Final Report

A Select Literature Review for the Te Ariki Trust on the Four Values
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Contents

Introduction

Purpose

This literature review has been commissioned by the Te Ariki Trust so that future applicants for the David Stewart Memorial Postgraduate Scholarship may benefit from access to a select literature review in order to understand the essence of the Trust's four values. These four values underpin all work associated with the Trust. The intention of the scholarship is that it will provide a postgraduate study opportunity for a school leader to advance and honour the work of David Stewart. The aim of the review is to provide a repository which can be consulted when applicants consider how they might build on David Stewart's legacy as they devise their scholarship proposals.

The Trust in selecting a scholarship recipient, looks for evidence of an intellectual challenge which will help school leaders make sense of the complex issues they encounter in daily leadership work in New Zealand primary schools. The recipient is expected to continue the theme of how school leaders can develop teachers as reflective professional practitioners working within collaborative school cultures. Scholarship applicants will need to show in their proposals how the process of education is indeed an intellectual activity in which professionals co-construct meaning from their practice in conversation and observation with colleagues to develop better ways of meeting students' learning need in the classroom. Applicants will also need to familiarise themselves with the work of David Stewart in order to honour and continue the work he started with New Zealand school principals. The articles featured in the review provide applicants with national and international literature to show the direction taken by recent research studies which, as well as providing insights from their own work, have signalled where future work is needed.

The four values

Four values guide the work of the Te Ariki Trust. These are 'professional discretion', 'collegial obligations', 'reflective inquiry and discourse' and 'evidenced based professional practice'. The literature review canvasses all four of these values knowing that each is underpinned by an extensive body of literature. As a select literature review, the focus on scholarship and research is limited to studies undertaken since the year 2010.

Process

The review examines up to five significant studies for each Te Ariki value. These are presented as annotated bibliographies followed by a summarising document bringing out the major messages across the four values. The review highlights what current literature has to say about each of the Te Ariki values and why such values are important for principal and teacher development when working as colleagues who are committed to making a difference to students' learning.

Value #1: Professional discretion

Definition

The trust's definition of professional discretion is stated as teachers acting professionally. However, professional discretion is not a term which is easily found amongst searches of leadership literature. In looking under the term, 'professionalism', Eraut (1994) is one author who writes about professional knowledge and competence offering a set of tenets for those who claim to be acting as professionals. Those tenets paraphrased for a school setting include: adherence to a moral purpose that means the work being done is in the interests of students and their learning; accepting the concomitant obligation to self-monitor one's performance and reviewing the effectiveness of work practices; extending repertoires and engaging in reflection on experience in order to develop expertise. There is no one way to be a professional as there are multiple ways of thinking and acting to achieve the same aim despite the presence of professional standards. Professional values are often enshrined in Codes of Ethics which act as the foundation for the choices for action leaders and teachers make. They influence the exercise of discretion when the action needed is not rule bound or procedurally governed.

Timperley (2015) argues that professionalism is promoted through conversations. Furthermore, she maintains it is important for school leaders to know how professional conversations and improvement-focused feedback can support the professional growth of teachers. The essence of learning through conversations is an active rather than passive type of learning, which is encapsulated in the terminology of 'adaptive expertise', which, like Eraut's first tenet, makes mention of a focus on the moral imperative of improving a range of valued outcomes for students. Timperley follows this with the need for agency to ensure "the continued development of knowledge and skills through self- and co-regulated learning as new evidence comes to light or new students present new challenges" (p.7). Self-awareness is a further aspect highlighted and described in terms of "existing assumptions, and when they might be helpful or unhelpful" (p.7). Therefore acting as a professional means understanding one's own capability to function and being adaptive and responsive to the work context and those whom one serves.

Decision making is an important part of professional discretion and involves making choices which one would hope are informed, considered and evidence-based. Decisions are enabled and constrained by a number of factors at the national, regional and local levels of policy in a context where school leaders mediate. Across each of these levels is acceptance that schools are places of learning established to help children learn. Also accepted is the notion that education is collective and collaborative work with multiple players taking the lead at different times.

Foremost in teachers' learning to act professionally is the notion that they cannot undertake this task alone. Learning alongside colleagues is beneficial and can take a number of forms, both formal through intentional mentoring and coaching and more informal contacts such as professional conversations about practice which help in making meaning of teaching and learning experiences. Timperley (2015) in a comprehensive literature review on professional learning conversations suggests:

> professional knowledge is constructed through social interaction and is situated and enacted in social communities of practice. Conversations are essential to its development. Effective professional development depends on the quality of conversations as teachers negotiate meaning with one another and learn from those with specialist expertise (p.4).

Coleman (2011) suggests that interest in collaborative work has increased in the last twenty years and is driven "by the view that partnership working may improve efficiency and add value in outcomes" (p.296). He also adds "remarkably little research has been undertaken into the nature of leadership required to maximise the potential of such partnership" (p.296). A synthesis of four recent articles will now show what the theoretical and empirical literature has to say about the options and potential for school leadership actions to make the required impact on students' learning and achievement when attention is placed on teachers being able to act professionally and share in that leadership work. The focal point of all professional decisions, is the interests of students.

Article 1: Coleman, A. (2011). Towards a blended model for school-based collaborations.

This article is first in the selection of four articles to inform the Te Ariki Trust of research undertaken in the last five years to illustrate the range of choices available to schools and their principals in decisions about how to find ways of working which will help them to

better meet the learning needs of students for whom they are responsible. In the first article, Coleman (2011) notes that this century is defined by its shift towards partnership with the emergence of both outward and inward facing partnerships. Schools are no longer viewed as separate entities operating in isolation but are actively encouraged to make the best use of what partnerships and support they can find. *Outward facing* partnerships convey the ways in which leaders work with schools and agencies to establish processes that safeguard the well-being of all children. One example of this is successful principals working with other schools to achieve this aim. Hopkins (2009) refers to this as the emergence of system leadership. Other examples include an executive head working across a group of schools whereby there might be economies of scale in sharing good practice and professional development opportunities. *Inward facing partnerships* capture the ways in which schools can distribute leadership from within by creating a team rather than an individual approach to leadership work.

Coleman's 2011 study capturing the insights of school leaders, local authority advisers and academics interested in collaborative leadership in the United Kingdom used interviews, document analysis of Ofsted Inspections and a survey to establish the challenges facing leaders of extended schools, strategies used, perceived key skills and experiences needed by leaders in these kinds of cooperatives and the factors ensuring continued success and sustainability. Combining findings from this study alongside published literature, Coleman then developed a blended model of leadership for school-based collaboration. It includes five elements: authentic, relational, distributed, political and constitutive leadership. Together these elements help to explain the areas requiring professional discretion highlighting the complex nature of leadership contexts and choices of action.

The first type of leadership within this blended model is authentic leadership which is explained as "values based performance of leadership" (Coleman, 2011, p. 303). This is about aligning a leader's values and actions in practice while at the same time adhering to wider social expectations of the role which Evans (2007) refers to as bounded agency and earlier referred to as ethical codes. Coleman argues that existing literature has little to say regarding "the precise nature of leadership practice required to achieve this or the basis for leaders' underpinning values themselves" (p.305). Indeed the New Zealand professional standards for principals leave plenty of room for professional discretion in the way the

leadership practices are conveyed as practices to be provided, created, developed and strengthened without specifying how principals might act. A limitation of values based leadership is that it "is unable to deal with instances when a leader's authentic behaviour runs counter to the interests of others" (p.304). In authentic leadership an understanding of context is particularly important working within the constraints of power and personal influence.

The second type of leadership is relational, highlighting organisational structures which are "more democratic, inclusive and open" (p.306). It calls for leaders to be more flexible in the ways they lead, adopting the most appropriate leadership style rather than adhering to one particular style. Professional discretion comes into play with the matching of approach to situation.

Distributed leadership is the third type in recognition of the work required rather than a positional role being the determinant for who undertakes the work. In collaborative settings this involves sharing work across professional groups and organisational boundaries with an understanding that this is expected. Here the need to trust colleagues is paramount otherwise the distribution is likely to be viewed as "abdication of responsibility" (Coleman, 2011, p.307). Once again Coleman suggests that the distributed leadership terminology "remains vague and misunderstood, with insufficient attention having been given to what such approaches look like in practice" (p.307) despite the sharing of power and responsibility. What will be of likely interest to the Ariki Trust is how principals might distribute leadership work so that it is a palatable and inviting option for teachers to consider.

Political leadership as the fourth leadership type has received even less recognition. Leaders, while being required to carry out government policy at the school level, can at times have difficulty reconciling "ethical commitment to principles such as openness and integrity with performative aspects of their role" (Coleman, 2011, p.309). Coleman claims political leadership is a further under-explored practice often in conflict with the readiness of and relevance to a local context.

The final leadership type advocated by Coleman is constitutive leadership. This type of leadership involves the clear articulation of values, rights and responsibilities to apply in

schools. It is contingent on close listening to the views of others and absorbing their views as much as possible when shaping agendas and gaining their trust. Likewise Coleman (2011) suggests this leadership type has been criticised for "lacking detail and precision on the processes through which leaders create meaning" (p.310). However, he also suggests it highlights "the part leaders play in creating the context within which they operate" (p.311).

In offering a blended model, it is Coleman's hope that more work will be undertaken to explain how collaborative leadership is enacted in practice and how the various tensions and paradoxes can be reconciled when particular decisions need to be taken. This model with its five leadership types helps to highlight the complexity of leadership work and the considerations for acting in a professional manner which ensures that students' learning potential is realised through those actions.

Article 2: Hargreaves, D.H. (2011). System redesign for system capacity building.

In England groups of schools are working together in a variety of collaborative ways with partnerships between clusters of schools on the increase. These collaborative partnerships have also become a research focus which has potential for providing insights to the Ariki Trust. Each of these partnerships is underpinned by a strong moral purpose to enhance student learning and works on the assumption that it is time to rethink what schools as learning organisations can do to be more certain of their intent. Organisational capacity building is a useful term referring to the range of resources and processes available to schools which have direct or indirect application to what happens in classrooms to enhance student learning. Such resources and processes include financial, physical and technological resources, qualifications and deployment of staff, quality of schools' management and leadership, governance arrangements and links to external agencies. With these processes and resources in mind Hargreaves uses the concepts of coupling and capital to make sense of how collaborative partnerships can enhance capacity building at the individual school level as well as local and national levels.

Three types of capital are offered. The first is intellectual or human capital which captures the totality of knowledge, expertise, competencies and skills available to the partnership. The second capital is social and it depends on the degree of trust between people inside and beyond that partnership. The remaining capital is organisational, which draws together

intellectual and social capitals. According to Hargreaves (2011), this is most easily noticed by its absence. Each of these capitals is needed to maximise what individuals and collaborative partnerships can offer students and their learning. They are the foundations upon which professional discretion depends, knowing whose knowledge, expertise, and skills will be of most use at a particular moment in time. Knowledge of these capitals is of importance to teachers as well as school leaders given that schools as organisations depend on the reciprocity and support all members.

Hargreaves also uses the concept of coupling to make sense of capacity building reminding us that coupling occurs on a continuum between loose or tight. Three types of coupling are advanced. *Professional coupling* relates to the level of teacher autonomy. *Institutional coupling* is the coupling between administrative structures, for example decisions about the organisation of the school year, day, timetabling, and groupings of students. *Inter-institutional coupling* is about the linkages of schools to other schools and organisations. Hargreaves claims (2011) that a shift in inter-institutional coupling has occurred in recent years with the formation of partnerships, clusters, federations, trusts and families but for varying reasons and extents. What Hargreaves' work tells us is that the notion of collective professional discretion is gaining prominence over the exercise of professional discretion when individuals act alone.

What is of particular interest is Hargreaves' commentary on the interaction between capital and coupling. He (2011) maintains C21 schooling has tight professional and inter-institutional coupling, and loose institutional coupling. This means that as professional coupling tightens, and trust between teachers develops, social capital increases and teachers find it easier to share reciprocal coaching and mentoring. Tighter professional coupling signals a new view of professional discretion which is to think of professional discretion as collective professionalism. This more inclusive view of professionalism means that qualified educators work together to bring their judgments to bear on student interests, not only about children in their own classes but also in those of neighbouring teachers with whom they are increasingly in coalition.

Views about the benefits of inter-institutional coupling are mixed. On the positive side Hargreaves suggests collective responsibility for meeting the needs of all students can be helpful, especially with regard to students with special needs. With regard to the personal

needs of staff, job rotations offer a way to extend practice using the resources of several schools. There is also the likelihood of more support being available to support new or emerging leaders addressing issues of leadership capacity building and succession when schools work together. Likewise, other financial and resource efficiencies are possible with a family structure as opposed to separate schools. What is less clear is whether clusters should be homogeneous (eg same sector or same faith), or heterogeneous (mixing sector groups). Furthermore, the skillset required of a leader of just one school, as opposed to a cluster of schools, will be different. Hargreaves purports cluster leaders must be totally committed to improving the success of all schools and students rather than just their own. This article is considered timely for the Ariki Trust because it highlights how collective professionalism can enhance schools' abilities to focus on student learning by drawing on new networks and at the same time giving professionals new opportunities to deepen their expertise through new challenges.

Article #3: Cooper, K.S. et al. (2016). The teacher leadership process: Attempting change within embedded systems.

The third article featured in this select literature review focuses on teacher leaders. It is of particular interest because it represents an embedded case study of eleven teacher leaders in three urban schools who attempt to change the practice of their colleagues while working as a professional learning community. The notion of collaborative teacher practices supports Eraut's (1994) view of professionalism which suggests professionals need to work together to improve the profession for this is how teachers can learn from one another, provide support and keep asking the questions needed to deepen understandings of practice. The change efforts of these teacher leaders integrate complex systems theory with the eight steps in Kotter's theory of organisational change.

The beginnings of teacher leadership often appear as informal dialogue about teaching with colleagues. For this dialogue to move to the next step of helping colleagues improve their practice, Cooper, Stanulis, Brondyk, Hamilton, Macaluso, and Meier (2016) argue that more work is needed to support teacher leaders in this important work, particularly by identifying how to engage in a change process professionally. York-Barr and Duke (2004) argue that teacher leadership is dependent on three interrelated conditions of school culture, relationships and school structures. Firstly, school cultures must be conducive for talk about

practice and collaborative practice. Secondly, professional and respectful relationships must prevail if colleagues are to feel safe and supported in their learning. Thirdly, school structures must support learning by providing time within the school day for teachers to plan, observe and learn from one another. However, even when these conditions prevail, Cooper et al. (2016) suggest influencing teachers is not the same as changing teachers' practices. It is to this end that their work has turned seeking to identify the strategies and tactics that intentionally work to change current practice.

In their study Cooper et al. (2016) analysed video footage of teacher leaders attempting to change the practice of colleagues, conducted interviews and sourced other documents to understand change efforts within their unique work contexts. Kotter's (1996) eight steps for leading organisational change were then applied to the data sets looking for evidence to support the presence of these steps. Kotter's theoretical framework begins with establishing a sense of urgency for people to change their actions. This is followed by those with power clarifying the problem, trying out new strategies themselves and suggesting possible strategies. A vision is communicated to attract wider interest in the change and support and training are provided to empower action toward the vision. Short-term gains are highlighted to propel further action and interest thereby extending the critical mass by revisiting the vision and aligning decisions to support the change goals. The final step is reached when those leading the change relinquish power to others and new practices become part of the school's culture.

A second theoretical lens of complex systems theory was also placed on the data. This allowed teacher learning to be viewed as nested with overlap and influence from individuals, collectives and schools as part of a larger system again. Picking up on Opfer and Pedder's (2011) notion of teacher leaders being boundary crossers, Cooper et al. looked for evidence of actions where teacher leaders were able to use their credibility with colleagues to link the visioning process and the implementation of the new teaching practice through connections they made across these boundaries.

Cooper et al's study was positioned within a four year university based professional development programme. The programme supported each school with two or more teacher leaders leading professional learning communities or mentoring beginning teachers to build school-wide cultures of professional inquiry around discussion-based teaching. Data were

collected in three case study schools with the designated teacher leaders and a survey of the fulltime teachers at each school. The professional development did not explicitly address Kotter's eight steps for leading change.

The findings showed how the embedded systems at each of the three schools had shaped the leadership actions of the teacher leaders. Professional discourse in communities of practice within each case study acted as a key strategy for the exercise of professional discretion. Each school was able to use collective knowledge drawn from conversations about practice and evidence-based data to determine how it would act to support the learning of its client body, the students. Having the autonomy to make what they considered the best possible decisions was the flux which helped to make all members committed to the same moral intent or purpose. Responsibility to act on collective knowledge gained in-situ helped to build teacher commitment and create momentum for ongoing improvements to teaching and learning because of direct relevance to issues of pedagogy determined by the community of practice.

One of the schools revealed that teacher leadership was more systematically focussed on the project's learning goal of increasing discussion-based teaching than the other two schools and its embedded systems supported teacher leadership in ways which were not observed or reported in the other two schools. At this school the teacher leaders had successfully demonstrated Kotter's first 4 steps for leading change. They had created a sense of urgency for the change by drawing attention to a need for consistency in their system to ensure students succeeded. Once teachers were convinced that system consistency was an issue the teacher leaders clarified the task ahead. One said, "our goal is to figure out where we are losing [consistency], why we are losing, and how can we stop losing it". Whole school approaches then emphasised the same approaches to discussion-based learning. Two teachers shared best-practices and then the grade level teams met to modify those practices for their grade levels. Mentors reinforced the goal with individuals. A guiding coalition of the three teacher leaders and the principal kept communicating and reinforcing the vision. The safe and collegial culture allowed frequent conversations about practice related to the goal to occur so that professionals could be actively engaged in determining what and how improvements might be planned.

The second case study school had a strong principal and strong mentors. Its embedded systems were, however, rigid and disconnected "pulling the leadership team in many directions and seemingly undermining the teacher leaders' ability to create change" (Cooper et al, 2016, p.99). The presence of multiple initiatives was unhelpful and the initiatives were "context independent: they were not framed as being responsive to the particular needs of … students" (p.100). Furthermore the principal had a top-down managerial style and the teacher leaders were her enforcers. As "the instructional agenda came from the principal and was not owned nor shaped by the teacher leaders, they had little autonomy and few opportunities for leading change" (p.100). This kind of leadership behaviour is at odds with professionalism because actions were not sufficiently linked to the current needs of the students and therefore were not seen as immediately relevant and required. In addition, the concept of collective professional discretion was overridden by the 'top down' approach to implementation action. While the teacher leaders could talk about the practices, they did not take hold and therefore became lost amongst the other initiatives. Connections were hard to make across multiple initiatives and initiatives tended to be treated as separate topics on a 'to do' list.

At the third case study school the embedded systems were lost in transitions to create separate campuses, new staff and the departure of the principal. Cooper et al. (2016) wrote, "in the midst of all this change, the embedded systems surrounding teacher leadership were compromised and struggling to become re-systematized" (p.101). Attention was placed on the need for high morale over any particular teaching strategy but when teaching strategies were addressed, the learning was presented as helpful tips rather than being research informed. There was little evidence either of a school-wide vision and the teacher leaders varied in their commitment to discussion-based learning. Again, this school's experience runs counter to one of the tenets outlined earlier from Eraut's work. It ignores the core of professional life, the use of research informed knowledge. The small number of teacher leaders at this school also impeded what could be achieved in contrast to what was possible at case study school one where the coalition of leaders included 4 or 5 teacher leaders and the principal. The two teacher leaders at this third case study school had little administrative oversight and were unable to act as a force for change within their school.

In drawing together insights from these case studies Cooper et al. (2016) discussed and named five embedded systems which they considered had impacted on the teacher leadership change process. These were the teacher leaders' and principals' personal orientations towards leadership, the leadership team, school context, and the local context outside of the school. Self-belief as a leader was important as not all of the teacher leaders saw themselves as change agents. Cooper et al. (2016) reported that their programme had concentrated on "developing understandings of professional learning communities, mentoring and types of collaborative practices that support teacher learning" (p.105). What they found was that teacher leader preparation also needed to include "understanding organisational change and strategies for driving change among peers – a process that turned out to require much more assertive leadership and purposeful visioning than … anticipated" (p.105).

Principals' orientations towards leadership as a system also mattered. A balance was required between autonomy and support. It was important that principals let the teacher leaders lead while they, themselves, took on a coalition member role rather than a direct leadership role. Principal support and involvement in the coalition group was symbolic but also increased the importance and effect of the proposed change. The team dynamics of the leadership team also made a difference so that where team members collectively reinforced the same vision, the change in teaching practices was more successful.

Taking contextual conditions into account, these case studies demonstrated the extent to which schools had constantly changing cultures. It was not a matter of establishing the conditions for collaborative learning before embarking on teacher leadership because some conditions were hard to identify from the outside. Even while teacher leadership opportunities might be available, little progress could be made if there were power imbalances resulting in teacher leadership actions having little effect. Attention paid to the content and processes of professional learning and change altered the way Cooper et al. (2016) approached their professional development work with teachers. The results from this study helped them to see the need to be more explicit about the processes of change and integrate Kotter's terminology of urgency, guiding coalition and vision to understand how to build support for change and lessen resistance from teachers. Two of the case study schools did not spend enough time on the early steps in Kotter's theoretical model which was to

their detriment. Overall these studies add to our understandings of leaders and teachers acting professionally because they highlight the importance of active engagement in all phases of a change initiative from determining and justifying its need, to considering how to act and reviewing those actions.

Article #4: Ell & Meissel (2011). Working collaboratively to improve the learning and teaching of mathematics in a rural New Zealand community

This article features seven rural primary schools who worked together to improve maths performance using a professional learning community approach. Their approach was informed by the work of Wenger (1998) whose definition of professional learning communities describes a joint focus, relationships that allow challenge and sharing and the skilled use of artefacts in solving problems. Various terms signify networks of teachers working to improve their practice either within their school or through inter-school networks. New Zealand uses the term 'cluster' to capture a group of schools working together for a particular purpose. However, it appears that this approach has more benefits for teachers than students. Making improvements in student learning is not a quick fix. Timperley and Parr (2010) report findings which show that it is evidence-based conversations amongst teachers which make the difference for students and their learning, reinforcing two important aspects of professionalism, namely: teachers collaborating to improve professional practice and using research informed knowledge. Their work facilitating literacy learning in clusters has highlighted the need to help teachers analyse classroom data. Work with researchers is one strategy, albeit a lengthy process, shifting cultures from evidence gathering to ones which act on evidence and plan targeted strategies. Lai and McNaughton (2008) also support the need for extended professional learning time, recognising that teachers working together need a degree of trust before the questions they ask each other become challenging and able to drive improvement agendas. Turning the theory of collaborative practice to actuality is not straightforward. It requires patience and individuals seeing that they need to contribute to the collective agenda of achieving the school's moral purpose to serve its students.

The schools in Ell and Meissel's study had been working in cluster groupings over a number of years with a range of Ministry of Education initiatives. What was different with this study was that the schools decided to form their own teacher-led cluster to improve numeracy in

their schools. They began with a strong sense of ownership of a problem believing that this would ensure they developed something which held meaning for them. They approached a numeracy facilitator already known to them and a researcher for assistance with data analysis, knowledge of informing literature and how to apply for additional funding supports. Whilst seeking outside help, the leadership of the cluster was firmly in the hands of lead teachers and not the facilitator or researcher.

The importance of taking the time necessary for the cluster to establish a shared and agreed focus was a key step in the improvement process. This took a full year. While cluster members shared plenty of concerns, Ell and Meissel (2011) reported "they differed about why it was a problem and how it could be tackled" (p.173). Eventually they settled on work to improve basic facts and place valuebelieving that this would help the students' problem solving and computation abilities. This is a clear illustration of collective professional discretion – the students' interests were at the centre of the decision taken but there was no definitive route to improvement to take. Professional judgment and commitment were required.

 The study progressed with students across all of the schools being tested in the same week each term. Aggregated data came back to the cluster group for discussion and then cluster members led discussions in their own schools. These data showed average scores for each age group and then subsequently broke the age levels into quartiles. Schools were then able to compare their data against the cluster. These data sets were owned by the schools and were not used for reporting elsewhere. The research accompanying this cluster group set about finding out what learning opportunities each of the schools planned after seeing the data and whether test results improved over time. Also of interest was whether there was a link between the learning opportunities and the students' progress. Action plans devised by the teachers were analysed and grouped into themes.

Teachers who attended the cluster meetings noticed that the discussion approach reduced blame, developed a shared language and understanding about the mathematics underachievement problem and encouraged collective responsibility for change raising questions about teacher effects and the relationship between teaching and learning. The importance of talking about change resonated with the work of Le Fevre (2010) who says teachers need to change the way they talk about change knowledge for professional

learning. Such talk, she argues, needs to include talk about "prioritising change, expectations for change, challenges of change and evaluating change outcomes" (p.71). Therefore, taking ownership of these challenges is vital because progress is dependent on the enactment gap being addressed, and risks taken and supported through trusting relationships. The cluster study demonstrated that while the individual schools could report progress, (some more than others), the researchers did not consider the schools had "harnessed the full power of being in a cluster…. [they maintained] "Sharing their intentions and supporting each other to change could have resulted in dissemination of the more effective techniques" (p.183). Thus iterative cycles are required over time so that the inquiry process can prompt more questions as it goes. A cluster has the potential for expertise to be shared across schools so that greater gains can be made in other schools. This is the next step for cluster professional learning.

Nevertheless, this study has highlighted two ways the cluster's inquiry cycle may have influenced student achievement. The first was that aggregated cluster data could make it clear to the teachers that there was a large problem, a problem they shared. This realisation could have been the impetus for change or some teachers might have side stepped it saying the problem belonged with other schools and did not apply to theirs, or even worse, too hard to tackle. The researchers attributed the teacher-led direction of the cluster as the most likely reason for cluster wide actions to engage in work to address the underachievement in mathematics. The second related to the information the tests conveyed. Three of the schools had used the test information to identify gaps and target instruction. These tests had itemised the skills and understandings required of students thereby helping the teachers to know what was needed. Having established that there were many gaps, this in itself served as a prompt for action. Next steps include the teachers sharing with one another across the school groupings and moving beyond one's own school as another opportunity to display leadership and make a difference to students and their learning.

Key points from the articles supporting Value #1

What these four articles have said or implied resonates with the Trust's view of Professional Discretion as 'teachers acting professionally. Six matters are deemed necessary. Firstly, change processes need to make space for multiple partners to contribute. These change partners

can be thought of as being within a school or across schools. Secondly, change initiatives benefit from principal support but this does not mean that the principal should be the sole leader of a change. Thirdly, opportunities to share leadership work with teachers can be seen as an investment in the future leadership pool and acknowledgement that teachers being the closest in proximity to students, know what their needs are. Merely distributing leadership to others is not enough. It must be supported. Fourthly, principals need to think about how they can provide support which enables emerging leaders to determine their leadership identities and how they can align their personality, knowledge and vision to serve the needs of students and their learning. Fifthly, it matters how leaders approach a change initiative. Talk about vision and process need to occur throughout the change initiative so that intentions are clear and understood by all. Lastly, focused talk about practice and the development of trust between colleagues takes time and sensitivity to be respectful, allow for risk taking without blaming and shaming. These are skills which develop through ongoing professional conversations which are evidence based. The last two articles highlighted the challenges and opportunities of working in clusters as professional learning communities beyond an individual school. This is timely because of New Zealand's educational policy landscape which supports the emergence of communities of learning across schools.

While these six matters are key points surfacing from a select review of research studies on the Trust's first value, the review also confirms the relevance of Eraut's tenets about professionalism. Each of the four studies demonstrates that the reason why coalitions with colleagues within and or beyond schools should be formed is that student achievement becomes everyone's raison d'etre. Coupled with this belief is an acceptance that opportunities for collegial sharing and sense-making increase the depth of reflection in, on and about practice. Being a professional also means that responsibility for reviewing and monitoring the effectiveness of one's work with students is a natural activity from which job satisfaction emerges. Thus, teachers acting professionally, attribute opportunities for regular and intentional conversations, observations and analyses of data with colleagues as among the reasons why they are able to continue meeting their commitments to students and their learning. A summary such as this should help the Trust further in highlighting the importance it places on professional discretion.

Value #2: Collegial obligations

Definition

The trust's definition of collegial obligations is stated as the belief that principals and teachers are professionals and schools function as teams. Tied in with this value is the notion that professionals need each other to develop their competence and personal job fulfilment. This sense of collegial obligation is characterised by the giving and receiving of support from colleagues. A shift towards more collaborative cultures in schools has drawn attention to the value of both large and smaller teams of teachers meeting to share issues of practice with one another. These teams have been given a variety of names in the literature: professional learning groups, professional learning communities and quality learning circles. New Zealand's Investing in Educational Success (IES) Initiative has added further terms such as communities of learners to this list. Regardless of the terminology for these groups, the extent of relational trust determines the effectiveness of teachers working in learning teams. How to develop the trust necessary for groups to thrive is a central question in the minds of many leaders, who, while recognising the potential value of collaborative practice, are less sure of how to ensure trusting relationships underpin all collaborative practices in their schools. It is an ideal which is harder to realise in practice. The articles chosen to support the Trust's second value of collegial obligations provide insights as to what is needed to develop trust. The five different country settings featured across the five selected articles provide evidence that the development of trusting relationships is a worldwide concern affecting all levels and size of collaborative groupings of teachers, leaders and learners both within the same school or when schools form coalitions or clusters. Together these studies show that regardless of the type of collaborative grouping, a belief in the potential of collective expertise prevails, for all are concerned with how to help students succeed at school.

Article 1: Hallam, P., et al. (2015) Trust and collaboration in PLC teams: Teacher relationships, principal support, and collaborative benefits.

The first article in this select literature review begins with recognition that the quality of teachers' work is enhanced when they work in collaboration with colleagues. Therefore understandings of how professional learning communities (PLC) can achieve this aim are central to knowing how to fulfil the Trust's second value of collegial obligations extending

knowledge gained from the Ariki Projects with quality learning circles. The article provides an in-depth discussion of the concept of trust building on earlier work from seminal work of Tschannen-Moran (2001, 2004, 2009). Trust is defined by Tschannen-Moran (2001, p.318) as "one party's willingness to be vulnerable to another party based on the confidence that the latter party is benevolent, reliable, competent, honest and open". These five facets of trust and their accompanying definitions from Tschannen-Moran (2004) need to be understood in order to maximise the value of the Hallam, Smith, Hite, Hite and Wilcox (2015) study. The five facets of trust from Tschannen-Moran (2004) include:

1. *Benevolence* which is defined as caring, extending good will, having positive intentions, supporting teachers, expressing appreciation, being fair, and guarding confidential information.
2. *Honesty* which is defined as having integrity, telling the truth, keeping promises, honouring agreements, having authenticity, accepting responsibility, avoiding manipulation, and being true to oneself.
3. *Openness* which is defined as engaging in open communication, sharing important information, delegating, sharing decision making, and sharing power.
4. *Reliability* which is defined as having consistency, being dependable, demonstrating commitment, having dedication, and being diligent.
5. *Competence* which is defined as setting an example, engaging in problem solving, fostering conflict resolution, working hard, pressing for results, setting standards, handling difficult situations and being flexible (cited by Hallam et al. (2015), p.196).

The Hallam et al. (2015) study suggests that while there is a body of literature supporting the need for trust and collaboration at the school level, less is available at the team level. Their study represents a qualitative matched case study approach in the United States of two cases of four purposively selected schools. The first case is just one school which struggled to effectively implement the PLC model. The second case includes three schools which experienced successful PLC implementation. Three research questions framed this study tracking the experiences of 12 collaborative teams of teachers. These questions were designed to determine how trust was developed in each of the PLC teams, what role the principal played in facilitating trust amongst teachers in the PLC teams and in what ways trust facilitated teacher collaboration in PLC teams. Findings were established within the cases and then compared across the cases and matched against Tschannen-Moran's earlier findings. This enabled the researchers to describe a high-performing PLC against a low-performing PLC.

Findings were largely consistent with Tschannen-Moran's work but with some new findings. In answering the research question about the development of trust within collaborative teams there were two similarities and one difference amongst the cases. In both cases sharing personal information and fulfilling responsibilities were important for developing trust. The one difference related to treating one another with patience and kindness (benevolence) which was a similar finding for each of the Case 2 schools and teams within them. This was captured in the words of one participant who said, "We're nice to each other and encouraging too. All of us have so many plates in the air. Sometimes a plate falls" (Hallam et al, 2015, p.204).

The research question about the role of the principal in facilitating trust has revealed two common themes which will be of particular interest to the Trust and its focus on principals creating and maintaining environments conducive to teacher and student learning. Firstly teachers much preferred to be given autonomy. This, Hallam et al (2015, p.205) claimed resonated with Tschannen-Moran who reported

> principals can foster greater trust in relationships among teachers by creating organisational conditions in which teachers can exercise greater discretion in using their professional judgment to respond to student needs. As the teachers observe one another making decisions and acting in the best interests of the students, trust increases.

Secondly, there were differences between the cases regarding how the teams were formed each year or when new appointments were made to the school. In Case 2 schools, the principals involved team members in the appointment of a new teacher for their team. This was a strategy which demonstrated respect for the existing team members. Hallam et al. (2015) referred to this strategy as one which indicated "the principal's openness and competence" (p.205).

The remaining research question about the ways trust facilitated team collaboration, highlighted three themes. Firstly, when teachers trusted their team members' abilities they developed confidence in asking for advice. Secondly, when teachers trusted each other's benevolence, they felt safe sharing student achievement data. Thirdly, an indicator of perceived competence in team members meant that teachers were more willing to rotate students for instruction amongst members of the team.

Experiences of the teachers in the Hallam et al. (2015, p.207) study did align with the five trust facets. Three of the facets received particular emphasis, namely those related to benevolence, reliability and openness. For trust to occur teachers needed to

> sense each other's caring intentions and see their team commitment. Team members' benevolence and openness assured that their vulnerability would not be exploited or their shared information used for personal gain. Reliability signalled a commitment to achieving team goals.

Hallam et al. (2015, p.211) argue

> when teachers perceived the team's purpose as helping every member succeed, they did not fear judgement by their team. Thus teachers recognize that being kind and patient with other team members and reliable in fulfilling their responsibilities build trust and eventually lead to increased collaboration. Without secure sharing, a team's collaborative efforts are likely to be superficial and ineffectual.

The authors' recommendation for future research is for a focus on the role of context for trust development to explore whether the same patterns are demonstrated. The article includes with a very useful appendix containing focus group questions which would help future researchers explore similar research questions.

Article #2: Kutsyuruba, B. (2013). Teacher collaboration in times of uncertainty and societal change. The case study of Post-Soviet Ukraine

This study was conducted in the backdrop of educational reforms calling for teachers to collaborate. Set in the context of Post-Soviet Ukraine, the study is of interest because it focuses on teacher to teacher collaboration highlighting the influence of wider societal changes on individual school settings. In recent years Post-Soviet Ukrainian schools have faced increasing reform emphasis on the pedagogy of cooperation and a call for collaborative relationships. In such a post-modern context, structures and values are secondary to relationships and a collaborative culture is needed to hold the decentralised parts together. In the new context there was no formal system which encouraged teachers to collaborate or share experiences in order to deepen their professional practice. While this change had the potential for flexibility and creativity, increased socio-economic pressures in the wider society meant that teachers were instead more concerned with survival than their professional duties. Material and financial instability created tensions among teachers, many of whom found they needed to find a second job to survive. This article may resonate with teachers in New Zealand struggling to find housing at an affordable price given the

current out-of-control housing market and the impact of this on their professional wellbeing and effectiveness.

Data were collected using document analyses, focus groups and individual interviews with 55 teachers working in eight schools in the same city. The lenses of organisational culture and micro-politics were placed on the data to reveal the nature, content and format of collaboration for teachers working in the study's schools. Successful collaboration was viewed as having a sense of *urgency* to make a difference, *agency* to enable inquiry and coherence and *energy* to achieve desired outcomes (Earl & Lee, 1998).

A lens of organisational culture was able to highlight observable manifestations of culture, its espoused values and the taken for granted guidelines for actions. A micro-political lens enabled closer discrimination of different forms of collaboration and collegiality and whose interests were being served.

Three themes emerged from the findings of this collective case study. The first theme was that teacher collaboration was both professional and personal. Kutsyuruba (2013) suggests successful professional collaboration is not possible without personal collaboration, a finding which had also surfaced in the Hallam et al. (2015) study (see article #1 for this Ariki Value) where personal connections mattered in the formation of trusting relationships. A second theme related to the wider Post-Soviet societal changes as the transformation was dramatic. The third theme revealed changes in teacher collaborations. These showed a range from non-collaborative cultures to pseudo collaborative cultures which were collegial in context but lacking collaborative substance to balkanised cultures with cliques according to common interests, comfortable collaborations, contrived collegiality and full collaborative cultures.

Various paradoxes were also apparent within this post-modern context. These included freedom with constraints, increased demand for professional commitment amidst a decline in material welfare and working conditions, tensions between emerging individualism and engrained collectivism and an increased division amongst teachers.

This article has highlighted the complexity of collaboration from both macro (societal) and micro (school) levels when hoping to translate collaborative intent to actual practice so that

teachers can fulfil their collegial obligations of maximising one another's ability to make a difference to students and their learning.

Article #3: Duffy, G, & Gallagher, T. (2014). Sustaining school partnership: the context of cross-sectoral collaboration between schools in a separate education system in Northern Ireland.

The focus for this third article in the review is cross-sector collaborations between schools in Northern Ireland. Schools in Northern Ireland have had a long history of separatism with Protestant and Catholic children attending separate schools. Today there are 4 school sectors in Northern Ireland of which the majority are controlled and maintained schools whilst others are integrated and voluntary schools. Each of these variants is explained in the article, suffice to say that some have full church control and others limited. The context for this article is one particular programme, called the "Sharing Education Programme (SEP)", which was designed with the intention of encouraging collaborative links between Protestant and Catholic schools so that students could take classes in each other's schools and the teachers could engage with one another to develop communities of learners. The first SEP was for a 3 year period from 2007 to 2010. A further SEP ran from 2010-2013 with a different set of schools.

What is different about the context for this study is that school partnerships were set up to promote reconciliation and social cohesion by bringing together schools from different communities. Applying collaborative intent to promote collegial obligations between century-old historical tensions of religious groups make this article of interest as this must count for one of the more challenging contexts for collegial practices with coalitions of schools. Furthermore, a particular focus of this article is sustainability and whether the schools involved were able to continue their collaborative ways of working beyond the funding of the three year period. The study included five schools from SEP 1.

The article includes a useful section on indicators of sustainable and effective school partnerships from informing literature. These include funding, a sympathetic policy environment, government and external agency support, school leadership support for collaborations, advocates for partnerships at the local level, geographical proximity, partnerships demonstrating flexibility and innovation, the capacities of the schools, availability of staff to work on collaborative projects and support from credible senior staff.

Again the authors offer messages for those attached to the macro and micro levels of education systems.

The findings were organised around three themes. These were the logistics and challenges of collaborating, the benefits of partnership arrangements, and examples of sustainable practice beyond the funded period of SEP. Logistical challenges included the travel time between schools and organising this around natural breaks in the timetable. Such logistical challenges will likely be in the minds of New Zealand principals if they have options to form coalitions from beyond their immediate geographical areas. In the reviewed article study timetables at the various schools differed which made it challenging to organise shared classes, however, some seemed to manage this. For some schools the benefits were more about the teachers interacting, sharing resources and supporting one another. Such benefits are captured in the following comment from one participant who said "If I walked into [school name] for half an hour I would learn something that I would want to bring back here". Another provided questions which indicated possibilities from the partnerships and asked "How can we learn from the other school? How can they learn from us? How would they respond if I said I want to teach you this or I want to challenge you about this aspect of your school culture?" (Duffy & Gallagher, 2014, p.200).

The most successful partnerships benefitted teachers, students and the schools as a whole. In all cases the schools sustained some form of collaboration, cooperation or connection but these varied. The variations for the students included sports activities at the other schools, use of virtual technologies and some shared teaching. For the staff, relationships developed at different levels between principals and governors, principals themselves and teacher to teacher. The school which showed the most potential for sustained partnerships had its partnership working at all levels. It had subsequently set up a new partnership with funding from another source to continue similar work.

Overall the Duffy and Gallagher (2014) study showed that the success of schools working in partnerships with one another depended on a commitment from all levels, both from within and beyond schools, to enable expertise to be shared, trusting relationships developed and time made for learning from one another. SEP had helped to kick start cultural shifts within the schools from institutional isolation towards mutualistic benefits found when students, teachers and schools worked together. This article offers considerable insights to support

the extension of collegial obligations beyond single school sites which aligns with the Trust's commitment to supporting teachers' and school leaders' professional practice across the teaching profession.

Article #4: Cutajar, M., & Bezzina, C. (2013). Collaboration: joint working by individual state-maintained schools in a new statutory system in the Maltese Islands

The education system in Malta has been overhauled since 2006. All state primary and secondary schools are now clustered into 10 provisional colleges. This article explores the nature of collaboration required to sustain the establishment of school networks over time, a matter which will have relevance to the trust and its commitment to ongoing collegial obligations between professionals. Collaboration was selected as the preferred strategy for this study for its potential to better meet the needs of Maltese students. The research question for the study was "what is the nature of inter-school collaboration in a policy context that requires joint working by individual schools?" That inter-school collaboration is mandated is an interesting notion for schools rather than being an option to consider. Nevertheless, this article still has messages for those setting up new coalitions between schools and those who are already collaborating with other schools.

While collaboration, cooperation and collegiality have been recognised as critical components in the last 15 years, a shift away from a centralised control and command mindset to a collaborative mindset is a marked change in how schools have operated in Malta. Supporting the potential of collaborative practices, Cutajar and Bezzina (2013) suggest "collaboration broadens the teachers' expertise and learning opportunities that no single school can offer, since it provokes the sharing of expert leadership and provides a healthy discussion among them" (p.22). This is similarly attested by a teacher in Cutajar and Bezzina's study who said "Collaboration has introduced a culture of *sharing best practice,* resources and experiences and a culture of shared leadership".

Challenges associated with a move towards collaborative practices include the realisation that schools will of necessity need to exist and function in different ways if the potential of its members is to be maximised. For principals, this means that they are no longer the only leader but instead part of a team accountable to one another. The challenge is to ensure that a collaborative network fosters individuality, creativity, spontaneity and originality in order to respond to its local needs (Cutajar & Bezzina, 2013).

What this study showed was that it was not enough to concentrate on the leadership and management structure of the Council of Heads for every college and its corresponding consultative body, an Educational Leaders Council. Further work was needed to take the notion of collaboration to a lower level and address the divide between parents and schools. This study highlights the complexity of the shift towards joint collaboration again resonating with the Trust's value that teachers as professionals need to see themselves working within a connected profession in which teachers and leaders cooperate and collaborate across classroom, school and district boundaries.

Article #5: Moore, T.A., & Rutherford, D. (2011). Primary strategy learning networks: a local study of a national initiative.

An English initiative called Primary strategy learning networks (PSLNs) is the network featured in the final article selected to support the Trust's value of collegial obligations. Of particular interest is the understanding of a network, what it means operationally and what the implications are for a centrally directed and funded model of networking. This particular initiative was launched in 2005 in one third of England's primary schools with each network consisting of five to eight schools working together to raise literacy and numeracy. The initiative was funded for one year from central funds on the condition that schools commit to the initiative for at least two years. The study reported here is from one Local Education Authority in London with data collected from observations and semi-structured interviews with just the headteachers.

The definition of a learning network posed by Moore and Rutherford (2011) was

> a collaborative group of educational practitioners sharing relationships based on trust, loyalty and reciprocity engaging one another to enquire into practice, to innovate and exchange knowledge and to learn together to impact on pupil learning (p.70).

The findings are grouped around two themes. The first relates to the requirements of networks to function successfully, particularly organisational structures and funded time. The second relates to the benefits of successful networking. There were more benefits to staff than students in this initiative which indicates that the main purpose of enhancing literacy and numeracy was not achieved. Challenges encountered were managing competing school and network priorities, staff mobility, the loss of headteacher autonomy, sustaining engagement in the initiative, coping with bureaucratic demands and power issues

with autocratic network leadership inhibiting decision making. Two recommendations were offered from the PSLN initiative. One recommendation was to engage teachers in the work of pulling policy into practice. The second recommendation was to suggest a need for more knowledge about the change process taking into account human relationships and power tensions.

The article concludes with an alternative model of networking, referred to as productive networking, which capitalises on the lessons learnt from the PSLN initiative. Attention is given to considering a realistic intervention and how an initiative can be evaluated. Particular questions taken from Pawson (2006) were promoted. The questions were: Is it working? How is it working? Why is this bit working? And what is the barrier to this bit not working? These questions highlight the importance of establishing the positive and negative aspects of an initiative and using the negative aspects as a prompt for further dialogue. The findings of this article also link to the Trust's third and fourth values of reflective inquiry and discourse and evidence-based professional practice.

Key points from the articles supporting Value #2

There is agreement from the authors of the selected articles that collaboration is necessary for school and student improvement. How to establish successful collaborative practice is less clear, especially when instigated by educational reforms but the authors nevertheless outline actions which can be undertaken by leaders and teachers alike. An obligation to collegial practice is considered as the hallmark of being a professional because through it professionals recognise the potential of collaborative networking as opportunities to question, interrogate and reshape practice for the benefit of students' learning. However, while a need for trusting relationships is realised, there is widespread agreement that each school and its networks has to work out its own ways to establish effective groupings ensuring trust is a cornerstone. Hallam et al's (2015) study warrants a close read to make connections between trust and collaboration, particularly at the team rather than school level, to show what it takes for teachers to willingly share student progress information, accept observations of their practice and not feel judged or vulnerable and see the merits of joint planning with colleagues. These features when extended beyond one's own school into wider networks or learning communities of several schools create larger challenges for the development of trust gone to scale, but at the same time, there are benefits possible given

the presence of a wider pool of expertise to support teachers in their work. Groups will not function effectively if attention is only paid to the content focus of what to teach students. Teachers will only be able to support each other in their practice if they can share issues of practice within safe environments where there is respect for all regardless of their levels of expertise and experience.

In concluding the review of the Trust's second value of collegial obligations, the Trust can take heart in its commitment to collegial obligations as being an essential component of how teachers and school leaders acting professionally can improve their practice on a daily basis. This value shows strong alignment with Tschannen-Moran's five facets of trust explained within the commentary for the first article in this review of selected readings supporting Value 2. Teachers and school leaders must pay attention to their communications with colleagues to ensure they are received as benevolent, reliable, competent, honest and open, for it is only then that the potential of teachers and leaders working together will be realised.

Value #3: Reflective inquiry and discourse

Definition

The Trust names reflective inquiry and discourse as the core of professional interaction and development signalling its potential to help teachers extend their expertise. A deepening of expertise is made possible through the application of teacher inquiry models, collegial discussions, the presence of relational trust, and personal learning and change in practice through involvement in collaborative sense making models. Reflective inquiry and discourse are key principles underpinning the Trust's work in their existing Ariki Projects where quality learning circles are the preferred collaborative learning approach. Deeper levels of inquiry and reflection are possible when teachers intentionally meet together to interrogate a focus of mutual and agreed interest.

The articles which support this third value reinforce the design features required for inquiry approaches (typically referred to as teaching as inquiry and action research), the levels of questions to ask about practice, opportunities for ongoing reflection and inquiry and above all the importance of trust as the catalyst for collaborative learning with colleagues and reason why teachers are prepared to participate. While academic references to relational trust often acknowledge Bryk and Schneider's (2002) work, this selection of articles for the Trust's commissioned literature review is limited to work in the last six years. It is also noted that the need for relational trust underpins more than one of the Trust's values but is signalled here as continuing recognition of its importance.

Article #1: Kaser, L., & Halbert, J. (2014). Creating and sustaining inquiry spaces for teacher learning and system transformation.

Kaser and Halbert have undertaken extensive work on teacher inquiry for many years. This article is drawn from a 15 year Canadian study exploring the potential of learning networks to both deepen teachers' professional learning and influence the education system as a whole. The article highlights key features of their inquiry framework and how it was set up in its various iterations. The article addresses the Trust's interest of how to use inquiry strategies but on a wider scale than for a single school site. Collaborative networks of several schools offer promise as a way to make improvements to practice and links well to the current IES policy environment in the New Zealand Education System.

Kaser and Halbert's first systematic inquiry network was established in 1999 and called the Network of Performance-Based Schools. It applied formative assessment strategies and learning progressions in four areas: citizenship, reading, writing and mathematical problem solving. Its primary goal was to transform schools from summative rankings to more learning oriented systems emphasising equity and quality. The network consisted of year-long inquiries with three formal meetings a year and a provincial seminar. Schools also posted short cases online for wider dissemination. An interesting feature of this network was that on completion the schools were given a small micro-credit grant. Those funds could be used to purchase resources, fund release time or gain new learning by undertaking school visits elsewhere in the network or attending the annual seminar. Perhaps this feature of a completion reward could be a useful idea for communities of learners to consider in New Zealand!

In 2006 Kaser and Halbert's network idea was taken up by health educators who formed a Healthy Schools Network focusing on children's fitness, nutrition, social and emotional wellbeing. This was followed in 2008 with an Aboriginal Enhancement Schools Network to improve the learning and graduation outcomes of Indigenous peoples. It also set about to change perceptions of all learners so every student had deeper understandings of Aboriginal culture, history and ways of working. By 2013, this network was requiring inquiries around issues of Indigenous identity and culture. It is interesting to note that the network specified the general areas of inquiry for schools to determine whether they would accept the invitation to participate.

These networks were based on *six key design factors*. These included "clarity of purpose with a shared focus, collaborative inquiry as a stimulus for evidence-based learning conversations, trusting relationships to build social capital, persistent leadership for learning, active evidence seeking regarding impact linked to an ongoing theory of action and interdependent connection between learning communities of the school and network as a whole" (Kaser & Halbert, 2014, pp.207-208). Readers may wish to refer to Stoll, Halbert and Kaser (2012) for further insights relating to school-to-school networks in the references accompanying Value #3.

This 2014 article, reviewed here, directs attention to clarity of purpose and the frameworks used to inform inquiry practice four settings: British Columbia (Canada), Yukon, Australia

and New Zealand. Types of goals are distinguished with a preference given to 'hard goals' (Murphy, 2011) as being heartfelt, animated, required and difficult. The British Columbian goals captured a commitment to social justice with mention of "every learner crossing the stage with dignity, purpose and options", student engagement and intellectual curiosity worded as "all learners leaving our setting more curious than when they arrive" and equity and social justice with the wording "every learner with an understanding of and respect for Aboriginal culture, history and ways of knowing" (Kaser & Halbert, 2014, p.208). The British Columbian network also became part of a wider international network linked to an OECD study called "Innovative Learning Environments (ILE)" which had four other country members. This report is worth reading for its illustrative case material.

Seven learning principles guided Kaser and Halbert's work. These also warrant mention as being: learners at the centre, learning as social, the importance of emotions in learning, recognition of individual differences, every learner being stretched, the importance of assessment for learning, and building horizontal connections for meaning.

Kaser and Halbert's inquiry model for the provincial network was developed in tandem with Helen Timperley and included six stages. These are depicted in the following table accompanied by focus questions.

Table 1: Kaser & Halbert (2014) Inquiry Model

Stages	Key Questions
Scanning	What's going on for our learners?
Focusing	Where are we going to place our attention?
Developing a hunch	What is leading to this situation and how are we contributing to it?
New professional learning	How and where will we learn more about what to do?
Taking action	What will we do differently?
Checking	Have we made a big enough difference?

This article, complements earlier articles selected from Value # 1 which revealed a need to talk about each phase of a change process and Eraut's (1994) tenets of professionalism including the obligation to self-monitor, periodically review the effectiveness of practice, extend teaching repertoires and engage in reflection in, on and about practice in order to

develop one's expertise. The strategies promoted within this third value explain how these tenets can be translated into actual behaviours.

Article #2: Nicolaides, A., & Dzubinski, L. (2016). Collaborative developmental action inquiry: an opportunity for transformative learning to occur.

Action research is a further inquiry strategy promoted to understand and transform practice. This article is of interest to the Trust, not so much for the context of its study (an adult education programme in an American University) but for its interrogation of a transformative learning approach using three levels of learning: single, double and triple. These levels serve to highlight that learning is somewhat limited if it does not include other people as participants in a sense making process.

The authors review the literature on adult learning theory and learning loops. Their definition of transformative learning is based on the work of Mezirow (1991) capturing the need for discourse about learning occurring at several levels which they refer to as "rational critical self-reflection and communicative discourse" (Nicolaides, & Dzubinski, 2016, p.123).

The three levels of learning loop are explained in terms of a focus on behavioural adjustments (single loop), exploration and potential revision of underlying assumptions for meaning-making (double loop) and awareness in action and possible alignment of intentions or vision in practice (triple loop). It is argued that in today's complex and ambiguous world double and triple loop learning are required. Feedback loops at each level lead to cycles of growth and transformation, deepening the reflection possible. It is about creating a space in which consciousness is raised and it is safe to ask questions and then revise assumptions. Solutions are allowed to emerge through the collaborative engagement with exploration being the transformative experience. This serves to highlight the importance of process and alignment in learning in favour of an emergent rather than linear design with pre-determined end points. The article would be useful to those in need of a rationale for an inquiry approach and why extending professional learning opportunities with a collaborative network deepens understandings of professional practice.

Article #3: Rusche, N., & Jason, K. (2011). "You have to absorb yourself in it": using inquiry and reflection to promote student learning and self-knowledge

The focus for this article is the promotion of questioning and inquiry to deepen understandings of practice. While it is specifically directed towards an instructor working with students, it has wider unstated appeal for those working as facilitators of teacher professional learning and development.

The student focus includes a series of exercises to encourage critical thinking skills through inquiry and reflective writing. The approach is sociological and draws upon the philosophy of bell hooks (1994, p.3) who states "our work as [college educators] is not merely to share information but to share in the intellectual and spiritual growth of our students". This rationale has relevance to working with colleagues as teacher learners. Rusche and Jason (2011) call their approach, inquiry-guided learning (ILG). They claim ILG "emphasises the importance of providing opportunities for students to engage [with] material with their own questions and concerns, rather than providing them with only 'correct' interpretation" (p.349). Again this can be applied to teacher professional learning and the time needed to establish a starting point which has meaning and relevance to participants, not one which is imposed upon them.

ILG is an inductive method based on the notion that knowledge is built from learners' experiences. This is also recognition that learning needs to be reciprocal and social, and must include good questioning of each other. The authors see questioning being part of process of investigating, interpreting, and being guided by others.

Rusche and Jason (2011) provide a list of 'do's and don'ts for asking questions. One example of a 'do' practice is asking questions that foster deep thinking. An example of a 'don't' practice is asking too many 'why' questions, and instead 'how' questions are suggested. Another key aspect is that inquiry is not about definitive answers but rather about evidence, perspective and/or context. Students, like teachers, need to practice asking questions. Rusche and Jason (2011) claim "good questions lead to more questions, which can ultimately lead to a more in-depth understanding of a complex problem that has undoubtedly many different answers" (p.344). This type of questioning is central to adult learning theory, particularly encouraging personal agency and ownership of problems of practice. Sociologists, like Rusche and Jason, suggest inquiry with reflection is a process of question asking. Paying attention to the quality of the questions prompts a process of further learning. The art of good questioning is central to the quality of inquiry and

reflection and is a necessary skillset which needs explicit modelling and practice to become part of the teaching or learning repertoire.

Article #4: Lin, H., Hong, Z., Yang, K., & Lee, S. (2013). The impact of collaborative reflections on teachers' inquiry teaching.

This article is included for its description of multiple ways to build teachers' capacity to reflect and inquire into matters of practice. It will be of interest to those who wish to extend their inquiry and reflective tools when working with colleagues. Science teaching in the elementary school classes of 3 Taiwanese teachers and 3 classes of students are the focus of this study. University researchers worked alongside the teachers offering a book club for the reading of book chapters and journal articles about inquiry teaching, workshops and sample lessons, opportunities to observe colleagues, videos of teaching, interviews and facilitated discussions. At the study's mid-point, the three teachers made 1.5 hour presentations to an audience of 20 In-service teachers. Data was also gathered from the challenging questions raised by either the 3 presenters or the in-service teachers. That analysis helped the researchers' understandings of professional development about inquiry teaching.

The researchers' reading of informing literature highlighted challenges teachers face when pursuing the teaching of inquiry. These included "a lack of professional ability and experience, pressures of accountability and high stakes assessment, lack of supporting resources, limiting nature of existing resources which did not support inquiry teaching and little empirical evidence of how to translate inquiry into their teaching practice" (Lin et al., 2013, p.3096).

Like the previous article reviewed, Lin et al. (2013) focused on the questioning skillset of teachers believing that teachers could be trained to ask higher order questions. Question types were subsequently analysed according to three levels for frequency data. The first level was a closed question. The next two levels were open ended. Level 2 questions sought opinions and reasons for opinions, while Level 3 related to identifying research questions, making hypotheses, designing investigative procedures and providing evidence based conclusions. All three teachers made progress on asking higher-order questions in their teaching.

The study confirmed that teachers need multiple opportunities for learning and benefited from the scaffolded workshops, continuous refinements to practice, reflection on students' responses and on-site visits from experts (in this case the researchers) who facilitated discussion about their inquiry teaching. Learning alongside colleagues and being able to use each other's teaching as collective examples provided new ideas for each of the teachers in addition to on-site support. This study also showed that learning centred in practice helps teachers through opportunities to read, apply theory and talk about what works in the classroom, have access over an extended time to an external facilitator, observe others' teaching, and practice new strategies with follow-up discussions.

Article #5: Ghamrawi, N. (2011). Trust me: your school can be better – A message from teachers to principals.

Insights about the pivotal role of trust are provided in this final article in the selection for Value #3. It draws on a two year empirical study in the Lebanon with teachers, subject leaders and principals in three schools. The study is framed around two research questions with data collected from semi-structured interviews. The first research question called for a description of school cultures that support the establishment of teacher leadership. The second question focussed on the kind of human relations that participants felt ensured the sustainability of teacher leadership at their school.

In recognition of the close proximity teacher leaders have to students, Ghamrawi (2011) recognises that principals need to foster teacher leadership in order to support the improvement of students' learning in schools. Conveying trust in teachers' capacity to contribute to leadership work is noted as a key consideration and why teachers will engage in leadership activities without necessarily being in a formal leadership position. This study builds on five key research findings from existing literature to highlight the importance of trust. These five elements are "self-efficacy, collaboration, commitment, collective vision and building a strong sense of belonging to the organisation" (Ghamrawi, 2011, p.333).

The findings of this study confirm that teacher leadership does not flourish unless it is supported by a strong positive school culture. Ghamrawi (2011) writes, "trusting relations stimulate teachers to exhibit a passion for professionalism, collegial dialogue, collective problem-solving, risk-taking, community building and bear strong commitment to continual

instructional development and design" (p.336). Teachers want to improve their practice (*self-efficacy*) in trusting environments. Trust can be likened to a lubricant "push[ing] teachers to try harder to achieve goals" (p.337).

Moreover, trust acts as a catalyst for *collaboration*. One teacher in the study intimated, "trust has to be a prize for achievement or a catalyst for an achievement" (p.339). In this sense, teachers must feel the trust is genuine for this makes them want to contribute to the greater good of the school. Trust also builds *commitment* and is influenced by contextual factors as well as the principal's behaviours. Ghamrawi (2011) writes, "when principals adopt an ethos of trust they tend to distribute leadership powers and crucially the responsibilities associated with that power" (p.339). Accordingly teachers respond when they know they have the trust of their principal.

Trust helps a school develop its *collective vision*. There are two parts to this, forming the vision and communicating it. Ghamrawi (2011) notes "when staff view their leaders as trustworthy and trusting individuals to whom they can relate and respect, they tend to establish effective lines of communication with them. It is through these lines that leaders project, promote and hold their staff to the vision" (p.340). This is likened to leaders walking the talk and role modelling for others to collaborate. A *sense of belonging* also develops with trust. One teacher's comment highlights the responsibility teachers feel when they are trusted to contribute to decision making saying, "when you trust your staff, you would be making them more accountable as you often make them decide what is best for their students' learning" (p.341). Here professional discretion is possible knowing one is trusted to make the best decision based on the evidence available.

The article's sub-title, messages for principals, is answered with mention of behaviours teachers would like to see in principals. The first is securing an environment of professional dialogue because this generates trust. Open communication needs to move towards professional discourse. A teacher in the study captured this succinctly by saying, "by virtue of trust, teachers fear nothing" (p.343). Likewise, when teachers' voices are encouraged, they will offer ideas for whole school improvement. Secondly, principals need to model distributed leadership for this creates space for others to engage in leadership. Thirdly, a principal's active engagement in research on teaching and learning can be useful. This helps the principal to be seen as a credible professional, one who demonstrates professional

learning. Lastly, if principals create the structures and processes in the school for teachers to share their reflections and impart experiences about successful strategies with one another, others will benefit.

In summary, Ghamrawi (2011) recommends further consideration of the daily interpersonal interactions of a principal with staff because it is these interactions which impact on teachers and their commitment to do their best. Trust is a tool which builds professionalism and the desire to contribute to the school's moral purpose of making a difference to student outcomes.

Key points from the articles supporting Value #3

The importance of building relational trust came through the Trust's third value of reflective inquiry and discourse. Teachers as learners will take risks when they know their workplace is supportive and encouraging of inquiry questions which instead of being their own, become everyone's issue to solve.

Six key summary points are drawn to the attention of the Trust. First is the reminder that trust is earned and takes time to develop. Secondly, trust involves having respect for the integrity, honesty and commitment of colleagues, whether they are leaders or teachers. It applies to each and every member of a school or network. Thirdly, quality relationships matter if teachers and leaders are to work as a collective. Fourthly, deprivatised practice enables classrooms to be sites of inquiry and dialogue exploring what works and why with teachers working as learning partners. Such partnerships can be created within and beyond schools. Fifthly, is the need for understanding and application of reflective questions, particularly knowing the kinds of questions which will help make sense of practice in order to plan further improvements. The sixth and final point relates to the need for professionals to add new inquiry and reflection practices to support their professional work. Suggestions include shared reading groups, sharing of best lessons, opportunities to observe in other classrooms and support from external facilitators as another sounding board for talking about issues of practice.

These five readings confirm the Trust's view that teachers' personal learning and changes in practices depend on how meaningful networks are formed around mutual areas of interest which value and respect everyone's input.

Value #4: Evidence based professional practice

Definition

The Trust's definition of evidence-based professional development makes reference to the need for multiple modes of data gathering spread across all school activities. Such data form the basis of collaboration across and within schools. Collaboration offers an opportunity for a collective evaluation of impact on students and their learning when teachers come together to plan and discuss next steps in teaching and learning. Knowing about one's students' achievement using robust data sources to inform future teaching and learning steps resonates with Eraut's (1994) tenets for professionals (referred to in the introduction to Value #1). Namely that those who adhere to a moral commitment to work in the interests of students will need to collect and analyse evidence to show themselves and others in their schools and education system that they are raising student achievement in their work as teachers. Interrogation of data will not just occur in response to system accountability and compliance but become a personal motivator to prove to oneself that teaching aligns with student needs.

The articles which support the Trust's fourth value of evidence-based professional practice continue to reinforce the benefits of co-constructing meaning from nominated issues of practice through planned research processes, cluster inquiries and research groups. The selection shows specific attention to how teachers can be supported to interpret and respond to data and how external facilitators and school leaders can assist teachers to make evidence-based judgments and decisions.

Article #1: Parr, J.M., & Timperley, H.S. (2015). Exemplifying a continuum of collaborative engagement: raising literacy achievement of at-risk students in New Zealand

In the first article of the selection, Parr and Timperley report three different ways researchers can work with stakeholders in national projects targeted at raising student achievement. One is a traditional approach using evaluative research at the completion of a project. A second approach is research from the inside serving a formative function to impact on achievement. The remaining and third approach is when a cluster of schools forms a collaboration in which schools co-construct activities to investigate and evaluate their progress but with the assistance of an external team. It is likely that this third approach will have the most relevance for those contemplating or reviewing work within a cluster or

community of learners. The study draws upon the experiences of Timperley and her team working in the Literacy Professional Development Project (LPDP) in the Auckland region over a two year period.

The continuum signalled in this article's title, firstly highlights the traditional approach in which researchers translate findings and disseminate them in workshops. In this approach it is the researchers who determine the success or limitations of a project. The second approach engages others in formative research. The LPDP included independent researchers and later added research associates who were insiders, (members of the clusters) trained to gather research information from the clusters. The third approach represents a move towards co-construction in which data are brought back to the cluster to interpret together. In the example of the LPDP project, regional learning meetings enabled representatives from each cluster to meet and build evaluation capability. Scenarios from cluster student achievement data were used to illustrate problematic practices and were discussed by those at the meetings. Likewise, focus groups were held with the express purpose of helping the group to consider the evidence they had gathered, its suitability, inferences they could make from it and how the impact of any actions could be checked and evaluated. The externals to the project had multiple roles in this project sometimes working as facilitators and other times as professional developers or researchers. This was a unique feature of the project although somewhat challenging. Throughout, however, the externals were modelling evaluation processes to show how a cluster of schools could work together to raise the literacy achievement of at-risk learners. Also important was their willingness to recognise when schools felt comfortable sharing their own data with the wider group and alternatively how sharing could still occur but not be linked to actual schools in order to preserve anonymity when members might have less confidence. Some of the schools had in fact been working as clusters for seven years while others were new to the experience. That sharing was an issue for some of the participating schools is a further indicator that it takes time to develop trust to the level that sharing is possible. Sharing has to be safe for all participants otherwise participants might see knowledge sharing exchanges as shaming or blaming encounters. This project adopted a process-orientation with an emphasis on knowledge exchange. It was intentional and designed to produce original analyses through collaborative work across schools.

This article is offers helpful tips for those who are working with schools as facilitators or cluster leaders or within individual schools. It highlights the work externals can do to assist capability building by weaving in research readings, providing resources, collating strategies within the cluster and scaffolding activities which will empower participants to interrogate their own data and be able to make decisions about future actions to improve teaching and learning. The article, while demonstrating the potential of co-constructing evidence-based judgments and decisions, is again dependent on the establishment of relational trust to allow those in-depth interrogations of data to take place. While the notion of trust is accepted as being an important feature for all working groups, as found in Value #2, it takes time to develop being the outcome of incremental interactions and behaviours between leaders and teachers and easy to lose at a moment's notice.

Article #2: Marsh, J.A., & Farrell, C.C. (2015). How leaders can support teachers with data-driven decision making: A framework for understanding capacity building.

Article No.2 begins with a reminder that accountability is a prevailing force which had given rise to increased demands for evidence of student learning. This in turn means that schools need to go beyond data collection to support teachers in their interpretations and responses to data. Marsh and Farrell (2015) offer a sound research based framework demonstrating how to build teacher capacity for effective data use. Specifically this is detailing what practices to use, when and how. These practices comes under the auspices of work entitled data driven decision making (DDDM).

The study on which the article reports is a year-long, comparative case study of three interventions intended to improve teachers' capacity to use data to improve literacy teaching and learning. It was undertaken in six low income secondary schools across four American districts. The article features three capacity building interventions (CBIs). These include a literacy coach, a data coach and a data team.

A literacy coach is a master teacher who offers 1:1 support to individuals or groups, of which data support is one feature. A data coach offers specific guidance in interpreting and using data. This coaching can be school or cluster based. A data team is one which can be likened to a professional learning community with a focus on making sense of data. It can be guided by a lead teacher or facilitator. Marsh and Farrell (2015) suggest the data team approach

"promotes more sound data interpretations with colleagues clarifying and correcting analysis errors" (p.271). Again the approach used is collaborative and co-constructed.

A further point made by the authors is "data alone do not ensure use" (p.271). Data need to become actionable knowledge but the difficulty is that teachers often do not possess the necessary skills to examine multiple measures, synthesise data and draw inferences. Marsh and Farrell (2015) explain this as needing data literacy competencies "to engage in meaningful data use and move from data, to information, to knowledge, to action" (p.271).

The lens of socio-cultural learning theory is applied to Marsh and Farrell's work in recognition that learning is embedded in social events. Their study endeavours to capture the interactions (referred to as units of interaction) between expert and novice where both parties gain and where shared interests prevail in communities of practice. The practices they named include brokering, modelling, authentic practice, dialogue, opportunities for group work and the development and use of tools. However, Marsh and Farrell (2015) caution that data capacity building is not merely acquiring skills and a body of knowledge. They suggest it is a "learning process in which individuals make sense of information and construct new knowledge through activity and social interactions mediated by prior knowledge, beliefs and experiences" (p.274).

Findings from this study revealed a range of factors. Teachers seemed to make deliberate choices at different times regarding the ways they preferred to learn about turning data into action. Four conditions were named as moderating this capacity building process. These included intrapersonal and interpersonal, structural-organisational and environmental factors. Lessons can be learnt from interrogating each of these factors. Intrapersonal factors were explained in terms of levels of engagement, prior understandings about data use and personal values, experiences and expectations. A comment about one teacher participant captures this factor with the comment, "a teacher who believed using assessment data helped inform her instruction was more willing to be observed and engage in dialogue than others without this orientation: (p.282). Another aspect of the intrapersonal factor was the expertise needed by the capacity building intervention (CBI) leader. Their expertise needed to be across the content area (literacy) and in data use for them to be valued as a 'knowledgeable other'. In terms of the content focus, the CBI leader needed sufficient experience teaching literacy that they could bridge the knowledge-doing gap. For the data

focus, experience was needed in using data systems, disaggregating data and identifying patterns. The CBI leader also needed to act as a broker between research and practice to satisfy administrators and teachers, especially ensuring confidentiality that sustained legitimacy. Credibility with teachers was achieved through co-teaching classes and connecting with students, whilst for the administrators this was achieved through communicating messages about how to use data to inform practice.

Interpersonal factors once again pointed to the importance of trust for enabling the critical examination of teachers' practices and the analysis of data and the time it takes for groups to establish the necessary group dynamics to work effectively together.

Structural-organisational and environmental factors were noted at both the district and school level. Issues of time, training, leadership were often deterrents as were a lack of principal commitment, care taken with the selection of participants and funding.

Implications drawn from the article include a set of questions to ask when designing data use interventions. These are:

- What is the current level of data literacy in my organisation and at what stage in the data-use process is more support needed?
- When designing supports for teachers, what units of interaction can be adequately supported?
- When designing supports for teachers, to what extent do they reflect the practices sociocultural learning theorists suggest are the most effective for learning?
- To what extent are the conditions in place that foster these supports (Marsh & Farrell, 2015, p.283).

Suggestions for further research are offered at the end of the article which may be useful for the Trust or teacher researchers to consider. These refer to identifying the components of developing data literacy, how these develop over time and whether there is a point at which work with a coach or data team no longer becomes necessary and a teacher is considered data literate. Other topics relate to issues of power, resistance and conflict inherent in data use. This article is useful because it attends to a process agenda for data

literacy. It signals that the process is not linear but is instead contingent on working with the complexity of the workplace culture where people and systems interact.

Article #3: Curry, K.A., Mwavita, M., Holter, A., & Harris, E. (2016). Getting assessment right at the classroom level: using formative assessment for decision making.

The main messages derived from this article concern the distance of data interpretation from the classroom setting and the work of classroom teachers. It is argued that there is an urgent need to ensure data are used effectively and with teacher involvement to impact on students and their achievement. In this regard a useful distinction is made between data to evaluate and data to inform. Curry et al. (2016) posit that when the purpose of data collection and analysis is to inform, this sets the agenda for teacher reflection and inquiry. Data collected from the daily roles and functions of teachers have more impact than a single summative measure.

This study, set in America, includes a purposeful sample of reading specialist 3rd grade level teachers, their building level leader and an Associate Superintendent of Curriculum and Instruction from the district. Student data is analysed over a three year period set alongside interviews, field notes, observations and document analysis. A conceptual framework of self-determination theory is used to explain the theoretical relationship between district support for formative data use and teacher motivation to use data to enhance student outcomes. This model allows interrogation of teachers' capacities to satisfy psychological needs, namely: autonomy, competence and relatedness.

Seven themes emerge from the study's data. These include the need for:

- administrative support for formative data collection (especially scheduling);
- teacher autonomy in goal setting;
- transparency of approach to data coupled with collaborative use of data;
- data being used to inform instruction;
- student motivation to participate in goal setting;
- the development of a sense of community regarding data use including relationships with parents; and
- data use being a skill that must be developed (Curry et al., 2016. p.95).

Being trusted to make competent decisions about practice matters if teachers are to feel they are treated as professionals. This article could equally fit under the Trust's Value #1 of professional discretion. One participating teacher said, "The focus is on what's best for kids.

We can do that however we feel is necessary. A lot of freedom is given to us as long as our focus is student learning and as long as we can justify what it is that we are doing" (p.96). This sense of autonomy combined with trust is what drives teachers to act professionally using data to inform next actions. Linking back to Eraut's (1994) tenets of professionalism (first mentioned in Value #1), this would mean periodically reviewing the effectiveness of their teaching practice, extending repertoires and reflecting on teaching experience in order to further develop their expertise as teachers.

As for the Parr and Timperley (2015) study, Curry et al. (2016) advocate a non-threatening approach to teachers' professional learning and development. They maintain such an approach enables teachers to continually review their instructional practices and make adjustments without fear of reprimand or disgrace. This process includes developing a common language when teachers meet to talk about student progress. Teachers in Curry et al's study had regular meetings in their grade levels and reading specialists working alongside them in their classrooms each week. Teachers were also able to initiate discussions about student data and share concerns. Over time, increased confidence with their data use enhanced their relationships with parents. One teacher said,

> We will share with parents where the child is and where 'on target' would be. We talk about what it takes to get them there. We tell them that it takes a lot of reading and knowing their strategies. These parents assume quite a bit of motivation for their learning (p.98).

Their learning with a specialist (mentor) and with grade level colleagues showed that learning to adjust instruction to meet student needs was a skill best learnt in relationships to other teachers. This finding gives credence to the Trust's practices of teachers and schools forming learning communities and clusters where issues of practice are shared and are the focus of joint inquiry work.

This study showed the importance of adopting strategies which increased teacher motivation to take ownership of how to raise student outcomes. The authors argue against current high-stakes accountability maintaining that it can demotivate teachers "by removing the teacher from the [data informed decision making] DIDM process… [and separating] student outcomes from immediate instructional practices" (p.103). The challenge for school leaders is therefore knowing how they can support teachers' data literacy competence so

that teachers will use data to inform practice, act professionally and gain satisfaction from their efforts.

Article #4: Herrington, D.G., Bancroft, S.F., Edwards, M.M., & Schairer, C.J. (2016). I want to be the inquiry guy! How research experiences for teachers change beliefs, attitudes and values about teaching science as inquiry.

A fourth article in the review has been selected for its focus on how a research process can assist teachers to adopt inquiry processes to inform day-to-day practice. This study reported by Herrington et al. (2016) is a qualitative study of 13 middle and high school teachers in the USA who were participants in a research experience for teachers (RET) programme. The teachers attended an intensive summer school programme in which they formed research groups around their areas of interest. They chose a topic, had a mentor and conducted their research disseminating their findings to others in the programme. Regular meetings were held during the year once the school year had started.

The research programme tracking their application of the teaching as inquiry approach used pre and post programme interviews and an inquiry teaching beliefs (ITB) instrument at the end of the programme to determine the extent to which their beliefs, attitudes and values had changed about inquiry-based science instruction. The teacher beliefs system spectrum was based on earlier work of Pajares (1992) and Rokeach (1968). The ITB instrument was based around the assumption that teachers have internal models of inquiry and base their classroom teaching around these internal models. The instrument involved a card sorting exercise which began with a classroom card representing an inquiry based instruction. The teachers were then asked to place cards close to the classroom card or further away to indicate whether the statements were supportive of inquiry teaching or not. The statements reflected inquiry, non-inquiry and neutral responses but this classification was not made explicit to the participants. Following their card sorting, the teachers were asked to explain their rationale for the placement of the cards.

All of the teachers indicated that their knowledge of the characteristics of inquiry-based teaching and learning had increased. This knowledge helped them to articulate why they were using an inquiry-based approach. The most influential features of their research experience teaching were a better understanding of the scientific process and the weekly

debriefing meetings. At those meetings participants had shared experiences and listened to how others were using inquiry-based teaching. The mutual sharing had validated their own challenges and contributed to their well-being, again reinforcing the value of teachers' sharing insights and concerns of practice with one another and why the Trust's commitment to collaborative learning is so apt. Where districts and schools had removed barriers such as the amount of content to cover or time available for teacher meetings, teachers had more autonomy about what to teach, how and when, in inquiry-based teaching. These are points worth noting because they highlight how continuous cycles of inquiry can become the way teachers are sustained and fulfilled in their professional work as they seek to extend their teaching skills and expertise.

However, despite the programme, the level of change or risk the teachers were willing to take depended on the school environment to which they returned after the programme and their personal attributes. Learning which was job-embedded and allowed for practical application with ongoing mentoring showed that pedagogical content knowledge mattered for teachers and how they might use inquiry-based practices in the classroom or with their colleagues.

Suggestions for further tracking of teachers' inquiry-based practices were suggested by the authors with mention of two other teacher inquiry beliefs system spectrum tools, the reformed teaching observational protocol (Sawada et al. (2002) and a teacher beliefs inventory from Luft and Roehrig (2007). These tools would be of interest to researchers exploring how school leaders and teachers can make the transition from data collection to suit system needs to more formative data collection which helps teachers in their day to day work scaffolding learning for students.

Article #5: Cosner, S. (2012). Leading the ongoing development of collaborative data practices: Advancing a schema for diagnosis and intervention.

The final article supporting Value #4 by Cosner fills a gap in knowledge about what school leaders can do to enhance and develop teachers' collaborative data knowledge and practices. Again, this article has particular relevance to the work of the Trust in supporting the leadership work of school principals as they create the conditions which allow teachers to work in communities of practice within their school and beyond as members of a cluster.

Cosner has synthesised literature to produce a schema of possible actions and considerations deemed useful. While the notion of using data is now widely accepted, there is growing attention surrounding the benefits of collaborative data practices.

Cosner's article draws upon Earl and Timperley's (2009) work to highlight the potential of collaborative data practices as a way for teachers to make more meaning of practice when in conversation with one another. Readers may also wish to read the edited volume from Earl and Timperley (2009) which focuses on professional learning conversations and the challenge of making them conducive for close interrogation of teachers' work to improve students' learning. Earl and Timperley (2009, p.2) suggest collaborative data use can

> set the stage for new knowledge to emerge as the participants encounter new ideas or discover that ideas that they have held as ''truth'' do not hold up under scrutiny and they use this recognition as an opportunity to rethink what they know and what they do.

Cosner suggests the task of making sense of student assessment data is a complex process, "it necessitates skilled analysis, content knowledge and more robust collaborative discussions and debates for the production of actionable information" (p.34). It is also somewhat challenging to expect teachers to work together to make sense of their assessment data when this can make them feel vulnerable alongside their colleagues, a viewpoint shared with Parr and Timperley (2015) and Curry et al. (2016) in the earlier discussed articles associated with Value #4. Likewise, that a good deal of collegial trust is essential if work groups are to be effective, is another notion which has received repeated mention across all of the Trust's values. Cosner (2012) offers a fulsome list of suggestions highlighting the interpersonal processes which are important in group contexts. Suggestions include the need for open communication, support for members, ability to manage and resolve conflict, collaborative planning, task coordination and collaborative problem solving and decision making. He writes,

> As teams engage in data interpretation they need to learn how to: interrupt and slow down teachers' responses; develop and investigate hypotheses about factors contributing to students' performance; surface and discuss conflicting positions; paraphrase, ask clarifying questions, probe, use focusing and reframing questions; reserve judgments and remain open to new ideas and interpretation (p.39).

Discussion protocols are offered as one way to help the effective functioning of work groups. Likewise, it is recommended that a variety of tools help to establish and manage

the purpose, and flow of meetings, as well as meeting planning and monitoring of progress. Composition of groups is a further factor recognising that some combinations serve to encourage or constrain collaborative practices among teachers. Those who lead the working groups also need deep levels of content knowledge, expertise with group facilitation and how to lead discussions. Timperley (2009) adds the skills of engagement and challenge to the facilitator skillset while Young (2006) adds the "ability to move teachers' discussions towards implications or instruction and concrete instructional plans that address problems revealed in data analyses" (p.540).

Cosner's other suggestion is that school leaders move teachers with recognised content and pedagogical knowledge into leadership, mentoring and coaching positions to give them time to work with peers but not forgetting that they will need training in group facilitation skills for such roles. This point warrants particular notice. The success of teacher leaders as mentors or coaches is not simply a matter of creating a new leadership role in the school and leaving the teacher leader alone. School principals have a moral obligation to support the next generation of leaders so that these emergent leaders will see how their leadership work connects with learning, deepening their own practice as they learn to help others. In this way teacher leadership work has the potential to be a job stimulant. Leaders could also consider the attribute of 'willingness to work collaboratively' when making new appointments. They should also be attuned to teacher competence as collaborative practice will make incompetence visible when teachers are working with peers in instructional collaborative contexts. Finally, school leaders need to look at themselves and how they can be intentional in modelling data use strategies so that all staff will have confidence in school decisions being based on sound evidence. The more opportunities there are for collaborative data use amongst work groups (both within and across schools) the better informed the staff will be to act and support one another in the interests of students' learning.

Key points from the articles supporting Value #4

Two themes were apparent under the value of evidence-based professional practice. Firstly teachers and school leaders need professional learning to interpret and use data for improvement. This means looking backwards and to the future to work out what has worked and why or why not. Secondly, external support is considered helpful but the idea is

for teachers to find ways to think of data as informing their practices rather than being an indicator of poor teaching and a judgment on their performance.

Parr and Timperley's article will be helpful for drawing attention to alternative ways in which facilitators might work with schools and clusters. Marsh and Farrell's (2015) recommendations include the use of a data coach and data teams for interrogating data. However, they note that attention to inter and intrapersonal skills pays off as this can reduce feelings of vulnerability amongst teachers and serve to establish the trust necessary for open conversations where no blame is attached to teachers and their levels of expertise. Curry et al. (2016) also pick up the need for teachers' psychological needs to be satisfied in professional practice, specifying the importance of their autonomy, competence and relatedness in this regard. The merits of inquiry learning and teachers taking responsibility for improving their practice alongside colleagues is the thrust of Herrington et al's (2016) study showing the importance of a formative process to make changes to practice. Then Cosner (2012) picks up many of the themes already raised by these authors but through the lens of what school leaders should be doing to ensure their school cultures are conducive to collaborative sense-making of assessment evidence. These include the composition of working groups, group effectiveness training with protocols for communicating and being sensitive to teachers' feelings and competence when interrogating their student data. There is plenty of substance in these articles to guide the Trust in helping principals to extend their skillsets in order to create and sustain professionally rewarding learning communities whether these be within or beyond their own schools.

Conclusions

In closing this literature review it is now time to join the separate discussions of the four values together. Each value must be seen as part of a connected whole, despite the earlier dissection of each value one at a time. A key question which drives the learning agenda of the Trust is how school leaders can develop teachers as reflective professional practitioners working within collaborative school cultures. That this question is a 'how' question rather than a 'why' question is important. It signals that the answer is one which school leaders must determine on their own. Answering this question combines a necessary interrogation of oneself, thinking about the kind of leader one would like to be in a given setting (expressed in terms of values, beliefs and personal vision). This will always take into

consideration what is possible given the dynamics of individuals in the setting and the extent to which they can commit to a shared vision and way of working together for the same moral purpose, namely the enhancement of students' learning. Each combination of teachers working in a school will have its own characteristics and interpersonal challenges for a school leader to understand and accommodate which in turn will shape the shared leadership of those who work with them. If there is one lesson school leaders must realise, it is the need to be responsive to context. This is the first intellectual challenge for a leader. It relates well to the notion that the first of the Trust's values is 'professional discretion'. This recognises that leaders have choices in how they act. Making the best choice means consistently putting the improvement of students' learning to the fore regardless of the pressures encountered.

The notion of teaching being a 'learning profession' is not new. In 1999 Darling-Hammond and Sykes released an edited handbook of policy and practice with this phrase in its title. The Te Ariki Trust has accepted this notion in its second value with its emphasis on teachers seeing themselves as part of a professional community with 'collegial obligations' to support the professional practice of colleagues and at the same time see that the continuing development of professional expertise is what it means to act professionally. This understanding combines values one and two. Working within collaborative school cultures means that teachers are valued for their contributions and able to support one another to become even more effective practitioners. Such cultures depend on the safe sharing of issues and concerns about practice so that teachers are able to question, interrogate and reframe their practice alongside their colleagues. However, this only happens when the relationships are trusting and constructive.

Knowing how to improve practice is a further challenge if teachers and school leaders are to satisfy their moral obligation to serve the needs of students and their learning. The Trust's third value, 'reflective inquiry and discourse', emphasises the importance of classrooms as the sites for inquiry. Teachers will only open up classrooms to colleagues when the culture is one of respect for each other's integrity, honesty and commitment. Classrooms as sites for professional learning are enhanced when colleagues are able to converse about practice and learn from each other's questions and insights. Co-construction of the meanings of practice enable teachers to progress their next steps towards meeting the needs of students

in their care. Again the need for trust and learning collaborations are apparent as the connections are made between the Trust's first three values.

The fourth and remaining value of 'evidence based professional practice' recognises the need for sound and robust evidence to inform practice. Acting professionally means that a teacher or school leader will be able to explain and justify their choices of action. In doing so they will have the needs of students as their main consideration. The Trust's value about evidence based professional practice highlights the importance of attention being given to the quality of data used for decision making and that professionals are expected to be able to interpret and use data for improvement with confidence. The need for data literacy is a skill expected of professionals and one that school leaders need to ensure is developed.

The following table encapsulates the findings of the select literature review on the Trust's four values in order to make the connections visible.

Table: Overview of literature findings to support the Trust's 4 Values

Value #1: Professional Discretion *Acting professionally means:*	Value #2: Collegial Obligations *Working collaboratively means:*
• *Having a moral obligation to improve students' learning no matter the pressures;* • *Adopting a continuous improvement mindset for one's practice;* • *Demonstrating alignment between values and actions;* • *Taking opportunities to deepen professional practice through partnerships or networks within & beyond schools;* • *Creating opportunities for teachers to lead;* • *Accepting that those new to leadership work need to be supported;* • *Realising that collegial sharing provides new insights to practice; and* • *Collecting and acting on data to inform next steps.*	• *Showing mutual kindness and patience for colleagues regardless of levels of experience and expertise;* • *Establishing trusting & constructive relationships;* • *Creating a culture of sharing where there is a willingness for mutual vulnerability;* • *Valuing opportunities to question, interrogate and reshape practice with colleagues;* • *Blending considerations for colleagues alongside concern for task completion;* • *Fulfilling assigned responsibilities so that others see colleagues as credible and trustworthy; and* • *Trusting one another's caring intentions and seeing commitment to others.*
Value #3: Reflective Inquiry & Discourse *Classrooms as sites for inquiry means:*	Value #4: Evidence based professional practice *Data as informing practice means:*
• *Being willing to take risks knowing the workplace is supportive and encouraging;* • *Having respect for the integrity, honesty and commitment of colleagues whether leaders or teachers;* • *Deprivatising practice & inviting others to observe in one's classroom as learners;* • *Sharing best lessons with colleagues;* • *Knowing the kinds of questions which help to make sense of practice;* • *Making time for reading research and discussing insights with colleagues; and* • *Co-constructing meanings of practice with external facilitators.*	• *Interpreting & using data for improvement;* • *Being able to discern what to consider as important & what to dismiss as irrelevant;* • *Being sensitive to teachers' feelings and competence when interrogating student data in a public setting;* • *Working with a data coach or data team to build data literacy;* • *Developing a mutual relationship where both parties increase their knowledge, skills and thinking; and* • *Constructing new knowledge through activity & social interactions mediated by prior knowledge, beliefs & experiences.*

Challenges for further research

Having presented a select literature review on the Trust's four values to help future applicants for the David Stewart Memorial Postgraduate Scholarship prepare applications to acknowledge and further the work of the Trust, I conclude by highlighting some of the intellectual challenges which the review has revealed. Applicants would need to consider these in tandem with priorities relating to their own work contexts.

1. A need for further understanding of conceptions of school leadership so that transitioning into leadership work is not associated with moving away from the classroom as sites for leadership inquiry. Positional leadership receives more attention in career progressions and incentives for advancement (Cooper et al., 2016).

2. The call for further practical research on how to provide on-site support to support the work of emerging teacher leaders (Cooper et al., 2016).

3. A need to explore the role of context on the development of trust examining whether patterns of trust development are the same or different according to contexts (Hallam et al., 2015).

4. Demand for active documentation of the sustainability of professional learning cultures (Duffy & Gallagher, 2014).

5. A lack of knowledge about how to create the conditions for learning (Nicolaides & Dzukinski, 2016).

6. A call for rethinking of the daily interpersonal interactions of a principal and how they impact on teachers and the school's culture (Ghamrawi, 2011).

7. A need for further understandings of the components of data literacy development (Marsh & Farrell, 2015).

8. A call for further practical research on the ways school leadership contributes to the ongoing development of more robust forms of collaborative data practices (Cosner, 2012).

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Appendices: Annotated bibliographies for the Trust's 4 values

Appendix 1: Value #1

Appendix 2: Value #2

Appendix 3: Value #3

Appendix 4: Value #4

Appendix 1: Value 1

Introduction

These articles were chosen because they align with the first Te Ariki value, **Professional discretion**. An outline of each article is provided below, followed by a summary at the end, which looks to weave the content of each article together to form a cohesive story.

Reference	Abstract	Comments
Coleman, A. (2011). Towards a blended model of leadership for school-based collaborations. *Educational Management Administration & Leadership, 39*(3), 296-316. doi:10.1177/1741143210393999	Interest in collaborative working has grown enormously in the last 20 years, driven by the view that partnership working may improve efficiency and add value in outcomes. As a result, collaborative working is an unavoidable feature of the 21st-century school and a consistent part of government policy for the provision of services to children. However, remarkably little research has been undertaken into the nature of leadership required to maximize the potential of such partnership based working within this context. This article outlines the findings from original research, supported by the National College for Leadership of Schools and Children's Services, into the nature of effective collaborative leadership in schools. It finds that the demands of such leadership are markedly different from those associated with traditional models, which view the school in isolation. In response to this, it outlines a multi-dimensional model for leadership, which draws on elements of a range of existing leadership models, including authentic, relational, distributed, political and constitutive leadership. This article concludes by stating that it is only through the utilization of a blended form of leadership (Collinson and Collinson, 2006) that school leaders are able to effectively realize the potential collaborative advantage associated with partnerships working. In doing so, it highlights the significance of day-to-day leadership activity, stating that effective collaborative leadership is rooted in a focus on the mundane rather than a preoccupation with the extraordinary aspects of this role.	• English context • Two broad collaborative themes – "outward facing", which includes school-to-school contact, and "inward facing", which includes distributed leadership • Explores how collaboration can involve both a style of, and focus on, leadership • Purports that sense-making, empowerment, conflict resolution, as well as commitment and effectiveness are important. • Qualitative study (2 phase process). 1st phase - structured and unstructured interviews with 49 school leaders; 2nd phase - six case studies, which involved interviews with 32 participants (e.g., headteachers, governors, other school professionals)

		• Findings: Identifies need for blended form of leadership, based on finding the most appropriate blend of authentic, relational, distributed, political, and constitutive leadership, depending on contextual setting • Useful theoretical model
Cooper, K. S., Stanulis, R. N., Brondyk, S. K., Hamilton, E. R., Macaluso, M., & Meier, J. A. (2016). The teacher leadership process: Attempting change within embedded systems. *Journal of Educational Change, 17*(1), 85-113. doi:10.1007/s10833-015-9262-4	This embedded case study examines the leadership practices of eleven teacher leaders in three urban schools to identify how these teacher leaders attempt to change the teaching practice of their colleagues while working as professional learning community leaders and as mentors for new teachers. Using a theoretical framework integrating complex systems theory with Kotter's (Leading change. Harvard University Press, Cambridge, 1996) eight steps for leading organizational change, we analyze the work and perspectives of individual teacher leaders, and we examine how teams of teacher leaders and principals function collectively in their efforts to lead instructional change. Our findings have implications for schools seeking to utilize teacher leadership as a reform strategy for authentic instructional improvement.	• U.S Context • Qualitative case study • 14 participants (principals/and teacher leaders) within three schools (1 PLC per school) • One of the three schools was characterised as having an "embedded system [that] support[ed] the teacher leadership process" (p. 97), whereas, other two school had 'lower functioning systems'. This provided a good comparison between what was working in one school and not that well in others • Paper has a good focus on what leaders can do to support teachers collaboration (e.g., promoting discussion-based teaching, providing teacher autonomy, and having a strong collective vision) • Paper has good layout and information throughout

Hargreaves, D. H. (2011). System redesign for system capacity building. *Journal of Educational Administration, 49*(6), 685-700. doi:10.1108/09578231111174820	Purpose - A recent development in England is the emergence, under various names, of groups of schools working together in a variety of collaborative ways. Such diversification enjoys broad political support. In this paper, the author aims to argue that the trend is potentially a radical transformation of the school system as a whole. The concepts of coupling and capital are drawn on to show how these changes enhance capacity building at the level of the individual institution and, more importantly, at the system levels, both local and national. Design methodology approach - The paper uses different conceptual schemes to throw light on the emerging phenomenon of partnerships between clusters of schools. Findings - As this is not an empirical research paper there are no findings as such. Practical implications - The paper is concerned with new policy directions, some of which are consonant with developments already taking place in England's education system. The analysis is intended broadly to support these changes but also to improve their design and implementation. Originality value - The conceptual analysis is original and has implications both for a theoretical analysis of inter-school partnerships and for the practical issues of how such partnerships might evolve.	• English Context • Theoretical Paper • Paper explores the different forms of capital (e.g., intellectual, social, and organisational) and the capacity of schools to build these • This is then linked to inter-school collaboration (with some benefits and tensions being outlined). Clusters feature prominently in paper • Author gives recommendations – "tighter professional coupling and looser institutional coupling" (p. 698) • Good theoretical paper, which should have relevance for NZ context
Ell, F., & Meissel, K. (2011). Working collaboratively to improve the learning and teaching of mathematics in a rural New Zealand community. *Mathematics Education Research Journal, 23*(2), 169-187. doi:10.1007/s13394-011-0010-7	This paper examines how a teacher-led cluster of rural schools used evidence of student achievement to improve the quality of learning opportunities for students in mathematics. The teachers began to collect evidence in order to promote constructive dialogue and stimulate action. An inquiry cycle provided feedback to schools through the cluster members. The students' results show that in two terms most of the five schools were able to accelerate progress in basic facts and place value. When the teachers' written intentions are considered alongside these results it appears that emphasising the broader mathematical context of these basics may have been more effective than practising them in isolation.	• New Zealand Context • Mixed methods study (student assessment was quantitative and teacher interviews constituted qualitative) • A cluster of seven rural NZ schools (results from five in this study) collaborated together to improve student math performance. Schools were primary and decile 1 • Inquiry cycle was used to inform teachers' practice

		• Results showed small to large effect sizes (overall very positive results) • Very good paper

Article Rationale

Two selections of articles were prepared with the final selection based on a leadership emphasis (i.e., the role that leaders play in engaging teachers in collaborative practices). This was because the word 'leadership' featured four times in the Trust's descriptions (i.e., Lens) and collaboration features as one of the fundamental areas targeted in the IES document.

Coleman (2011) and Hargreaves (2011) papers both outline good theoretical frameworks for considering leadership in relation to collaborating within a school (Coleman) and clusters of schools (Hargreaves).

Cooper, Stanulis, Brondyk, Hamilton, Macaluso, and Meier (2016) – compares leadership process in one high functioning school and two that were struggling, with advice being given that relates to collaboration.

Ell and Meissel (2011) – Highlights how clusters of schools working together can improve student performance. This article also suits value 4, as the authors used evidence to inform their practice. However rather than provide an extra for value 4 it is included within the Value 1 allocation. Also, considering there is a large amount of cross-over between values, this paper also fits in value 1 under 'clusters of schools', 'disciplined collaboration', and 'high quality learning cultures'.

Appendix 2: Value 2

Introduction

These articles were chosen because they align with the second Te Ariki value, **Collegial Obligations**. An outline of each article is provided below, followed by a short rationale at the end, which justifies the choice of articles.

Reference	Abstract	Comments
Hallam, P. R., Smith, H. R., Hite, J. M., Hite, S. J., & Wilcox, B. R. (2015). Trust and collaboration in PLC teams: Teacher relationships, principal support, and collaborative benefits. *NASSP Bulletin, 99*(3), 193-216.	Professional learning communities (PLCs) are being recognized as effective in improving teacher collaboration and student achievement. Trust is critical in effectively implementing the PLC model, and the school principal is best positioned to influence school trust levels. Using five facets of trust, this research sought to clarify the impact of trust among PLC teachers on their team's collaborative practices. Findings suggested ways that members of successful PLCs built trust. Findings also suggested ways that principals influenced team members' trust. Successful and unsuccessful PLCs emphasized different facets in describing development of trust, the principal's role in building trust, and the role of trust in collaboration.	• United States Context • Quantitative Case Studies (1 school that was struggling to implement PLC & 3 schools that were successful). • 12 focus groups were conducted around trust, collaboration, and principal influence in PLCs • Study adopts Hoy & Tschannen-Moran's (1999) five facets of trust (benevolence, honesty, openness, reliability, and competence). • Findings focused on comparing high-performing with low-performing PLCs • Results showed trust was developed by members sharing personal information, fulfilling their responsibilities, and treated each other with patience and kindness • Additionally, it was found that excessive principal micromanaged was correlated

		- with low-performing PLC, and vice versa - Authors advise principals to avoid top-down micro-management of staff and instead offer supportive structures that emphasise autonomy and collaboration - In high-performing PLCs, teachers shared teaching strategies, as well as observed and taught one another's students, which deprivatised their practices. Authors highlight that high trust is needed for this to happen - Useful study, particularly the comparison on low vs high PLCs
Kutsyuruba, B. (2013). Teacher collaboration in times of uncertainty and societal change. *European Education, 45*(1), 25. doi:10.2753/EUE1056-4934450102	The work of teachers is subject to changing not only policies and reforms but also the complexities and contradictions of societal transformations. This paper examines teachers' perceptions of the impact of post-Soviet transformations on teacher collaboration amid the changing education policies and reforms in Ukraine. Drawing on qualitative methods such as document analysis, focus groups, and individual interviews, this case study reveals that the nature, content, and format of collaboration among teachers in schools are susceptible to transformations at the macro (societal) as well as micro (school) levels. The study points to the ongoing struggle between the forces of modernity and postmodernity and highlights dilemmas and paradoxes that characterize educational reforms in post-Soviet Ukraine.	- Ukrainian Context - Qualitative study involving document analysis, 8 focus groups and 15 semi-structured interviews (n=55 primary and secondary teachers) - Study conducted in the back-drop of educational reforms calling for teachers to collaborate - Study focuses on collaboration through two theoretical lenses: organisational culture (i.e., artefacts, espoused values, and underlying assumptions) and

		micropolitics (i.e., interactions and political ideologies of social systems within schools) • Several key points were discussed 1) "personal aspects of collaboration have become antecedents for professional collaboration" (p. 39); 2) Top-down/mandated collaboration dissuaded teachers from working together; 3) Personal pressures (e.g., monetary & high-workload) prevented effective collaboration; 3) Isolation and the formation of cliques stifled collaboration • Author states that majority of teachers were working in pseudocollaborative cultures (see Fullan & Hargraeves, 1996) • Good study that highlights the tensions within collaboration (e.g., individualism vs collectivism, and autonomy vs bureaucracy)
Duffy, G., & Gallagher, T. (2014). Sustaining school partnerships: The context of cross-sectoral collaboration between schools in a separate education system in Northern Ireland. *Review of Education, 2*(2), 189-210. doi:10.1002/rev3.3034	This study explores the current understanding of cross-sectoral collaboration between schools in a divided society. The paper provides the context surrounding inter-school collaboration in Northern Ireland then presents findings based on a qualitative study of five post-primary partnerships made up of schools from the various sectors in Northern Ireland (maintained/Catholic, controlled/Protestant and integrated sectors). Participants in the study are teachers and school leaders. Evidence from this study reveals a number of things: despite a separate education system made up of different sectors, schools on an inter-sectoral basis are willing to collaborate and those represented in this study	• Irish context • Qualitative Study (semi structured interviews with principals, DPs, and teachers within 5 partner schools working together between 2007-2010) • Interesting study as different sectors (Primary/Secondary),

	appeared disposed to sustain partnership activities; schools recognised that collaboration and partnership while beset with a number of logistical challenges, is also beneficial for pupils and institutions. In all cases there remained evidence of sustainable collaborative practice; although some of this was more developed in some partnerships than in others. In effect this paper concludes by recognising that schools do require some level of funding to sustain partnership working but that sustainability should not be couched entirely around these terms; rather, sustainability is about creating the right conditions to allow schools to develop effective and strong partnerships. These conditions are outlined in the latter stages of this paper.	religious (Catholic/Protestant), and funded (State/Private) schools collaborated together (not all together though). This study was also part of larger project (Sharing Education Programme) • Findings of this study included both barriers (e.g., logistical issues) and benefits (e.g., educational and social value) to inter-school collaboration • Primary focus of study was on sustainability. Funding, relationships, logistical issues (e.g., proximity and time), as well as regular and sustained learning opportunities were mentioned as important factors • Excellent study
Cutajar, M., & Bezzina, C. (2013). Collaboration: Joint working by individual state-maintained schools in a new statutory system in the Maltese islands. *Management in Education, 27*(1), 19-24.	In October 2005, the Maltese Government embarked on a new phase of its national educational reform, which focuses on state compulsory primary and secondary schooling. A central part of this reform was the creation of state-maintained colleges. By February 2008 all state primary and secondary schools on the Maltese Islands were clustered into ten provisional colleges. This article aims to show the nature of collaboration that is required to sustain the establishment of school networks. It analyses the nature of collaboration in a policy context that requires joint working within and by individual schools and the formation of a partnership with parents and the community at large. Data collected from face-to-face in-depth semi-structured interviews with stakeholders and documented material have underpinned the importance of the theme of collaboration as a core aspect of this case study. This article reports the results of phase 1 of a larger study that was undertaken in one college.	• Maltese Context • Qualitative Study (Narrative) involving semi-structured interviews • Maltese Government had clustered schools in 10 regional Colleges. One College was chosen and a random sample of one principal, 16 heads of school, and 34 teachers were interviewed • Researchers sought to understand the nature of this

		collaboration between schools and teachers
		• Findings were generally positive, with participants stating that this new reform improved inter-school collaboration, collaboration from parents, and enhanced community networks
		• Challenges involved working as part of a collective, rather than as one individual school, differing leadership styles, and the fact that some schools were going to be phased out in the near future, which created uncertainty and frustration
		• One prominent critique was that collaboration was overly bureaucratic at times (at the leadership level) and that collaboration did not filter down that much at the teacher-level
		• Excellent study
Moore, T. A., & Rutherford, D. (2012). Primary strategy learning networks: A local study of a national initiative. *Educational Management Administration & Leadership, 40*(1), 69-83.	The use of networks as a means of communicating knowledge and ideas and in promoting innovation among schools has emerged globally over the past decade. Currently, inter-school collaboration is not only at the fore nationally in England, but also has become integral to the school improvement agenda. However, networking theory is a disparate field and its application in education is very variable. Nevertheless, there seems to be consistent policy support at government level for school collaborative working arrangements as a key means for promoting the standards agenda. This article explores the effectiveness of one such initiative -- Primary Strategy Learning Networks (PSLNs). This is a qualitative study of two PSLNs in England over the course of the first year of the initiative. The research not only seeks to understand the term 'network' and	• English Context • Study focused on Primary Strategy Learning Networks (PSLNs) • Qualitative Case Study utilising observations and semi-structured interviews of headteachers in two PSLNs (comprised of five and seven

	what it means methodologically, but also what the implications are of a centrally directed model of networking. The findings of this research offer (1) an alternative model for productive networking and (2) a different perspective to planning for success. These findings will add to the national and international debate on networks as power bases for school improvement.	schools, respectively). Study was over one year • Authors argue that 'buy-in'/involvement in the process at all levels is crucial and that the process needs to be flexible and realistic • The findings focussed on the requirements (i.e., structure, time, and funding), benefits (sharing resources, supportive, and collective voice), and challenges (e.g., engagement, hierarchical structures, and lack of expertise) of inter-school collaboration • Authors highlight that many of the positive and negative features are diametrically opposed (e.g., common purpose – conflicting agendas) • Excellent study

Article Rationale:

Cutajar and Bezzina (2013), Duffy and Gallagher (2014), and Moore and Rutherford (2012) all directly pertain to IES document, which focuses on collaboration between schools.

Hallam et al., (2015) discuss trust and collaboration (Cranston article is also good)

Kutsyuruba (2013) explores micro and macro factors which affect the establishment of collaboration amongst teachers. Even though study is set in very different culture, there is relevance to the NZ setting.

Appendix 3: Value 3

Introduction

These articles were chosen because they align with the third Te Ariki value, **Reflective inquiry and discourse**. An outline of each article is provided below, followed by a short rationale at the end, which justifies the choice of articles.

Reference	Abstract	Comments
Kaser, L., & Halbert, J. (2014). Creating and sustaining inquiry spaces for teacher learning and system transformation. *European Journal of Education, 49*(2), 206-217. doi:10.1111/ejed.12079	Over a 15-year period, one Western Canadian province, British Columbia, has been exploring the potential of inquiry learning networks to deepen teacher professional learning and to influence the system as a whole. During this time, we have learned a great deal about shifting practice through inquiry networks. In this article, we provide a description of the key features of the inquiry framework that has evolved through this work, offer suggestions for creating and sustaining influential educator networks and provide some observations about how this approach is shifting practices at the classroom, school, university and policy levels.	• Canadian Context • Theoretical Paper • Authors propose six key factors for transforming school systems: 1) Shared focus and purpose; 2) collaborative inquiry; 3) trusting relationships; 4) persistent leadership; 5) active evidence-seeking, and; 6) interdependent connections between PLCs • In addition, key learning principles are also discussed (e.g., emotions, individuality, and assessment) • 'Spiral of inquiry' model (Timperely, Kaser, & Halbert, 2014) is also discussed • Very good paper which outlines pertinent factors for teacher inquiry
Nicolaides, A., & Dzubinski, L. (2016). Collaborative developmental action inquiry: An opportunity for transformative learning to occur?	Life in the 21st century is increasingly complex, paradoxical, and ambiguous, bringing into question the ways that graduate adult education programs function. In this article, we describe an action research study involving the method of collaborative developmental action inquiry conducted with key stakeholders of a program in adult education at a research one university. Collaborative developmental action inquiry	• U.S Context • Qualitative study that involved University students, professors, and supervisors in one setting

Journal of Transformative Education, 14(2), 120-138. doi:10.1177/1541344615614964	created opportunities for transformative learning to take place. The study process and outcomes suggest that the method and practices of collaborative developmental action inquiry could themselves create favorable conditions for transformative learning to occur.	• Focus on adult education and impact of collaborative developmental action inquiry (CDAI) • Useful theoretical models (transformative learning/CDAI) and types of learning loops outlined (single, double, and triple) • Article examines reflection at both an individual and collective level • Useful theoretical framework and analysis provided
Rusche, S. N., & Jason, K. (2011). "You have to absorb yourself in it": Using inquiry and reflection to promote student learning and self-knowledge. *Teaching Sociology, 39*(4), 338-353. doi:10.1177/0092055X11418685	Inspired by inquiry-guided learning and critical self-reflection as pedagogical approaches, we describe exercises that encourage students to develop critical thinking skills through inquiry and reflective writing. Students compile questions and reflections throughout the course and, at the end of the term, use their writings for a comprehensive analytic self-reflection that examines their intellectual and sociological growth. Following Schwalbe's (2008) urging to emphasize sociological thinking over disciplinary nuances in introductory courses, we describe several complementary methods for teaching students how to think like sociologists. We detail five inquiry exercises and three reflection exercises that build up to the final analytic reflection essay. The unique value of these exercises is that students not only engage the course material throughout the course but also learn to examine their own writing as data. In doing so, students learn to value the process of learning, inquiry, and critical self-reflection while acquiring and constructing self-knowledge.	• U.S Context • Article links theory to practice • Focus is on using sociological thinking to promote critical reflection in students • Two approaches are used: Inquiry guided learning (IGL) and critical reflection • Articles gives practical examples of how teachers can implement approaches (e.g., types of questions to ask, exercises to use, and grading rubric), followed by quotes from students who have experienced this type of teaching approach • Authors have taught at tertiary level, however, theory espoused in the article can be applied

		towards the ways teachers' think about pedagogy at any level. Furthermore, practical exercises could be applied at secondary level and perhaps even at primary level if development stages are taken into account. • Great study that provides practical advice for teachers
Lin, H., Hong, Z., Yang, K., & Lee, S. (2013). The impact of collaborative reflections on teachers' inquiry teaching. *International Journal of Science Education, 35*(18), 3095-3116. doi:10.1080/09500693.2012.689023	This study investigates the impact of collaborative reflections on teachers' inquiry teaching practices and identifies supportive actions relating to their professional development. Three science teachers in the same elementary school worked as a cooperative and collaborative group. They attended workshops and worked collaboratively through observing colleagues' teaching practices and discussing with university professors about their own inquiry teaching. The pre- and post-treatment classroom observations and comparisons of their teaching reveal that the three teachers were more focussed on asking inquiry-oriented questions in the post-treatment teaching. With additional qualitative data analysis, this study identified supportive resources of professional development. Workshop training sessions and sample unit served as the initiative agent in the beginning stage. Discussions with peers and reflective observation of peer teaching acted as a facilitative agent. Finally, student responses and researchers' on-site visit comments worked as a catalytic agent for their professional development.	• Taiwanese Context • Mixed-methods study (semi-structured interviews with 3 science teachers , field notes, reflective journals, teacher videos) • Intervention looked to use collaborative reflection as an agent to enhance PLD in a PLC • Strategies included: a book reading club, providing sample teaching lessons, reflective journal writing, classroom observations, and inquiry workshops • An increase in teachers asking 'high-level' questions was noted, and teachers began to increase student assessment time in class in order to gather evidence of student learning • Teachers highlighted that collegial discussions and reflection on student responses

		were the most important elements in their inquiry
		• Each of the science teachers individualised changes in their practice through focusing on different facets of inquiry teaching
		• Authors point towards a combination of different interactions: interactive collaboration, collaborative reflection, and interactive reconciliation
		• Good study on the role on collaboration and reflection in teaching inquiry
Ghamrawi, N. (2011). Trust me: Your school can be better—A message from teachers to principals. *Educational Management Administration & Leadership, 39*(3), 333-348. doi:10.1177/1741143210393997	Drawing upon empirical data, this article explores the concept of trust as a context for the establishment of teacher leadership. This article is part of a larger study that was carried out over a 2-year period and involved 21 teachers, 21 subject leaders and 9 principals belonging to three private K-12 schools in Beirut, Lebanon. Data was collected through semi-structured interviews. Findings suggest the pivotal role of trust in establishing higher levels of teachers' self efficacy, collaboration, commitment, collective vision and building a strong sense of belonging to the organization thus paving the way towards the establishment of teacher leadership. The article highlights how principals establish trust by (1) securing a considerate environment that encourages teachers to get involved in professional dialogues; (2) modelling specific leadership behaviours; and 3) making it possible for teachers to instigate ideas and programmes that result from reflective practice.	• Lebanese Context • Qualitative study (51 semi-structured interviews with teachers, leaders, and principals in three private and high-performing K-12 schools) • Many examples given (i.e., teacher/leader/principal quotes) throughout paper, which helps to convey intended message - (importance of collegial trust) • Reflective practices are also touched upon in relation to trust Good paper

Article Rationale:

Both studies (Kaser & Halbert, 2014; Nicolaides & Dzubinski, 2016) outline good theory surrounding creating inquiry spaces/reflective practices for teachers

Rusche and Jason (2011) provide practical examples on how teachers can implement reflective practices

Ghamrawi (2011) – Article on relational trust (could also be used in Value 3) and principal's role in supporting this in schools…reflection is also discussed within this article

Lin, Hong, Yang, and Lee (2013) extends the opportunities schools could include to foster inquiry and reflections

Appendix 4: Value 4

Introduction

These articles were chosen because they align with the fourth Te Ariki value, **Evidence based professional practice**. An outline of each article is provided below, followed by a short rationale at the end, which justifies the choice of articles.

Reference	Abstract	Comments
Parr, J. M., & Timperley, H. S. (2015). Exemplifying a continuum of collaborative engagement: Raising literacy achievement of at-risk students in New Zealand. *Journal of Education for Students Placed at Risk (JESPAR), 20*(1), 29-41. doi:10.1080/10824669.2014.983512	This article reports different ways researchers work with stakeholders in national projects targeted at raising achievement of students. Specifically, New Zealand has a persistent high performance-low equity profile in international tests, with indigenous Maori students and immigrants from the Pacific Islands most at risk of underachievement and of leaving school without qualifications. Policy has aimed to address this issue largely through provision of high-quality professional development to enhance effectiveness of practice. The notion of a continuum of collaboration is proposed; examples are presented that are positioned at different points in terms of the ideal of co-constructed, evidence-based judgments and decisions. The examples represent models or ways of working and the analysis captures both the varied nature of the interface that researchers have with policy makers, ministry officials, deliverers of professional development, and schools, and the affordances and tensions that accompany each model. Student achievement outcomes are identified.	- New Zealand Context - Theoretical Paper, however, data presented comes from three Quantitative studies - Authors outline their experiences of working with stakeholders in three different ways to raise achievement - Collaboration (e.g., clusters of schools), evidence-based practice (e.g., formative research), reflection, and relational trust are all mentioned in paper - The article foregrounded the authors' research experiences. Overall, great paper that is directly relevant to NZ teachers
Marsh, J. A., & Farrell, C. C. (2015). How leaders can support teachers with data-driven decision making: A framework for understanding capacity building. *Educational Management*	As accountability systems have increased demands for evidence of student learning, the use of data in education has become more prevalent in many countries. Although school and administrative leaders are recognizing the need to provide support to teachers on how to interpret and respond to data, there is little theoretically sound research on data-driven decision making (DDDM) to guide their efforts. Drawing on sociocultural learning theory, extant empirical literature, and findings from a recent study, this paper develops	- U.S Context - Qualitative Study (case study involving 6 low income schools and interviews with district leaders (n=6), administrators, intervention leaders, and case

Administration & Leadership, 43(2), 269-289. doi:10.1177/1741143214537229	a framework for understanding how to build teacher capacity to use data, specifically informing what practices administrators might employ, when in the DDDM process to employ these practices, and how these mechanisms may build teacher knowledge and skills. Given the global economic climate, administrators face difficult choices in how to invest scarce resources to support data use and once invested, how to ensure that teachers gain, and sustain, the needed capabilities once the supports are removed. The framework provided herein presents a set of concepts that may be useful in guiding these decisions. Implications for leadership practice, as well as suggestions to guide future research and theory development, are discussed.	study teachers (n=79), and non-case study teachers (n=24). A focus group (n=6) , observations, and document analysis also occurred • Capacity-Building Interventions (CBIs) were used (i.e., literacy coach, data coach, and data team) • Sociocultural learning theory was applied to make sense of how teachers could apply data-driven decision making (DDDM). This was done at both an individual and collective level • Some of the key features that emerged where that teachers: assessed each other's needs, modelled, observed each other (both formally and informally), provided feedback and shared expertise, engaged in dialogue and questioning, as well as brokering (e.g., arranged or negotiated between different people) • Conditions that moderated these features included: intrapersonal and interpersonal factors, as well as structural-organisation and environmental factors. • Good paper that points out some important pre-requisites

		and guidelines for DDDM in education
Curry, K. A., Mwavita, M., Holter, A., & Harris, E. (2016). Getting assessment right at the classroom level: Using formative assessment for decision making. *Educational Assessment, Evaluation and Accountability, 28*(1), 89-104. doi:10.1007/s11092-015-9226-5	Current high-stakes accountability mandates emphasize data use for school improvement. However, teachers often lack training for effective data use, and data is often too far removed from students to actually influence instructional practice. This qualitative case study was designed to gain a better understanding of a district-wide, teacher-centered approach to data use. Findings suggest that when data is used to "inform" instruction rather than "evaluate" instruction, teachers begin to practice reflective teaching. A common language emerged across grade levels facilitating a collaborative approach to data use. Using the theoretical framework of Self-Determination Theory, we propose a data informed instructional theoretical model that stakeholders in K-12 education systems can use to enhance instruction and learning at the classroom level. This teacher-centered model is of particular importance as a framework to build collective capacity by meeting psychological needs of teachers of autonomy, competence, and relatedness.	• U.S Context • Mixed-methods Study that involved interviews, field notes, observations, and document analysis (529 teachers within 7 schools – primary though to high school) • Study is an evaluation of a teacher-centred, district-wide initiative to improve formative data use (not much detail on the intervention unfortunately) • Self-determination theory, which focused on autonomy, competence, and relatedness, was used to analyse findings • Seven categories were identified as being influential for teacher learning in regards to data: Administrator support, teacher autonomy, transparent and collaborative use of data, data use to inform instruction, taking into account student motivation, development of communities/relationships, and that ongoing experience is needed • Article has good lay-out (i.e., section headings), theoretical framework, and analysis.

Herrington, D. G., Bancroft, S. F., Edwards, M. M., & Schairer, C. J. (2016). I want to be the inquiry guy! How research experiences for teachers change beliefs, attitudes, and values about teaching science as inquiry. *Journal of Science Teacher Education, 27*(2), 183-204. doi:10.1007/s10972-016-9450-y	This qualitative study examined how and why research experiences for teachers (RETs) influenced middle and high school science teachers' beliefs, attitudes, and values about teaching science as inquiry. Changes teachers reported after participating in the RET ranged from modifying a few lessons (belief change) to a comprehensive revision of what and how they taught to better reflect inquiry (attitude change). Some teachers who described comprehensively changing their instruction also described implementing actions meant to change science education within their respective schools, not just their own classrooms (value change). We present how and why teachers went about changes in their practices in relation to the researcher-created teacher inquiry beliefs system spectrum (TIBSS). The TIBSS conceptualizes the range of changes observed in participating teachers. We also describe the features of the RET and external factors, such as personal experiences and school contexts, that teachers cited as influential to these changes.	• U.S Context • Qualitative Study (semi-structured interviews with 13 science teachers) • Research for Teachers (RET) intervention was used, whereby teachers formed research groups based on areas of interest. They chose a topic, had a mentor, and conducted, wrote-up , and presented their findings • RETs were based on collaborative reflection in order to improve student learning • Research explored cognitive, affective, and behavioural components of inquiry-related knowledge • Results showed that all the teachers had some degree of belief, attitude, and value change post-intervention, with 84% reported positive statements about the RET, 4% neutral, and 12% negative. • Good paper that demonstrates translating theory into practice
Cosner, S. (2012). Leading the ongoing development of collaborative data practices: Advancing a schema for diagnosis and intervention. *Leadership and Policy in Schools, 11*(1), 26-65.	Research suggests that school leaders play an important role in cultivating and developing collaborative data practices by teachers. Although diagnosis and intervention are critical facets of leaders' work to support collaborative data practice development, this work remains poorly understood. Missing from data-use literature is more explicit and holistic attention to diagnostic factors and interventions of importance to the ongoing development of collaborative data practices. To address this knowledge gap, this	• Theoretical Paper • Paper puts forward the importance of collaborative data practices in relation to diagnosis and intervention

doi:10.1080/15700763.2011.577926	article integrates largely unsynthesized literature to advance a schema for school leader diagnosis and intervention as a central mechanism for supporting the ongoing development of collaborative data practices.	- Outlines heuristic of work group effectiveness (i.e., task appropriate strategies and interpersonal processes, work-group context, and organisational context) - Paper centres on the role of leaders in supporting teachers collaborative use of data - Good paper

Article Rationale

Parr and Timperley (2015) – This article was chosen because it touches upon many of the areas throughout the four values and highlights how collegial consideration of evidence helped improve student performance. Furthermore, it is set within a New Zealand context

Marsh and Farrell (2015) & Cosner (2012) – Both papers focus on how leaders can support teachers to use data to make informed decisions

Curry, Mwavita, Holter, and Harris (2015) – Paper has a teacher-centred approach the collaborative use of data and is well set-out

Herrington, Bancroft, Edwards, and Schairer (2016) – This article was chosen because it highlights how research experiences for teachers can help facilitate the use, interpretation, and application of data to pedagogical practices