Leading improvement in student numeracy requires a team effort. It involves strategic thinking and practical action by teachers, principals, school executive staff and central office personnel working together. The following exercise is designed for you to reflect upon your school and school-system context, and to plan for and monitor numeracy improvement. As you reflect upon your team membership and capabilities and discuss the questions and planning elements with colleagues, consider the themes, principles and ideas that have been presented throughout the chapters of this book. As you do, think about how you intend to build alignment in thinking and practice about improving students’ engagement with, enjoyment of, and achievement in numeracy.

Reflect on your team membership and leadership capabilities. Describe the strategy you intend to use in leading numeracy development in your school or school system:

- What you are going to do?
- Why you are going to do it?
- How you are going to do it?
- How you will evaluate the success of what you have done?

Consider what leadership capabilities are most important in your context, your team strengths, and what capabilities need to be developed. Adjust your strategy based on these considerations.
## Numeracy monitoring template: Numeracy development plan

### Table A.1: Numeracy development planning and monitoring template

<table>
<thead>
<tr>
<th>Numeracy development plan</th>
<th>Purpose rationale</th>
<th>Synopsis</th>
<th>Success criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Useful data to gather</strong>*</td>
<td>• Teacher participation</td>
<td>• Students are targeted at tiers 1, 2 and 3</td>
<td>Indicators:</td>
</tr>
<tr>
<td><strong>Useful data-gathering instruments</strong></td>
<td>• Teacher understanding</td>
<td>• Strategies and tasks, personnel, timeline and resources for each tier</td>
<td>• Changes in student achievement: whole-school student performance, year level performance, achievement of tier 1, 2 and 3 students, English-as-a-second-language/English-as-a-second-dialect students, students with disability</td>
</tr>
<tr>
<td></td>
<td>• Teacher agreement</td>
<td>• Steps in place for students to move in and out of different tiers</td>
<td>• Changes in teaching: teaching quality, teacher level of use of numeracy intervention, teacher stage of concern about numeracy intervention</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Teaching practice</td>
<td>• Changes in parent and community support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Teaching programs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Professional development</td>
<td>• Those listed above plus:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Organisational arrangements (incl. structures and resources)</td>
<td>◊ Student work samples, classroom assessments, NAPLAN</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>◊ Parent surveys</td>
</tr>
</tbody>
</table>

* Sample data sources and means for collecting data are illustrative only. Actual approaches will depend on the nature of the individual school and school system contexts.
Appendix 1

Numeracy monitoring template: Team plan for leading numeracy development

<table>
<thead>
<tr>
<th>Team plan for leading numeracy development</th>
<th>Useful data to gather</th>
<th>Useful data-gathering instruments</th>
</tr>
</thead>
</table>
| **Developing shared purpose to improve numeracy** | • Student achievement data  
• Teacher* expectations  
• Teacher participation  
• Teacher understanding  
• Teacher agreement | • Personal professional journal**  
• Document analysis:  
  - staff meeting papers  
  - correspondence  
  - school newsletters |
| **Valuing teaching and professional development** | Those listed above plus:  
• Teaching practice  
• Teacher participation in decision-making  
• Staff teamwork  
• Teacher leadership  
• Professional development (who, when, how, what, with what effect, and what cost) | Those listed above plus:  
• Teacher survey  
• Teacher interview  
• Teacher focus groups  
• Classroom observation |
| **Organising curriculum and infrastructure** | • Teaching programs  
• Supportive organisational arrangements (incl. timetable, staffing structures and resources)  
• Resources allocated to improve conditions for learning | Those listed above plus:  
• School budget priorities and expenditure |
| **Engaging the community** | • Parent involvement  
• Networking with professional colleagues | Those listed above plus:  
• Parent meeting records and surveys |
| **Thinking strategically and acting practically to build alignment between outcomes, vision, teaching, organisation and community** | • Qualitative and quantitative student engagement and achievement data  
• Teacher, parent and student understanding of the connections between outcomes, vision, teaching, organisation and community | Those listed above plus:  
• Class- and school-based internal assessment  
• Systemic external assessment – NAPLAN  
• School community survey |

* While ‘teacher’ is listed as the data source, it may also be appropriate to gather data from other members of the school community or central office, for example, parents and students, depending on the school or school-system context.

** A personal professional journal is a useful monitoring instrument for tracking one’s leadership of numeracy development.

Leading Improvements in Student Numeracy. Published by ACER Press.  
Copyright © Michael Gaffney and Rhonda Faragher 2014

202
APPENDIX 2

LAND PROJECT SCHOOLS AND PROJECT STAGES

LAND project schools

Northern Territory Catholic Education Office
Santa Teresa – Ltyentye Apurte
Our Lady of the Sacred Heart, Wadeye
St Francis Xavier, Nauiyu, Daly River
Murrupurtiyanuwu Catholic School, Bathurst Island
Xavier Community Education Centre, Bathurst Island

Catholic Education Office South Australia
Immaculate Heart of Mary
St Brigid’s School
Whitefriars
Catherine McAuley School

Catholic Education Office of Western Australia
Banksia Grove
St Vincent’s Parmelia
Xavier Catholic College
St. Joseph’s Waroona
St Joseph’s Kunnunura
St Joseph’s Wyndham
Djarindjin Lombadina School
Sacred Heart Beagle Bay
LAND project stages

Stage 1: Project orientation, information gathering and analysis

Stage 1 involved the following steps:
• familiarisation visits by the research team to schools including community consultation
• an orientation workshop with school personnel: principal and other staff for each school cluster
• gathering baseline information about current school and system numeracy practices.

Stage 2: Professional and organisational development

Stage 2 involved the following steps:
• two professional and organisational development workshops. These workshops focused on pedagogy and content knowledge in numeracy; leadership; and school development and alignment.
• visits by the research consultancy team to each project school (at least twice over a 15-month period after the first Stage 2 workshop and before the second. Additional visits made by the central office project officer.
• a mid-project review.

Stage 3: Planning for sustainability

The final stage in the project involved the following steps:
• a final visit to each school in the project
• a planning and evaluation workshop
• a showcase conference involving participants from all LAND schools.
APPENDIX 3

LEADERSHIP REFLECTIONS, COMMITMENTS AND PLANS: LAND PROJECT – WORKSHOP 1

*Michael Gaffney, Michael Bezzina, Doug Clarke and Rhonda Faragher*

Workshop 1 was based around a series of PowerPoint slides, which are reproduced below.

The following factors are based on the findings from the Leaders Transforming Learning and Learners (LTLL) project by Michael Bezzina, Charles Burford and Patrick Duignan. LTLL is a project researching the ways in which leaders can promote learning in values-based school environments.

**Leadership: A process of influencing student numeracy development by:**

- encouraging collaboration
- using evidence
- promoting professional learning
- shaping the culture of the school community
- working with change
- networking
- planning for sustainability
- building capacity.
Leadership: A process of influencing student learning in numeracy

Read your description(s).
As a group consider each factor in turn by:
• explaining your factor description to colleagues
• inviting colleagues to rate and record their thoughts about the evidence of the factor in their school setting.

Rating and reflecting
[Participants were shown a traffic light symbol and asked to rate their reflections according to the colours of the lights]
• RED: No evidence
• YELLOW: Some evidence
• GREEN: Lots of evidence

Reflect on your rating. Why have you selected that colour and what are some examples?

Leadership through collaboration
Supporting staff to work in partnership when making decisions about teaching and learning – recognising that all have a leadership contribution to make.
An effective school:
• has an explicit and agreed educational purpose
• has a shared view of what constitutes good teaching and learning
• promotes a sense of staff efficacy and competence
• empowers staff to make decisions that are in tune with the school’s educational purpose
• has agreed standards for performance
• engages in collaborative professional learning
• promotes team-based initiatives
• trials innovative practices
• demonstrates collective responsibility for outcomes.

Leadership based on evidence
• Building teachers’ capacity to collect and analyse relevant data to inform their planning and actions
• Encouraging teachers to take a ‘research stance’ in their work
An effective school:
- identifies the types of evidence relevant for improving teaching quality and student learning
- has valid and reliable procedures for collecting and analysing relevant evidence
- acts on the results
- develops teachers’ capabilities for evidence-based practice.

**Leadership promoting professional learning**
- Developing the professional learning community
- Encouraging shared understandings and principles of practice

An effective school:
- values professional learning
- supports team-based learning through school structures and procedures
- encourages professional conversation based on experience and expertise, as well as authoritative literature and research
- evaluates the impact of professional learning on teaching practice and student outcomes.

**Leadership shaping the culture of the school community**
- Recognising that every school has an organisational culture and that ‘community’ is at the heart of the Catholic school
- Shaping school culture to influence the ways people think, feel and act to improve outcomes for students

An effective school:
- has an explicit, shared vision and purpose grounded in its identity
- uses clear, shared language to describe its vision and core activities
- has an accepted set of norms for behaviour
- celebrates key events and achievements as a community
- lives out shared values in behaviour, word, ritual and symbol.

**Leadership in working with change**
- Initiating and responding to change driven from within the school community
- Influencing and responding to change driven from outside the school community, i.e. from central office, governments

An effective school:
- works with change because of the moral purpose – to improve outcomes for students
• engages those affected by change
• develops procedures sharing knowledge and learning from change
• uses change to bring vision, teaching, community characteristics, organisation and outcomes into closer alignment
• embodies enthusiasm, hope and energy in the leadership of change.

**Leadership through networking**

• Working in partnership with parents and the local community
• Building constructive alliances with other partners in the education enterprise

An effective school:
• works in partnership with parents, focusing on two-way communication about the needs of individual students
• develops networks with other schools within and beyond its local system
• engages actively with other education providers in targeted programs
• encourages staff membership of professional associations.

**Leadership for sustainability**

• Planning for sustainable improvement
• Developing sustainable leadership

An effective school:
• plans ‘strategically’ for sustainable improvement
• supports those in leadership roles
• encourages and develops members of the school community to be leaders.

**Leadership building capability**

• Assisting staff to integrate knowledge, skills, personal qualities and understanding . . . (thereby)
• Developing staff capacity to respond to changing circumstances

An effective school:
• recognises the capabilities of its people
• appreciates the complexity of building capability
• provides opportunities for staff to develop their capabilities
• builds a climate of trust, mutual support and development.
LAND school leadership team reflections on numeracy

What are our school’s areas of strength?
What are our school’s areas of weakness and possibility?

LAND school leadership team member commitments

The personal dimension: Myself
As a consequence of my start in the LAND project, I commit, in the next month, to take on this personal challenge:

by:

The professional dimension: Me and my class
As a consequence of my start in the LAND project, I commit, in the next two months, to implement new numeracy practices in the following area(s) in my classroom:

The peer leadership dimension: Me and my colleague(s)
As a consequence of my start in the LAND project, I commit, in the next month, to share my learning about:

with:

Leadership in the school dimension: Us and our school
Our LAND school leadership team will commit to work with colleagues and community members across the school community to bring about change in the following area(s) of numeracy:
LAND school action plan

What’s in an action plan?
- **Focus**: what are we trying to do?
- **People**: who will be directly affected? Who else might be interested?
- **Resistance**: who or what will get in the way/oppose/block?
- **Assistance**: who or what will be able to support us?
- **Our learning**: what have we learned that we can use?
- **Possible strategies**: what strategies can we think of? Which will we use?

Action plan
We want to make this change:

________________________________________

We are conscious that these people will be affected:

________________________________________

These are the steps in our plan:

<table>
<thead>
<tr>
<th>Step</th>
<th>By whom?</th>
<th>By when?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Action plan critique
How well do you think the plan has:
- identified helping and constraining factors?
- developed ways for dealing with these?
- made use of the material presented in the workshop?

What would improve your plan?
ACHIEVING VALUES ALIGNMENT

Chris Branson and Michael Gaffney

How are teachers’ attitudes and behaviour influenced by the psychological relationship between their school and them?

This is referred to as having an ‘affective organizational commitment’ (Gautam, Van Dick & Wagner, 2004). In other words, teachers have an emotional attachment to, identification with and positive involvement in the school (Van Knippenberg & Sleebos, 2006, p. 573).

This attachment results from the achievement of ‘organisational values alignment’ where the personal values of the employee are aligned with the values of the organisation. This implies that everyone participating in the change process would share the same values.

Organisational values alignment is not a naturally occurring or simple outcome to achieve. Values are specific to an individual and only reside in the mind of that person. Often, within organisations, the people hold many different and sometimes incompatible beliefs and values based on assumptions they individually hold about their own personal entitlements, constraints and preferred courses of action. When people come together in an organisation, they each bring their own personality and set of values. The organisation hence does not possess a set of values unless the individuals in the organisation personally and authentically embrace each value within the proposed set.

Successful educational change has a deliberate and comprehensive organisational values clarification and alignment process. This process has two elements:

• a values clarification procedure designed to cooperatively discern the essential values that need to characterise the school
• a means by which each person is encouraged to support the application of these values in their everyday endeavours.
Figure A.1 shows a framework designed to guide the values clarification and application. The key components of the framework are elaborated in the next section.

![Diagram of the framework for developing values alignment]

**Figure A.1:** Framework for developing values alignment

**Framework for developing values alignment**

**LAND project vision**

Project vision is what the group is striving to achieve through the LAND project. It describes what the group needs to do and, as such, it is distinct from, but related to, the school vision. The project vision is a single sentence that describes not only what is seen as the core business of the group but also the manner and means for achieving it.

For example: ‘Our LAND project vision is to [state core business and aspirations] by [describe ways of achieving it].’

As a controlling insight, the project vision is a source of potential school values in the minds of those involved. These values have meaning since each individual understands them and therefore is in a better position to support and adopt them.
These points act as guidelines for defining project vision:

- What are we trying to achieve as the school LAND team?
- What unique outcomes are required to distinguish our work from that of others aiming to achieve a similar expectation but in a different context?
- What are the key roles and responsibilities of this group in achieving these expectations?
- Whom do we serve and what do they want or expect from us?
- Create a one-sentence vision statement that captures these insights.

**Performance capabilities**

Performance capabilities are the strengths and weaknesses of the group and each individual with respect to the achievement of the project vision. Discussion builds confidence by reinforcing strengths and finding ways to overcome weaknesses: for example, through targeted professional development. The transparency of the process clarifies what is valued and why it is valued. In this way, the meaning of the values is reinforced in the minds of the group members.

These points act as guidelines for defining performance capabilities:

- What are the real strengths of our school LAND team?
- How can these strengths be maximised?
- What personal strengths do I contribute to this group?
- What are our clear weaknesses and how can they be overcome?
- What personal weakness can I attend to so as to enhance the strengths of our team?

**Success indicators**

Success indicators are the perceived logical consequences achieved as the group realises its vision. Having the group develop the indicators of success builds commitment and motivates individuals to become engaged in project activities, and clarify and share group values.

These points act as guidelines for defining success indicators:

- How will we know when we are achieving our vision? What are our *success indicators*? What will we see, hear and feel to be happening when we are achieving our vision?
- What is our most critical *success indicator*?

**Operational values**

Operational values are the values arising from the preceding components and the ones that are required to realise the vision. The group needs to prioritise the most important values. Having too many values diffuses commitment.

These points act as guidelines for defining operational values:
What are the possible values that would help to achieve all the outcomes that have been previously discussed? (See the final section for a list of possible values.)

Of these values, which are more important for achieving success?

The next step is to engage in a collaborative prioritisation process:

- From the full list of possible values chosen by the group, each individual selects and prioritises their own top five, and gives the most important value a rating of 10, and the least important value a rating of 1.
- Collate all of the individual ratings.
- Determine the top five values and place a tick adjacent to the value to indicate its acceptance as a preferred value for the group. In the event of several values having the same score, giving a total of more than five top values, further discussion should take place to determine the top five accepted values.

See Table A.3 for an example.

Table A.3: Sample collation and determination of operational values

<table>
<thead>
<tr>
<th>Nominated value</th>
<th>Group rating</th>
<th>Accepted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respect</td>
<td>6</td>
<td>✓</td>
</tr>
<tr>
<td>Trust</td>
<td>6</td>
<td>✓</td>
</tr>
<tr>
<td>Communication</td>
<td>6</td>
<td>✓</td>
</tr>
<tr>
<td>Honesty</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Loyalty</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Courtesy</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Reliability</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Responsibility</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Understanding</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Cooperation</td>
<td>7</td>
<td>✓</td>
</tr>
<tr>
<td>Harmony</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Encouragement</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Collegiality</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Professionalism</td>
<td>7</td>
<td>✓</td>
</tr>
</tbody>
</table>
**Guiding beliefs**

Guiding beliefs are the agreed guidelines arising from the operational values. Henderson and Thompson stated:

> Every time we have worked through this process with a group, people have commented on how powerful the experience was. To feel a group of people align on a single and unanimously agreed belief about a value is unifying and empowering. It also has an added benefit of being a wonderful team-building experience. (2003, p. 109)

Guiding beliefs are created by converting each value to a belief by asking the group to complete the following sentence with each value: ‘We value [insert nominated value] because . . .’

Here are some examples:

‘We value COOPERATION – because we are a team and a team works together.’

‘We value PROFESSIONALISM – because we have confidence in each other’s specialist skills and knowledge.’

**Performance indicators**

Performance indicators are the behavioural outcomes expected to be seen enacted by a person authentically living out these beliefs and values. Having the group identify behaviour and outcomes that logically result from living out the values not only makes it quite clear what is expected, but each person also knows that others will be able to judge their personal commitment to these values by their behaviour. In this way, it is more likely that each person will commit to these beliefs and values.

These points act as guidelines for defining performance indicators:

- If the team is performing in accordance with these values and beliefs, what would each member be doing?
- Draw up a personal plan for the next five days that states four things that you will do to contribute to the team’s agreed vision.

Each of these aspects involved in aligning values builds meaning for the individuals involved. Synergy is achieved by working through each aspect. The whole becomes greater than the sum of the parts.

As a consequence, individuals are able to better align their values with the organisation’s values while also sensing heightened workplace meaningfulness and fulfilment.
Possible values

Abiding by the law; accepting others; accountability; achievement; adaptability; adventurous; affirmation; alignment; altruism; approval; authenticity; authority; balance; belonging; candour; caring; Catholic; caution; Christian; cohesiveness; collaboration; collegiality; comfort; commitment; communication; community; community involvement; community orientation; community support; companionship; compassion; competition; compliance; concern for others; confidence; confidentiality; congruence; consideration; consistency; control; cooperation; courage; courtesy; creativity; credentials; credibility; curiosity; dedication; deference; delight; dependability; dependency; developing others; dignity; diligence; diplomacy; discernment; discretion; diversity; effectiveness; efficiency; empathy; empowerment; encouragement; enthusiasm; equality; ethics; evangelising; excellence; expediency; faith; fellowship; flexibility; freedom; friendship; fulfilment; generosity; genuineness; giving; glory; hard work; harmony; health; honesty; honour; humility; humour; imagination; improvement; inclusiveness; independence; influence; initiative; innovation; integrity; intelligence; interdependence; intuition; involvement; justice; kindness; love; loyalty; material possessions; mentoring; merit; morality; mutual interests; networking; perseverance; politeness; popularity; prestige; productivity; professionalism; progress; obedience; openness; opportunity; optimism; order; organisational orientation; originality; ownership; participation; partnering; patience; peace; quality; recognition; reliability; respect; responsibility; responsiveness; results; risk-taking; routine; security; self-control; self-discipline; self-interest; seniority; service; sincerity; situational ethics; speed; spirituality; spontaneity; stability; status; status quo; subservience; success; support; synergism; tact; teamwork; territory; tolerance; tradition; trust; trustworthiness; truth; understanding; winning; wisdom; witness to faith
APPENDIX 5

PROCESS AND STAGES OF ANALYSIS IN THE LAND CAUSAL MAPPING STUDY

Craig Ashhurst

LAND project participants (LAND school leadership team members, central office personnel and officers from the Department of Education, Employment and Workplace Relations) were invited to respond to an initial survey that posed the question: What in your experience are the significant causes of improvement in student achievement in numeracy? The responses to this question were combined to create an ‘original’ cluster causal map.

Each map represented an initial collection of perceived causes required to improve numeracy in the participants’ specific context (school, central office, government department). For ease of comparison, causes were grouped according to the LAND framework. If causes were linked in the survey responses, this was shown on the map by a line with an arrow. An example of an original cluster causal map is shown in Figure A.2.

Each cluster map was printed and presented to the related cluster group at Workshop 3 in the series of LAND project workshops. This provided a means by which an individual’s originally identified causes were combined with those of their colleagues and reflected back to them in visual form as a representation of their collective thinking. Two 90-minute sessions in Workshop 3 functioned as the first round of work on causal mapping. In the first session, participants were asked to reflect on their map in school groups during the workshop, making any modifications that they considered necessary. School groups were then asked to discuss the following questions:

- Is there anything we need to remove from the map?
- Is there anything missing that should be added?

Each group’s response was reported back to the whole cluster.

Groups were then asked to nominate the top three causes essential for improving numeracy in their schools, give their reasons and report back to cluster group.
At the planning and evaluation workshop (Workshop 4 in Stage 3), the revised maps, based on the Workshop 3 feedback, were presented to the cluster groups. Participants were then asked to comment and also to discuss a series of questions relating to their maps.

**Figure A.2:** Original causal map – Broome (Kimberley) school cluster