
THE ARIKI PROJECT:

A 2009-2010 MINISTRY OF EDUCATION TRIAL

Acknowledgement

The Ariki Project has been a collaborative endeavour since its inception. Face-to-face and on-line interaction has been managed by a talented group of principals spread around the country. Their enthusiasm, knowledge and insight underpin all that we do. From South to North I would like to pay tribute to Dr Wendy Bamford, Principal Wanaka Primary School, Dr Lyn Bird, Principal Ilam School, Liz Millar, Principal Ngaio School, Kay Tester, Principal St Brigid's Primary School and Gary Punler, Principal West End School. As regional directors they have both delivered the programme and collected much of the evidence for this report. As the report writer, however, I take complete responsibility for what is written here.

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BACKGROUND AND OVERVIEW

Professional conversations and reflective critique helps establish meaning and authenticate purpose for what teachers and school leaders do. This concept has been at the centre of a long series of *School Development* initiatives in New Zealand Schools. As a consequence of the *Reflective Principal* courses that were a feature for many, of principal education in the 1990s, leaders' groups were often established to continue to share some of the processes which participants had found attractive and effective during the withdrawal courses. Early clusters were referred to as Mentor Groups¹ as there was an expectation that the group would behave in a reflective yet critical manner.

The facilitation of these groups was conducted by the New Zealand Principal and Leadership Centre which was a partnership between Massey University and the New Zealand Principals' Federation. As the changes known as Tomorrow's Schools took hold there was an increasing interest from people working in the leadership field to make prominent the notion of *community*. Gradually the *Mentor Groups* became known as *Professional Learning Communities*.

The Ariki Project grew out of this development and sort to refocus the various practices which had developed in parallel with the leaders' groups. The intention was to place the individual school development scheme as the vehicle for beginning the professional conversations both within the school and within the Leaders' Forums.

¹ See David Stewart. *Tomorrow's Principals Today*, Kanuka Grove Press, Massey University. 2000. Ch 5.

SCHOOL DEVELOPMENT: A definition

“School Development is the process by which members of an institution develop the capacity to reflect on the nature and purpose of their work together”²

In this publication the authors first published the concept of Quality Learning Circles which has now widely permeated the school environment, been used as a research tool, and been adapted and modified in many different styles. School development is based on the assumption that an effective organisation is impossible without high quality information. Quality Learning Circles was developed as a mechanism for both collecting that data and then working with it, in groups, to establish meaning and implication.

Quality Learning Circles are focussed interactions with colleagues where shared professional narratives are illustrated with evidence of practice. Each circle is a small heterogeneous group whose members take turns to recount their selected interaction. This is supported with shared evidence. They then ask critical reflective questions of each other. Before separation they may confirm the summary that has been kept and make arrangements to visit each other for further learning. Groups may extend their discussion through the introduction of virtual visitors and reference to appropriate literature. This process underlines the search for meaning that characterises professional behaviour. Throughout the year this activity becomes a substantive part of principal appraisal as each leader searches for correlations between their intentions, their work and what happens in classrooms.³

For the Ariki Project, whilst the form and structure of the QLCs was retained, the manner in which the groups functioned and the kinds of reflective questions that were asked within the process was completely revised. These revisions were made available to the participants as *The Reflective Group Protocols*.

REFLECTIVE PRACTICE: How it begins

To put this in context we need to return to the *Reflective Principal* courses of the 1990s. As principals grappled with the major changes to their jobs, aspects of business and commercial practice were being injected into the mix. An example of this enhancement was the newly mandated job description. Most of the examples promulgated at the time were heavily task related and to balance the offering somewhat this writer devised what was known at the time as the *Conceptual Job Description*. The intention here was to re-emphasise the intellectual nature of school leadership. In order to link reflective practice with the actual job that people were doing a further aid was produced, entitled Digital Portfolio. This utility, first produced on a CD-ROM and then later adapted to a web browser application used the Conceptual Job Description as its template and linked observations and recordings to both the Job and to the then available standards. Reflective practice includes asking;

what am I required to do?
what have I agreed to give priority to?
how will I validate my teaching? and,
how will I deal with this amongst all the other student focused questions relating to immediate individual and classroom concerns?

² See David Stewart and Tom Prebble. *The Reflective Principal: School development within a learning community*. ERDC Press. Massey University. 1993:1.

³ See tutorial at http://www.edex.net.nz/files/djs_qlc.swf

The assumption we make here is that ***learning requires the individual to actively construct meaning and knowledge on the basis of reflecting on experience.***⁴ The portfolio application was advanced as a means of collecting examples of *experience* in preparation for later reflection. In this trial the portfolio application was re-named and reconfigured as a concept map and web diary. The application was intended to guide practice as well as record and organise thinking and acting over time.

Further guidance about what to reflect about was suggested to turn around the concept of interactions. If we were able to lift the roof of a school and watch the activity as it happened, it is likely that we would be struck with the predominance of interactive talk amongst the occupants. Teachers talk with students, with each other, students talk and from time to time visitors talk with various groups. Obviously there are times when students study independently and individually and teachers prepare and mark but the dominant activity is likely to be interactions amongst the people. Thus it makes sense to use these actions and reactions as the raw data for our study and development activity.

There is support for this kind of reasoning by Elmore (2006) for example:

"We have known explicitly for at least thirty years, and probably implicitly for a good deal longer, that it is not the policy, or the program, that directly produces the effect."... "interaction effects dominate main effects. The effects most worth knowing about ... are interaction effects." (p4);

and by Spillane (2006, p84);

"Interactions, as distinct from actions, are critical."

In relation to creating reflective questions most of the studies perused presumed that these questions would be posed by the group facilitator, the academic leading the study or the teacher of a student group. There is little evidence in the literature search which has been conducted to date to parallel the direction taken by many of the principal groups who have worked in the various Ministry contracts so far. Our intention has been to provide a simple taxonomy with some examples from which groups can generate their own questions which best fit the local context. Furthermore we have endeavoured to provide a template which was soundly based around group activity as different from personal study or direct supervision. The latest version of this categorisation uses just four sets; questions about meaning, questions about lateral links, questions about existing data, and questions about validation. These notions are detailed in an *Edex* tutorial⁵ and in a separate resource entitled '*The Reflective Group Process*'.⁶

Another of the areas where the reflective group dynamic differs from other critiquing methodologies, such as peer coaching for example, is in group audience behaviour. As one group member presents their narrative and engages with the others in discussion there is always at least one other person just listening. Anecdotal evidence suggests that these listeners often engage in internal debate comparing and contrasting what is being presented with their own practice. We believe this often results in listeners altering their own subsequent behaviour.

⁴ See David Stewart. *Tomorrow's Principals Today*, Kanuka Grove Press, Massey University. 2000:29

⁵ <http://www.edex.net.nz/files/Asking%20Reflective%20Questions.swf>

⁶ <http://www.edex.net.nz/files/The%20Reflective%20Group%20Process.pdf>

SCHOOL ACCOUNTABILITY: Including the Board of Trustees in the Ariki Project

“The Ariki Project offers contiguously, a practice of accountability and a network for school development and improvement.”⁷

The processes at the heart of the programme require participants to systematically gather evidence of their current practice in a staged manner throughout the year. This material is then used as they seek to link purpose with action. Clearly, such records while providing a base line and a stimulus for interactive thinking, also, can be useful in documenting the school’s progress towards stated goals. The Ariki Project focuses on those interactions within the school that deal directly with teaching and learning.

At the school level, principals in the programme need to reach agreement with their Boards of Trustees as to the manner in which the Ariki Processes will be adopted for the year(s). The programme directors are firmly of the view that this programme should not be an addition to the principal’s work load. It is recognised that Principal Appraisal is a Board of Trustee responsibility and as a consequence participants are encouraged to:

Work through an agreement for one to two years with the Board in a discussion which demonstrates how the Ariki processes and instruments have the potential to develop and document progress through key progress indicators. We support the notion that Board chairs act as the appraiser as they bring to the task cumulative knowledge from regular meetings and conversations. We have some examples of how Performance Appraisal Cycles have been developed.

Make links to the Professional Standards and highlight congruence.

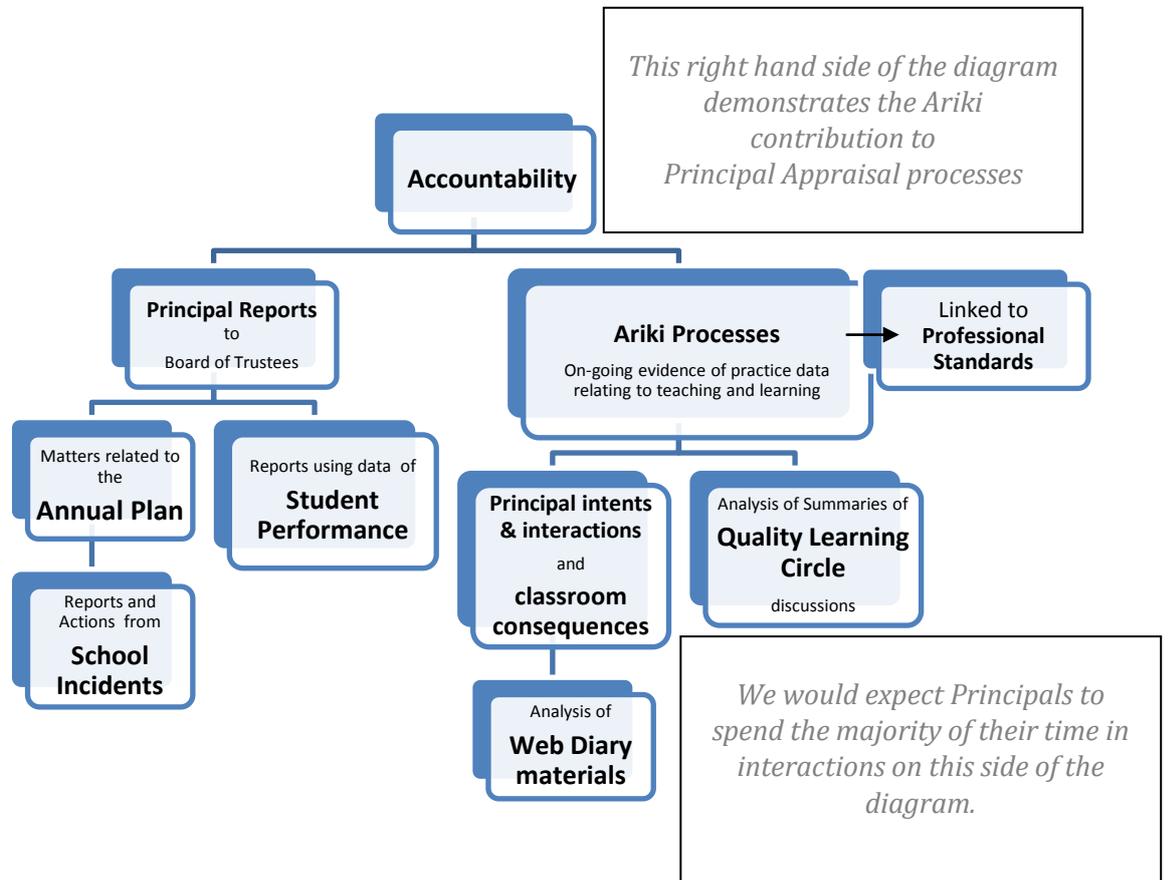
Show how other functions, financial etc, will be met through the Annual Plan which covers all the NAGs.

Report to regular Board Meetings with updates and supply on-going student data.

As agreement is reached it is likely that the quality and breadth of the data arising from the Ariki Project will be preferred to a number of existing routines. It is important that these changes are documented and available for view by external agencies such as ERO for example.

⁷ See David Stewart. *Collaborative Critique based on evidence of practice*. NZ Principal. 2009, v24, p5.

School Accountability: Interactions at the centre of judgement



WHAT THE PRINCIPALS AND SCHOOLS DID: THE PROGRAMME

Much of the theoretical underpinning of the approach we used and its validity has been published elsewhere⁸. The schema is presented here from the perspective of a participant principal. We proposed five principles to guide the activity.

1. PRINCIPAL DEVELOPMENT should engage the participant and at the same time enable more effective School Development

Our featured principal has been concerned for some time that the practicalities of teaching and learning keep getting pushed to the bottom of her work schedule. She meant to visit more classrooms last week but didn't manage to; she overheard some conversations amongst teachers in the staff room during a group meeting some time ago now, and was concerned at the low level of critique evident but has not as yet had time to address the issue; she is concerned that some teachers seem totally unaware of what their colleagues are doing and yet she herself is working every waking hour just to run on the spot.

The Ariki Project appeals because it purports to assist principals focus on interactions with others, which seems to include most of what she does during the day, and furthermore it gives a structure to enable her to address the concerns she currently has as well as possibly increasing the effectiveness of teaching and learning in the school.

To get under way she needs to firstly divide her staff into Quality Learning Circles of 4-5 teachers and provide space for meetings say twice a term. She decides to schedule these meetings instead of whole of staff meetings on weeks 4 and 9. Before this can begin staff need to be aware that each of them will be expected to come to the QLC meeting with some written record of recent evidence of practice. Enrolling staff with the KnowledgeNet concept map facility results in each staff member receiving from the project director a written page including expectations, their personal password and a summary of the project's objectives. A special staff meeting is scheduled for week 2 to introduce and discuss these ideas.

In one stroke she feels that she has the beginnings of a methodology for getting closer to the practicalities of teaching and learning and moving these matters to the top of her work agenda, and at the same time she has an initial framework of professional development that encompasses all the teaching staff in the school.

2. WORKING WITH EVIDENCE OF PRACTICE in a carefully prescribed reflective group setting will encourage the development of high quality judgement

As our subject thinks about the Quality Learning Circle process⁹ that she intends to implement for her staff she also begins to think about how the process will function amongst the four principals who have also signed up for Ariki with her and who will meet with her twice a term as part of the group reflective critique process. The process and protocols will be the same. The

⁸ See for example, David Stewart. Collaborative Critique based on Evidence of Practice. NZ Principal March 2009 Volume 24 Number 1 Pages4-7

⁹ For protocols for this project see the Ariki Resources page <http://www.edex.net.nz/default.asp?pageid=31>

difference being that the principals will each bring with them to the meeting some written notes illustrating an aspect of their current practice. In each case as these case notes accumulate individuals begin to create a portfolio of practice as evidence of their progress towards stated goals.

The data trails are also identical, with the within school summaries of QLC¹⁰ being routed to the principal following the meeting, and the summaries of the principals' group being forwarded to the regional director of the project.

Our principal example ponders how she could encapsulate the consequences of this way of working and the centrality of the group discussion in the professional development activity when she next talks with her Board. She comes to the view that in both cases, within school and across school groups, the desired outcome is the development and enhancement of high quality judgement. Teachers and principals are constantly choosing what they might do next. This reflective group process offers a mechanism for expressing what you currently do, what that means and why you chose to do it, and what you might do next as a consequence of carefully examining your interactions and listening to other points of view. Indeed, the group process, because its very nature creates an audience who may or may not always speak enables participants to modify their future behaviour silently. This notion the educational process being substantially contained within individual's heads is one to which she subscribes.

3. PROFESSIONAL DEVELOPMENT should be integrated into the fabric of daily work – instead of, not as well as

In thinking about how time and energy could be devoted to the Ariki Project our principal in this example considers the suggestion that she could exchange this activity for much of her current principal appraisal efforts. Clearly, she would need to have a conversation with the Board of Trustees' chair but here is an opportunity to document in a progressive way the connections between her interactions in the school and what teachers do in classrooms. In a real sense this is what principal appraisal should do.

Furthermore, if much of the activity was considered by staff to be part of the principal's appraisal their perception of what might happen to the data that they were generating would be different. There would be sense, perhaps, that this project was primarily about school development. As such, teachers may be more committed to the QLC reflective critique process and with completing the summary of these sessions. From time to time they would be asked to supply examples of their concept map entries in order for the principal to be able to look for connections between her work and theirs. Over time, this sequence of selecting significant examples of current work interactions from which to fashion wise judgements, via the QLC process, about what to do next would become an integral part of the fabric of daily work both for the staff and for herself. That there would also be a progressive record of this that could be sighted by the board would be an added bonus.

All the QLC meetings would be scheduled to replace existing meetings and the concept map records would be incorporated into the various existing planning regimes. Our principal experimented with the web diary¹¹ that both she and all the teaching staff would use and found that she could complete a satisfactory record ready to take with her to a meeting in 3-4 minutes.

¹⁰ The form and an example of how it might look is available on the Ariki Resources page <http://www.edex.net.nz/default.asp?pageid=31>

¹¹ This is a browser based facility hosted by KnowledgeNet. A new release has been made available in 2011.

4. QUALITY PROFESSIONAL DEVELOPMENT should help principals find relationships between their interactions and what teachers do

As our principal continued to think about the possibilities of this project she returned to the problem that had been concerning her for some time:

What were the indicators that she should look for in deciding whether what she was currently doing was having a positive effect on teaching and learning in the school?

Firstly, she examined her own behaviour. She wished to demonstrate to the staff and to the school community generally that her actions and the manner in which she worked were congruent with the educational core beliefs that the school had adopted. By actively demonstrating a collaborative reflective critique based on evidence of practice through her membership of the principals' group she could look for signs of similar commitment to the in-school groups. By also publicly putting the emphasis for the use of her time in the learning and teaching arena she would signal her priorities to all. (She would return again and again to just how the rest of the work would get done!)

Secondly, she sought to convey through her own work that there could be many ways to a particular destination. Often it was the quality of the interaction and support, rather than a specific piece of information that led to quality learning outcomes. An indicator here could be the expression of delight by staff in achieving results 'through their own creative efforts'.

Next, she wished to model that successful teaching and learning is an amalgam of systematic organisation overlaid with a large covering of high level thinking. This high level thinking can be best characterised as engaging in quality judgements. Thus, an indicator here for our principal would be in examining both samples of teacher judgement and consequence, and understanding how continued learning through the QLC process contributed to these judgements.

5. KNOWLEDGE ACQUISITION OPPORTUNITIES need to mesh with current interests and use relevant technologies to engage participants

By the time our principal returned home in the evening she was often too tired to concentrate on any serious educational reading. There didn't seem to be enough time in the school day to read much of this material either. She did, however, like to listen to the radio on the 30 minute drive to and from school each day. A purchase of an iPod cradle that plugged into the car speakers, from Dick Smith's enabled her to enjoy the variety of Podcast offerings that were now appearing on the NZPF website. Recently she was able to hear what Ben Levin had to say about school improvement in Ontario, she watched and listened to the presentation on using a decision tree with national standards and the Ariki Team discussing progress in the project so far.¹²

She decided that she would email the director of the Ariki Project with some suggestions of her own about future podcasts with some serious emphasis on the ones that made her laugh.

¹² See <http://www.arikiproject.ac.nz/podcasts/> for all that is available.

EXPECTATIONS

Principals and staff will construct personal portfolios broadly based around the concept map on KnowledgeNet. Entries from these diaries will form the stimulus for the quality Learning Circle conversations. The meetings of the QLCs will generally follow the provided reflective critique protocols. Summaries, using the four headings from these protocols will be completed at the conclusion of each meeting. Leaders' group QLCs will follow the same process with the conversations beginning with a sharing of web diary from one or more of the participant principals. The focus of diary entries for both principal and staff will be interactions which demonstrate evidence of some aspect of current practice. During the programme participants will complete a minimum of two entries a term and attend a minimum of two QLC sessions a term for the first three terms of the year. All will understand that excerpts from diaries and summaries will be used to inform decisions and illustrate progress in various school reports.

A PROGRAMME EVALUATION MODEL

Over recent years measurement across the leadership area has been largely dominated by the Michael Scriven's dichotomy of formative or summative evaluation. In addition more recently, there has been a concerted drive to focus predominately on student outcomes and formulating school goals. With our emphasis on interactions we are taking a much more functional approach where notions such as judgement, worthwhile activities, and professional growth become very important. This Ariki programme does not aim to add another layer to the goals and targets schools are already engaged in formulating. Rather we prefer language like 'planned intentions' or planned purpose' to signal that the Ariki project is designed as a series of processes and interactions which will help principals work towards their goals, chart their progress and make immediate decisions about *what next*. As a consequence we need to apply a programme evaluative design which reflects this position while still providing valid information for future development decisions.

Robert Stake¹³ proposes the concept of *responsive evaluation* which fulfils this purpose.

Firstly a definition

Stake uses the ratio¹⁴:

**[Program] Evaluation = whole constellation of values held for a program
Complex of expectations and criteria
that different people have for the program**

Heng and Boden go on to paraphrase Stake (page 14), the "...basic task is neither to solve this equation nor to obtain a descriptive summary grade for the programme. Instead Stake advises the evaluator to make a comprehensive statement of what the programme is observed to be and to reference the satisfaction and dissatisfaction that appropriately selected people feel towards it. The dominant theme in *responsive evaluation* is providing a service to specific clients."

The point here is to separate the observations from the judgements or any interpretations which might be made. This is congruent with the reflective questions protocol where the presenters state what they did (becomes the observations for the group) and then are asked 'what does this mean?' etc which becomes the basis for judgements.

As we look to translate this notion into a workable means of critiquing and reflecting on the Ariki programme in action we could group the constellation of values in the manner of the chart below. On the left is what the participants would do, incorporating 'the whole constellations of values' and on the right how those 'complex of expectations and criteria' could be distilled into a major set of values driving the School Development initiative.

¹³ Robert E Stake. 2004 Standards-Based and Responsive Evaluation Univeristy of Illinois Sage Pubs Inc

¹⁴ See Heng Deug Hong and Mark Boden . *R & D Programme Evaluation - Theory and Practice*. P11.
Downloaded from:

[http://books.google.com/books?id=2zn8x4gy8gC&pg=PA11&lpg=PA11&dq=programme+evaluation+Stake&source=bl&ots=hTvbkgU8Mi&sig=HO5v_1XKsjTXNU3XrBrmuwm4_08&hl=en&ei=l4sgSr3bF5bmsgPTvyPBA&sa=X&oi=book_result&ct=result&resnum=4#PPP1_M1_\(1_June_2009\)](http://books.google.com/books?id=2zn8x4gy8gC&pg=PA11&lpg=PA11&dq=programme+evaluation+Stake&source=bl&ots=hTvbkgU8Mi&sig=HO5v_1XKsjTXNU3XrBrmuwm4_08&hl=en&ei=l4sgSr3bF5bmsgPTvyPBA&sa=X&oi=book_result&ct=result&resnum=4#PPP1_M1_(1_June_2009))

GROUPING THE CONSTELLATION OF VALUES

Making connections between principal intent and classroom activity
Regular use of the reflective questions protocol for scheduled professional conversations.
Systematic use of the Web Diary for recording 'evidence of practice.'

Evidenced Informed Professional Practice

Assisting principals to ask 'what next' within a pedagogical perspective. (versus what else)
Principals demonstrating deepening judgement in stimulating effective classroom behaviour.
Teachers demonstrating deepening judgement in selecting effective classroom strategies.

Reflective Inquiry and Discourse

Stimulating effective group activity through thoughtful participation.
Sharing with colleagues results and summaries of reflective critique through digital applications.
Using examples of student attainment to illuminate valuable understandings.

Collegial Obligations

Amalgamating professional knowledge, research evidence and evidence of current practice to select classroom practice.
Visiting other classrooms and schools as a *learner* to deepen own insight.
Using Podcasts and other digital media for surveying a wide range of concepts.
Being thoughtful about the power of within-school perceptions.

Professional Discretion

THE KINDS OF DATA GENERATED

Five different data sets were generated from both within the work of the project and by the project director to test the viability and usefulness of additional measures.

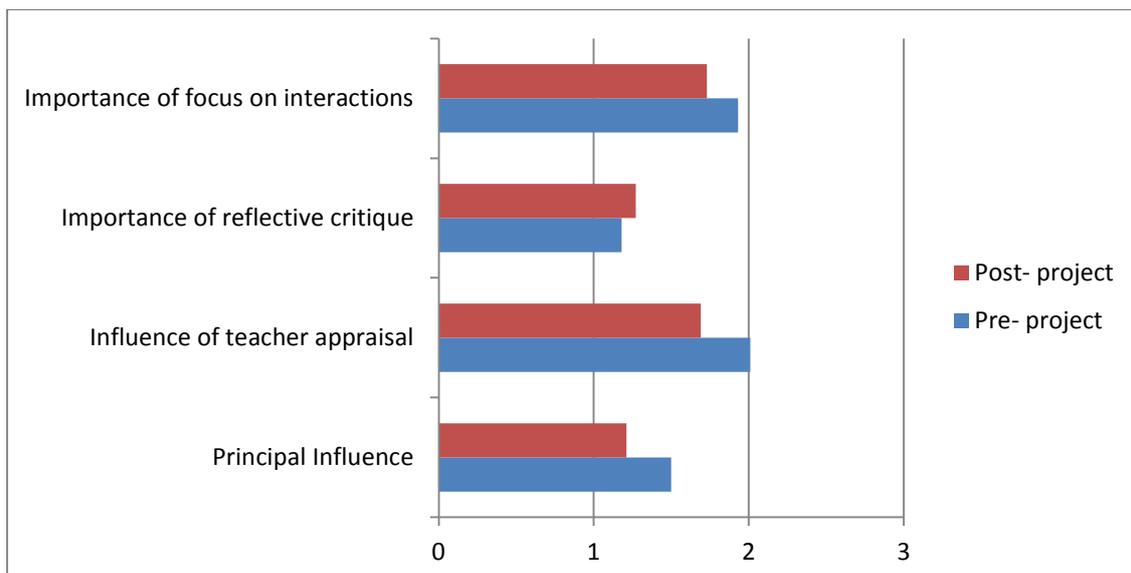
PRE AND POST QUESTIONNAIRES

The intention here was to evaluate the usefulness of a simple questionnaire using a 5 point Likert scale to record changes in perception, understanding and practice of the various Ariki protocols. Data were not designed to be aggregated across schools and used in a summative manner but rather to demonstrate to participants how a simple pre-post designed questionnaire using mainly Likert scales could contribute to principal decision making. In this case the decisions were about perceptions of principal influence on classroom practice, about the more structured professional conversations, QLCs which had been introduced, and about appraisal processes. Principals were offered a service, from us, to analyse and comment on these as part of a board of trustees presentation if they so wished. Our trial of these notions confirmed that the forms could be completed by staff during a staff meeting in about 10 minutes.

In many of the schools there were staff changes during the trial period. As questionnaires were completed anonymously these changes were not tracked. The questionnaires were viewed as being generally representative of the staff view at the time of completion. Use of these questionnaires signalled a planned progressive approach by the schools who participated in seeking to illuminate areas of school life and meaning hitherto mostly hidden from view. Data could be used both in a principal appraisal context and for future planning by the principal. The use of pre and post questionnaires of this nature contributes to the value of evidence informed professional practice.

About a quarter of the cohort took up the option to do both pre and post questionnaires. The graph below shows that in most cases there was some movement towards the top end of the scale. The result in the teacher appraisal question was somewhat skewed by most staff in one school choosing the negative end of the range in the post survey.

PRE AND POST QUESTIONNAIRES N=9 (SCHOOLS)



PRINCIPAL REPORTING TO THE BOARD OF TRUSTEES

We collected some examples of the manner in which principals reported to their boards of trustees, based around the data and processes of the Ariki Project. Note that once again, we were not attempting to use data from this source to prove that the Ariki Project resulted in all participating schools demonstrating these kinds of actions, but rather we were seeking to illustrate the kind of reporting that becomes available to principals of schools who opt into this programme. Each of the examples can be defined as a case study which, in Stake's (1998:259) view is explored for "its pattern of meaning".

Case C BoT was a report that was presented to the school's Board of Trustees in December 2010. This report contained the following elements:

An initial statement, "The Ariki model of principal appraisal is a means of more effectively seeking correlations between principal intentions, what they actually do, and the consequences for teaching and learning in the school. This report aims to demonstrate successful application of the six assumptions which underlie the Ariki model:"

(These assumptions were then stated, and the introduction then went on to say:)

"This report aims to show clear links between principal intent, based on the XXX Annual Plan goals, teacher intent and improved outcomes for students."

A table with a sample of curriculum goals.

These were set out showing action and outcome.

Three Web Diary entries

These were printed versions from the digital collection of a year 4 teacher showing the links between principal intent, as set out in the annual goals, and teacher intent and classroom data which demonstrated improved student outcomes in a particular curriculum area.

The principal's reflection or commentary on these entries.

Here the principal pointed to how the teacher's analysis of student data had informed her planning and how the Quality Learning Circle process had lead to resetting teaching and learning goals. "After her final QLC presentation the teacher concludes that the year long inquiry in spelling has been effective in improving outcomes for students."

A Principal Web Diary Entry

"The following table shows an entry from my principal web diary, which reveals a reflection on the macro level inquiry process operating in the school and its intended outcome. I am linking the practices undertaken by teachers to my intent, clarifying and deepening my own understanding and making a more informed judgement."

A Concluding Statement

"As an appraisal approach the Ariki Model de-privatises teaching practice; principals and teachers are collegially empowered by the group to share their data and their practice in a safe professional environment. This brings a level of accountability beyond the usual compliance technicist approach. As teachers record in their web diaries the practices they are employing to

meet their goals the principal is able to access the web diaries so there is a continual monitoring and reviewing process and the principal can make links between teacher intent and student's learning and achievement.

Finally, it is an empowering experience. It is clearly a dynamic system, it's practical and it gets results. By its nature it galvanises the collegial nature of the teaching profession and builds trust and confidence in the teachers of our school."

LEADERS' GROUP RESPONSES

In the final term of the project (Term 4 2010) regional directors, in a group discussion context, explored some perceptions and opinions of members of the leaders' groups. The intention was to:

- track connections between principal actions and classroom behaviour;
- explore whether a 'what next' perspective was useful in thinking about pedagogy in the school;
- explore questions of deepening judgement;
- talk about Quality Learning Circle Group process as a group activity and the effectiveness of the reflective questions protocols;
- express opinions about the 'evidence of practice' stance;
- talk about the 'visitor as a learner', notion in regard to visits to classrooms and schools;
- talk about the Web Diary application;
- share feedback from teachers;
- talk about any unexpected consequences; and
- share evidence of shifts in student attainment.

From summaries of these discussions

Principals valued the Ariki Processes for the manner in which they provided a coordinated framework for some of the things that they were already doing. Mentioned, for example, were teacher inquiry practices, peer coaching, and a variety of suggested procedures for looking in classrooms. "It is now easier to see the connections [between principal actions and classroom activity] as the focus areas of the interactions are clearer and tighter..." "We now have a clear process of identifying data gaps – drilling down to the data and needs..." "...strong links to trust and evidence around practice".

To find a way to confirm an individual's deepening judgement is a difficult task but the following comment does get close. "I share the delight of learning with my teachers and I share their progress [through the web diary and QLC process].

As we sought reaction, through a number of questions, to the combination of processes contained in the web diary and Quality Learning Circle protocols which are at the heart of the way Ariki operates we were delighted to receive evidence which supported some of our earlier assumptions developed at the programme's genesis. For example we had proposed that the web diary focus on an interaction that demonstrated 'evidence of practice' rather than simply recording an event. One comment noted that there had been, "significant shifts [in student attainment] as QLCs are data driven". While another noted that the Ariki process provided a

structure for the “reflection process and identifying next steps”. When asked to identify any unexpected consequences some responded that the programme, “exposes the inadequacies in teacher practice”, “challenged teachers to step up their practice”, “challenged teachers to risk-take and try new approaches”, and provided “recognition to all”. “Teachers overwhelmingly ‘love’ this approach, and we are planning a QLC seminar so teams can share to other teams”.

WEB DIARY ENTRIES

Over the period of the trial 513 participants registered for the Web Diary.

In total they logged on 5883 times.

Average logon = 12 times, which is the suggested minimum use over two years.

This data base of entries was sampled, selecting some examples of high frequency use and some examples of moderate use. It was beyond the scope and indeed the resources of this survey to apply high level discourse analysis to these samples. Instead interest focused on such elements as:

The kinds of practice recorded. An assumption of the design of the project was that interactions would be the basis of discussion within the Quality Learning Circle so references to these types of data were of importance.

Some sequences were scanned looking for suggestions that areas of interest may be revisited. The type and degree of student attainment data used in diary entries was of interest. References to current school initiatives, policy issues, principal intentions and comments, and suggestions from colleagues were relevant.

It was also of interest to get a sense of what focus the QLC discussions seemed to stimulate. Here the search was for evidence of pedagogical concerns as well as curriculum and pupil management issues.¹⁵

Pedagogical development

There were many examples of significant questioning of teaching technique and insightful reflection into what to do next. For example (F1 206) engaged with other teachers in a series of mutual observations. The reflections, in the web diary, following each of these events and their consequential QLC discussion, show rapid development of alternative and additions teaching methodologies. Other teachers in this group (F2 156) recorded similar patterns of activity. A feature of their entries was their recording of ‘trying out’ ideas and activities, and reading around the issue while carefully monitoring the effect.

In regard to student data and monitoring achievement (F3 151) devoted a number of entries to this focal point. There was a particularly interesting entry devoted to the issues around capturing this information and then deciding what to do with a head full of data from every student in the class. This teacher was pondering how to find the time to do the analysis and

¹⁵ See also the recently published article: Lyn Bird. Teaching as Inquiry: One school’s approach using a Macro Level Cycle. *Inquiry in Education*. Vol 2 Issue 1. 2011
Downloaded from: <http://digitalcommons.nl.edu/ie/vol2/iss1/> (15 June 2011)

incorporate the findings into the next lesson sequence without shortening the time devoted to teaching the subject.

There was also evidence of school wide policies and issues being reflected in the entries. In one case the school had decided to institute some programmes on phonic awareness and this teacher (F4 216) after completing some testing of her class determined to look for relationships between low phonic awareness on school entry and later inclusion of these children in reading recovery. She also wondered if there was any correlation between phonic awareness scores on school entry and the various different kinds of preschool that these children may have attended. In a later entry this same teacher wondered if metacognitive strategies may offer a way forward in the situation she faced.

In terms of confirming that teachers in the project are using the wider resources that Te Ariki offer, it was pleasing to see a reference to one of our podcasts in a teacher's reflective comment (F5 121). Occasionally, also there was a comment about how the QLC protocol was an effective method of staff development (E2 321).

In some cases the 'evidence of practice' collected and written up prior to the QLC discussion had additional reflection applied after the discussion. One (F6 2571), describing how a student was having great difficulty in a group situation was clearly resolved after the discussion with not only effective strategies but significant change to the manner in which this teacher would coach all students to get the best from these methodologies. This particular entry demonstrates the close link for teachers in resolving real issues and gaining access to a wider range of effective teaching strategies from evidence informed professional discussions.

Some of the entries (E6 336) recorded how using the reflective questioning protocol as opposed for example to providing an answer or a range of answers, so influenced teacher thinking that they determined to apply the same technique to learning sequences in their classrooms.

It was also evident from entries that groups were attempting to deepen the QLC conversations to include investigations of the underlying assumptions and theories behind particular teaching behaviours and strategies (H2 361). In doing this individuals were clearly extending their own reading and study to include a wide range of material.

The leaders' group discussions are also based around the QLC protocol that teachers follow. It was interesting to find some examples of how these leaders' sessions had translated to changed practice in an individual school (H5 376). This particular instance also contained how teachers viewed being asked to provide evidence of practice, evidence of progress towards goals as being analogous of them asking their students similar questions.

SUMMARIES OF QUALITY LEARNING CIRCLE DISCUSSIONS

These summaries followed the sequence set out in the reflective questioning protocols with suggested section headings being:

Questions about meaning raised ideas about:

Looking for lateral links followed:

The relevance of existing data was underlined by comments and questions about:

The group explored aspects of validation by talking about: and

Links to previous and future meetings:

Summaries were completed as an integral part of the QLC session and each participant was given a copy. A further copy was made available to the principal. (In the new version of the Web Diary released at the beginning of June 2011, this whole procedure has been digitalised with copies of the summary being automatically attached to each participant's journal, and notified to the principal.)

Throughout the trial period, regular samples of these summaries were gathered. They are of course context specific and the intention in collecting them was to gain some insights, into what teachers within the school were talking about, and also gain some impressions about the professional talk in the Leaders' Forums. Their major use, within the project is to provide a window for the principal in assessing the congruence of intents and outcomes. Of course, they also provide an ongoing thread for groups of teachers to chart their own development. One unexpected outcome was principals encouraging particular groups of teachers to share a particular discussion or an outcome from a discussion with the whole of staff. The summary sheet had alerted this principal to a particularly effective series of teaching actions arising from the professional interactions around some current practices in a specific Quality Learning Circle.

Sampling in this way, confirmed for the facilitators that by and large the reflective questioning protocol was used systematically by a large number of groups. As they moved through the sequence of themes it was clear that the discussions moved from 'what is' to 'what might be' and included some clear thinking about how any new learning could be validated. It was also noticeable how frequently participants shared further study or wider reading with each other as they pondered the particular issue being presented. Often, within the summary there was an intention stated, either to try out or to assess, prior to the next session. A dominant notion running through many of the examples was of trying to match teaching behaviour with the particular learning needs being discussed. In beginning the QLC discussion with some evidence of practice which usually raised a wider issue, teachers following these kinds of modus operandi were engaging in personal and professional engagement which often translated into amended practice. That these amendments themselves would then be available for validation and critique would seem to be applying a systematic and rational methodology of testing teaching across a wide range of outcomes. From many of the summary comments it was also apparent that teachers view these QLC sessions as a means of resolving issues and a stimulating forum for refreshing and sometimes refocusing their work. As distinct from some genre of coaching where teachers are guided to a pre-prepared position, the QLC style enabled professional discretion and personal flair while at the same time acknowledging proven pedagogical understandings. Furthermore, the grounding of all these discussions in the context of specific students and specific school goals proved highly motivating for most participants.

Samples of summaries were also collected from a range of Leaders' Forums, where the intention was to have a very similar QLC protocol operating. The feedback we have received on this aspect of the programme confirms the fact that principals operate in a complex, highly charged environment where much, if not most of what they do is in a very high stakes environment. As a consequence opportunities for open discussion with a group of trusted colleagues is a valued prospect. Considerable self-discipline was exercised by the Ariki groups in order to devote a substantial part of this meeting time to this form of reflective critique.

Whereas with teachers the stimulus interaction presented tended to be quite tightly based around learning and teaching, examples of summaries from leaders' groups tended to be more general. For example the presenter might present a 'learning journey' associated with a particular curriculum and how the analysis of effectiveness was made (G1 Sum 2010). The discussion would then follow the same sequence of themed questions. In another example, (F1 Sum 2010) a relatively new principal presented her explanation of how she was getting to grips with the current school culture and how she had begun to prioritise. The group then through questioning and comment encouraged her to broaden and widen 'what might be possible'. Both, nevertheless, demonstrate a reflective critique stance in that the participant is encouraged to devise a strategy which achieves that stated goal but takes into account the uniqueness of that school's particular circumstance and context. The reflective questioning protocol places emphasis on using teaching and learning data to inform the next step and predicting a means of validating the choices selected.

CASE STUDIES: Matching principal intents with student outcomes drawing on all the data streams

The nature of the processes within the project combined with the use of the web based diary enables school leaders to utilise information from five data streams. These are:

evidence of practice that the principals themselves have collected;
teacher evidence from all or a sample of teachers' web diary entries;
the summaries from within school QLCs;
the summaries of professional conversations from the Leaders' Forum; and
specific evidence of student learning during the period under study in the form of aggregated data.

A prime purpose in combining these resources can be for school leaders to track their intents and consequential outcomes. A case study demonstrating how this could be done was published in New Zealand Principal Magazine December 2010, Volume 25, No4, Pages 19-21 (http://www.nzpf.ac.nz/sites/default/files/NZP_T4_2010-web-new.pdf)

While not appropriate to reproduce a case study in full here, it is fitting that some analysis be done of how an investigation of these data sources by the principal can be a rich and fruitful source of assistance in considering 'what next'. It is important to note at the outset that the records exist as a consequence of the on-going school development initiative. There is no need to engage in further surveys, investigations, or indeed particularly focused conversations. This distinguishes this activity from some forms of self review which require quite considerable additional effort but the underlying purpose is similar. The principal wishes to be sure about what is currently working well, where more effort and attention needs to be placed, and what kind of activity should s/he prioritise over the coming months. We have characterised this activity as tracking intents and outcomes.

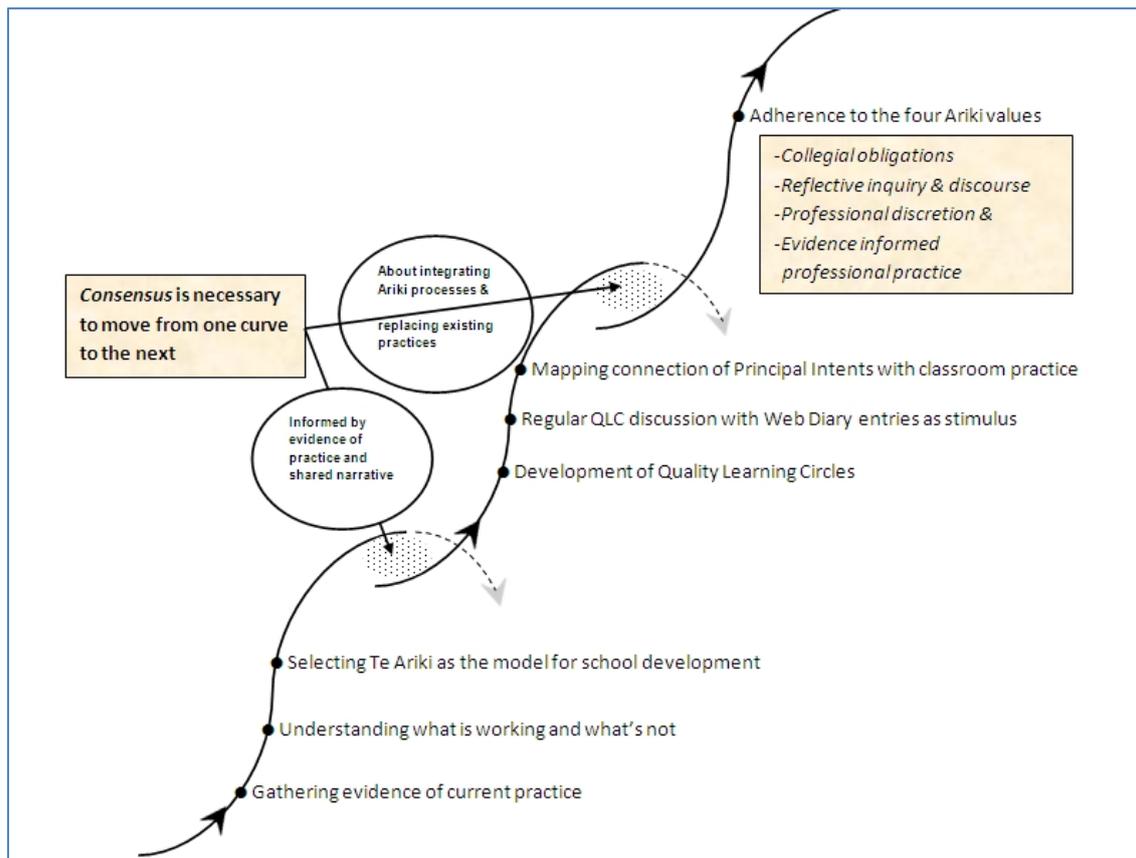
In the published example, the principal's intentions were derived from a Web Diary entry that had been completed prior to presenting at a Leaders' Forum. This pending activity had provided a stimulus for thinking carefully about a curriculum initiative which was currently under way. In understanding how teachers were progressing with this work, web diary entries from 8 teachers were surveyed. The QLC summary sheets which had been completed since the

programme had begun were collected, and reference was made to a Leaders' Forum summary sheet where the discussion had been about effective teaching. Finally the principal studied some graphical representation of student learning, within the chosen curriculum over the last two terms. As these various items were brought together the principal had a clear picture of what s/he needed to do next. Not featured in this particular case but an integral part of the Ariki methodology is the visit, as a learner to classrooms and schools. Such visits provide another significant plank in the whole verification process. An enhanced capacity to do these kinds of searches is being built in to the recently released new version of the Ariki Web Diary.

It is the immediacy and utility of this methodology which appeals to school leaders. Using the digital resources created within the Web Diary function, alongside some aggregated student data, the principal can make reliable decisions about what to put effort and energy into next, say within ten minutes. Furthermore, this can be done at any time in the school cycle and as frequently as desired. Periodically, the principal will wish to turn this analysis into a more formal document for presentation to Board of Trustees, or to ERO for example.

SOME CONCLUSIONS

Thinking through some of the implications arising out of the analysis of this programme it may be useful to represent the progress of Te Ariki as a *Sigmoid Curve*. In developing a theory for School development this writer characterised the process within this metaphor in a number of illustrations¹⁶. In a recent NZCER presentation by Rosemary Hipkins¹⁷ a similar diagrammatic approach was also taken.



SIGMOID CURVE - TE ARIKI PROJECT

The curved shape of the line indicates that principal development and school development is not necessarily a totally orderly process. Unexpected and incidents of high importance may interfere with the planned process of any innovation. In the diagram above the first curve acknowledges that there are a number of school wide activities, mainly about knowledge sharing, which need to be completed prior to engaging with the Ariki processes. This first arc then leads into substantial staff consensus to persist with the Ariki programme. If this consensus is not reached or indeed not sought, the model suggests that this initial activity of establishing a shared statement of the present school culture and progress will gradually decline. It is in this notion of consensus where this representation of the Sigmoid Curve differs

¹⁶ David Stewart. *Tomorrow's Principals Today*. Kanuka Grove Press, Massey University 2000:247-268

¹⁷ Rosemary Hipkins. Learning to reinvent the school curriculum. Presentation, at the NZCER conference, *Connected and Contagious*, May 12, 2011. Pp7.

from Hipkins' and that of Charles Handy¹⁸ who is often credited with beginning this form of organisational behaviour representation.

The second curve then begins with the development of the Quality Learning Circle process. Linking this protocol with the browser based Web Diary sets the process in action for principals to progressively use a systematic tool for connecting their intents with outcomes. It is assumed that there will be a very close relationship between the school's planned goals and current principal intentions and as a consequence principals will have a growing capacity to measure their progress towards these agreed outcomes, and as a result, modify or change their own behaviour in the light of the insights that they are obtaining.

As the Web Diary is organised around a number of conceptual themes, and participants are encouraged to collect evidence of their work, usually in the form of an observation about an interaction, it is a relatively simple matter to connect these entries with the appropriate teaching standards.

The diagram then goes on to propose that the consensus seeking which occurs at this stage is about how some of the school's existing practices can be subsumed into the Ariki process. Quite clearly, existing meetings will be high on the list, but other options would include current aspects of appraisal processes, extending inquiry techniques across teaching methods, using these ideas to address and solve existing problems say in behaviour modification, and moving more generally to this process to address curriculum implementation. Material in the previous section demonstrated how schools were working in this way through the trial period and gave some indication that integration was occurring.

By using the Stake methodology as the stimulus for this programme evaluation, we have also demonstrated how the *constellation of values* can aid in the production of some overarching notions which we have called *Ariki values* in the box at the top of the third curve. These would then inform and influence the programme in subsequent cycles.

This is a whole of school programme which begins with teachers and principals recording what they currently do, taking that to a forum where this *instance* is critiqued in a planned and thoughtful manner which invites reflection from all who are present. A concise record of this discussion is kept for reference by all who attended the session. These professional discussions then are evidence *informed* sessions where *what is* can be examined for meaning, for eliciting the underlying assumptions, and for connections to other teaching and learning, while at the same time *what might be* can be considered both from an available literature viewpoint and of course, from original thinking from within the group. A strength of the Ariki approach is that this activity takes place at two levels; within the school with teacher groups, and across schools with the Leaders' Forums.

We have also trialled the same approach with two groups of isolated country schools using audio graphic technology.¹⁹ They followed much the same approach as schools in the face-to-face mode but met with us, on line, twice a term for the leaders' sessions. Here they took turns to display their web diary entry on all our screens before we engaged in the reflective group protocols.

One of the disadvantages of a decentralised schooling system such as we maintain is that individual schools are constantly bombarded with information and ideas, and occasionally

¹⁸ Charles Handy. *The Empty Raincoat: makings sense of the future*. Hutchinson London 1994:50-51

¹⁹ See Ken Stevens and David Stewart. *Cybercells: Learning in actual and virtual groups*. Thompson Learning, Melbourne 2005.

instructions, about how to do it all better. Then, schools are very much on their own as to how they integrate the important ideas into a whole of school strategy. They don't get a great deal of help with the "what will I do tomorrow?" question. In a real sense teachers are often portrayed as having problems in need of repair. The attraction of Te Ariki, for many, is that principal and staff are presented with a process, supported by appropriate resources and protocols, that gets everyone working together with the focus quite clearly on the improvement of teaching and learning. Significantly, they are offered a development method which makes them the agent of their own and their colleagues learning. There is a wide and strong literature for reflective conversations amongst school staff and a recent Victoria University Masters' Thesis gives an indication of the scope and power of this concept²⁰.

For principals, the Ariki process not only offers a mechanism for stimulating and empowering the learning of their teachers in direct relation to the educative and pedagogical issues that they face with their current students, but at the same time enables them, as leaders, to make more frequent and more informed judgement calls about their own actions. During this programme evaluation period some reported during phone calls, the writer was conducting, that a new sense of purpose, enjoyment and satisfaction had been injected into their work. As the various elements of the programme combine together, many principals find the Ariki protocols a coordinating influence in keeping their focus firmly on what happens in the classroom. The various records that are compiled allow them to clearly illustrate to others, such as Boards and ERO the detail of this dynamic. Leaders' Forums are developing where a similar close focus on teaching and learning stimulates the further cross fertilisation of worthwhile practices. Principals attending these forums need to prepare short 'evidence of practice' narratives to share with each other. This discipline further enhances their work in their own school.

There is a great deal of evidence to support the notion that leadership practice should be widely distributed across the school. Elmore (2006:8) argues that leadership practice rather than being an attribute of the leader, "...is a collection of patterned actions based on a body of knowledge, skill and habits of mind that can be objectively defined, taught, and learned." This is precisely what we would argue happens in our Quality Learning Circles. Schools implementing the Ariki model also embrace the concept of all teachers taking leadership roles in QLC from time to time.

As the section on *the kinds of data generated* demonstrated, all the processes contributed to the whole. Of prime importance, however, was the ability of principals to scan across all the various threads in a form of immediate self-review, and form a view of the connectiveness of their own intentions with teacher behaviour and student attainment. This enhanced their judgement and enabled rapid response with appropriate action.

For many principals, Te Ariki appeals because it offers contiguously, a school development progression which builds on educators' penchant to talk about their work with their colleagues, and a means of informing their decision making with high quality evidence of practice. The appeal for teachers is that these professional conversations with their peers are sharpened and focused and they feel both challenged and stimulated by the interaction. For all, the reality of being responsible for their own learning and consequential practice brings a heightened sense of professionalism and empowerment. Schools are more successful as a result.

²⁰ Jeannette Grundy. *What counts in the development of teachers' learning conversations?* Unpublished Masters' Thesis. Victoria University. downloaded 12 June 2011 from: <http://researcharchive.vuw.ac.nz/bitstream/handle/10063/1395/thesis.pdf?sequence=1>

SOME RESEARCH OPPORTUNITIES

As with all inquiries of this nature, the more intensive the examination, the more we discovered what we didn't know. Of course, most of our understandings are from correlations and it is really difficult to discover cause in these environments. Nevertheless there are some quite clear areas which could be investigated in a non-obtrusive manner.

With those schools who have been in the programme for a time it would be useful to know the extent to which former existing processes have been integrated into the Ariki plan. These might include appraisal, classroom visits, some reports to board and other agencies and staff meetings.

The manner in which the Leaders' Forums operate could be a study in its own right. Here the links to and from the forum by the participating schools would be of interest as would the kinds of evidence of interactions that were shared.

A study based around principal judgement and action through the serial study of congruence of principal intent and classroom actions could inform the whole field of school self review.

We trialled a form of pre and post questionnaire as a mechanism for deciding about 'worthwhileness'. There is clearly much more scope for learning about whether or not this kind of sampling could lead to more effective teaching and learning or even more effective judgement.

A close examination of the protocol of reflective questions linked with the consequences in classroom actions would be a rich vein of interest.

We could encourage individuals from right across the school to compile simple accounts of their own progress through the programme, say over three or four terms and to attach to this account samples of records which supported their comments.

We will continue to use our construct of Stake's *responsive evaluation* to gather material for articles and presentations.

THE NEXT PHASE

The Ministry of Education trial is now complete and NZEI and NZPF have together formed a charitable trust, *Te Ariki Charitable Trust* to continue the project. Schools themselves now have to fund the project as the Ministry is not currently funding programmes in this area. With the exception of the Web Diary which has been completely rewritten, the project continues very much as outlined in this report.

Forty seven schools are participating in this cycle which began at the beginning of term two, 2011, and a further seventy have expressed their intention to join term one 2012. There is a great deal of enthusiasm in the schools who have decided to participate and this augers well for the long term survival of the concept.

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REFERENCES

1. Barber, M. & M. Mourshed. (2007). How the world's best-performing school systems come out on top McKinsey & Company.
2. Barth, R. (Improving Relationships Within the Schoolhouse [Web Page]. [2007, January 11].
3. Lyn Bird. Teaching as Inquiry: One school's approach using a Macro Level Cycle. Inquiry in Education. Vol 2 Issue 1. 2011
Downloaded from: <http://digitalcommons.nl.edu/ie/vol2/iss1/> (15 June 2011)
4. Clark, S. H. Timperley. et. al. (2003). Unlocking formative assessment: Practical strategies for enhancing students' learning in primary and intermediate classrooms. Wellington: Hodder moa Beckett.
5. Collins, G. (The Current Work of New Zealand Teaching Principals [Web Page]. URL <http://www.leadspace.govt.nz/leadership/articles/current-work-of-principals.php>.
6. Cushman, K. (How Friends can be Critical as Schools Make Essential Changes [Web Page]. URL <http://www.leadspace.govt.nz/leadership/articles/how-friends-can-be-critical.php> [2007, January 10].
7. Elmore, R. F. (2004). School Reform from the Inside Out: Policy, practice and performance. Cambridge MA.: Harvard Education Press.
8. Elmore, R. F. (2006). Leadership as the practice of improvement. International Conference OECD "International Perspectives on School Leadership for Systemic Improvement" London UK.
9. Fullan, M. (2008). The Six Secrets of Change. San Francisco: Jossey-Bass.
10. Hackman, J. R., & Wageman, R. (2007). Asking the right questions about leadership: Discussion and conclusions. American Psychologist. 62(1), 43-47.
11. Hargreaves, A. (2008). Leading Professional Learning Communities. Moral choices amid Murky realities. Alan M. Blainstein, Paul D. Houston, & Robert W. Cole (Editors), Sustaining Professional Learning Communities (pp. 175-197). Thousand Oaks California: Corwin Press.
12. Hill, J. & K. Hawk. (Aiming for Student Achievement: how teachers can understand and better meet the needs of Maori and Pacific Island Students [Web Page]. URL <http://www.leadspace.govt.nz/leadership/articles/aiming-for-student-achievement.php> [2007, January 10].
13. Kofoed, W. J. (2009). Written Reporting: Strengthening learning partnerships through purposeful reporting. Auckland: Auckland University, Unpublished Doctor of Education thesis.
14. Lakoff, G. & M. Johnson. (1980). Metaphors we live by. Chicago and London: The University of Chicago Press.
15. Levin, B. (2008). How to Change 5000 Schools. Harvard Education Press.
16. Lovett, S. The Quality Learning Circle: Enhancing Teacher Learning. NEMP Probe Study Findings.
17. Lovett, S. (2002). Teachers' talk helps learning: The quality learning circle approach. Set 1.
18. Lovett, S. & A. Gilmore. (2003). Teachers' Learning Journeys: The quality learning circleP as a model of professional development. School Effectiveness and School Improvement, 14(2), 189-211.

19. Lovett, S. & P. Verstappen. (2004). Improving teachers' professional learning: the quality learning circle approach. New Zealand Journal of Educational Leadership, 19(Number 2), 31-43.
20. Robertson, J. & L. Murrhly. (Developing the person in the professional: Building capacity of teachers for improved student learning: The missing basket - personal learning [Web Page]. URL <http://www.leadspace.govt.nz/leadership/articles/the-missing-basket-personal-learning.php> [2007, January 10].
21. Robinson, V., Hohepa, M., & Lloyd, C. (2009). School Leadership and Student Outcomes: Identifying what works and why. Best Evidence Synthesis Iteration [BES]. Wellington: NZ Ministry of Education.
22. Spillane, J. P. (2006). Distributed Leadership. San Francisco: Jossey-Bass.
23. Stake, R. E. (2004). Standards-Based and Responsive Evaluation. Thousand Oaks, CA : Sage Publications.
24. Stevens, K. & D. Stewart. (2005). Cybercells: Learning in Actual and Virtual Groups (Chapter 7). Melbourne: Thompson/Dunmore Press.
25. Stewart, D. (1999). Principal Appraisal : Who Benefits? The International Principal, 5(2).
26. Stewart, D. (2000). Tomorrow's Principals Today. Massey University, Palmerston North: Kanuka Grove Press.
27. Stewart, D. (2002). What does a reflective principal do? SPANZ Journal, (August), 7-11.
28. Stewart, D. (2003). Principal Accreditation - Moving forward. The Principal, 18(1), 4-7.
29. Stewart, D. (2005). Digital Portfolio: The power of the reflective group. Keynote Address to Eifel Conference.
30. Stewart, D. (2006). Digital Portfolios: Records and reflections for personal or group development. Occasional Papers. NZEI. Te Riu Roa New Zealand Educational Institute.
31. Stewart, D. (2008). From Walk to Talk. An Occasional paper on school leadership issues for the Ministry of Education.
32. Stewart, D. (2009). The Arika Project: Collaborative Critique based on evidence of practice. New Zealand Principal, 24(1), 4-7.
33. Stewart, D. (2010). The Arika Project: Reflective Leadership and Collaborative Schools. New Zealand Principal, 25(4), 19-21.
34. Stewart, D. & L. Bird. (2009). Rich Conversation and Critique: Professional interactions at the heart of Principal Appraisal. New Zealand Principal, 24(2), 4-6.
35. Stewart, D. & K. Tester. (2010). ArikaRural: A Cybercell Trial. New Zealand Principal, 25(2), 13-15.
36. Treasury Board of Canada, Secretariat. Program Evaluation Methods: Measurement and Attribution of Program Results. (Third ed)