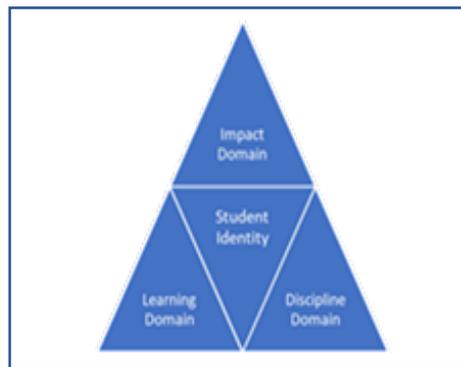


Blended Learning Project: Mid-2018 Project Report

7th December, 2018

Presented to the teachers and leaders of Aoba Japan International School (AJIS)



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Acknowledgements

The authors would like to gratefully acknowledge the teachers and school leaders who shared their time and thoughts by participating in this project and the activities required to produce this report. The opportunity provided by BBT University, Aoba and Meguro schools is highly appreciated. Special thanks to Ed Lawless, Paul Fradale and Chasen Stahl for performing important “on-the-ground” activities in service of this report.

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Executive summary

The complete picture of a whole-of-school blended learning initiative is complex and difficult to capture, requiring as it does extensive and clearly coherent data and other information to monitor and evaluate. This mid-term report has been developed to provide instructive guidance to the Aoba International school leaders and teachers concerning progress-to-date on the embedded Blended Learning (eBL) Project, and recommendations for moving the Project forward. This report references data collected from the following sources:

1. **Readiness survey:** This survey is designed to ascertain levels of alignment, capability and engagement of school staff. More specifically, this report provides comparative readiness data over 2 years with respect to *alignment* (the extent to which staff are aligned to the schools strategic goals and values), *capability* (level of knowledge and skills of staff to competently fulfil their role and function in the Project), and *engagement* (staff satisfaction with their role and commitment to the school's mission and goals).
2. **Standardised tests (ISA/PAT-M & R):** These standardised and comparative tests have been used to show the level of student learning outcomes in the core areas of literacy and numeracy over a 3-year period. While not comprehensive in terms of the overall school curriculum, they do provide significant insight into student learning outcomes and thus are able to act as proxies for teaching performance.
3. **BL Surveys:** These surveys sought to elicit teacher and school leader perceptions in relation to key elements of the eBL Project, including ICT, Collaborative Team Work (CTW), PD learning and leadership feedback and guidance.
4. **Staff interviews:** These interviews were conducted with teachers and school leaders by trained interviewers, using open-ended questions designed to clarify teacher and leadership attitudes, perceptions and understandings of the eBL Project. The information from these interviews was combined with findings from other instruments to assist our overall understanding of these attitudes and perceptions for this report.

N.B.: In 2017 all teachers underwent a BL Schema audit, in order to ascertain base-level BL skilling. However, due to current circumstances no follow-up audit was performed and therefore this report is unable to speak to current BL Schema skilling on the part of teachers. It is thus suggested that a comparative BL Schema audit be conducted to identify current teacher skilling in this area.

Once these data were collected, a variety of quantitative and qualitative analyses were conducted to identify the important relationships between school readiness (including BL readiness as this relates to PD units 1 & 2), student achievement outcomes and what the teachers are doing in their Project work. These processes revealed the following key findings and associated recommendations.

1. Key findings are:

- Levels of school readiness over the 3-year period of examination have been inconsistent and declined during the 2017 – 2018 time frame.
- Teachers were generally positive about the eBL Project, and indicated satisfactory levels of engagement with associated activities and projects, although differences in teacher perceptions were found between older, more experienced teachers as compared to younger and more specialist teachers.
- Teachers indicate that competing school agendas have tended to make engagement with the eBL Project somewhat challenging.

- Over the 3-year reporting period student learning outcomes returned mixed results. For example, although mathematics has generally improved, reading has generally remained static.
- Teachers recognised the importance of leadership guidance and feedback, yet perceived leadership feedback as being inconsistent and not adequately focused on their individual core team projects.
- Teachers reported that they valued PD units 1 & 2, but that the level of work involved was demanding and that these units lacked sufficient practical guidance, especially modelling how to implement specific ICT skills into their core team projects. Despite this, the teachers progressively gained confidence about their use of technology in relation to classroom teaching and learning as a function of their involvement with these units.

2. In light of these findings, this report makes the following key recommendations, based on the desired outcomes of the eBL Project in conjunction with established literature in the areas of school leadership, school improvement and blended learning:

- This report indicates there has been slippage in terms of the projects positioning & alignment. Therefore, a review of the project is in order in terms of its goals and strategies and, correspondingly, the assignment of resources and teacher PD. Put simply, it appears there are several competing agendas within the school and that BL, while originally central to the school's operations, has lost impetus. Due to this situation, we recommend that AJIS re-conceptualise its BL Schema in light of its new strategic plan, seeking to establish whole-school buy-in to the new BL schema, as based on that strategic plan, as the fundamental basis for its BL outcomes.
- It was apparent in the teachers' data that the required organisational and leadership functions in the school were not sufficient to embed and sustain a whole-school BL Project. For example, it was clear in the data that teachers did not receive adequate levels of feedback from leaders on their progress towards specific BL competencies as connected to individual core team projects, and in relation to how what they were doing was making a difference to the school. The school thus needs to establish clear arrangements by which teachers can be more supported in their delivery of the Project outcomes and how this has affected student learning. This is also apparent from the readiness data, which shows that teacher's level of ACE have decreased, further reinforcing these points. To this end KPIs for the school leaders should also reflect the revised BL Project outcomes.
- A review of overall student outcome data (ISA, PAT) suggests that a greater focus should be provided on core teaching elements, given these are the foundations of academic learning in a school. For example, PAT-R deficiencies indicate a greater teaching focus on English. It is therefore recommended that all future core team projects contain a focus on this particular area to address this deficiency moving forward. Middle-school leadership assistance coupled to a more formalised CMF regime are suggested as important for supporting this focus.
- It is also apparent at this point that the processes for collecting data have been viewed as somewhat challenging and were therefore piecemeal. It is recommended that the school adopt a consistent schedule of data collection and analysis for the purpose of authentic Project monitoring, evaluation and ongoing

guidance. This is necessary to ensure the validity and reliability of Project outcomes, and requires particular attention to the issue of competing agendas in order to avoid further slippage relating to teacher engagement and satisfaction with the Project.

- Teachers indicated that although PD units 1 & 2 were interesting and informative, these units were also demanding and lacking in practical guidance. Given this, it is recommended that PD units 3 & 4 have a practical focus and be embedded more directly in the teachers' classroom work. Specific attention to the practical use of ICT in service of improved English for each Core Team project should form a distinct element of guidance and feedback for these PD units. In addition, teacher differences as uncovered by cluster analysis suggests that a strategy for moving the Project forward should be to base Core Team membership on a mixed-age, mixed-experience and mixed-teaching-area strategy.

Key terms & abbreviations used in this report

eBL – Embedded Blended Learning. The term used in this report to refer to the whole-of-school Blended Learning Project that underpins overall school improvement for Aoba & Meguro schools. Positioning Blended Learning within a whole-of-school improvement initiative is important because it allows evaluation of *school readiness* (see below) at a holistic pedagogical level for these schools (cf. Yeigh & Lynch, 2018).

BL Schema (BLS) – An underlying framework for the Collaborative Blended Learning Model, designed to support this model within a change agenda impacting teachers. The BLS operates as a mechanism that articulates, scopes, directs, and guides the school, its leaders, and teachers to understand what needs to change and what such changes will 'look like' in classrooms. Importantly, the BLS remains a "work-in-progress" across the entire Project, as it continues to be developed as an inductive outcome of the knowledge-building framework for the Project.

Collaborative Blended Learning Model - The specific, contextualised model of Blended Learning that was developed to position Blended Learning within the local school context.

Exploratory Factor Analysis (EFA) – A statistical technique used to determine the underlying (latent) variables that contribute to the data structure of an instrument or measure (such as a survey or questionnaire). The particular form of EFA used in this report was *Principle Components Analysis (PCA)*, which is designed to identify how many unique latent variables exist within a data set, as well as what the relative explanatory power (variance) is for each variable.

Knowledge Economy – Refers to the way technological advancements have changed the way people live, socialise, work and learn in modern societies, wherein most societies have moved from an economy based on industrialised outputs to an economy based on information outputs.

School Readiness – An important underlying concept for the *eBL*: That effective school improvement (involving both teachers and students) depends on a school being appropriately "ready" to enact improvement measures, across three corresponding areas of knowledge, skill-sets and behaviour: *Alignment* (agreement between teachers and school leaders concerning improvement goals and vision); *Capabilities* (degree to which the improvement

initiative is properly resourced in terms of knowledge, skill development, time, etc.); and *Engagement* (the level to which a positive school-wide attitude/belief that the initiative and effort required are meaningful and worthwhile is taking place). The concept of school readiness is based on the *Theory of Planned Behaviour* (TPB), which suggests that an explicit relationship exists between attitudes, intentions and behavioural engagement (cf. Ajzen, 1991; Armitage & Conner, 2001; Lamorte, 2018).

Introduction

In 2016, Aoba Japan International School (AJIS) planned to develop a Blended Learning Platform and Curriculum to support the development of ‘The School’ into the future. To this end Southern Cross University (SCU) was invited, through a research contract, to support ‘The School’ in such an endeavour. This has become known as the AJIS Blended Learning Project (also known here as the eBL Project) and in the literature as the Collaborative Blended Learning Model (CBLM, cf. Lynch, Fradale, Sell et al., 2018). The aims of this report are to identify current Project outcomes, issues and needs, and to make recommendations for moving the Project forward on the basis of these identifications. This report relies on a variety of quantitative and qualitative data sources that together are used to provide an insight into outcomes and impacts to date of the Project to date. The report concludes with a series of recommendations for further work in the eBL.

Project framework

The literature around Blended Learning (BL) positions BL as a pedagogical approach designed to harness the disruptive power of technological innovation in a positive way (Horn & Staker, 2015; Tucker, Wycoff & Green, 2017). Technological innovation exerts a fundamental impact on the structure of society in terms of the way people live, socialise, work and learn, a societal circumstance known collectively as the *Knowledge Economy* (OECD, 2013; Yeigh & Lynch, 2017). This has resulted in calls for schools and other education providers to develop new teaching strategies that incorporate technology in appropriate ways, in order to improve student outcomes and support a shift to more student-centred learning (AITSL, 2015; Ingvarson, Reid, Buckley et al., 2014; Lynch, Madden & Knight, 2014; TEMAG, 2014).

In this respect Blended learning (BL) is an instructional approach, designed to increase student-centred, student-led learning via the assistance of technology (Horn & Staker, 2017; Willis, Yeigh, Lynch et al., 2018). It is still developing as a distinct pedagogical format, and because of this does not have a single, universally agreed definition in terms of specific structure or process. However there is general agreement that BL involves some combination of face-to-face (F2F) and online learning elements, and that the main focus for learning needs to be situated within a school setting (Horn & Staker, 2015). Connecting student learning to actual school settings is important because this ensures that the learner’s online experience is informing what’s happening in the classroom and vice versa, and is one reason the eBL Project was embedded within a holistic, whole-of-school improvement initiative.

In order to address these concerns it is necessary to define and position BL within the immediate context of the local school environment, to ensure that the specific BL approach is relevant and appropriate to the authentic capabilities and needs of the school. It is this contextualising process that allows BL to operate in a way that addresses global issues associated with the knowledge economy, while at the same time also able to address the pertinent issues of the local school. In this respect, the underlying assumptions for the eBL Project are encapsulated in the CBLM, which seeks to capture how the important relationships of the underlying BL Schema developed for the Project are meant to operate in the service of overall school improvement. Figure 1 provides a simplified overview of the

CBLM. This particular depiction is designed to show how the basic dimensions of the CBLM (student and teacher) interact to support specific Project outcomes that are supportive of the underlying BL Schema developed for this Project.

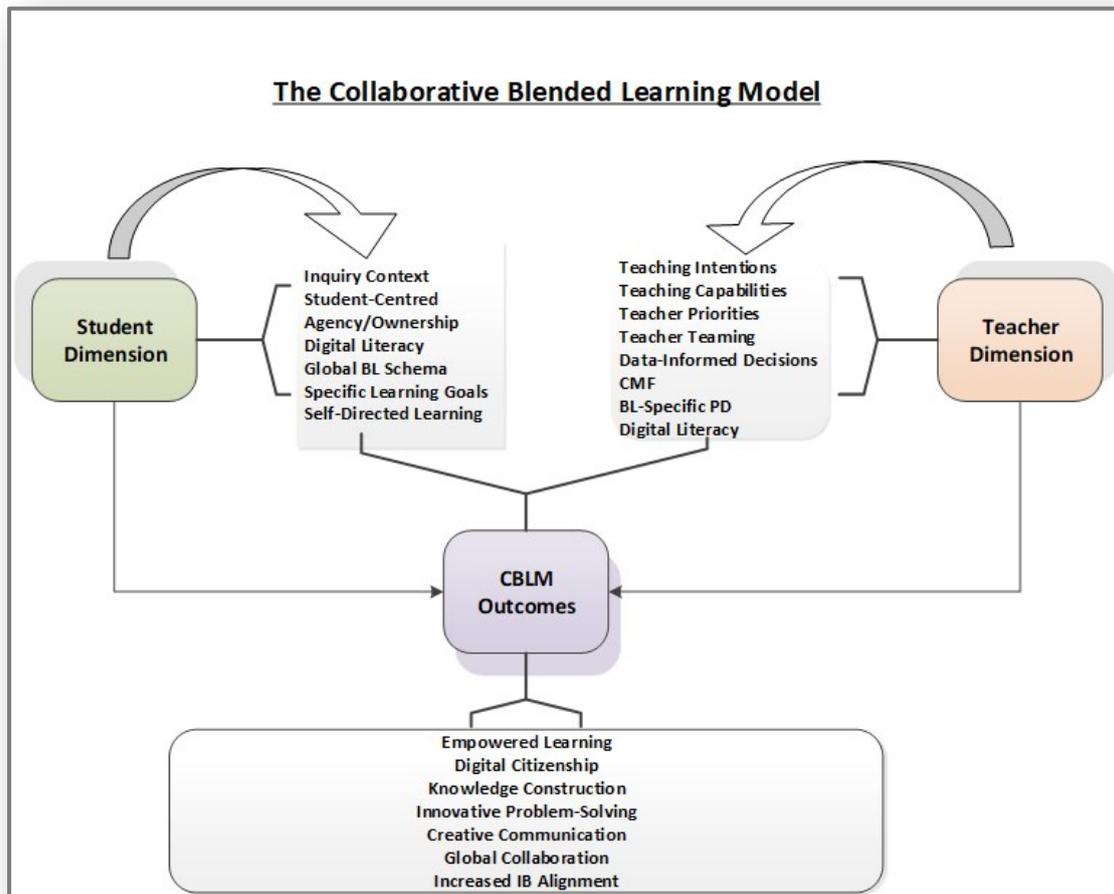


Figure 1: Overview of the CBLM as contextualised for the eBL Project.

The assumptions of this model are crucial to the intent of BL as a contextualised pedagogy, and are what characterise BL as a distinct pedagogical approach for the eBL Project, as opposed to the role of technology per se', which some might expect to be more the case (Willis, Lynch, Fradale & Yeigh, 2018). When understood from this perspective, the CBLM can be seen as a modern pedagogy model in which the classroom and online learning elements inform and direct one another in a reciprocal manner. Importantly, the goal of this reciprocity is to change the fundamental role of the teacher and the student in a manner designed to better differentiate and personalise student learning, that is, to increase student control over the learning that takes place in schools and classrooms. This is critical in that it lays the foundation for student ownership of the learning, a necessary pre-condition for genuine learner agency. In this respect it is important to note that the Core Team projects that represent how BL is being actioned within the Project schools are focused on student agency as an essential strategy for increasing student engagement, with the expectation that increased engagement will lead to improved learning outcomes. The goal of increased student agency

thus forms a key outcome for the eBL Project overall, as supported by the CBLM as presented here.

In light of this the current report will discuss Core Team responses to the eBL from the perspective of the CBLM, which represents how the underlying BL Schema has been contextualised to the particular school environments at Aoba and Meguro.

Brief overview of the Project development process

To date the eBL project has travelled through the following developmental stages:

Stage 1: Extensive review of the blended learning literature to identify key conceptual elements and their associated understandings.

Stage 2A: Base line data collection. This comprised; Readiness Survey, Leadership Survey, Teacher BL Survey, ISA, PAT-R and the PAT-M.

Stage 2B: development of a model to explain and frame what the project was to implement. This is known as the Collaborative Blended Learning Model.

Stage 3: Project Implementation. This stage chiefly comprises the development of 4 x professional learning units which are presented to AJIS staff as embedded PD focused on Blended Learning. TO date PD units 1 and 2 have been completed with 3 and 4 planned/ underway.

Stage 4: Mid Line Report. This stage comprises data collection and a report that has been designed to provide advice and guidance as to project performance and recommendations for next steps.

Methods

A mixed methods approach was used to collect data for this report, with quantitative data captured using Likert-type scales and qualitative data obtained using semi-structured interviews conducted by trained interviewers. The quantitative data involved in this report consists of standardised student achievement data, teacher surveys and School “readiness” data. The qualitative data was derived from a series of semi-structured teacher and leadership interviews that occurred over a ten day period at Aoba and Meguro schools during September 2018. An overview of teacher confidence ratings in relation to PD units 1 & 2 is also included, as this provides some insights regarding changes in teacher confidence across the different areas of PD learning that are covered in these units.

Measures

As also shown in figure 2, a primary focus for the eBL Project is student achievement, as mediated by teacher professional learning in the PD units. The following measures have been designed to capture student achievement (PAT) in relation to teacher attitudes and behaviour concerning the eBL Project (BL Teacher Survey), within the whole-of-school improvement initiative (Readiness Survey) currently taking place at Aoba and Meguro.

PAT – The *Progressive Achievement Tests* (PAT) is used to provide a standardised measure of student growth over time. This allows us to assess progressive change in student academic achievement within Aoba and Meguro schools, while at the same time compare results with normative data from other schools from around the world. The PAT thus allows for both intra-and-inter-school comparisons of student achievement.

BL Teacher Survey – The *BL Teacher Survey* was originally intended to as an exploratory tool to build theory and aid in the development of a more valid measure over the course of the project. Included in the survey are items intended to measure teacher attitudes and behaviours regarding important aspects of the BL project, such as the use of ICT (in the classroom as well as general skills), face to face classroom interactions, student-centred learning, the inquiry context, and the use of student data. The BL Teacher Survey is conceptually linked to the BL schema.

Readiness Survey – The *Readiness Survey* is used to measure Alignment, Capabilities, and Engagement within the school from the perspective of the teachers and leaders (using separate versions of the survey). Alignment relates to how clear and congruent school goals, strategies, and priorities are to staff. Capabilities assess whether there is sufficient information, resources, and skills within the schools to do the work and meet school goals as required. Engagement refers to the motivational energy or commitment of staff, and thus incorporates a willingness to exert effort and act as an advocate for the organisation. Research suggests that maximising these three things will increase a school's ability to make effective improvements (Yeigh & Lynch, 2018; Yeigh, Lynch, Turner, et al., 2018). The Readiness Survey gives us a good idea of how functional and effective the relationship between school leadership and teacher behaviours is, in terms of ensuring that the school is ready for improvement.

Methodological process

The °BL Project has adopted pragmatism as its theoretical framework, largely because pragmatism uses an inductive approach toward data collection and analysis to determine what, and how, things work in real-world settings. Within this framework, the current report has employed a methodology based on explanatory research design to identify the important concepts, principles, behaviours and attitudes that appear to effect the °BL Project. An overview of this process is presented in Figure 2. The importance of this process is that it allows us to inductively analyse Project information, forming a good basis for authentic, evidence-driven decision making.

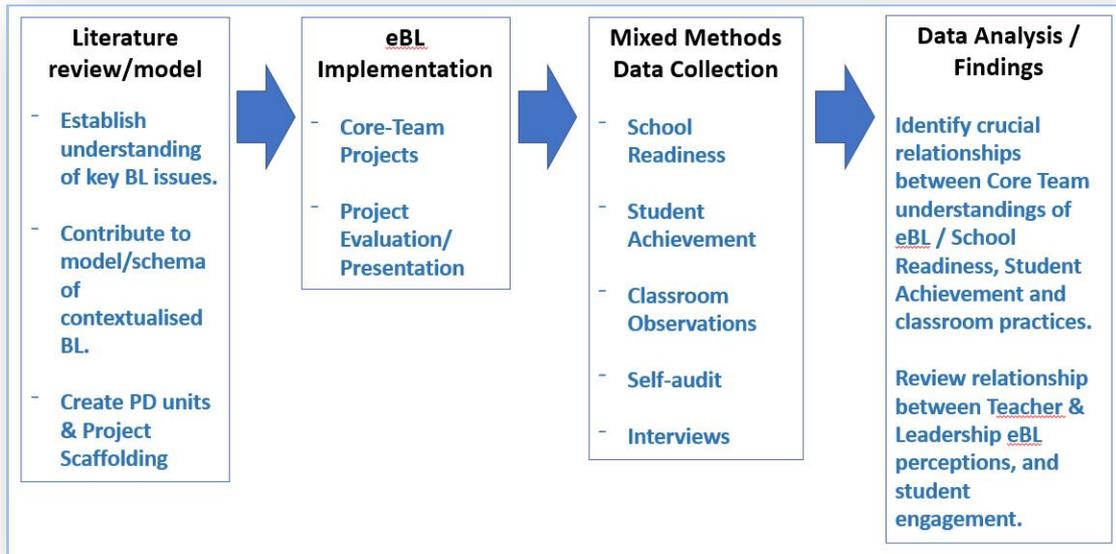


Figure 2: Overview of the explanatory research design process.

Data collection

Data collection is envisaged as essential to the provision of evidence-based decision making for the eBL Project, and in this respect represents a core focus for this report. Important aspects of data collection include data analysis and a data collection timeline, as these are necessary for monitoring and evaluating the Project in a valid and authentic manner. The overall relationship between data collection and school leadership, teacher professional development and student learning for the eBL Project is shown in Figure 3. Note that the leadership and teacher surveys are aimed at giving us an understanding of what leaders and teachers are actually doing in relation to the strategic plan and Readiness, with the PAT scores being our standardised measures of student achievement. Changes in all these things will be assessable over time with the different time-points, as shown by the black arrows. The underlying logic of this approach is that leadership behaviours and attitudes influence teacher behaviours and attitudes, which in turn influence student achievement.

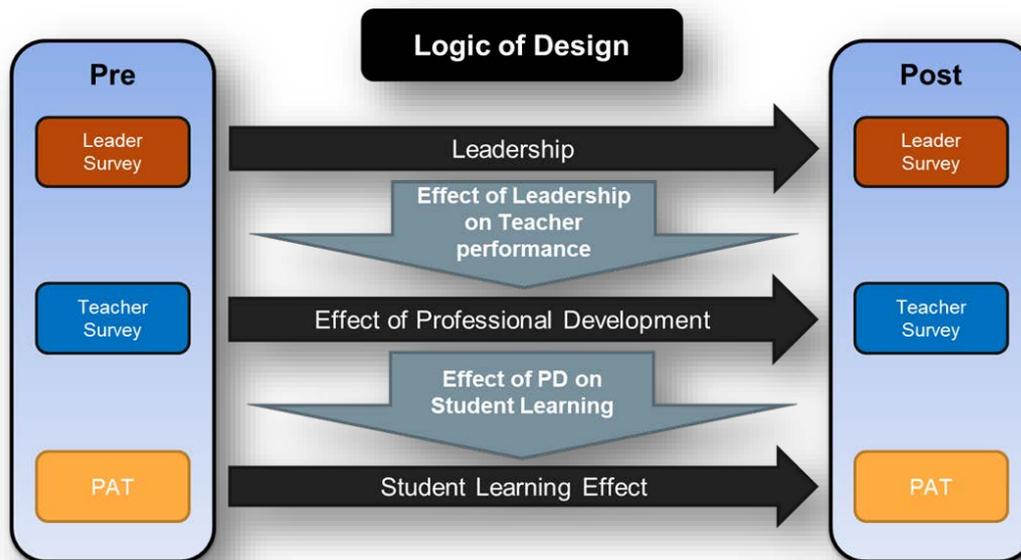


Figure 3: Overview of relationships between data collection and school leadership, teacher professional development and student learning.

Data analysis

Quantitative data was analysed descriptively and inferentially. Descriptive analyses were variously used to identify individual, team, cohort and overall means (averages), standard deviations (SDs – how consistently close to the mean a particular data set might be clustered) and ranges (how much distance exists between the lowest and highest scores for a data set). This level of analysis allows for the development of individual and team profiles, comparisons between different cohorts (e.g., primary & secondary) and some indication concerning the consistency of responses across different measures and cohorts.

Inferential analyses were used to identify internal reliability for the quantitative data collection instruments, significant relationships within the data sets, significant comparisons between different groups, and how to cluster the response-sets (this identifies significant differences within a particular data-set, in order to form within-set groups, thus providing for dichotomous analysis of an individual variable – analysing a single variable from two different - yet inherent - perspectives). Another form of inferential analysis (exploratory factor analysis) was also used to identify how many, and which particular, latent variables (factors inherent to the peculiar pattern of responses given) were evident from the actual data as collected. Inferential analyses allowed us to determine which areas of response seemed most significant from an inductive perspective, and thus helped tease-out key findings, as well as suggest specific areas of recommendation.

Qualitative analyses involved the use of individual, semi-structured interviews with both teachers and the school leadership team. This level of analysis provided a broad range of understandings from the perspective of individual teachers and school leaders concerning key Project areas such as ICT skills and knowledge, Professional Development, Collaborative Team Work, School Leadership and specific areas for Project improvement. Summary

overviews concerning the key themes and core issues arising from these interviews were presented in our interim report (Sept., 2018). This report will review these themes and issues again, with a view to identifying specific interview responses that underlay these previous summary overviews, as well as how these responses might correspond to (or contradict) the quantitative data.

Data collection timeline

Crucial to effective data collection as a monitoring and evaluation strategy for the eBL Project is the need to collect and analyse data systematically. In this respect a data collection timeline has been proposed for the purpose of ongoing monitoring and evaluation to support the Project, as provided in Figure 4. This represents a generic or “core data” timeline only, as pertaining to the eBL Project itself, and we accept that this may not cover other types of data the schools may additionally wish to collect. However it does provide a clear schedule against which all data can be eventually mapped, and we suggest that having such a timeline – and adhering to it – are important for moving the Project forward effectively.

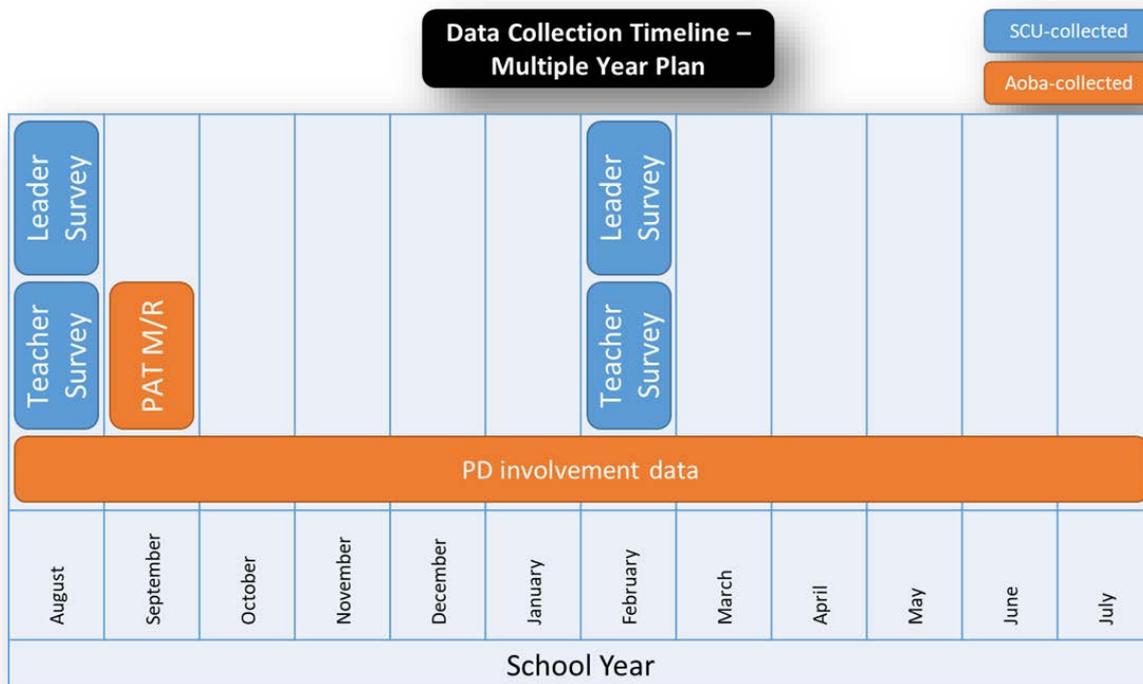


Figure 4: Proposed data collection timeline for the eBL Project.

Data analysis findings

Quantitative analyses

We begin with a series of quantitative analyses designed to capture important concepts, factors and relationships as measured by the readiness survey, teacher survey, PD confidence checklists and the student achievement outcomes associated with the eBL Project.

Sample demographics

Participants consisted of 28 females and 10 males for whom we had consistent data and matching codes for in relation to all the data received for this report. These teachers had a mean age of 42 ($SD = 10.81$), and consisted of Early Childhood teachers ($n = 7$), Primary teachers ($n = 11$), Secondary teachers ($n = 12$), and Specialist area teachers ($n = 8$).

Exploratory Factor Analysis (EFA) and internal reliability of subscales

A type of Exploratory Factor Analysis (Principal Component Analysis) was used to identify the underlying structure of the BL survey items. Due to the small sample size, the proposed subscales were ran separately to maintain a reasonable participant to item ratio. The proposed subscales were:

- *ICT skills, attitude, and behaviour change due to the BL Project (ICT)*
- *PD 1&2 impact on student-centred learning, enquiry approach, collaboration, and core team inquiry (PD)*
- *Core Team Work importance in the BL Project and impact on teaching (CTW)*
- *Leadership oversight and feedback*

The ICT, PD, and CTW subscales were all found to have a single underlying factor, each of which explained over 70% of the variance for each item. The Leadership subscale, however, was found to have two underlying factors: *Leadership Feedback*; and *Leadership Oversight*. These two 4-item factors accounted for 92% of the variance within these items. One item was deleted because it crossloaded onto both factors.

As can be seen in Table 1, internal reliability for these subscales is high. This provides evidence that each subscale item is measuring the same subscale construct (the same variable or factor) as the other items in that subscale, thus affording confidence that the subscale items are consistent in the way they are measuring each construct.

Table 1: Cronbach's Alpha and Descriptive Statistics of Subscales

	Cronbach's Alpha	N of Items	Mean	Std. Deviation
ICT	.875	4	4.45	0.99
PD	.868	4	4.51	1.13
CTW	.883	4	4.89	1.11
Leadership Feedback	.972	4	3.45	1.48
Leadership Oversight	.959	4	4.52	1.37

EFA interpretation

These findings are interesting because they suggest that two different aspects of leadership are being represented in these item responses, one focussing on oversight and the other on feedback. In this respect it is important to note that whereas the mean (average) rating for Leadership Oversight (4.52) was the second-highest rating for these subscales overall, the mean rating for Leadership Feedback (3.45) was the lowest, and that the Standard Deviation (SD) for Leadership Feedback (1.48) was the highest SD for these ratings overall (i.e., the responses for this subscale had the least amount of agreement/most amount of disagreement; as shown in Figure 5). These findings may therefore accord to some degree with the interview data also analysed for this report, in that the interview data identified strong leadership guidance (especially at the beginning of the Project) coupled to inconsistent leadership feedback as a relevant issue for the Project.

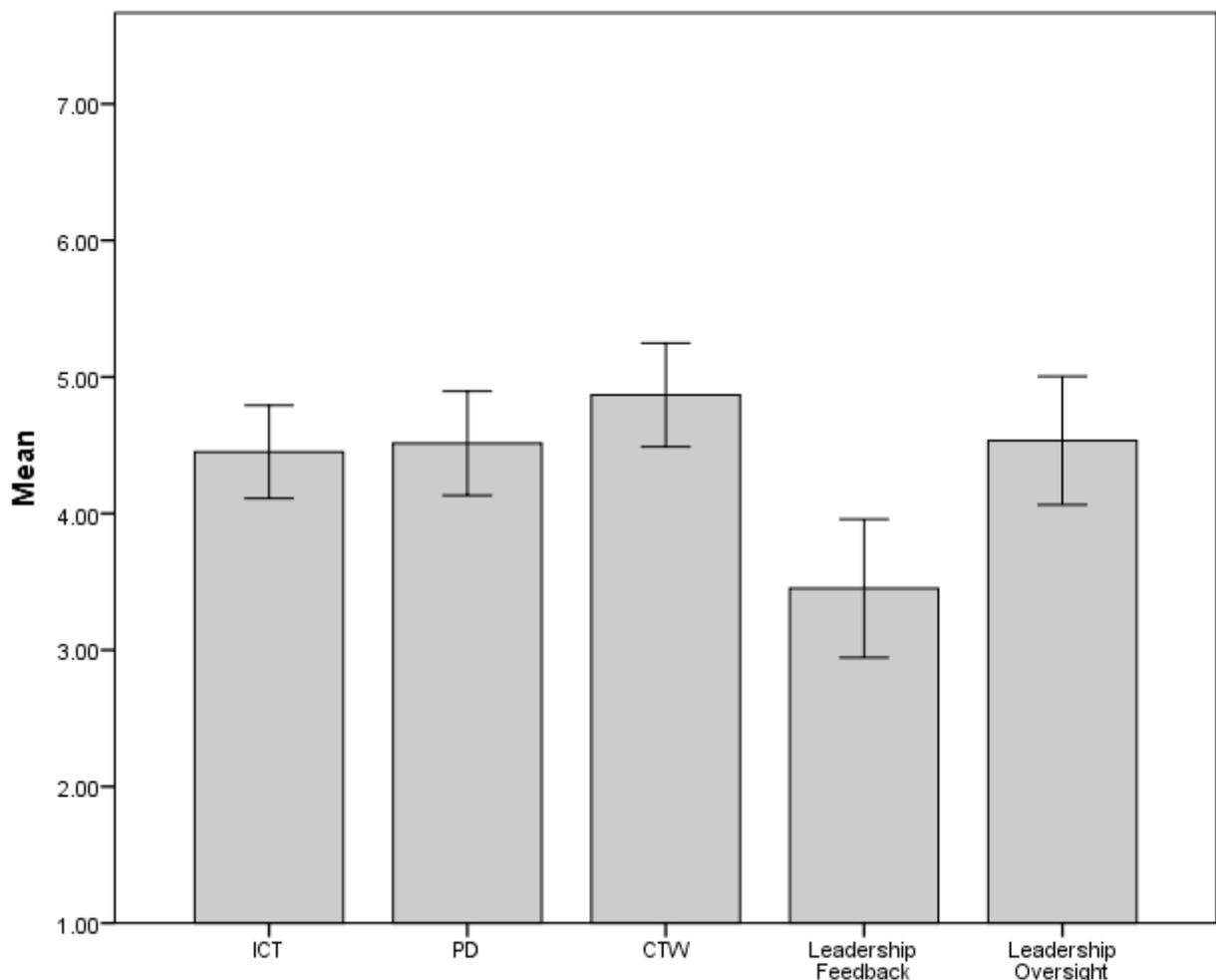


Figure 5: Mean scores of the EFA subscales.

Cluster analysis

Once the 5 subscales had been identified, a 2-Step Cluster Analysis was used to assess whether there were different teacher profiles (different groups of teachers) that could be distinguished based on the responses to these subscales. In this respect the same 2 cluster

solutions were found when analysing the survey items separately and as subscales, and, as shown in Figure 6, in both cases we found one group of teachers who scored higher on all 5 subscales ($n = 15$), and another group of teachers who scored lower on all 5 subscales ($n = 21$). We discuss the implications of this further below, but for now it is important to note that the relative predictors for this grouping structure were (from most important to least important) CTW, Leadership Oversight, ICT, PD, and Leadership Feedback. That is, CTW most differentiated between the clusters (or teacher groups), while Leadership Feedback least differentiated between the clusters.

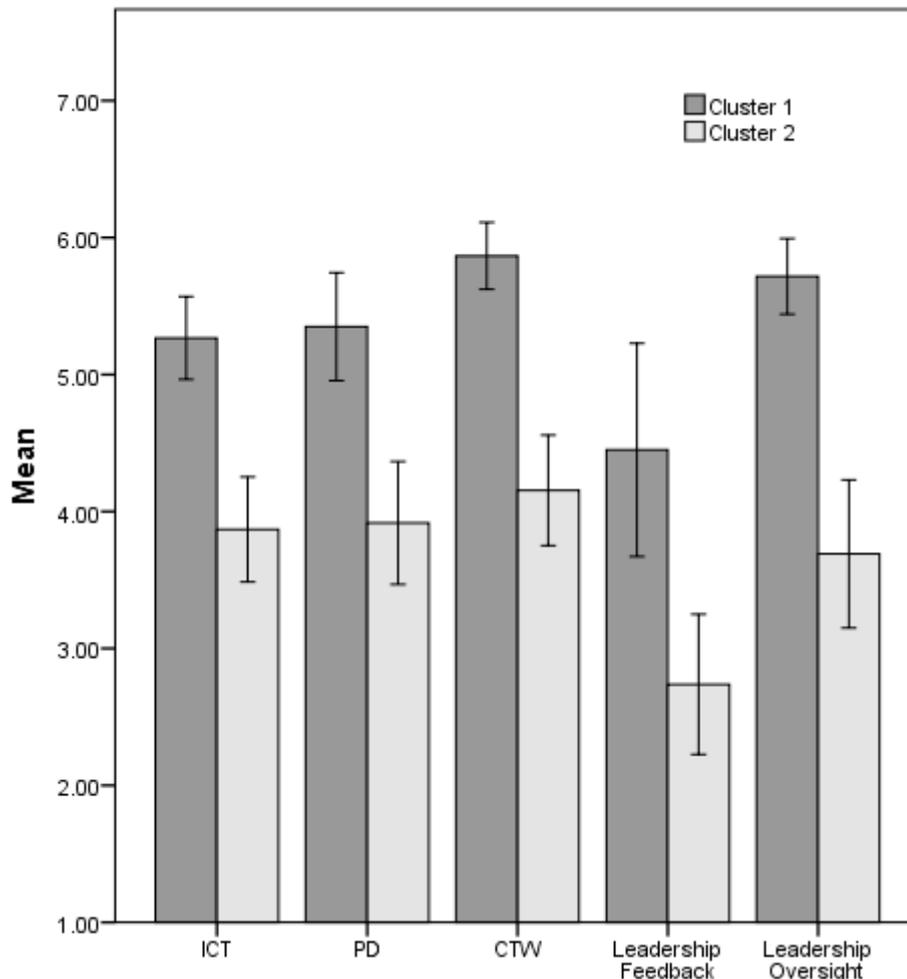


Figure 6: Mean scores of the five subscales underlying two step cluster analysis solution.

Between Groups Comparisons

Clusters

Cluster analysis was performed because it can provide important insights into differences in the way teachers think about and respond to their experiences with the eBL. To tease this out a bit more, we compared these two groups in terms of their characteristics and response patterns. In this respect note that Figure 7 reveals that Cluster 1 is composed of older teachers who have had more years teaching as well as more years teaching at the

current school. However, only age, $t(34) = 2.68, p = .011$, and years teaching, $t(33) = 2.16, p = .034$, were found to be significantly different, while years teaching at this school was not, $t(33) = 1.63, p = .113$. The fact that “age” and “years teaching” were significant indicators of being grouped with cluster 1, while “years teaching at this school” was not, suggests that the differences in survey responses between the two clusters was influenced more by overall maturity and teaching experience than it was by the more specific experience of teaching at a particular school.

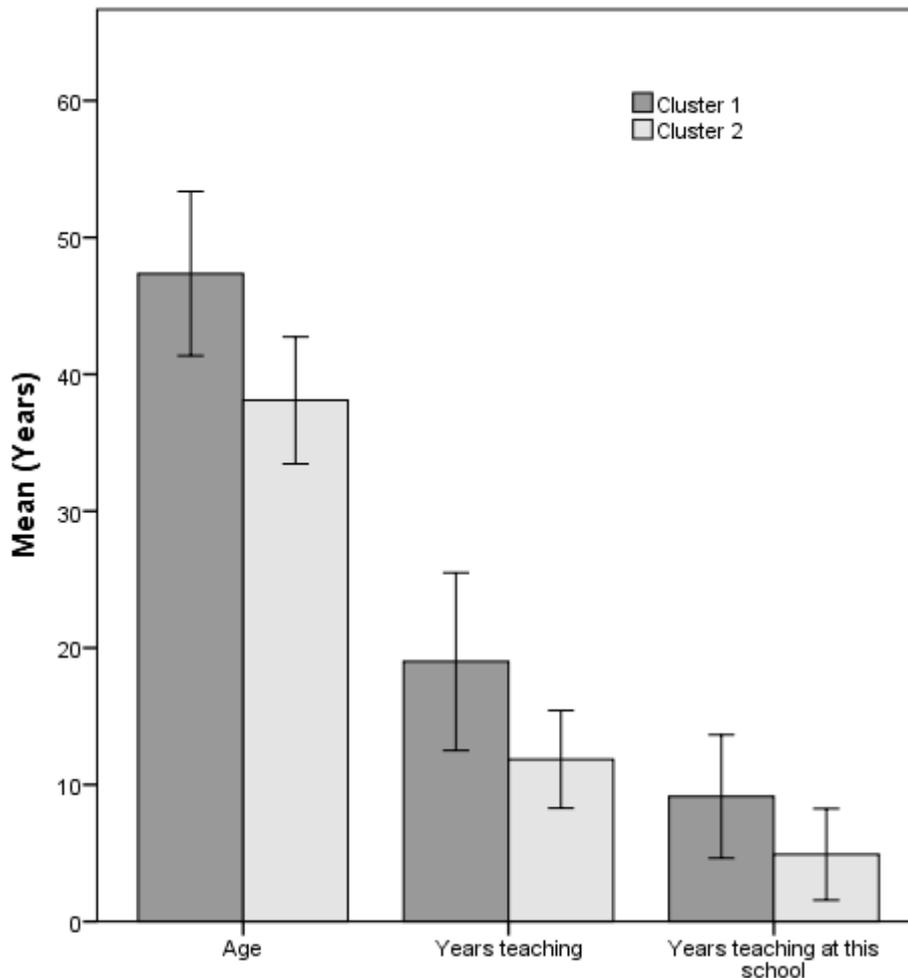


Figure 7: Mean age, years teaching and years teaching at this school in relation to the two clusters.

In this respect Figure 8 additionally reveals that secondary teaching is the only teaching area with more teachers in cluster 1 than cluster 2, meaning that secondary teachers also tended to rate the subscale items more highly than other teachers. Thus, overall it appears that older, more experienced secondary teachers tended to rate every area of the eBL Project more favourably than other teaching groups. This occurred in spite of the fact that each of the teaching areas have reasonably equal numbers in each cluster, except for the specialist area teachers, who have a much larger proportion of teachers in cluster 2 than

cluster 1. Unfortunately the small cell sizes did not allow for parametric (Chi Square) testing of contingencies, so these differences could not be tested for statistical significance. However this does correspond to the qualitative interview data, where we found that the specialist teachers reported less favourably on their experiences with the eBL Project (noting that the cluster 2 responses represent lower subscale ratings).

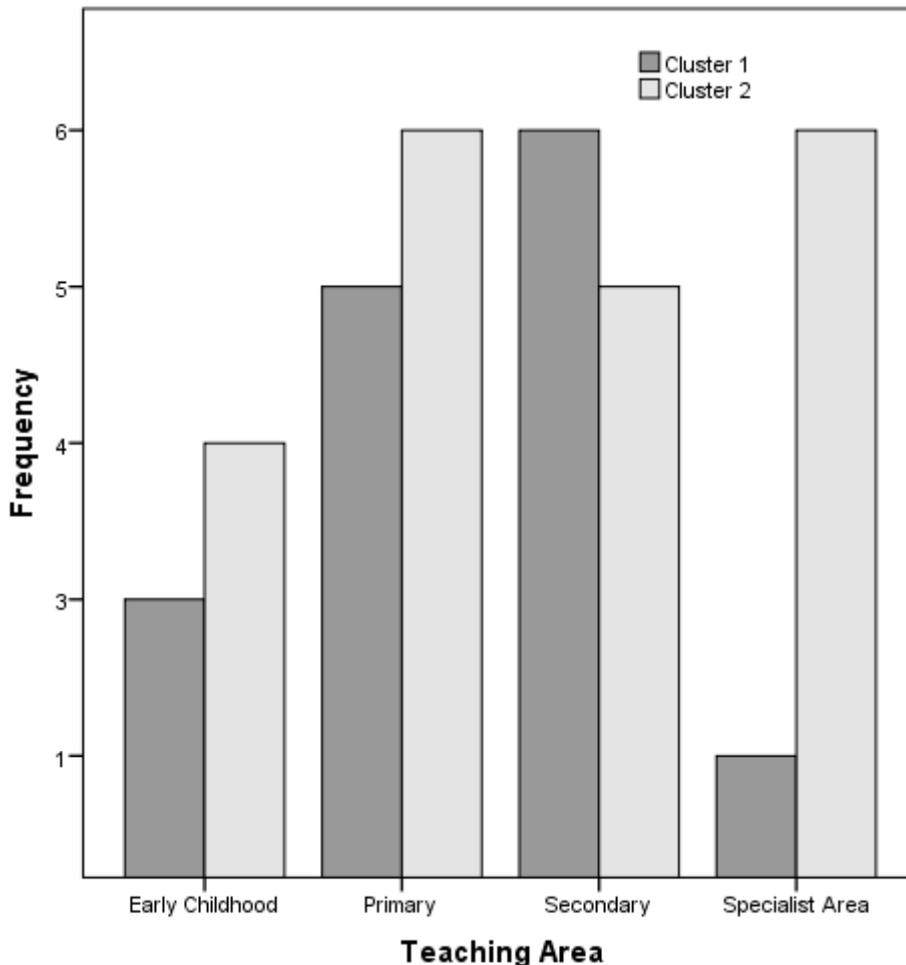


Figure 8: Frequency of teacher clusters in each teaching area.

Teaching area

There were no statistically significant differences between teaching areas on the subscales, but we can see general differences in Figure 9, which support the overall lower ratings given by the specialist teachers, as well as highlighting the lower ratings received from all areas concerning leadership feedback. One exception to this was the individual item *The School Leadership at my school has ensured I receive regular feedback from my students about my teaching in relation to the Blended Learning Project*, which was found to be significant, $F(3, 33) = 2.93, p = .045$. Importantly, post-hoc analysis revealed that the secondary teachers scored significantly higher than specialist teachers on this item ($p = .039$), again reinforcing differences in group responses to the eBL Project by these two groups.

There may also be some overlap between this finding and the qualitative findings, where the specialist teachers reported receiving less consistent feedback while secondary teachers reported receiving more consistent feedback, but further interviews would be needed to tease this out more precisely.

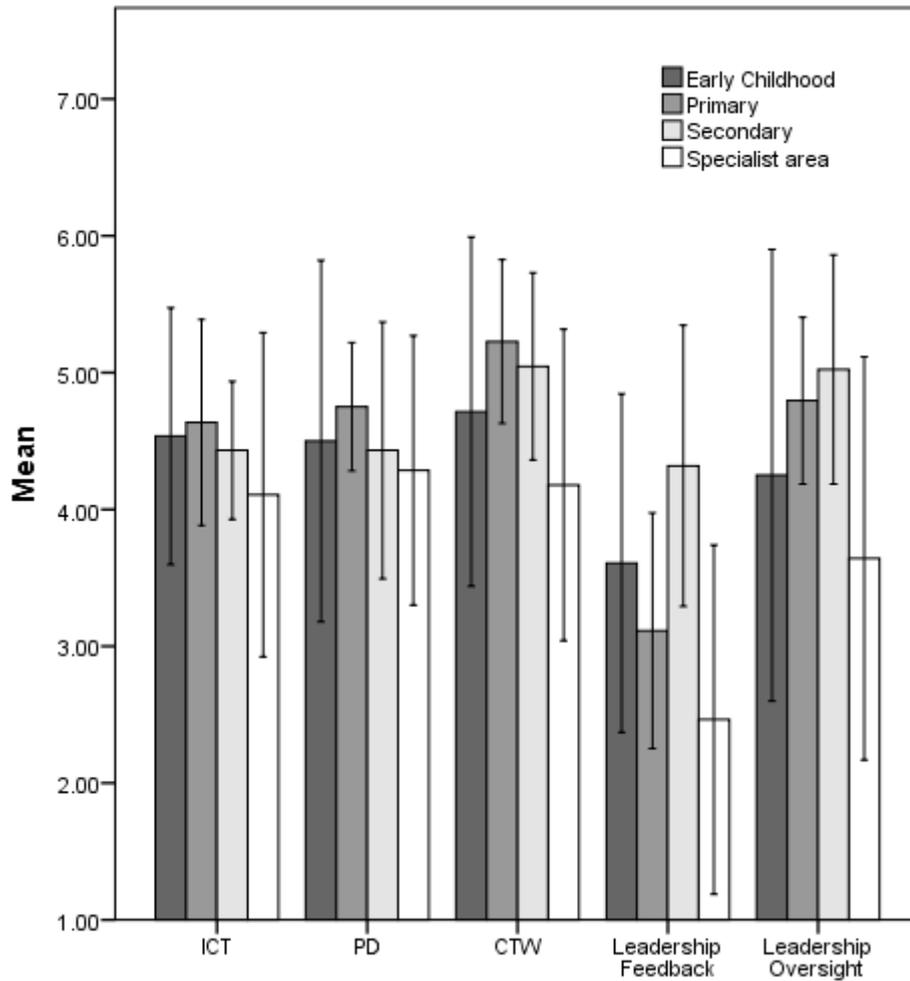


Figure 9: Mean scores on subscales of teachers from different teaching areas.

Gender

There were no statistically significant differences in overall subscale scores based on gender, although Leadership Feedback did approach significance as a subscale, $t(35) = 2.02$, $p = .051$, with females scoring lower than males. Overall gender differences are shown in Figure 10.

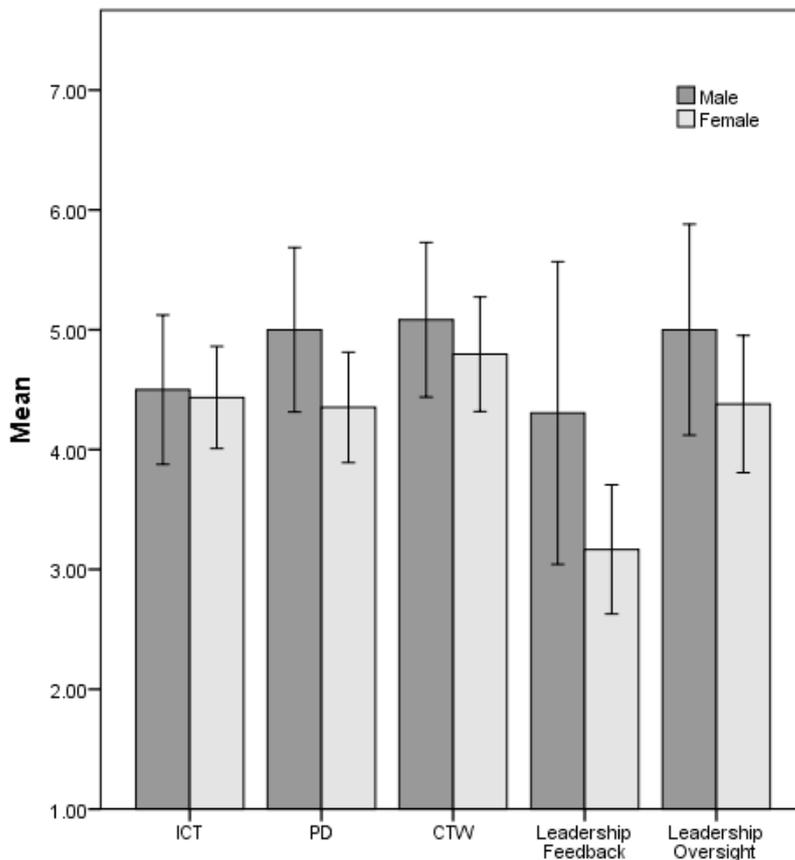


Figure 10: Mean scores on the subscales for female and male teachers.

When assessing individual subscale items, the following items were found to be statistically significant, with males rating the item higher in both cases.

- In relation to the Blended Learning Project, the School Leadership at my school has provided regular feedback on my use of ICT, $t(35) = 2.13, p = .040$.
- In relation to the Blended Learning Project, the School Leadership at my school has provided regular feedback on my teaching skills in relation to the Blended Learning Project, $t(35) = 2.24, p = .032$.

What seems to be developing from these analyses is a picture in which older, more experienced male secondary teachers are reporting higher support for the eBL Project, in contrast to younger, less experienced teachers and the specialist teachers, who are both reporting lower support for it.

Correlations

As can be seen in Table 2, there are statistically significant positive relationships between the five subscales. Teachers who score high in one of the subscales generally score high in the others; those who scored low one, generally scored low in the others. Thus, teachers who reported greater importance and impact of CTW, receiving more feedback from leadership, and perceiving more leadership oversight of the Blended Learning project, also reported greater increases in ICT skills, attitudes and behaviour change, and more of an impact from the PD units on student-centred learning, the use of an inquiry approach, collaboration, and their core team inquiry.

It is important to note that these subscale correlations were not significantly related to age or years teaching however, because they are only reflecting the degree to which each teaching group as a whole scored on each subscale, that is, they represent group-level subscale scores only. Underneath this level of analysis there remains a range of intra-group differences which creates substantial variation in the individual scores within each group. The subscale correlations are essentially a function of the cluster analysis process, and reported here because they reinforce other findings suggesting that older, more experienced teachers tended to score all the subscales higher when considered as a group.

Table 2: Pearson's correlations between subscales, age, and years teaching.

	ICT	PD	CTW	Leadership Feedback	Leadership Oversight	Age	Years teaching
PD	.749**						
CTW	.758**	.683**					
Leadership Feedback	.494**	.621**	.580**				
Leadership Oversight	.761**	.625**	.851**	.681**			
Age	0.156	0.114	0.314	0.28	0.302		
Years teaching	0.144	0.142	0.311	0.166	0.179	.820**	
Years teaching at this school	0.12	0.241	0.256	.331*	0.171	.493**	.606**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Teacher confidence data in relation to the PD units

Another area of correlational interest is the teachers' self-ratings concerning how confident they were with various aspects of their Project involvement as a consequence of their PD unit learning. Table 3 shows correlations between reported confidence levels before PD unit 1, after PD unit 1, and after PD unit 2; in relation to reported levels of confidence with technology (this was reported by the teachers as part of a technology self-audit). As can be seen, there is no relationship between these variables before taking part in the PD units. That is, teachers' confidence with, for example, applying technology within the school's BL framework and effectively incorporating ICT skills into curriculum planning had no relationship with their confidence with technology in general. Upon completion of the PD units, however, there were positive relationships between these things. Thus, teachers seem to have become progressively more confident about their use of technology in relation to classroom teaching and learning as a function of their involvement with these units.

We also note the increase in confidence for individual items of importance for the eBL Project in relation to being confident with technology, including using and applying technology within the school's BL framework, being able to incorporate ICT skills into curriculum planning, and being able to experience positive change in relation to the PD units. Data collection, which overlaps to a large extent with the Teacher as Researcher (TaR) process being used to underpin teacher self-evaluation for the Project, seems more inconsistent in these ratings, probably reflecting the teachers' desire for more specific mentoring in this area, as also reported in some of the interviews. However, of particular interest are the teachers' responses concerning the degree to which their BL Project will meet the needs of students and the degree to which their professional learning will result in improved student outcomes. In this respect note that initial confidence for both these items was negative, yet confidence in their BL Project meeting the needs of students grew more positive across PD units 1 & 2; and confidence that their professional learning would result in improved student outcomes became highly significant by the end of PD unit 2.

These correlations are of interest because they show how important it is that teachers have the necessary ICT skills to use in their classrooms (cf. Willis, Lynch, Fradale & Yeigh, 2018). They also demonstrate that it is not necessary for teachers to know about all aspects of ICT, but rather that they need to have quality experiences with ICT related to what they might do in the classroom. Similar findings were also evident in the qualitative interviews, where one group reported having been introduced to some appropriate technology the leadership team, and the subsequent benefit from this process. Overall, these correlations are of interest because they testify to the impact of the PD units, and suggest the development of some risk-taking on the part of teachers. They also attest to an emerging digital literacy on the part of the teachers, which is important for the promotion of student success within a blended learning environment.

Table 3: Pearson's correlations between confidence with technology and PD unit confidence items.

	Confidence with Technology		
	Pre-Unit 1	Post-Unit 1	Post-Unit 2
I am confident with using computers and other technology.	.262	.499**	.433*
I am confident that I understand what the Blended Learning (BL) project is about.	.191	.312	.181
I am confident that I can use and apply technology within the school's BL framework.	.142	.435*	.419*
I am confident that I can incorporate ICT skills into my curriculum planning effectively.	.122	.493**	.506**
I am confident that my BL project will meet the needs of my students.	-.207	.112	.289
I am confident that my professional learning will result in improved student outcomes.	-.246	.173	.542**
I am confident that I understand how to collect student data for my BL project.	.070	.355*	.296
I am confident that I understand how to collect data on my teaching for the BL project.	-.068	.510**	.202
I am confident in my ability to experience positive change in relation to Professional Development (PD) as part of the school's BL project.	-.141	.369*	.543**
I am confident that I understand how to implement Teacher as Researcher (TaR) practice in relation to the school's BL project.	.097	.240	.388*

Note. * $p < .05$ (2-tailed); ** $p < 0.01$ (2-tailed); $N = 33$.

School ISA data

The *International Schools Assessment* (ISA) program is designed specifically for grades 3 - 10 in international schools. It is based on the OECD's *Programme for International Student Assessment* (PISA), and assesses student learning in the areas of reading, writing and mathematical literacy (grades 3 – 10), and scientific literacy (grades 7 – 10). ISA data is standardised (specifically formatted for purposes of comparison) in order to allow comparisons between 400 international schools globally (@90,000 students). ISA data is thus useful for making inter-school comparisons based on scores that have been amalgamated across the designated areas. It does not provide area-specific analyses however, and although

aligned with PISA areas it is important to note that the ISA program is not endorsed by the OECD.

Figure 11 shows the percentages of ISA scores from 2018 that are above or below 2017 ISA scores for Aoba and Meguro schools, analysed in relation to the relevant ISA data for PYP (grades 3 – 5) and MYP (grades 6 – 10) to correspond more clearly to the schools’ student grouping categories. As can be seen, grades 3 - 5 have close to half of their scores above and below, especially concerning significant differences, thus presenting a fairly static picture in terms of improvement. Grades 6 - 10, however, have a greater proportion of scores from 2018 that are higher than 2017 scores, as well as a larger proportion of scores significantly higher, and with no scores being significantly lower. It is important to notice these differences, rather than simply looking at the total differences as shown, in order to realise that most of the total differences have come from improvements in the outcomes for grades 6 – 10. Nonetheless, total ISA change for the schools during this period shows positive improvement. These data also suggest that differences between the ways that PYP and MYP prepare for ISA related testing may need further examination, however, in order to better determine why these PYP/MYP test differences occurred.

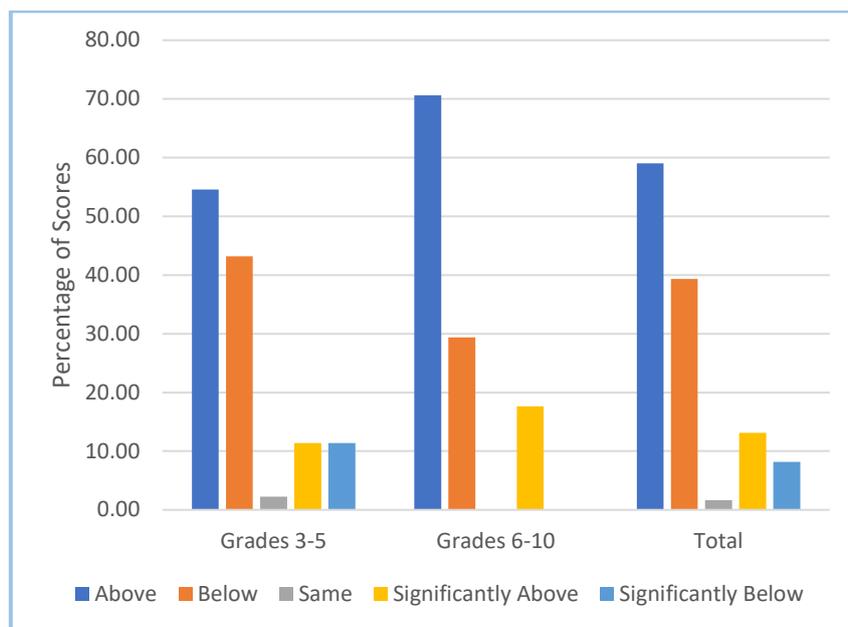


Figure 11: Percentage of 2018 ISA score above and below 2017 ISA scores.

School PAT data

Progressive Achievement Test (PAT) data is another form of standardised test data commonly used by individual schools to progressively monitor and evaluate student achievement over time. Importantly, PAT assessments are informed by a growth mindset, which means they are intended to assist teachers to differentiate their teaching for the purpose of addressing individual differences and learning needs in relation to student-centred learning. In this respect the PATs are designed to provide objective, norm-referenced information to teachers about specific student skills and understandings in key areas of

targeted growth. This data can also be used to afford intra-school comparisons of achievement across these specific areas of learning for each grade level. PAT data is thus designed to be used in a diagnostic manner.

We analysed two types of PAT data for this report, the PAT-R (Reading - figure 12) and PAT-M (Mathematics – figure 13). Note that in both reading and maths there has been general improvement across this period, but for reading this improvement has been minimal and remains below the reading norm for both years, whereas for mathematics the improvement has been largely above the norm, and especially so for 2018. It appears that reading is more difficult than mathematics for students at Aoba and Meguro, and we suspect this may have to do with “English-as-a-second-language” as a general issue for these schools, but for whatever reasons this requires additional investigation concerning reading in order to improve these outcomes moving forward.

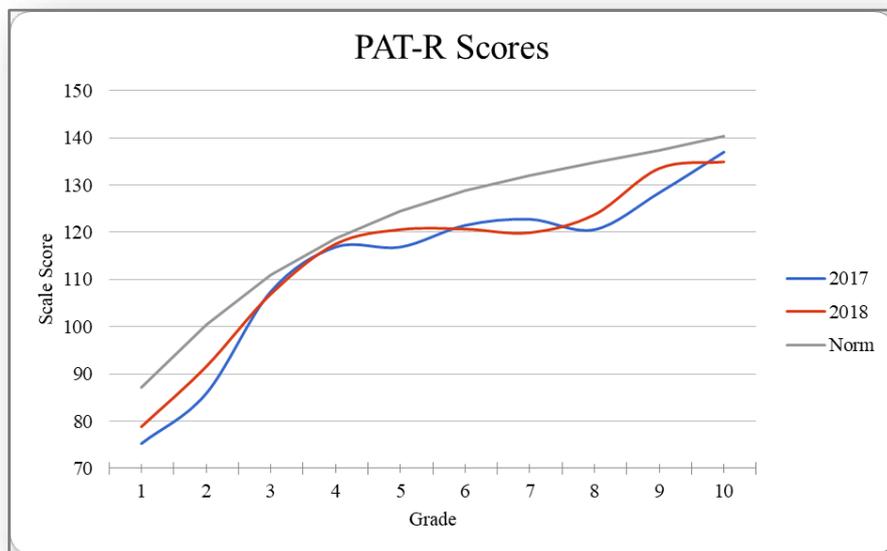


Figure 12: Overview of PAT-R comparisons, 2017 – 2018.

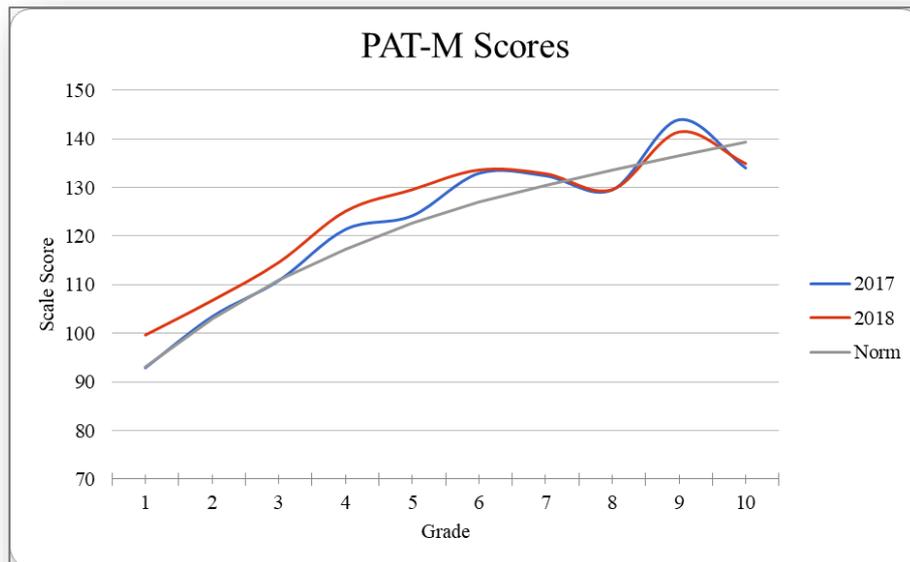


Figure 13: Overview of PAT-M comparisons, 2017 – 2018.

Closer analysis also reveals that the grades at which the 2018 reading scores have fallen below their 2017 counterparts are grades 6 & 7, and again at grade 10. Similarly, although the 2018 maths scores show substantial improvement in general, and are mostly above the norm for mathematics, there is a notable dip in improvement for grades 8 & 10 across both years of assessment. This may be a cohort function (particularly for grade 10), but obvious questions would also be whether the same teacher was delivering mathematics for grades 8 & 10, and/or whether a different instructional approach was being used for these grades.

ISA/PAT comparisons

Further comparison between the PAT and ISA outcomes is also interesting, in that these outcomes do not closely correspond to one another. Figure 14 shows PAT Scale score percentage changes between 2017 and 2018, relative to the norm for each area. We provide this graph because it shows clearly that the PYP grades have seen greater improvements overall compared to the MYP grades, with PYP equal or above the norm in maths and closer to the norm in reading than MYP across both years. This seems to contradict what the ISA data suggests, which was to indicate greater improvement for MYP than for PYP. This may be an artefact of the different focus areas for each assessment type (ISA versus PAT), or it may involve the way the ISA data is more amalgamated in comparison to the PAT data. There is also a possibility that the ISA data is less complete, that is, that some of this data was not reported for analysis or perhaps that some students were not assigned to sit the ISA tests. Irrespective of this, we suggest focussing on PAT data as a primary form of standardised data for the eBL Project, because this data allows for more precise intra-school comparisons as well as providing a standardised inter-school norm.

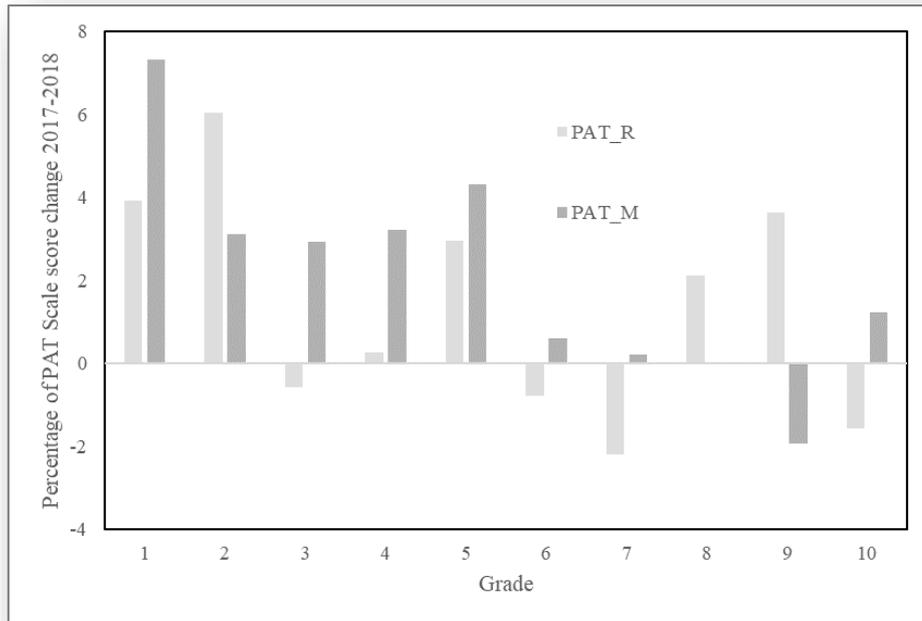


Figure 14: PAT Scale score percentage changes between 2017 and 2018 relative to norm.

School readiness data

Specific contributors and impediments to school readiness at the current time are shown below, based on the 2018 Readiness Survey. Staff indicated the top 5 contributors and impediments to readiness as follows, and we note that the impediments here appear to echo other areas of this report relating to a desire for additional time, more specific guidance and increased (or more consistent) leadership feedback. We also note the potential for further development that seems inherent to the contributors here, as this reminds us of the relatively strong support for the overall Project that was found in the BL survey ratings and teacher confidence ratings.

Contributors

- Staff are ready to be responsible for improving student achievement.
- Teamwork and cooperation within work units/departments or teams is sufficient.
- The school's values have been clearly articulated to me.
- Staff are happy with this school as a place to work.
- Staff are generally treated with respect and dignity in this school.

Impediments

- The school is not one of the best schools to work for in this part of the country.
- The school staff do not have all the information about students that they need to raise academic performance in this school.
- The resources required to teach students are not readily available.
- Staff in the school do not get focused training so they can meet the school's expectations.
- The school's professional learning programs have not made teachers and administrators more effective in their work.

A further breakdown of the overall readiness elements is shown in figure 15. Note there are no “needs work” (red) elements in the Alignment section of these responses, but that a majority of these do exist in the Capabilities section. Thus, there appears to be clear understanding and support for the school’s mission and goals on the part of teachers (Alignment), but this is coupled to less satisfaction or clarity around issues of support and feedback (Capability). Of interest, the “needs work” elements relating to Capabilities seem to again highlight the teachers’ desire for increased feedback (availability of key information and evaluations on performance) and more specific guidance (levels of professional learning and availability of resources).

Engagement shows moderate satisfaction with the work environment (in-line with the EFA and BL Survey ratings) and a strong sense of collegial support. Receptivity to feedback and perceptions concerning organisational support are both viewed as needing further work however. This may reflect a desire to provide more “bottom-up” feedback to school leaders as reported in some of the teacher interviews, and a perception that more specific guidance and feedback is needed - directed at specific ICT skills and Core Team project performance according to other report data.

Overall the readiness report reveals moderately strong support for the goals and mission of the school, moderate satisfaction with how these goals are being pursued, and low satisfaction with the organisation and guidance as provided by leadership.

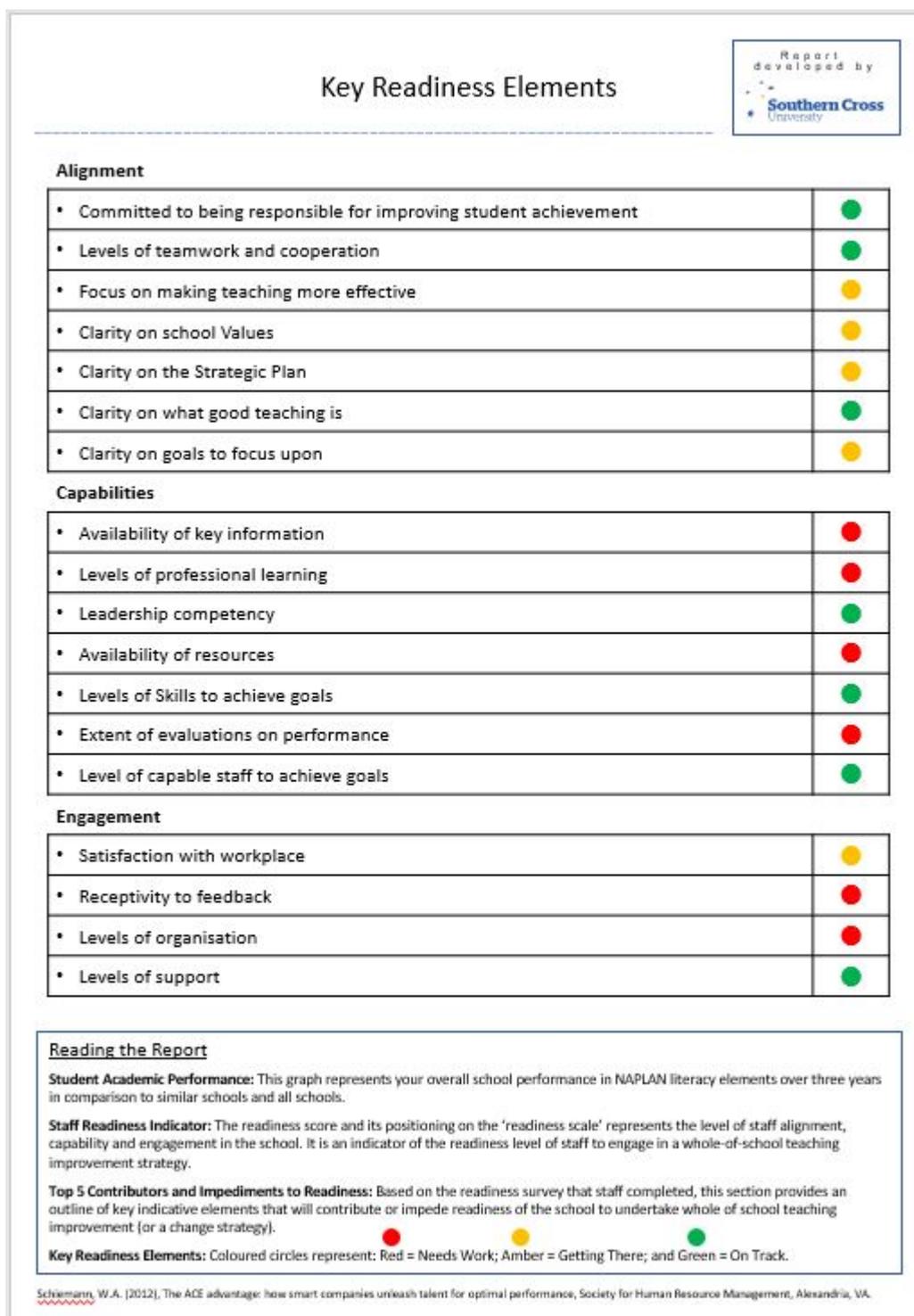


Figure 15: Key readiness elements.

2017/2018 Readiness Comparisons

Comparative readiness ratings were also analysed for this report as shown in figure 16. These ratings were analysed on the basis of comparisons between teachers who completed the Readiness Survey in 2017 ($N = 61$) and again in 2018 ($N = 42$). The relevant finding here is that overall readiness has declined amongst these teachers during this period.

The smaller number of teacher responses for the 2018 Readiness survey may have played a part in the lower scores for this administration of the survey, but these findings also seem to reflect the BL survey and cluster analysis results, by indicating that some teachers have become less satisfied with their Project involvement in terms of finding this demanding, not receiving sufficient feedback and lacking sufficient organisation (having to deal with competing agendas).

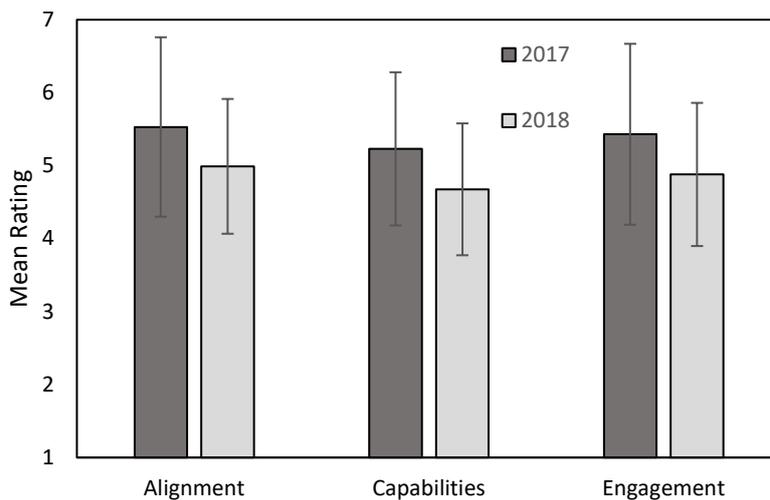


Figure 16: Mean ACE ratings in 2017 and 2018. Error bars represent 1 SD.

Further comparison of the ACE components in relation to the teacher clusters also supports this interpretation, as shown in figure 17. This comparison clearly shows that older, more experienced teachers (cluster 1) are more aligned, capable and engaged than their younger and specialist teacher counterparts (cluster 2), although we note that only Capabilities was statistically significant in this respect. The relevant point here is that these outcomes closely mirror the Exploratory Factor Analysis (EFA) and teacher interview findings examined prior, in that those findings suggested inconsistent leadership feedback as a relevant issue for the Project. Overall, what the readiness data shows is that a decline in readiness has taken place over the 2017 – 2018 period, and that this overall decline corresponds to the differences in teacher groups as found in other data, which also suggested declining satisfaction on the basis of competing agendas, insufficient leadership feedback and a “demanding” scope of overall teaching duties.

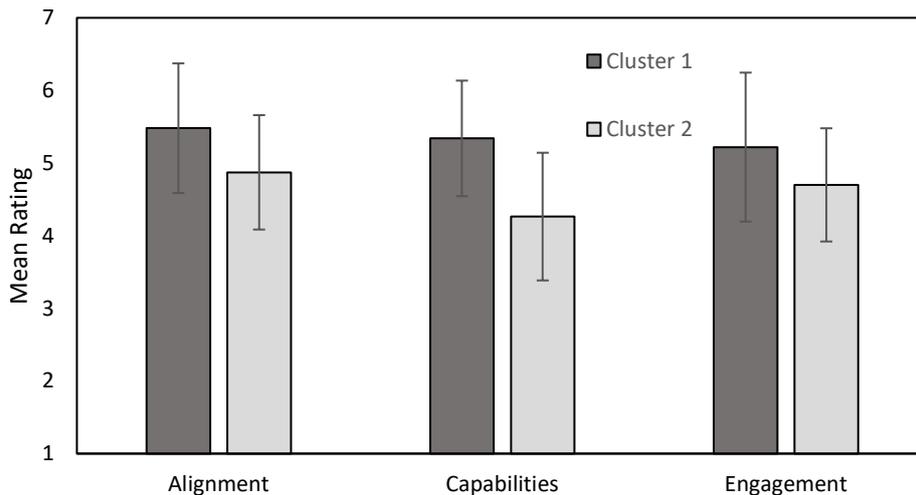


Figure 17: Mean ACE ratings of Clusters for 2018. Error bars represent 1 SD.

Qualitative analyses

The following tables display information from the teacher and leadership interviews that were conducted during September, 2018. Summary overviews of these interview responses were provided in our interim Project report (September, 2018), but here we have used thematic analysis to unpack the specific responses relating to each interview topic, in order to afford a more complete picture of the core issues that seemed to emerge for each topic.

Table 4: Teacher interviews - Core Issues & Specific Responses

Interview Topic	Core Issues	Specific Responses
Perceived critical impact of the Blended Learning Project on teaching and learning at the school.	<p>Time was the most reported issue for this topic, with most responses emphasising:</p> <ul style="list-style-type: none"> • additional time demands inherent to “BL Project expectations, • not receiving sufficient additional time to meet these expectations, and • having to prioritise how to make use of time relative to regular teaching 	<p>“The load on teachers is really big, so I think it is a big load on their shoulders because they are already tired with all kind of class kids, kids here are demanding also. It’s like a lot for teachers to carry.”</p> <p>“The teaching time and preparation for class was also happening at the same time [as the PD units] and it was very tough for us”</p> <p>“The biggest frustration for me was the time”</p> <p>“I don’t think there was enough time or maybe it could have been done differently. For me and my team, I think, we would still need support in it”</p> <p>“Our collaboration was tested during this time because on top of all the PYP which was introduced only recently and all the other stuff we had to do, so there was like blended learning, so we really had to schedule our</p>

	<p>demands versus the Project expectations.</p>	<p>meeting times and make sure that every meeting time is worth it”</p> <p>“As a teacher, it is sometimes difficult, because our main job, our priority, is to come to class and teach the students, so, it is not easy to do your task, but also at the same time we have meetings and doing extra research”</p> <p>“Timewise, it’s difficult to meet their [the leaders’] assignment or task, sometimes”.</p> <p>“When you do something new, you have to allocate the time for the new thing while you’re doing the regular, old routine”.</p> <p>“Time needs to be considered”</p> <p>“They need to understand that this project is one of our jobs, but balance, sometimes they try to rush, rush to the schedule for this project [...] I’m sure they have deadlines [...] but because of that we feel rushed”</p> <p>“If you are going to force this kind of thing on your staff, you have to make sure there is time available”</p> <p>“If this is your focus, then make it your focus, and make sure that there is time to do it correctly and well, without overwhelming”</p> <p>“Balance is very important for us to be all happy”</p>
<p>Importance of the Professional Development units to success in the Blended Learning Project.</p>	<p>The relationship between theoretical/conceptual understanding and practical application was the core issue relating to PD units 1 & 2, with most teachers emphasising:</p> <ul style="list-style-type: none"> • they gained a good understanding of what BL is from these units, and • the PD units were lacking sufficient practical components for modelling BL. 	<p>“I would like to see more hands on sessions”, “subject-specific modelling” to “see what it looks like”.</p> <p>“It’s helped for teachers to understand what it should be, what the goal should be, why it’s good, based on the theoretical part, but in terms of the practical part, like actually implementing it in our own subjects that we teach, that’s been a bit more of a challenge”</p> <p>“Unless we actually learn the components of Blended Learning in...unless we put it into practice we wouldn’t, I wouldn’t get a clear understanding of exactly what Blended Learning is”</p> <p>“We were unaware of what’s out there. I mean, we don’t mind using it, but it’s just finding it”</p> <p>“It takes a while for people to finally get the “Aha” moment, like “oh, that’s what it means” and then to be confident to sit there and say “okay, this is how I can change my practice to accommodate these new approaches”</p>

		<p>“When it comes to setting up a common language, that’s where it is most helpful”</p> <p>“The first one [PD unit], the initial one was kind of like a stepping stone to the second one because we were kind of like, it was new to us so it was like a hit and miss. But we were more confident with the second one because the objective was more clear and we were more confident in gathering data and also the time frame was, like, we were given more time”</p> <p>“I don’t think there was enough time or maybe it could have been done differently. For me and my team, I think, we would still need support in it”</p> <p>“I would have liked it if we could have someone that could role model what blended learning looks like in the classroom. Like for me, from my perspective, my experience was very new, I didn’t have a full picture of what it looked like”</p> <p>“I understand the models and the theories, but struggled to try and apply it in the classroom. And I felt like if I could have someone come in and role model to me what it would look like, that would be very helpful. Because I did feel on my own, kind of lost. I had these ideas, but how does that look in the classroom, what it looks like, was very difficult. So, I didn’t have anyone come in and observe my teaching. I think the feed from someone observing, an expert in that field, would have been helpful in enlightening a lot of things”</p> <p>“We know what it should look like, but the how part, that’s still the question mark for me”</p> <p>“We never talked about software”</p> <p>“What would help sometimes is to be able to see or to observe, whether through video or to have someone come in and run a blended learning, ah, you know, like a 2 week, ah, class setting where we go in there and observe and also kind of look at the students and see how they’re reacting and just to kind of give us a real clear idea of what it, you know, kind of looks like and how it differs from what we’re doing now”.</p> <p>“If there were opportunities to see it modelled in an actually classroom, to see what it looks</p>
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		<p>like, that would be quite helpful. So subject-specific modelling would help too you know”</p>
<p>Importance of Collaborative Team Work (CTW) to success in the Blended Learning Project.</p>	<p>Learning, supporting and developing new ideas together was the core issue for the CTW element of the eBL Project.</p>	<p>“I would have been unable to do it on my own”.</p> <p>“It wouldn’t have gotten completed without [collaborative teamwork]”.</p> <p>“I think collaborative teamwork is important for success in a school regardless of what they are doing, so uh, as with Blended Learning it is just as important and we definitely have people who have strengths and weaknesses around knowledge of blending learning and knowledge of ICT so working as team was probably essential for success I would say”</p> <p>“Because of collaboration between teachers we could help the students learn more, to get them more excited about things that are abstract”</p> <p>“without the team, it would have been incredibly overwhelming”</p> <p>“It’s central”</p> <p>“I think it is important to figure out the whole blended learning, but also, half of the missing puzzle is how we do it”</p> <p>“I found it [collaborative teamwork] very successful, because as a team we’d work together. I think it strengthened the bond between the staff and it was very helpful to have people on your side to help and guide”</p> <p>“I do think, in terms of blended learning, collaboration is important, because me as an individual, I can’t do it on my own, that’s for sure. Being in a group together highlighted a lot of things, we share ideas and group support is very helpful too”.</p> <p>“I don’t think it something we could do all by ourselves”</p> <p>“We feel like it went smoothly because I think we were quite clear at the beginning, like we set the learning outcome that we want from the students, therefore, whatever we do it’s really based on the students and learning outcome, rather than which of the program that we using. So our goal very clear, so it’s easier for us to collect base data, and then having to make intervention with the students, and then collect the second data and the results, et cetera. So, I think the planning of it was very important within our team and also clear goal setting.”</p>

		<p>“It’s been very helpful to have people that you can get help from, get support and talk to if something’s not going well, and together collaboratively coming up with solutions, so if I was to do this on my own, I wouldn’t be very much motivated”</p> <p>“I would not have been able to do it without the team”</p> <p>“It wouldn’t have gotten finished without it, because we could split up our work, because we could think and apply it in different situations. Just thinking and planning together, all of that, we wouldn’t have had enough time, we have a lot of work otherwise”</p> <p>“I really enjoy learning and getting ideas off other teachers”</p>
<p>Importance of School Leadership to success in the Blended Learning Project.</p>	<p>The core issue for leadership was support, but with quite mixed responses, with:</p> <ul style="list-style-type: none"> • some teachers perceiving the leadership team as being involved and supportive, while others observed little leadership support, • a perception that strong leadership was evident during the initial stages of the BL project but not during the later stages, and • That there was a push to implement BL into the classroom, but little, if any, feedback and guidance provided in practice. 	<p>“in the early stages I was very concerned with like, what can I be doing in my subject, I want to know specific stuff to improve my practice in my subject area, and I didn’t get so much help on how to do that, I had some suggestions but they were not things that I could be doing for an extended amount of time, or things that would enhance my practice, or students learning in a meaningful way”</p> <p>“Beyond the once a week meeting, it was kind of unclear how often they were checking in or how we would unify it in a way to the students as well, so we were doing blended learning, you know, we were unified on our Wednesday meetings and getting us all together, but when it came down to the student body, I don’t know that the students knew that the school was doing a blended learning thing all together and as teachers, maybe the teachers had thought down to us, but then getting the whole school on was kind of unclear”</p> <p>“I was, during the day, I was kind of in my teaching bubble, not working with my core most of the time, I’m seeing them once a week, I’m trying to assist as much as I can but, yeah, it was hard to see a unified whole school approach”</p> <p>“It’s kind of half and half”</p> <p>“[The leaders] were very adamant about the blended learning project, and we welcomed that because we knew it was something that</p>

		<p>would improve the children’s learning and it’s a need we have to do. It’s hard work but it’s a must”</p> <p>“I think the leadership really tried their best to make their attempt. I don’t think it was successful, but I think there was an effort made”</p> <p>“A lot of teachers are still a bit confused about it and are still needing a lot of support and maybe the part that wasn’t very successful is how it was carried out, so maybe a different method, in terms of working with working teachers, in addition to their workloads to differentiate the different levels of grades and how it could be applied to that, so it was basically one size fit all template and it just covered the basic foundation of blended learning, however the nitty-gritty, the process is still quite unknown. That area wasn’t very successful”</p> <p>“They introduced us to bended learning. As a staff member, I feel that I need more support from the leadership team implementing in the classroom. It’d be nice to have leadership pop in and see how things are going. So, in terms of feedback, I didn’t personally receive feedback for my own teaching, which I would greatly appreciate because at least I’d know if I’m going in the right direction or not”</p> <p>“They’re the ones that instigated it”</p> <p>“The system in place and the management was a bit poorly conducted, therefore, it wasn’t as successful as it could have been”</p> <p>“Generally, blended learning, I’m really liking it, just a little more guidance would be great”</p>
<p>Importance of ICT skills and knowledge to the success of the Blended Learning Project.</p>	<p>Core issue here was the perceived importance of ICT skills to the success of the BL Project.</p>	<p>“I feel like [ICT skills and knowledge] are essential”</p> <p>“Using technology is really important to allow kids to explore on their own”. (ICT) “gives the kids agency”.</p> <p>Teachers must “always keep abreast” of ICT skills to support students.</p> <p>“Teachers need to pick it up” RE: ICT skills and knowledge.</p> <p>“especially at my age it is hard to learn the new technology stuff, but once you get used to the technology it very convenient”</p> <p>“It’s a necessary requirement because, although it’s not all about tech, I mean,</p>

		<p>blended learning does rely on technology and, um, you have to be ready to change at any moment”</p> <p>“As a teacher, we definitely had to use our ICT skills, especially with collecting data and making sure that the apps that we introduced to the children are manageable and also helpful for their learning”</p> <p>“As a teacher myself, I have to learn first whatever technology I introduce”</p> <p>“Basic ICT skills are necessary, but not in terms of, you have to be geeky or anything”</p> <p>“Teachers who are not familiar with ICT will have a bit more struggle than those who are familiar”</p> <p>“Having a bit more ICT skills does help, or kind of becomes a motivator, I guess, to actually want to implement it into the classrooms”</p> <p>“I think you should have at least the basics and it’s, for me, it’s a continuing process, because you can never say that you know all of it. You know, sometimes you use something and you still discover new things, right.”</p> <p>“I do learn a lot from the kids too, it’s a 2 way street”</p> <p>“You have to make a point of always keeping abreast [of ICT] and upgrade your skills”</p>
<p>Importance of feedback to the success of the Blended Learning Project.</p>	<p>The main issue concerning feedback was that it was not sufficient, with teachers consistently stating that their efforts to implement ICT into the classroom were not being guided, assessed, nor feedback given post the PD units.</p>	<p>“They introduced us to bended learning. As a staff member, I feel that I need more support from the leadership team implementing in the classroom. It’d be nice to have leadership pop in and see how things are going. So, in terms of feedback, I didn’t personally receive feedback for my own teaching, which I would greatly appreciate because at least I’d know if I’m going in the right direction or not”</p> <p>“The most important thing at this time is someone in and support in the classroom and seeing and observing the classrooms and giving feedback in the different subject areas. Because other things might work in the math or the science, but not necessarily in other subjects. So I think that is a very crucial element, is to have someone with the expertise to give feedback and to guide”</p> <p>“We have all the theory, which is great, but what it looks like in the classroom is where</p>

		<p>we're always struggling, and when we do, I'm never sure if this is the right way to do things"</p> <p>"We are not very resourceful because we are aware that there are a lot of tools and a lot of programs online, but we don't know how to find them. And also, we need people's feedback on how well it worked on the students as well. So it's not only, you go onto the internet and search for some tool and then you just use it and test it on the kids, we really would like some peoples feedback on using those tools and how well or not so good it went with the students."</p>
<p>How well the Project was received overall by teachers.</p>	<p>The core issue here was new learning that was relevant to modern teaching, with most teachers saying they had gained something positive from the project, especially in the use of technology to support student learning.</p>	<p>"The results were very positive, at least for our team"</p> <p>"This is very stimulating"</p> <p>"I enjoyed most of the modules, I liked having the literature available and having that like here is what we are going to read and what we are going to be working on"</p> <p>"I did like the teacher as researcher, the project we did afterwards that was supposed to directly correlate to that. Being able to learn about it and then try to apply it, in a team, straight away, ah, that kind of instant feedback was nice. But it was such a short term, we kind of had to get it done".</p> <p>"I did like the pacing between the learning and the doing"</p> <p>"I found out that it [blended learning] was possible to do it for smaller children, because in the beginning it was I was kind of like "aghh, blended learning for 3 year olds""</p> <p>"Through the project, yeah, we were able to introduce technology in a sense that they can use it"</p> <p>"a good idea, but not well executed"</p> <p>"Introducing the models was very helpful"</p> <p>"The beginning was a lot of information, a lot of background information, which was helpful. But then the second part, where we had to do a lot of discussions and we were thinking of how it actually applies to the classroom, that made it real, it made it concrete. I would say that it was a perfect balance."</p> <p>"We've always used technology, but it's just now it's about how we specifically use it"</p>

		<p>“If I know how to implement blended learning properly, more efficiently, I think this would change a lot of students’ lives”</p> <p>“I think this is a very important learning style”</p> <p>“I see the student interest, student engagement is really high when we implement technology”</p> <p>“Of course the time is changing, so we definitely have to have the kids to be fluent users of computers”</p> <p>“I do enjoy using technology in the classroom and kind of being encouraged on a schoolwide level to do that is nice. Sometimes you do, you find other schools where like “aghh, tech, I don’t want to use this all the time in the classroom”, but, you know, I felt I was mostly encouraged to do that”.</p> <p>“I think it is important to not think about it as ICT-based learning, it’s still student-centred, and it’s all what the student’s needs, but then because ICT has developed to an extent that we really need to facilitate students’ learning using that in different environments. That’s my biggest take-away from it”</p>
<p>Teachers’ perceptions concerning revising the BL Project.</p>	<p>This topic seemed to bring together many of the existing themes and issues that stemmed from these interviews, with teachers generally:</p> <ul style="list-style-type: none"> • wanting more modelling of BL in subject-and-grade-specific scenarios, • examples of ICT tools and evidence of their efficacy, • time allocated to PD in BL itself, • more guidance in practical components of the PD unit as required (e.g. 	<p>“It would really help with ICT sometimes if we had more autonomy with, ah, you know, our computers, because, ah, everything we do has to go through them”.</p> <p>“I want the leadership to develop a PD day with a well-developed schedule”</p> <p>“The biggest thing for me would be to, especially for a specialist teacher, would be having those teachers grouped to their core teams, because we work very closely with everything else except for this, so we were split up, we felt like we could hardly, we’re not going to do what the 2nd grade homeroom teacher is doing, so I’m mostly just assisting them or helping taking data, help develop what they were going to use in their classroom, but when it came to my personal teaching, I was kind of experimenting with ideas of my own”</p> <p>“If you just keep the same or similar teaching groups together, that would be most helpful”.</p> <p>“I feel like I learned a lot, but didn’t apply too much? I don’t know, because I wasn’t working with my team”</p>

	<p>developing goals in TAR),</p> <ul style="list-style-type: none"> • feedback on BL implementation into their classrooms, • how to implement differentiation within the BL framework, and • how to collect data and other evidence to analyse and support their BL projects. 	<p>“We had a little worry when choosing our research topic. It was kind of difficult for little ones for what research topic we should use. So something in line with that would be good. Especially for our age group [younger students]”</p> <p>“I think this was really rushed. I think how it’s been done needs to possibly change to make it more effective. It’s like teaching a lesson, like, you need to understand your students, which are teachers, working teachers, and you have to understand each grade level’s struggle and provide, you know, support and, you know, someone to guide each group, to help them...definitely more support for the teachers”</p> <p>“This is brand new, this is something that some teachers might have an idea about or other teachers don’t have any idea, so just a lot of support, I think that would be helpful. And I think rushing it, with little support, on working teachers was really difficult. So that itself really pushes the motivation for teachers, so if we only have that, you’re not going to see genuine work”</p> <p>“The facilitator has to have really good interpersonal skills, I think that would be helpful because you are challenging teachers’ perspective and you’re showing us something new so the facilitator has to be able to be empathetic, relate to the teachers, as well as guide them through something new that they might not agree with or whatever the case is. I think that’s quite important”</p> <p>“The most important thing at this time is someone in and support in the classroom and seeing and observing the classrooms and giving feedback in the different subject areas. Because other things might work in the math or the science, but not necessarily in other subjects. So I think that is a very crucial element, is to have someone with the expertise to give feedback and to guide”.</p> <p>“we need people’s feedback on how well it worked on the students as well”</p> <p>“If there were opportunities to see it modelled in an actual classroom, to see what it looks like, that would be quite helpful. Subject-specific modelling would help too you know”.</p>
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		“We had to face the parents, and sometimes they are not in favour of technology, so I’d like to have something to say “according to this study...” ...because sometimes they have an article they have read that said that giving an iPad to a child this age is not good and we’re doing it at school because we’re doing blended learning”
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Discussion of overall teacher interview findings

Overall the teachers were generally supportive of the eBL Project and had an understanding of its logic. By far the key theme was lack of time to deal with all the challenges and tasks that a modern classroom comprises and then also fulfil Project obligations. The PD units (#1 and 2) were generally well regarded, but both leaders and teachers tended to indicate that these units needed to provide more about how to apply BL knowledge and skills in the classroom. Application modelling will need to be highly individualised to each Core Team project however, and for this reason there needs to be some degree of internal CMF for applying BL made available at the local school level. This will also need to be guided by an external coach or perhaps “critical friend”, to help support the application mentoring.

Teachers appeared to value opportunities for collaboration, but there were also echoes of competing agendas operating: some of which were school-wide and some more pressingly from individuals in the leadership team. Importantly some teachers were concerned they were not getting enough feedback on their personal progress with BL.

Table 5: Leadership Interviews_Core Issues & Specific Responses

Interview Topic	Core Issues	Specific Responses
Understanding of what has occurred during the Blended Learning Project	The project now provides a focus to the ‘whole of school’ on its strategic directions. Despite this an apparent and relatively poor fit to ECE/ kinder environments.	<ul style="list-style-type: none"> • Uncertain during early project whether the issue was how to use technology or something else, but gradually teachers came to realise the importance of technology as a tool for improving student learning – Progressive BL learning encouraged this process to occur. • Primary section of school engaged with BL quicker and more enthusiastically, and thus are now a bit ahead of secondary in their BL skill sets. • Looked at how the school could improve student learning and formed group to research particular learning projects (TaR) • Key leadership team started things off at our Coffs Harbour meeting, to define and establish what BL means, Designed and implemented the first 2 PD units, teacher confidence increased

		<p>and this gave a focus for whole school to look at BL in common (cohesive outcome).</p> <ul style="list-style-type: none"> • Noted that teacher engagement moved from an interest in what BL was to an understanding of what it actually means over the last 2 years. This occurred largely because of the TaR format, as implemented via PD units 1 & 2.
<p>Importance of the Professional Development units to success in the Blended Learning Project.</p>	<p>The PD units provided clarify on what is meant by BL was and was effective in locating the concept in terms of the school’s future directions. The collaborative nature of ‘tasks’ created opportunities for teachers to work together. Not enough time to fully engage as there are competing agendas in the school. Need to progress to more practical/ in classroom skilling</p>	<ul style="list-style-type: none"> • Provided for authentic implementation of BL for most primary project teams • Has helped to cross-pollinate PD in the school, sharing information, etc. • PD1 enhanced the “why?” part of the project quite noticeably. PD2 then set the program into gear, and laid the foundation for integrating the BL work into the overall “readiness” of the school as a whole. Both units promoted greater questioning and exploration, as well as collaboration, on the part of the teachers. • A need to focus on practical applications • Competing agendas which are promoted by various members of the leadership team
<p>Importance of Collaborative Team Work (CTW) to success in the Blended Learning Project.</p>	<p>The premise of collaboration is important to how the school should operate. Not enough time to fully engage with Blended Learning. Teachers appear to like working collaboratively.</p>	<ul style="list-style-type: none"> • Highly beneficial, having the focus on collaboration provided better support to individual team members in terms of how to integrate their BL learning with what they were doing as a team. • If had not undertaken the project as a collaborative endeavour, the project learning would not have been sustainable • In hindsight, leadership should have identified the need to differentiate the CTW earlier, and provided specific strategies for individual groups to do this.
<p>Importance of School Leadership to success in the Blended Learning Project.</p>	<p>Whole of school leadership focus on BL as the key strategy is important. Too many competing agendas. Less top-down decision-making and more collaborative decision making would ensure a better</p>	<ul style="list-style-type: none"> • Direct leadership contributions came mainly through Paul Fradale, with most other aspects of contributing conducted along less formal lines • Leadership team acted more as a “sounding board” for teachers – clarifying questions, helping to find ideas, helping people to connect with others who might be able to help with a particular problem, etc. • Main challenge for teachers was time, leadership tried to provide additional times, use group

	<p>fit of BL and strategies to all sections in the school.</p>	<p>meetings, etc. to help minimise the impact of time on teachers</p> <ul style="list-style-type: none"> • Has provided vision and direction. • Has selectively hired new staff members with the relevant skill sets. • Leadership team has all been on the same page about things too, and this has helped to focus the project for the school quite clearly. • Vital – Some polarisation within the leadership team about this however, and this has impacted on the whole school focus to some degree. • This created some confusion on the part of secondary teachers concerning what to do (because the oppositional impact was coming from a senior secondary member of the leadership team), how to do it, what to value, what to expect, etc.
<p>Importance of ICT skills and knowledge to the success of the Blended Learning Project.</p>	<p>Core issue here was the perceived importance of ICT skills to the success of the BL Project. In this respect it was generally perceived that teachers had to have at least basic ICT skills and knowledge in order to produce a successful BL project.</p>	<ul style="list-style-type: none"> • Opened-up possibilities for teachers in the early years area in particular. • Probably a bit of tension still exists concerning how best to use ICT to support learning even in the Primary area. • Important for basic skills in BL • Fairly important, but need to understand that it is the teaching, not the level of ICT skill, that makes for good BL pedagogy. • ICT is a “tool”, and teachers need to be aware of what tools might be relevant to their particular project or learning plan. • Collaborative sharing of ICT skills and knowledge can be an effective way of getting students to help drive the project. • Opened-up possibilities for learning Kanga that were more creative • Wasn’t as easy for everyone in the group to use ICT • Just as important as being able to read & write in traditional educational terms. Critical to the success of the BL project. Project is key representation of how to build social and decisional capital within the school.
<p>Leader’s perceptions concerning revising the BL Project.</p>	<p>This topic seemed to bring together many of the existing themes and issues that stemmed from these interviews, with the leaders generally wanting more</p>	<ul style="list-style-type: none"> • Focus more clearly on how to connect the various forms of data collection into a coherent, integrated whole. This would help teachers to see the purpose of data collection more clearly. • Perhaps more systematic feedback provided to staff by leadership, to help keep teachers located and directed in relation to their project work

	<p>modelling of BL in subject-and-grade-specific scenarios, examples of ICT tools and evidence of their efficacy, time allocated to PD in BL itself, more guidance in practical components of the PD unit as required (e.g. developing goals in TAR), feedback on BL implementation into their classrooms, how to implement differentiation within the BL framework, and how to collect data and other evidence to analyse and support their BL projects.</p>	<ul style="list-style-type: none"> • Better communication within the leadership team – specific issues and important Project undertakings not always clearly communicated across the leadership team (especially at the middle-management level) • Provide more time for the teachers – Perhaps use planning meetings to also plan how to integrate BL into their teaching. • Also related to time - making the TaR to take place across an entire year (rather than across only one term, as it did). • More direct input into the development (and re-development) of the PD units from middle-management and teacher-teams • Attack the IB part of the school’s program earlier and marry this with the BL project more clearly – get rid of the roadblocks • Perform a curriculum-mapping for the entire school to ensure that the team projects were more directed to the actual needs of the school • Focus more on PYP • Bring the BL project more coherently integrated for the whole school • Make sure the BL work is integrated with the IB curriculum • Make the PD units more “hands-on” for teachers to actually use the ideas and skills • Entire project should be more open to the public – At open day each teacher team should make a presentation about what they are doing for the parents and students • Encourage teachers to individually make a brief written reflection on their use of BL every day • Refine how to organise teams getting through the amount of work involved. • Identify and define what necessary instructions for leadership might need to be for the school, prior to beginning the Project. • Seek to identify the key drivers of success earlier, and ensure that these drivers were understood and acted upon more uniformly across the teaching teams.
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Discussion of leadership interview findings

It was apparent, from those who identified as a ‘leader’ in the school, that they thought the leadership team was a cohesive and effective unit. In this respect it should be noted, however, that recent changes in the leadership team meant some of the interviewees were new to a leadership role or the leadership team. Leaders were supportive of the project and its goals

and had a clear understanding as to what the school was trying to achieve through the BL project. However, leaders with ECE/kindergarten portfolios were concerned with what they perceived as a lack of fit to that area in terms of its peculiar 'operations', 'culture' and 'curriculum'. Leaders generally saw the logic and appreciated the support and guidance that SCU provided in the project. Some commented that this tended to refocus 'them' as busy leaders with multiple agendas back to the project but also to enable 'them' to be challenged and consider new things. In addition, from the quantitative data also used to inform this report it seems that some school leaders were not aware of the key role leadership needs to play in establishing and sustaining teacher engagement and commitment to the BL Project.

Report summary: Key findings & recommendations

This report has found a series of central themes which indicate the following as key review findings and recommendations:

1. This report indicates there has been slippage in terms of the Project's positioning & alignment. Therefore a review of the Project is in order in terms of its goals and strategies and, correspondingly, the assignment of resources and teacher PD. Put simply, it appears there are several competing agendas within the school and that BL, while originally central to the school's operations, has lost impetus. To remedy this situation, clarity should be provided to all staff concerning which leader is directing each different area of the project, as well as clear delineations made concerning the specific roles of associated parties and overall workload demands. Addressing this issue is important for the AJIS schools because competing agendas contribute to the teachers' sense of being overwhelmed and thereby reduces their satisfaction with their Project work. We suggest this process be commenced by:

- a) Negotiating a new BL schema, based on the updated Project domains (Impact, Learning and Discipline). This will allow the Project to better align with the schools' new strategic plan.
- b) Establishing whole-school buy-in to the new BL schema, based on this strategic plan.

2. It is apparent in the teachers' data that the required organisational and leadership functions in the school are not sufficient to embed and sustain a whole-school BL Project. For example, it was clear in the data that teachers did not receive adequate levels of feedback from leaders on their progress towards specific BL competencies as connected to individual core team projects, and in relation to how what they were doing was making a difference to the school. This is important to the Project because perceptions of leadership feedback present as a key point of difference amongst teachers, with EFA, cluster analysis and the interviews suggesting that a re-examination of leadership feedback processes should occur, which focus on improving feedback consistency and individualising the feedback. This is also apparent from the readiness data, which shows that teacher's levels of ACE have decreased, further reinforcing these points. The school thus needs to establish clear arrangements by which teachers can be more supported in their delivery of the Project outcomes and how this has affected student learning. To this end KPIs for the school leaders should also reflect these BL Project outcomes.

3. It is also apparent that the processes for collecting data have been viewed as being onerous and piecemeal. It is therefore recommended that the school adopt a systematic schedule of data collection and analysis for the purpose of authentic Project monitoring, evaluation and ongoing guidance. This is important to the Project because it relates to the validity and reliability of the ongoing Project outcomes. It is also crucial to the development of evidence-based decisions concerning Project direction and (where needed) correction. We recommend adhering to a consistent schedule of data collection, as represented in figure 4 (or similar).

4. Both the ISA and PAT data show some improvement for the Project schools 2017 – 2018. However discrepancies concerning the degree of improvement, as well as which student divisions (PYP or MYP) are most responsible for this, serve to further highlight the need to ensure a more regular and complete data collection schedule. Our review of this data suggests that a greater focus should be provided on core teaching elements, given these are the foundations of academic learning in a school. For example, PAT-R deficiencies indicate a greater teaching focus on English. It is therefore recommended that all core team projects contain a focus on this particular area to address this deficiency moving forward, and that specific leadership guidance and feedback processes be implemented to support this focus.

5. Teachers indicated that although PD units 1 & 2 were interesting and informative, these units were also demanding and lacking in practical guidance. Given this, it is recommended that PD units 3 & 4 have a practical focus and be embedded more directly in the teachers' classroom work. Specific guidance in the development of ICT skills and data collection that are relevant to individual Core Team projects should form one element of this guidance. This will help to standardise the Project more consistently across the schools as well as assist teachers to set appropriate Teacher-as-Researcher (TaR) goals. It will also help the teachers learn how to provide their own feedback in relation to their Project work, as their competence in data collection and data design progresses.

Ongoing collaboration and consultation between SCU and all Project stakeholders will seek to address and/or implement the recommendations and insights from this report. The purpose of this will be to revise and re-design the BL Project moving forward, with a view to increasing the impact of blended learning as a coherent school improvement pedagogy.

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