; Willis et al., 2017).

These concepts and attributes have been organised into the CBLM as a proposition to be tested over time to focus the school on new imperative teaching and learning operations, effective classroom teaching practices, and curriculum delivery through specific processes associated with Blended Learning. As outlined prior, the associated teaching and learning goals, while linked to the International Baccalaureate (IB), are conditioned by changes in society that are a product of the emergence of a Knowledge Society (Sahlberg, 2008). Taken together, the CBLM components represent a proposition for the education field as to how schools could be organised for Knowledge Economy era teaching and learning effects using Blended Learning as a central strategy.

Missing in the detailing thus far is a mechanism that articulates, scopes, directs, and guides the school, its leaders, and teachers to what needs to change and what such changes will ‘look like’ in classrooms. We hasten to add that the premise of illustrating what a new and technologically rich classroom might ‘look like’ is an important consideration because the traditional view or ‘visual’ of classrooms and the work of teachers therein – students at their desks with pen and paper while teachers instruct from the front with a whiteboard – is a powerful and sustaining visual cue for teachers in classrooms. This is a product of the tradition of schooling and its existence over many centuries (Lynch, 2012), and the architects of the CBLM saw this circumstance as a potential impediment to be overcome. It is important to note that the BLS attempts to fulfil this requirement in a change agenda impacting teachers.

While the orchestration of each ‘dimension’ in the CBLM and its elements comes to represent the mechanics of the model, the BLS is effectively the embodiment of what this mechanism aims to achieve at the classroom level of implementation. Read as a series of descriptors to each of the model’s student dimension elements – because the model essentially is about outcomes in students (while the teacher dimension is focused on processes to establish the required teacher capabilities designed to achieve same in students) – the intent of the BLS is to enable teachers and their leaders to ‘see’ what’s new, what they need to focus upon, and in turn use, in order to evaluate their capabilities and performance towards each element and the associated dimensional goals.



The development of this BLS is considered a ‘work in progress’ at the time of writing. This is because as the project matures and research evidence emerges as to the model’s efficacy, plans are in place to evaluate and update each element and criteria to strengthen the model and its effectiveness for teaching and learning in the school. This schema is located as Table 1 at the paper’s end.

### **Future directions**

In this paper we have detailed the plans of a school which seeks to come to terms with the circumstances created by a Knowledge Economy and its resultant societal change. The school’s plans centre on the introduction of a school-wide (Kindergarten through Year 12) Blended Learning approach to teaching and learning, which has been coined as the *Collaborative Blended Learning Model*. This model has revealed a clear approach for whole-of-school teaching reform, and represents an identified number of elements which essentially represent new imperative teaching and learning propositions that now require testing. Over the next few years, this model will be put through its paces and a comprehensive study conducted to evaluate model performance. Ongoing publications will continue to provide project updates and outcomes as the model continues to develop and our research findings come to light.

As with any new approach, there are benefits and drawbacks to the current project. We already know from existing literature that some teachers have reported a Blended Learning approach requires more work and can result in a diminished classroom dynamic if not implemented carefully. Similarly, some students have reported experiencing confusion, diminished social aspects, and an increase in required effort when learning within a Blended Learning context (e.g., Welker & Berardino, 2005). Conversely, other students have reported they find blended classrooms more flexible, independent, and convenient, and much research reports significant gains in student achievement over time in relation to the implementation of Blended Learning (e.g., Christensen, Horn, & Johnson, 2011; Dirckinck-Holmfeld, 2016; Horn & Staker, 2015).

Given the relatively new frontier that Blended Learning embodies, particularly in primary and secondary schools, none of this is particularly surprising, and in fact provides precisely the sort of rationale needed to encourage further investigation into the use of Blended Learning as a pedagogy that is responsive to the new imperative of teaching and learning in the knowledge age. What sets the current model of Blended Learning apart from much of what has gone before in this area, is the way in which our proposed model of Blended Learning has been contextualised to conform to the specific needs of an individual school, teaching capabilities, school leadership, and student outcomes. In this respect, the authors believe we will be able to provide realistic and worthwhile insights into Blended Learning in a manner that supports new imperative goals and intentions, while at the same time producing valuable evidence concerning the efficacy of Blended Learning as an appropriate pedagogy for the modern teaching and learning process.



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Elements	Goals for Student Learning	Specific Blended Teaching Strategy	Face to Face Interactions	Digital Technologies	Student Centred Learning	Inquiry Context
Specifies / Evidence of Each Element (Increasing in level of skills required to implement/ action)	1.1 Teacher is able to articulate:  - The vision for the school - His/her role in delivering on the school's vision - The component pieces that he/she personally has to engage with for success	2.1 I.B. Curriculum implementation is aligned with vision and values	3.1 Teacher in student interactions:  - Uses open ended questions - Checks for understanding	4.1 Teachers deliberately use 'off the shelf' digital technology product/s	5.1 Students can:  - Articulate the goal for learning - Explain what they are learning	6.1 Statements of Inquiry drive process, along with Big Question foci; provocations to find out and test things; focus on deep conceptual learning
	1.2 Teacher has clearly defined long term goals in planning documents which reflect whole of school curriculum expectations. (Review Planning)	2.2 Teacher completes BL specific PD Units 1-4. There is evidence of new found teacher knowledge and skills in action	3.2 Provisions of timely feedback to students on their performance include:  - Formal written feedback - Informal written feedback - Oral point in time feedback - Formal whole class feedback - Informal whole class feedback	4.2 Teacher has Blended Learning elements in use such as:  - Synchronous/asynchronous delivery - Web 2.0 products/platforms - On-line quizzes - Digital Games - Virtual worlds - Automated Guidance Systems - Learning Management Systems - Emerging technologies	5.2 Students:  - contribute to the setting of goals for learning - set goals for own learning.	6.2 Units of Inquiry properly aligned with school's curriculum expectations
	1.3 Teacher and students have clearly defined:  - short term (lesson and experience) goals - which directly link to long term curriculum expectations - which are measurable.	2.3 Digital technologies in synchronous and asynchronous learning experiences are evident in practice	3.3 Classroom organisational elements create an environment conducive to learning including structures, routines, agreed norms for interactions	4.3 Teachers work with an ICT expert (e.g. ICT team) to adapt a digital technology product to deliberately enhance learning	5.3 Students recognise and use a variety of places for learning (e.g. access the curriculum from outside the classroom)	6.3 Teachers use the school's Pedagogical Framework for planning and implementation
	1.4 Teacher references individual student and collaborative learning profiles in plans and can provide explicit insight into each student's current performance level based on a hierarchy of thinking orders.	2.4 Collaboration with Teaching Team members become central for teaching and learning effects. Efficiencies and increased capacities for dealing with individual	3.4 Teacher incorporates feedback from students to inform next teaching steps	4.4 Teachers develop their own to digital technology product to enhance learning (e.g. app)	5.4 Students decides pace (e.g. students negotiate submission dates)of learning	6.4 Students engage with problems that are significant to them and their immediate world, propose a solution and test for fit and effectiveness and report on findings using various ICTs.

		students is created				
1.5 Teacher develops a plan for each student:  - based on data in the form of an individual student learning profile (i.e. identified learning need) and managed through technology		2.5 Teacher incorporates path, place and pace options into learning engagements	3.5 Learning environment customised to meet learning goals: collaborative configurations, resource and study centres, ICT devices, furniture configurations, appropriate digital technology access, technical resources used	4.5 Teachers use Adaptive Technology a part of a Learning Management System.	5.5. Students decide path (e.g. students negotiate use of external academic programs) of learning	6.5 Students set and engage with problems that are significant to them and their immediate world, propose a solution and test for fit and effectiveness, and report on findings using various ICTs.
1.6 Teacher can articulate how Blended Learning will be engaged or enacted to deal with each individual student's learning profile as well as the collaborative profile for groups of students		2.6 Teacher differentiates teaching and learning to meet profile of individual students	3.6 Extra-curricula activities are used to enhance or extend learning	4.6 Students co-opted (empowered) to solve teaching and learning problems through the use of technology	5.6 Students reflect on outcomes achieved and evaluate the extent of personal learnings	6.6 Students use technology to facilitate, customise and better enable their engagement with processes of inquiry
1.7 (a) Teacher contributes as a matter of course to redefining the school curriculum beyond the current to a future version, by testing propositions and reporting on findings using various mediums	1.7 (b) Students are consulted re their individual and collaborative learning profiles (including data, progress and learning needs) and this information is used to inform teacher planning	2.7 The teacher reflects on personal progress towards implementation of the BL model and takes appropriate actions (i.e. responds positively to peer and mentor feedback; makes annotations to record progress; seeks feedback; collects evidence of achievements and personal growth and development)	3.7 Mechanisms in place to inform parents of classroom happenings: use of ICT, relationship based, F2F involvements in classroom	4.7 Students enrol in outside of school online programs to enhance their learning	5.7 Students adapt their approach to learning based on feedback and reflections and learn how to learn (i.e. metacognition)	6.7 Students develop propositions that consider how the world is changing, test them and report on findings using various ICTs
1.8 (a) Teacher develops new curriculum initiatives in collaboration with their	1.8 (b) Students take the lead in setting their own goals	2.8 Team teaching arrangements are used to increase teaching capabilities	3.8 Teachers use ICT to report on student outcomes	4.8 Students propose, test and report on digital technologies and/or products for teaching and learning effects	5.8 Students:  - critique what they are learning - offer solutions to maximise their	6.8 Students engage with out of school agencies on problems and circumstances that inform and extend their

	teaching team					learning opportunities	classroom study program and associated goals and report on findings using various ICTs
	1.9 (a) Teacher develops new curriculum initiatives for the school executive to consider	1.9 (b) Students set extension goals focusing the individual student and his/her cohort that go beyond the written curriculum	2.9 Students assigned to need and ability groups for teaching (and away from age based cohorts)	3.9 Instructional methods are deliberately chosen by teacher to meet the needs of learners (e.g. direct / explicit instruction , cooperative learning, mini lessons when specific needs arise)	4.9 Students create digital products expand and complement classroom teaching and learning effects for self-learning benefits	5.9 Students engage with customised learning experiences to meet their individual and collaborative student needs	6.9 Student engage/ enrol in outside school learning programs which complement and extend their classroom learnings
	1.10 Teacher attends conferences / forums to report on the outcomes of new curriculum initiatives		2.10 Teachers create goals to extend students beyond the curriculum expectations (e.g. that are of significance to individual student learning profiles)	3.10 Student analogue and digital products are published to reinforce and encourage learning (e.g. celebrations of learning, connection to the world beyond the classroom)		5.10 Students propose and develop propositions for learning that inform, extend and reinforce their own learning	6.10 Students engage/ enrol in outside school learning programs which complement and extend their classroom learnings to new and differentiated learning goals which have student centric outcomes
			2.11 Teacher engages with outside of school agencies and entities to locate the curriculum in real life context	3.11 Student learning extends beyond the classroom through the use of a Learning Management System for cohorts		5.11 Students enrol in outside school programs which complement and extend their study program	6.11 Students present and publish results of inquiry in contexts for other student reference
				3.12 Student learning extends beyond the classroom through the use of a Learning Management System for individual students		5.12 Students study/engage in environments and programs which are external to the classroom and the school, but informed by their school goals, with success	6.12 Students present and publish results of inquiry in contexts for other outside school student reference
				3.13 Students propose learning			



				activities, which are goal focused, and which extend their classroom learning into society/ industry			
				3.14 Students lead learning activities, which are goal focused, and which extend their classroom learning into society/ industry			