USE OF A DUAL-TARGET APPROACH TO ACHIEVING PEDAGOGICAL CHANGE IN SCHOOLS

Presentation of a roundtable discussion of research in progress to the ICSEI Congress, Limassol, Cyprus, 4 – 7 January, 2011

Jean Russell
Graeme Jane
Graham Marshall

Melbourne Graduate School of Education, The University of Melbourne

ABSTRACT
An Australian project, currently in progress, focuses on the difficult but vital issue of achieving change in teacher pedagogy. It is generally held that the quality of teaching is the most powerful influence under the control of the school for achieving enhanced student learning. At the same time, engendering improvement in teaching is not easy. It is argued that bringing about pedagogical change is facilitated if a dual-target approach is adopted, especially an approach using feedback and evidence as a basis for professional learning.

On the one hand, there is highly specific, detailed and diagnostic feedback from a class group to the individual teacher about the students’ experience of learning in that classroom, with teachers having the chance to evaluate the accuracy of their own perceptions of students’ experience against the responses of the students. On the other hand, there is targeted, diagnostic feedback at the whole-school level for the leadership team from individual team members and from the teachers in the school about leaders’ beliefs and practices that help or hinder teachers in the quest for pedagogical effectiveness. Original instruments developed, processes followed and patterns of results to date will be discussed.

Those attending the roundtable will be asked to participate in discussion of the dual-target approach, the questionnaire instruments used, the processes of professional learning, the patterns of results to date, and the ways in which the challenges of real-life research such as this can be better met.

INTRODUCTION
Since 2008, the Northern Metropolitan Region (NMR) of the Department of Education and Early Childhood Development (DEECD) in Victoria, Australia, has engaged in a major school improvement strategy with the aim of raising regional achievement levels that were amongst the lowest in the state. It specified the goal of improved achievement not only in the basics (literacy and numeracy) but also, importantly, in curiosity (and thus engagement in learning) of each child in every one of its 203 schools. Its school improvement strategy was named Powerful Learning; the strategy gives clear recognition to the vital role of excellent teaching practice and school leadership in effecting improvement in learning. The NMR umbrella Achievement Improvement Zones (AiZ) Project (http://www.aiz.vic.edu.au/) encompasses several contributing projects that dovetail together to help schools put powerful learning into practice.
The focus of the project on which we are reporting is the achievement of pedagogical change and improvement. Many factors impinge on the quality of students’ learning in schools. There is general agreement, however, that the most powerful and pervasive influence on students’ learning within the control of the school is the quality of teaching that students experience (Hattie, 2003; Barber and Nourshed, 2007).

Different strategies have been proposed and explored as ones that are likely to bring about change in teaching practices, though it has been acknowledged that such change is not always easy to achieve (Leat, 1999). Such strategies include team teaching, professional learning teams, mentoring, individual professional learning plans, interpretation and use of data, peer observation, student feedback, and monitoring and interpretation of student outcomes.

Provision of targeted feedback to students is held to be crucial to the enhancement of their learning and is particularly so when combined with effective instruction (Hattie and Timperley, 2007). In like manner, targeted feedback to teachers, when combined with effective professional learning, is a powerful strategy for enhancing teachers’ pedagogy. All too frequently, the content of student feedback questionnaires is general in nature and results are given at whole school or at year levels. What is needed is feedback to the individual teacher from the individual class, with the feedback being about specific, detailed aspects of classroom teaching practice. It is essential to get right inside the classroom door and discover how students in a particular class experience the teaching and learning that takes place there.

However, it is insufficient to try to achieve improvement in teaching and learning throughout the whole school by working at the individual classroom level alone. Conditions at the school level affect the likelihood of achieving whole-school pedagogical improvement. The role of the leadership team in enabling whole-school improvement in pedagogy is vital.

School leadership has the capacity to influence student outcomes indirectly, through leadership impact on teachers and teaching quality (Hallinger and Heck, 1998). In the perception of teachers, there is a strong association between leadership practices and quality of teachers’ work (Russell, Mackay and Jane, 2003). These leadership practices establish the whole school direction, organisation and conditions that make continuing improvement in teaching and learning possible. Leaders who create a stimulating, collaborative professional learning community, with shared vision and goals for learning, and a strong sense of teacher efficacy and collective responsibility, enhance teacher development and student success (Robinson, Hohepa and Lloyd, 2009).

Learning-focussed leadership implies that leadership teams test all planning and decision-making in the school against the criterion of its potential for improving teaching and student learning (Dimmock, 2000). A critical issue is thus whether the leadership team has a powerful focus on leadership for learning, with a clear, meaningful, shared vision (based on shared values, beliefs and understandings) of desired qualities and characteristics of student learning outcomes to guide them through the innumerable tasks and decisions they engage in.

Such a conscious, coherent mind-set and focus helps to ensure that decisions about each aspect of school practice (for example, whole-school shared goals, strategic planning, curriculum, monitoring and assessment, timetabling, physical space arrangements, teacher learning, teacher teaming, class formation, student attendance,
school culture, allocation of financial and technological resources, community relationships) are made consistently on the basis of that shared vision for teaching and learning. Coherent, consistent learning-focused leadership means doing all those things that best enable teachers to make a difference to student learning. “Leaders enable teachers to help students to learn.” (Russell, 2002:34)

Again, targeted feedback is the tool of choice. Feedback from members of the leadership team and from teachers can be used to provide leaders with an evidence base on which to plan and undertake improved learning-focused leadership strategies. Building the capacity of school leaders to improve student learning is essential. According to Fullan (2003:102), capacity-building is 'about giving people the training, resources, and opportunity to pursue complex tasks and then to hold them accountable'. Capacity-building is closely allied to learning. Increasing leadership capacity in schools means, in turn, increasing the capacity of others in the school. Building capacity is in essence the building of a learning community, one with the skills, culture and internal conditions that enable it to manage productive change (Harris and Lambert (2003).

Our project has adopted this dual-target approach to achieving change and improvement in pedagogy. One target is the pedagogical approach of the individual teacher in the individual classroom, the other is the leadership team and its role in providing conditions that enable whole-school improvement in pedagogy.

RESEARCH QUESTIONS (RQs)
Two sets of research questions were established, one set for the focus on the individual teacher-classroom aspect of the project, the other for the focus on the leadership for learning aspect.

Feedback on Teaching and Learning
1. Do the questionnaire scale ratings differentiate among aspects of a teacher’s practice in terms of relative strengths?
2. Do teachers’ perceptions of their practice differ from those of their students in the initial term 1 questionnaire?
3. Do student give more positive ratings in the targeted aspects of practice in terms 2 and 3?
4. Do student and teacher perceptions become more closely aligned in terms 2 and 3?
5. Is there greater change when subject area or year level is held constant within the mentoring group?

Feedback on Leadership for Learning
6. Do the questionnaire scale ratings differentiate among aspects of leadership practices in terms of relative strengths?
7. Do leaders’ perceptions of their practice differ from those of the teachers in the initial term 1 questionnaire?
8. Do leaders and teachers give more positive ratings in the targeted aspects of leadership practice in term 4?
9. Do teacher and leaders perceptions become more closely aligned in term 4?

THE FEEDBACK INSTRUMENTS
The purpose of the feedback instruments was to give evidence to individual classroom teachers and school leadership teams that could be used as a basis on
which to decide the focus for the improvement they each wanted to achieve via professional learning during the year. In the case of the classroom teacher, feedback would come from students, as indicated. Additional information would also be provided by a comparison between students’ reported experience of the classroom and the teacher’s own perceptions of how those students were experiencing teaching and learning in that classroom.

In the case of leadership teams, feedback was sought from teachers about their experience of leadership strategies relating to their teaching and learning, while leaders’ own perceptions were also sought, making it possible to examine the congruence between teacher and leader perceptions. This feedback established an evidence base for targeted professional learning goals for the leadership team in the ensuing year.

1. Feedback on Teaching and Learning Questionnaire (FTLQ) (Secondary)

1.1 Purposes
To provide a diagnostic instrument that will enable individual teachers to strengthen their own pedagogical practices through use of data from
- individual class group(s) about their experience of different aspects of the teacher’s practice and
- discrepancies between students’ feedback and the teacher’s own estimation of those same aspects of their practice.

To use the feedback instrument within a professional learning context that entails
- interpretation of the feedback data;
- individual professional development plans;
- small group mentoring and support;
- measurement of change.

1.2 Development of the FTLQ
The FTLQ has been in the process of development for several years. High quality pedagogy is defined in relation to the kinds of learning outcomes that are desired. Thus, the first step was to establish the type of learning goals sought in today’s world. These encompass much more than the basics of literacy and numeracy. In essence the challenge is to develop the capacities that will enable students to live successfully in a knowledge society within a world of change, an environment that requires continued, lifelong learning (Beare, 2001, Dalin and Rust, 1996; Delors, 1996). These include the capacity and motivation to continue to learn throughout life; to play an active role in their own learning; to think deeply and logically; to obtain and evaluate evidence in a disciplined way; to be creative, innovative, resourceful people; to solve problems by drawing on multiple disciplines; to plan independently but also collaborate and work in teams; to communicate ideas successfully; and to have a sense of self-worth (Ministerial Council on Education, Employment, Training and Youth Affairs, 2008).

The research literature was then consulted to determine the major pedagogical constructs that impact on the achievement of ‘good learning’ of this type. Work in the following areas was seen to be pertinent because of their role in student learning: goals for twenty-first century learning; self-regulated learning; achievement goal theory; deep and surface learning; constructivism; metacognition; higher order, critical, creative and complex thinking; roles of effort, ability and competition in learning; dispositions; personalisation and individual differentiation; motivation and goal-directedness; engagement and energy investment; interest and curiosity;
attainment, utility and intrinsic learning values; emotion; beliefs about self as learner; expectancy beliefs; self-efficacy; self-worth; control and attribution beliefs about learning; agency beliefs and opportunities for student agency and ownership of learning; collaborative learning; communication; well-being; achievement anxiety; learned helplessness and self-handicapping behaviour; characteristics of student-teacher relationships; peer relationships; classroom culture and climate; behaviour management and orderliness; authentic pedagogy; assessment and feedback; teacher beliefs about learning; teacher professional learning; teacher knowledge of content and process; teacher expectations; teacher efficacy; teacher engagement.

Given the range of possible aspects of the teaching-learning process that could be included in the questionnaire, it was essential to establish a framework that organised the content of the questionnaire and at the same time gave a basis for prioritising possible content. Following early drafts, the organising framework ultimately used was based on the concept of Newmann, Whelage and Lamborn (1992) that two global aspects of school life affect student engagement in learning: the culture of work and learning offered to students and the culture of relationships and interactions they experience. Constructs and items to measure these two aspects were developed on the basis of four domains: two work-related domains (The Nature of Student Work; The Development of Student Skills) and two domains focused on relationships and interactions (Classroom Culture; Classroom Organisation). These domains have been identified separately for the purposes of structuring the questionnaire, but they are in fact interactive. Each domain interacts with all others, together creating the total classroom experience of the student.

The number of items was reduced and scales refined through a two-stage piloting process in 2009, involving 884 students and 40 classes in 12 schools in total. Data from the pilot programs made it possible to determine which set of inter-related items best represented each construct. The final questionnaire of 115 items (114 substantive and one demographic) defines 23 scales across the four domains of student classroom experience. The decision about the number of scales and items to be included resulted from the need to achieve a balance between the level of specificity that would be useful for diagnostic purposes and the length of a questionnaire suitable for secondary students.

Two procedures were used in the establishment of scales. Principal components factor analysis established the unitary nature of the underlying dimension represented by a scale, indicated the percentage of variance accounted for by the set of items, and gave the weighting of each item’s contribution to the scale. The reliability of the scales was assessed using Cronbach’s alpha, a measure of internal consistency, thus allowing any problem items to be identified and excluded.

1.3 The 2010 FTLQ
Appendix 1 provides the framework of the FTLQ, the scales within each of the four domains, a description of the construct measured by each scale, and the statistical properties of the scales.

Item order in the questionnaire is randomised. Each item is rated on a five-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire is presented and completed on line. While time taken varies with levels of literacy and task engagement, for example, the average time taken by students during the first administration of the questionnaire in 2010 was approximately 23 minutes.

---

1 A primary school version of the FTLQ (for years 5-6) has been piloted in 2010.
The questionnaire is completed by two sets of respondents: the students within a particular class and the teacher of that class. The results constitute feedback from two perspectives that can be compared: the students’ experience of the teaching and learning in the class, as well as the accuracy of the teacher’s perception of the students’ experience.

Separate Domain questionnaires have also been formatted, so that classes responding to the FTLQ during the second administration have the opportunity to complete only the items in the domain pertinent to the teacher’s chosen focus for the year.

2. Leadership for Learning Questionnaires (LfLQs)

2.1 Purposes
To provide a general diagnostic instrument that will enable the leadership team to strengthen its leadership for learning through the use of data from

- teachers and their experiences of the team’s leadership practices that build good teaching and learning approaches in the school,
- members of the leadership team and their perceptions of their leadership efficacy, strategies and professional culture of the school, and
- discrepancies between teachers’ feedback and the leadership team’s own estimation of those same aspects of their practice.

To use the feedback instrument within a professional learning context that entails

- interpretation of the feedback data;
- a leadership team professional development plan;
- action based on that plan;
- measurement of change.

2.2 Development of the LfLQs
Based on work undertaken during the Middle Years Research and Development Project (1998-2000), the LfLQs were developed in 2001 and have been used to provide an evidence base for some 117 leadership teams engaged in learning-focussed leadership development programs since then. Like the FTLQ, these questionnaires target the type of learning goals that are seen to be essential for successful living in the world of the twenty-first century. Benchmark² ratings for items and scales have been calculated separately for primary and secondary schools to provide schools with some guidance for their interpretation of results.

The questionnaires are based on the major constructs that the research literature indicates are important to pedagogy and learning, as outlined for the FTLQ. In addition, major constructs from the leadership literature were also examined in order to select those that had particular impact on teacher pedagogy and effectiveness, constructs such as leader efficacy; learning-focussed leadership; leadership teams; distributed leadership; leadership influence on learning; professional learning; whole-school change; professional culture; teacher beliefs about learning; vision; school learning values; leadership strategies; teacher-leader relationships; power; teacher agency; competition and co-operation; evidence-based approaches; school effectiveness and school improvement.

² The benchmarks are the average scores calculated from leadership team responses in 45 government and Catholic schools across Victoria during the period 2001-2009.
The two procedures used in the establishment of scales for the *FTLQ* had also been used in determining the scales and their component items for the *LfLQs*: principal components factor analysis for establishing the unitary nature of the underlying dimension and Cronbach’s *alpha* for measuring internal consistency.

2.3 The 2010 LfLQs

The *LfLQs* have been designed as instruments that provide leadership teams with targeted feedback from their own members and from the teaching staff about the quality of leadership for learning in the school, i.e. about leaders’ beliefs and practices that enable teachers to improve whole-school pedagogical effectiveness. Responses to the leader and teacher questionnaires give insight into the way the two groups, teachers and leaders, experience their school environment, particularly within the context of improvement of student learning. The two questionnaires are designed so that direct comparisons of leader and teacher perceptions of important aspects of culture and improvement practice can be made.

Appendix 2 presents the structure of the two LfLQs, the scales within each of the two questionnaires, a description of the constructs being measured by the scales, and the statistical properties of the scales.

Item order in the questionnaire is randomised. Each item is rated on a five-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire is presented and completed online.

3. On-line Questionnaire Presentation and Reports

Both the *FTLQ* and the *LfLQs* were presented to respondents for completion online. For the *FTLQ* teachers could decide whether to have students complete the questionnaire together in class time or individually in their own time. Most adopted the former approach for the sake of efficiency.

Each school designated a member of staff to be the School Program Co-ordinator (SPC) for the purpose of preparing for on-line questionnaire completion. The task of the SPC was to access the on-line *Certain Knowledge Administration Portal*, record user details of classes/students, teachers and leaders in relation to the specific questionnaire to be completed, record the release start and end date for user access to the questionnaires, and advise users of how to log in to the system.

Automated on-line reports were available immediately to participating schools. *FTLQ* reports could be accessed only by the teacher of the class(es) from whom the feedback was obtained. *LfLQ* reports were made available to the school principal. Reports of both questionnaires contained both graphical and numerical information, the latter including means, standard deviations and scale scores. *LfLQ* reports also contained benchmarks that could be used as a basis for comparison with school results.

THE PROJECT IN PRACTICE

1. A regionally-based developmental program

The project was funded by the Victorian Department of Education and Early Childhood Development (DEECD) and established as a developmental program for
NMR secondary schools. The Region arranged for the participation of the secondary schools involved: 25 schools (involving 2,942 students in 175 classes from years 7 to 12, taught by 126 different teachers) participated in the use of feedback to individual classroom teachers (FTLQ) and 26 schools (219 leaders and 989 teachers) in the feedback to leadership teams (LfLQs), with 22 of these schools undertaking feedback at both the individual classroom and whole-school levels. A Project Team consisting of the project consultants and senior regional staff monitored the implementation of the project.

In essence, the task of the project consultants was to provide school-based participants with pertinent questionnaire feedback to be used as an evidence base for stimulating and supporting pedagogical change at classroom and whole-school levels. Consultants also committed to conducting activities at a regional level to support user understanding of the questionnaires, their administration, and the interpretation of reports.

2. Model for obtaining and using feedback

There were similarities in the recommended process for making use of the FTLQ and the LfLQ feedback. In both cases, the process centred on reflection on the questionnaire feedback, the setting of targets for change, planning and using learning strategies to achieve change, then monitoring and evaluating the results over time.

In terms of the FTLQ, the following process was used.

- Principals arranged for teacher selection into the program. Teacher participation was voluntary and class feedback reports were provided on a confidential basis to the teacher. Participant teachers within each school formed triads or small mentoring groups/professional learning teams.
- Each teacher could choose one or two classes for involvement in the program. It was suggested that teachers might select a class whose responses seemed puzzling, or classes that offered comparisons on the basis of subject or year level. No individual class was to be asked to respond to the questionnaire in relation to more than one teacher.
- Teachers spent time preparing students for the questionnaire completion by discussing with them purpose, nature, confidentiality and potential helpfulness of the FTLQ. They were to emphasise to students that this was an opportunity for students to take an active part in shaping their own learning and also to signal that there would be a discussion of results afterwards.
- Students and teachers completed the on-line questionnaire and teachers received the on-line report.
- Teachers discussed with the students their experiences of the questionnaire and also particular aspects of the results that might become the focus of the teacher’s targets for change.
- Teachers shared their results in their triads, interpreting and reflecting on the meaning of the evidence, and developing professional learning plans aimed at achieving desired changes.
- The triads undertook collaborative strategies of professional learning, including observation of one another’s classroom teaching in order to provide professional feedback about targeted areas of pedagogy.
- The FTLQ or one of its Domain questionnaires was re-administered later in the year in order to monitor and evaluate change.
Use of the *LfLQs* followed a similar collaborative learning process, with the professional learning team being the school’s leadership team and the feedback coming both from the team members themselves and from the teaching staff.

3. Support given

Project consultants provided several forms of support to the region and to school-based participants.

- Briefings for Regional Network Leaders and for Critical Friends who give direct support to schools
- Briefings for Principals, teacher participants and SPCs
- Detailed written Guides to the *FTLQ* and the *LfLQs*, together with a guide for the SPCs, all posted on the Regional website ([http://www.aiz.vic.edu.au/Documents/?Pg=12](http://www.aiz.vic.edu.au/Documents/?Pg=12)) Two Regional Office staff also gave much appreciated help to SPCs who had queries about the on-line system.
- Meetings with school-based staff to assist with interpretation of results
- Two podcasts providing assistance with interpretation of results, one for the *FTLQ* users and the other for the *LfLQ* users ([http://www.aiz.vic.edu.au/Documents/?Pg=16](http://www.aiz.vic.edu.au/Documents/?Pg=16))
- Presentation to a regional Principals’ Forum and to four teacher twilight meetings, giving an overview of the results obtained during the year

**RESULTS TO DATE: SOME PATTERNS IN THE DATA**

**INDIVIDUAL TEACHER FEEDBACK:**

*Feedback on Teaching and Learning Questionnaire*

Analysis of results is at an early stage at present. However, some of the early patterns found in the data can be reported. These student response patterns are derived from the first administration data collected in the first or second school term. Student responses were aggregated to class level prior to analysis, so that class size would not bias the results.

1. Comparison of the four domains

Table 1  Average student responses to the four domains

<table>
<thead>
<tr>
<th>Domain</th>
<th>Mean</th>
<th>SD</th>
<th>Lowest Class Mean</th>
<th>Highest Class Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature of Student Work</td>
<td>3.66</td>
<td>0.44</td>
<td>2.50</td>
<td>4.90</td>
</tr>
<tr>
<td>Development of Student Skills</td>
<td>3.72</td>
<td>0.38</td>
<td>2.78</td>
<td>5.00</td>
</tr>
<tr>
<td>Classroom Culture</td>
<td>3.83</td>
<td>0.41</td>
<td>2.70</td>
<td>4.89</td>
</tr>
<tr>
<td>Classroom Organisation</td>
<td>3.80</td>
<td>0.38</td>
<td>2.80</td>
<td>5.00</td>
</tr>
</tbody>
</table>

The two work-related domains, Nature of Student Work and Development of Student Skills, receive significantly lower student ratings than the two domains concerned with relationships and interactions. A repeated measures analysis of variance shows that there is a significant main effect for domain, with each paired comparison being statistically significant at the .001 level and the effect size being .39.
The range of class means within each of the domains, together with the standard deviations, indicates considerable variation in the quality of individual classrooms, based on students’ rated experience in those classrooms. The variation is greatest in the Nature of Student Work domain, the domain most central to the purpose of schooling.

2. Scale ratings across the domains

Table 2  Class responses to scales in the Nature of Student Work domain

<table>
<thead>
<tr>
<th></th>
<th>Value of Work</th>
<th>Challenge of Work</th>
<th>Work Interest</th>
<th>Work Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.85</td>
<td>3.79</td>
<td>3.52</td>
<td>3.52</td>
</tr>
<tr>
<td>SD</td>
<td>0.44</td>
<td>0.38</td>
<td>0.55</td>
<td>0.55</td>
</tr>
</tbody>
</table>

Responses to the four scales in the Nature of Student Work domain indicate the reason for this domain receiving a lower overall response than other domains did. Paired sample t tests show that students’ perceptions of the level of interest engendered by the work given them are significantly less positive than their perceptions of the Value of Work (p <0.001) and the Challenge of Work (p <0.001). The same is true when student responses to the Work Activities scale are compared with their responses to the Value of Work (p <0.001) and the Challenge of Work (p <0.001). The size of the standard deviations for the Work Interest and Work Activities scales is higher than for the remaining two scales indicating greater variation in students’ experiences of quality teaching in these critical areas.

Table 3  Class responses to scales in the Development of Student Skills domain

<table>
<thead>
<tr>
<th></th>
<th>Information Skills</th>
<th>HOT Skills</th>
<th>Collaborative Skills</th>
<th>Metacognitive Learning Skills</th>
<th>Metacognitive Self-evaluation Skills</th>
<th>Decision-making Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.74</td>
<td>3.84</td>
<td>3.66</td>
<td>3.81</td>
<td>3.70</td>
<td>3.64</td>
</tr>
<tr>
<td>SD</td>
<td>0.39</td>
<td>0.39</td>
<td>0.42</td>
<td>0.43</td>
<td>0.39</td>
<td>0.46</td>
</tr>
</tbody>
</table>

Most scales received reasonably positive responses from classes, especially (and somewhat surprisingly) the Higher Order Thinking Skills scale and the Metacognitive Learning Skills scales. Students were less positive in their perceptions of their opportunities to take part in making decisions about their own learning and in working in groups with others.

Table 4  Class responses to scales in the Classroom Culture domain

<table>
<thead>
<tr>
<th></th>
<th>Goals &amp; Expectations</th>
<th>Effort &amp; Achievement</th>
<th>Positive Attitude</th>
<th>Respect</th>
<th>Support</th>
<th>Valuing the Individual</th>
<th>Behaviour Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.09</td>
<td>4.00</td>
<td>3.83</td>
<td>3.95</td>
<td>3.69</td>
<td>3.56</td>
<td>3.72</td>
</tr>
<tr>
<td>SD</td>
<td>0.35</td>
<td>0.38</td>
<td>0.43</td>
<td>0.49</td>
<td>0.52</td>
<td>0.46</td>
<td>0.40</td>
</tr>
</tbody>
</table>

One of the patterns seen across domains is the positive ratings given to the learning values students perceive to be underpinning their learning. This is reflected in the high ratings for the Value of Work and Challenge of Work scales (Table 2) and the Goals and Expectations scale and the Effort and Achievement scale (Table 4).
Another of the patterns seen across domains is students’ perception that individuals are not given as much attention as they would like. This is seen in the low average class rating given to the Valuing the Individual scale (Table 4), but is also reflected in the very low score on the Personalisation scale (Table 5) and the Decision-making Skills scale (Table 3).

Table 5 Class responses to scales in the Classroom Organisation domain

<table>
<thead>
<tr>
<th></th>
<th>Time for Learning</th>
<th>Personalisation</th>
<th>Organising Learning</th>
<th>Feedback</th>
<th>Teacher Knowledge</th>
<th>Teacher Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.64</td>
<td>3.42</td>
<td>3.82</td>
<td>3.87</td>
<td>4.04</td>
<td>4.00</td>
</tr>
<tr>
<td>SD</td>
<td>0.41</td>
<td>0.42</td>
<td>0.41</td>
<td>0.38</td>
<td>0.41</td>
<td>0.46</td>
</tr>
</tbody>
</table>

Class responses indicate that students are generally positive about teachers’ professional characteristics, their knowledge and engagement in teaching, their ability to organise learning, and also their provision of feedback to students. Provision of sustained learning time, which supports deep learning, is in need of attention; this is an area where leadership involvement for whole school arrangements is essential.

3. Usefulness of the item level for interpretation purposes

The questionnaire is detailed in order to give teachers useful, diagnostic feedback. An examination of results from domain and scale levels directs teachers’ attention to areas in need of development, as well as to areas of strength. The item level of analysis refines this information in a way that enables teachers to focus on quite specific behaviours. Table 6 directs attention to the ways in which students feel their teachers are less or more inclined to recognise student individuality. The contrast between the ratings of the first two and the remaining items is of particular interest.

Table 6 Class responses to items in the Valuing the Individual scale

<table>
<thead>
<tr>
<th>VALUING THE INDIVIDUAL Scale</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>34. The teacher remembers important things that have happened to me.</td>
<td>3.36</td>
<td>0.51</td>
</tr>
<tr>
<td>26. The teacher knows the things that I like and dislike in this subject.</td>
<td>3.27</td>
<td>0.52</td>
</tr>
<tr>
<td>100. The teacher knows my strengths and needs in this subject.</td>
<td>3.60</td>
<td>0.50</td>
</tr>
<tr>
<td>62. The teacher is interested in who we are as individuals</td>
<td>3.72</td>
<td>0.51</td>
</tr>
<tr>
<td>56. The teacher knows what to do to help individual students overcome any problems with learning.</td>
<td>3.86</td>
<td>0.47</td>
</tr>
</tbody>
</table>

4. Relationships across the domains

The domains are not independent; strong associations across the domains can help illuminate the meanings of students’ perceived experience. For example, one area of particular concern is the relatively low rating given to students’ interest in their work, the Work Interest scale in the Nature of Student Work domain. Interest is a major factor in students’ engagement in their learning, the energy they invest in their work and the persistence with which they pursue it. The three other domains contain scales that correlate strongly (above +0.80) with the Work Interest scale. On this basis, the
evidence indicates that the following constructs are closely associated with students’ level of engagement in their learning:
Work Interest and Decision-making Skills scales \((r=+0.85)\)
Work Interest and Positive Attitude scales \((r=+0.84)\)
Work Interest and Supportiveness scales \((r=+0.83)\)
Work Interest and Teacher Engagement scales \((r=+0.83)\)
Work Interest and Respect scales \((r=+0.82)\)
Work Interest and Valuing the Individual scales \((r=+0.82)\)
Work Interest and Time for Learning scales \((r=+0.81)\)
Work Interest and Metacognitive Self-evaluation scales \((r=+0.80)\)

Thus, in the perception of students, there are strong links between their level of interest in their work and the opportunities for involvement in making decisions about and evaluating their own learning, having constructive and individualised teacher-student relationships, knowing that the teacher enjoys the teaching process, and having work scheduled for sustained learning times. Many of these scales receive low average student ratings.

5. Different responses to the same teacher
Teachers were given the opportunity to involve two of their classes in the project for comparison purposes. Sometimes the results showed similar patterns of response for the two classes. Some teachers found, however, that the two classes responded differently from one another. Such a result provides a useful reminder that the teacher-class interaction is the critical variable, not simply the teacher. Classes differ and teachers need to modify and adapt their pedagogy to the nature and needs of the class. Differential feedback from two classes offers teachers valuable evidence on which to base professional learning and development.

The following results from the classes of one teacher illustrate this point; the students were in parallel classes at the same year level and in the same learning area.

Table 7  Comparison of two classes taught by the same teacher

<table>
<thead>
<tr>
<th>Nature of Work Domain</th>
<th>Class 1</th>
<th>Class 2</th>
<th>Class 1</th>
<th>Class 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of Work</td>
<td>3.58</td>
<td>3.66</td>
<td>3.58</td>
<td>3.66</td>
</tr>
<tr>
<td>Challenge of Work</td>
<td>3.53</td>
<td>3.65</td>
<td>3.02</td>
<td>3.02</td>
</tr>
<tr>
<td>Work Interest</td>
<td>3.02</td>
<td>3.02</td>
<td>3.51</td>
<td>3.09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Development of Student Skills Domain</th>
<th>Information Skills</th>
<th>HOT Skills</th>
<th>Collaborative Skills</th>
<th>Metacognitive Learning Skills</th>
<th>Metacognitive Self-evaluation Skills</th>
<th>Decision-making Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>3.47</td>
<td>3.60</td>
<td>3.67</td>
<td>3.55</td>
<td>3.62</td>
<td>3.49</td>
</tr>
<tr>
<td>Class 2</td>
<td>3.60</td>
<td>3.66</td>
<td>3.46</td>
<td>3.67</td>
<td>3.62</td>
<td>3.48</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classroom Culture</th>
<th>Goals &amp; Expectations</th>
<th>Effort &amp; Achievement</th>
<th>Positive Attitude</th>
<th>Respect</th>
<th>Supportiveness</th>
<th>Valuing the Individual</th>
<th>Managing Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>3.78</td>
<td>3.82</td>
<td>3.69</td>
<td>3.91</td>
<td>3.69</td>
<td>3.38</td>
<td>3.64</td>
</tr>
<tr>
<td>Class 2</td>
<td>4.08</td>
<td>3.93</td>
<td>3.91</td>
<td>4.05</td>
<td>3.71</td>
<td>3.58</td>
<td>3.78</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classroom Organisation</th>
<th>Time for Learning</th>
<th>Personalisation</th>
<th>Organising Learning</th>
<th>Feedback</th>
<th>Teacher Knowledge</th>
<th>Teacher Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>3.54</td>
<td>3.50</td>
<td>3.66</td>
<td>3.74</td>
<td>3.95</td>
<td>3.78</td>
</tr>
<tr>
<td>Class 2</td>
<td>3.52</td>
<td>3.22</td>
<td>3.97</td>
<td>3.98</td>
<td>4.15</td>
<td>3.98</td>
</tr>
</tbody>
</table>
6. Congruence of student and teacher perceptions.

Teachers were asked to complete the *FTLQ* in terms of their understanding of the average student perception on each item. This allowed teachers to see how accurate their understanding of students’ experience is. Teachers whose perceptions are accurate are thought to be in a better position to judge how they need to modify their teaching approach to suit the particular class.

Teachers differed in their capacity to read the classroom experience of their students. Three main patterns were seen in teachers’ responses; these are illustrated in Figure 1. The third pattern is the one that causes concern. Not only is there a gap between the level of teacher and student response, but the teacher’s responses do not reflect an understanding of the relative level of student responses in the four domains.

Figure 1 Patterns of congruence between student and teacher perceptions

**LEADERSHIP TEAM FEEDBACK:**

*Leadership for Learning Questionnaires*

Results for the first administration of the LfLQs can be reported; the results for the second administration are not yet finalised. The results reported here are average responses across schools, with data aggregated to school level. These, of course, do not provide the most interesting comparison between perceptions of a leadership team within a particular school and perceptions of the school’s teaching staff.

Table 8 Leader and teacher average ratings on the LfLQ scales

<table>
<thead>
<tr>
<th></th>
<th>Leadership Efficacy and Culture</th>
<th>Leadership Improvement Practices</th>
<th>Teacher Efficacy and Culture</th>
<th>Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.8</td>
<td>4.2</td>
<td>3.8</td>
<td>3.6</td>
</tr>
<tr>
<td>SD</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Benchmark Mean</td>
<td>3.7</td>
<td>4.1</td>
<td>3.6</td>
<td>3.3</td>
</tr>
<tr>
<td>Benchmark SD</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.3</td>
</tr>
</tbody>
</table>
1. Leader and teacher scale scores

Leaders’ scale means and standard deviations are very close to the benchmarks. Leaders are more positive about their leadership practices for achieving school improvement in teaching and learning (Leadership Improvement Practices) than they are about their own efficacy as leaders and the quality of the school’s professional culture (Leadership Efficacy and Culture).

Leaders’ ratings show they have some concern about the following aspects of:
- their personal leader efficacy, in particular their capacity to make a difference to or have control over the development of teachers’ effectiveness;
- the learning culture of teachers, in particular the level of innovation fatigue that diminishes teachers’ genuine involvement in change and to some degree the extent to which the school is a motivating work environment for teachers;
- the student learning culture, in particular the above-average level of school recognition given to ability vis-à-vis effort, and of school encouragement given to academic competition amongst students. Leaders are also not strongly convinced that their teachers believe all students have the capacity to learn.

Teacher scale scores are somewhat more positive than their leaders’, relative to the teacher benchmarks. Unlike their leaders, teachers judge their own efficacy and culture (Teacher Efficacy and Culture) to be stronger than their leaders’ practices for achieving school improvement in teaching and learning (Leadership). The ‘self’ is viewed more favourably than the ‘other’, perhaps.

Teachers’ ratings do, however, indicate similar concerns to those of their leaders, in the following aspects of:
- their personal teacher efficacy, in particular their capacity to make a difference to or have control over students’ learning;
- their own professional culture, in particular the level of innovation fatigue that diminishes their genuine involvement in change;
- the student learning culture, in particular the level of school recognition given to ability vis-à-vis effort, and of school encouragement given to academic competition amongst students.

Teachers, like their leaders, give well above-average ratings for one aspect of a stimulating professional learning environment, i.e., the involvement of teachers in visiting one another’s classroom in order to learn from one another. Leaders and teachers recognise that teacher peer observation is no longer an uncommon experience in these schools. This reflects a deliberate Regional policy to establish the concept of shared professional learning through peer observation and reflection. Such ratings, although still only a little above the mid-point of the scale, have not been seen in any other programs we have conducted in the past decade. Further bedding down of this strategy is needed, as indicated by the relatively high standard deviations for leader and teacher ratings on this item.

Teachers are noticeably less positive than their leaders about the improvement practices leaders use to achieve school improvement in teaching and learning. Teachers show particular concern about leaders not
- maintaining consistent, continuing interest in innovation after the initial stages of an improvement program and
- providing adequate concrete practical support for the implementation of innovative improvement programs (e.g. professional development, meeting time, release time).

2. Range of school scores

Table 9 Range of school scores on the LfLQs

<table>
<thead>
<tr>
<th></th>
<th>Leadership Efficacy and Culture</th>
<th>Leadership Improvement Practices</th>
<th>Teacher Efficacy and Culture</th>
<th>Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest mean</td>
<td>4.2</td>
<td>4.5</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Lowest mean</td>
<td>3.4</td>
<td>3.9</td>
<td>3.6</td>
<td>3.1</td>
</tr>
</tbody>
</table>

There is considerable variation among schools in the confidence leaders and teachers display in their efficacy, culture and leadership practices in relation to teaching and learning. The range is greater for leaders when efficacy and culture is being evaluated, but is greater for teachers when it is leadership practices that are being rated. This is in keeping with the ‘self’ and ‘other’ bias found in the teacher and leader ratings generally.

3. An illustration: Greenfield Secondary College

Greenfield Secondary College is a medium-sized secondary school of approximately 700 students in a disadvantaged area of Melbourne with a highly multicultural student population. The school has a recent history of poor level of student achievement relative to its student profile. This was particularly the case at the senior end of the school where students exit for higher education, training or work.

The school has a new principal, who is trying to take the school on a path of significant improvement, and two assistant principals. In addition to this top leadership group there is a wider leadership team of 10 who are influential in the school.

The data collected by the school from the LfLQs were designed to help it determine what it needed to do to improve, in particular what its strategic priorities should be, first within the leadership team and then with the staff.

When the data from the LfLQs were analysed, several key issues were highlighted.
- On the positive side both leader and teacher scale scores for efficacy and culture and for leadership were above the benchmarks and the teacher learning culture was scored highly by both teachers and leaders.
- However, there were negative teacher views about the student learning culture. Of particular concern was the low rating given by teachers to the item, “In this school teachers believe that all students can learn”. This rating was also part of a pattern for the set of questions concerning the student learning culture. These teacher perceptions and teacher expectations of students were shared by the school leadership. On this particular item, and a number of others, there was also a considerable level of divergence of views among the leaders, as shown by the high standard deviation.

These data pointed to key leverage points for the school to promote improvement. These points were
firstly, there was the need to develop a common direction with a common set of priorities, initially among the leaders and then among the teachers. The divergence of views among the leaders showed there was a need to develop more common and consistent positions if teachers were going to be influenced in a particular direction.

secondly, there was a need, drawn from the data, for there to be a strong focus on improving teachers’ expectations of students. The low expectations that did exist among many of the staff were influencing teacher behaviour towards the students.

Building on these two leverage points the school determined that the priorities they would work on would be
  - literacy and numeracy throughout the school,
  - an orderly learning environment,
  - ensuring that all students are well known, and
  - developing a stronger work ethic.

In addition to this, all teachers in the school were allocated to triads (professional learning groups of three teachers) to assist them to work together to improve classroom practice.

The initial action was focussed on year 7 and the VCE level. At year 7 the strategy was to ensure that students experienced an orderly learning environment, were all well known by at least one teacher and were provided with strong foundations in the literacy and numeracy areas. At VCE the focus was on improving the work ethic of students through the creation of a VCE Centre where students were exposed to a good working environment and where teachers were always present to work with students and assist them.

## RETROSPECT AND PROSPECT

1. The Research Questions
   The results that have been outlined indicate answers to RQs 1, 2, 6 and 7. The interesting questions concerning change and the evaluation of the two-targeted approach await the analysis of data received toward the end of the year.

2. Feedback from schools
   December interviews with teacher triads and principals in seven of the participating schools produced several evaluative comments and suggestions about the FTLQ, as well as some interviewer observations:
   - Teachers felt the provision of data at the individual class level was very valuable to them.
   - The specificity and detail of the feedback helped teachers see what could be done to change their practices.
   - Some experienced teachers reported being confronted by unexpected feedback about aspects of their classroom practice; this brought about considerable re-evaluation of their professional practice.
   - The immediate, automatic on-line reports meant teachers did not lose momentum between questionnaire completion and using the feedback.
   - The inclusion of standard deviations in the reports was appreciated by some because these gave insight into whether the class had cohesive or divided perceptions.
Triad teachers were able to use the feedback to select a focus for professional learning and change, and then develop targeted observation protocols for use by triad members when visiting one another’s classrooms.

Spending time preparing students for the questionnaire produced greater student engagement in and completion of the task.

The full FTLQ is a long questionnaire, many felt it was too long. Students in some schools found difficulty with some vocabulary; others did not.

Having an excellent SPC made a big difference to the timely completion of questionnaires by students and teachers. SPCs who took on not only an administrative role, but also a professional learning role, added great value to the implementation of the program in the school.

The feedback and triad processes provided first-year teachers with very valuable mentoring and assistance.

Teachers, especially respected, senior teachers, who shared their feedback results with other members of the teaching staff stimulated interest in the program and encouraged the development of greater openness among staff members.

The provision of regular, timetabled meeting time for triads is essential for productive use of the feedback.

Schools or teachers who feel their participation is mandated are less likely to be genuinely involved. Superficial involvement predisposes schools to discontinue the program.

Strategic formation of triads and selection of teachers (for example, focusing on a discipline area or year level, especially a focus allied to the school’s improvement plan) makes more productive use of the program than simple acceptance into it of a relatively random group of teachers.

A strategic approach is more likely to be used if school participation in the program is known by about November in the preceding year, when timetables and class allocations are being decided.

3. Challenges

Three major challenges need to be dealt with:

- how to gain closer contact between project consultants and participating schools, so that the program is implemented more fully and meaningfully in each school, thus ensuring that teachers and leaders take productive action on the basis of the feedback;
- how to balance the length of the FTLQ against the diagnostic value of highly specific and detailed feedback for teachers;
- how to develop interaction within a school between the whole-school feedback from the LfLQ and feedback to individual teachers from the FTLQ, so that each enhances the other in an interrelated approach to improving pedagogy and learning.

REFERENCES


During the first administration of the FTLQ in 2010, responses were given by 2,942 secondary students in 175 classes taught by 126 different teachers in 25 Victorian government secondary schools in NMR, with teachers also responding to the FTLQ. Two procedures were used in the establishment of scales: principal components factor analysis established the unitary nature of the underlying dimension represented by a scale, indicated the percentage of variance accounted for by the set of items, and gave the weighting of each item’s contribution to the scale. The reliability of the scales was assessed using Cronbach’s alpha, a measure of internal consistency, thus allowing any problem items to be identified and excluded.

### Domain 1: Nature of Student Work

- **Value of Work**
  - Scale: Work is seen to be important, meaningful and worth doing.
  - No. items: 5
  - Percentage variance: 66.1
  - Alpha: 0.87

- **Challenge of Work**
  - Scale: Work stretches students, challenging them to engage with new ideas and skills.
  - No. items: 5
  - Percentage variance: 52.8
  - Alpha: 0.78

- **Work Interest**
  - Scale: Work is experienced as interesting and absorbing rather than monotonous and boring.
  - No. items: 5
  - Percentage variance: 58.5
  - Alpha: 0.82

- **Work Activities**
  - Scale: Work is active and varied, instead of passive and routine.
  - No. items: 5
  - Percentage variance: 55.8
  - Alpha: 0.80

### Domain 2: Development of Student Skills

- **Information Skills**
  - Scale: Students learn how to search for information and use it effectively.
  - No. items: 5
  - Percentage variance: 58.1
  - Alpha: 0.82

- **Higher Order Thinking Skills**
  - Scale: Students are led to the use of complex thinking skills that enable in-depth learning.
  - No. items: 5
  - Percentage variance: 54.7
  - Alpha: 0.79

- **Collaborative Skills**
  - Scale: Through practice in collaborative learning, students develop a range of associated skills.
  - No. items: 5
  - Percentage variance: 56.7
  - Alpha: 0.81

- **Metacognitive Learning Skills**
  - Scale: The teacher helps students develop the skills necessary for learning how to learn.
  - No. items: 5
  - Percentage variance: 57.6
  - Alpha: 0.82

### Domain 3: Classroom Culture

- **Goals and Expectations**
  - Scale: Students understand that greatest value is placed on working hard to achieve depth of understanding.
  - No. items: 5
  - Percentage variance: 57.6
  - Alpha: 0.82

- **Effort and Achievement**
  - Scale: Effortful learning is seen to improve achievement.
  - No. items: 5
  - Percentage variance: 58.2
  - Alpha: 0.82

- **Positive Attitude**
  - Scale: The classroom is characterised by respect in attitude and behaviour among members of the class.
  - No. items: 5
  - Percentage variance: 65.1
  - Alpha: 0.87

- **Respect**
  - Scale: The class operates in an orderly way, with the teacher being aware of students’ feelings and behaviour, and following agreed procedures consistently.
  - No. items: 5
  - Percentage variance: 53.9
  - Alpha: 0.79

### Domain 4: Classroom Organisation

- **Time for Learning**
  - Scale: Time available for the class allows for sustained learning without interruption.
  - No. items: 5
  - Percentage variance: 60.5
  - Alpha: 0.84

- **Personalisation**
  - Scale: Individual variation in approaches to learning is recognised in the way learning is organised.
  - No. items: 5
  - Percentage variance: 55.1
  - Alpha: 0.79

- **Organising Learning**
  - Scale: Learning is effectively organised, with timing and sequence being logical and explanation and expectation being clear.
  - No. items: 5
  - Percentage variance: 61.1
  - Alpha: 0.84

- **Feedback**
  - Scale: Feedback is frequent, prompt, individual and formative.
  - No. items: 5
  - Percentage variance: 54.8
  - Alpha: 0.79

- **Teacher Knowledge**
  - Scale: Students see the teacher to have an excellent command of the subject.
  - No. items: 4
  - Percentage variance: 62.3
  - Alpha: 0.80

- **Teacher Engagement**
  - Scale: Students experience the teacher as someone who enjoys teaching the students in the class as well as enjoying the subject being taught.
  - No. items: 5
  - Percentage variance: 64.1
  - Alpha: 0.86

- **Deciding Making Skills**
  - Scale: Opportunity for students to make decisions about their own learning enhances their capacity to learn independently.
  - No. items: 5
  - Percentage variance: 61.1
  - Alpha: 0.84

- **Managing Behaviour**
  - Scale: The class operates in an orderly way, with the teacher being aware of students’ feelings and behaviour, and following agreed procedures consistently.
  - No. items: 5
  - Percentage variance: 53.9
  - Alpha: 0.79

- **Classroom Culture**
  - Scale: No. items: 7
  - Percentage variance: 80.0
  - Alpha: 0.96
Appendix 2

PROPERTIES OF THE LfLQ SCALES

The data used for the establishment of the properties of the LfLQ scales comes from a total of 72 primary schools (304 leaders and 1018 teachers) and 45 secondary schools (332 leaders and 2070 teachers). Two procedures were used in the establishment of scales: principal components factor analysis established the unitary nature of the underlying dimension represented by a scale, indicated the percentage of variance accounted for by the set of items, and gave the weighting of each item’s contribution to the scale. The reliability of the scales was assessed using Cronbach’s alpha, a measure of internal consistency, thus allowing any problem items to be identified and excluded.

<table>
<thead>
<tr>
<th>Leadership for Learning Questionnaire (Leaders)</th>
<th>Leadership for Learning Questionnaire (Teachers)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leader Efficacy and Culture scale</strong></td>
<td><strong>Leadership Improvement Practices scale</strong></td>
</tr>
<tr>
<td><strong>Content</strong></td>
<td><strong>Content</strong></td>
</tr>
<tr>
<td>o Leaders’ perceptions of their capacity</td>
<td>o Teachers’ perception of their capacity</td>
</tr>
<tr>
<td>(individually and as members of a team) to</td>
<td>to do those things that enable students</td>
</tr>
<tr>
<td>enable teachers to help students learn and</td>
<td>to learn, their confidence about</td>
</tr>
<tr>
<td>sense of collective responsibility for</td>
<td>making a difference and their taking of</td>
</tr>
<tr>
<td>enabling teachers to improve student</td>
<td>responsibility for student engagement</td>
</tr>
<tr>
<td>learning</td>
<td>and the improvement of student</td>
</tr>
<tr>
<td>o Leaders’ perceptions of the</td>
<td>learning</td>
</tr>
<tr>
<td>characteristics and qualities of the</td>
<td>o Teachers’ perception of the</td>
</tr>
<tr>
<td>professional learning culture of teachers</td>
<td>characteristics and qualities of the</td>
</tr>
<tr>
<td>within the school, with a focus on its</td>
<td>professional learning culture within</td>
</tr>
<tr>
<td>capacity to engender motivation,</td>
<td>their own school, with a focus on its</td>
</tr>
<tr>
<td>stimulation and sharing in</td>
<td>capacity to engender motivation,</td>
</tr>
<tr>
<td>professional learning and teaching</td>
<td>stimulation and sharing in</td>
</tr>
<tr>
<td>o Leaders’ perception of the kind of</td>
<td>professional learning and teaching</td>
</tr>
<tr>
<td>learning goal orientation the school</td>
<td></td>
</tr>
<tr>
<td>values and presents to students as</td>
<td>o Teachers’ perception of the kind of</td>
</tr>
<tr>
<td>being important.</td>
<td>learning goal orientation the school</td>
</tr>
<tr>
<td></td>
<td>values and presents to students as being</td>
</tr>
<tr>
<td>No. items: 18</td>
<td>No. items: 18</td>
</tr>
<tr>
<td>Percentage variance: 34.1%</td>
<td>Percentage variance: 43.0%</td>
</tr>
<tr>
<td>Alpha: 0.87</td>
<td>Alpha: 0.92</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Leadership Improvement Practices scale</strong></td>
<td><strong>Leadership Improvement Practices scale</strong></td>
</tr>
<tr>
<td><strong>Content</strong></td>
<td><strong>Content</strong></td>
</tr>
<tr>
<td>Leaders’ perceptions of the leadership</td>
<td>Teachers’ perception of their capacity</td>
</tr>
<tr>
<td>practices in their school that enable</td>
<td>to do those things that enable students</td>
</tr>
<tr>
<td>teachers to implement improvement programs</td>
<td>to learn, their confidence about</td>
</tr>
<tr>
<td>successfully:</td>
<td>making a difference and their taking of</td>
</tr>
<tr>
<td>o affiliative practices</td>
<td>responsibility for student engagement</td>
</tr>
<tr>
<td>o professional interactions</td>
<td>and the improvement of student</td>
</tr>
<tr>
<td>o practical arrangements for achieving</td>
<td>learning</td>
</tr>
<tr>
<td>improvement</td>
<td>o Teachers’ perception of the characteristics</td>
</tr>
<tr>
<td>o establishment of direction, vision, values</td>
<td>and qualities of the professional learning</td>
</tr>
<tr>
<td>and goals.</td>
<td>culture within their own school, with a focus</td>
</tr>
<tr>
<td></td>
<td>on its capacity to engender motivation,</td>
</tr>
<tr>
<td></td>
<td>stimulation and sharing in professional</td>
</tr>
<tr>
<td></td>
<td>learning and teaching</td>
</tr>
<tr>
<td></td>
<td>o Teachers’ perception of the kind of learning</td>
</tr>
<tr>
<td></td>
<td>goal orientation the school values and</td>
</tr>
<tr>
<td></td>
<td>presents to students as being important.</td>
</tr>
<tr>
<td>No. items: 13</td>
<td>No. items: 13</td>
</tr>
<tr>
<td>Percentage variance: 40.8%</td>
<td>Percentage variance: 43.0%</td>
</tr>
<tr>
<td>Alpha: 0.87</td>
<td>Alpha: 0.92</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Teacher Efficacy and Culture scale</strong></td>
<td><strong>Leadership scale</strong></td>
</tr>
<tr>
<td><strong>Content</strong></td>
<td><strong>Content</strong></td>
</tr>
<tr>
<td>o Teachers’ perception of their capacity</td>
<td>Teachers’ perceptions of school leaders’</td>
</tr>
<tr>
<td>(individually and as members of a team) to</td>
<td>approaches and practices regarding improved</td>
</tr>
<tr>
<td>enable teachers to help students learn and</td>
<td>student learning, focusing on the same four</td>
</tr>
<tr>
<td>sense of collective responsibility for</td>
<td>aspects of leadership practice as in the</td>
</tr>
<tr>
<td>enabling teachers to improve student</td>
<td>leaders’ questionnaire.</td>
</tr>
<tr>
<td>learning</td>
<td></td>
</tr>
<tr>
<td>o Teachers’ perception of the characteristics</td>
<td></td>
</tr>
<tr>
<td>and qualities of the professional learning</td>
<td></td>
</tr>
<tr>
<td>culture of their own school, with a focus on</td>
<td></td>
</tr>
<tr>
<td>their capacity to engender motivation,</td>
<td></td>
</tr>
<tr>
<td>stimulation and sharing in professional</td>
<td></td>
</tr>
<tr>
<td>learning and teaching</td>
<td></td>
</tr>
<tr>
<td>o Teachers’ perception of the kind of learning</td>
<td></td>
</tr>
<tr>
<td>goal orientation the school values and</td>
<td></td>
</tr>
<tr>
<td>presents to students as being important.</td>
<td></td>
</tr>
<tr>
<td>No. items: 6</td>
<td>No. items: 6</td>
</tr>
<tr>
<td>Percentage variance: 76.2%</td>
<td>Percentage variance: 76.2%</td>
</tr>
<tr>
<td>Alpha: 0.94</td>
<td>Alpha: 0.94</td>
</tr>
</tbody>
</table>