LITERACY & NUMERACY

A POSITION FOR CATHOLIC SCHOOLS IN THE ARCHDIOCESE OF BRISBANE

2006-2009
Improving students’ literacy and numeracy is a priority for all Catholic schools in the Archdiocese of Brisbane, and developing these aspects of learning is a critical part of effective school renewal. Initiatives are more likely to be sustained if they are developed with a whole school focus.

The Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) in April 1999, endorsed the National Goals for Schooling in the Twenty-First Century. This declaration prioritises the need for all students to gain appropriate literacy and numeracy levels as defined in the National Benchmarks for Literacy and Numeracy.

Recent research into literacy teaching, in particular the *Literacy Review of Queensland State Schools – Literate Futures Report* (2000) and the *National Inquiry into the Teaching of Literacy* (2005) made recommendations about the teaching of literacy to improve students’ learning outcomes.

In relation to numeracy, reports such as *Numeracy = everyone’s business* (1997) and *Numeracy across the curriculum: demands and opportunities* (2003) made recommendations about the teaching of numeracy and the identification of numeracy demands for all students.

Improving students’ literacy and numeracy is also an intention in Priority 2 of the Brisbane Catholic Education Strategic Renewal Framework 2007–2011. Expectations relating to this are that by 2011:

E1. Student and school data are used to support improvements in learning and teaching.

E2. Inclusive and comprehensive curriculum, assessment and reporting processes align with current Queensland syllabuses and guidelines, and are informed by the *Brisbane Catholic Education Learning Framework* and Brisbane Catholic Education curriculum policy, regulations and directions.

E4. Teaching practices actively engage students in their learning.

E7. Improvement in pedagogical practices is at the forefront of teacher professional learning programs.

The revised Archdiocesan Literacy and Numeracy Position 2006–2009 outlines a position, and gives advice on developing a coordinated approach to planning on a whole-school basis to enhance literacy and numeracy outcomes.

This material is written and produced by the Literacy and Numeracy Subcommittee of the Archdiocesan Commonwealth Targeted Programs (CTP) Committee and is a resource for all schools in the Catholic Archdiocese of Brisbane. Materials supporting this booklet include:

- examples of planning methods with a whole-school focus
- mapping literacy and numeracy demands across learning areas
- advice on aspects of teaching and learning literacy and numeracy
- recommended resources to support classroom practice.

The materials may be accessed by contacting the Education Officer, Literacy and Numeracy, Brisbane Catholic Education.
The Brisbane Archdiocesan Literacy and Numeracy Position 2006–2009 provides an overall structure for developing whole school approaches to teaching literacy and numeracy.

Central to the planning process are teachers’ belief in, and understanding of, their professional capacity to improve outcomes, and the capacity of every student to learn in an appropriate environment.

The Learning framework (Catholic Education, Archdiocese of Brisbane) (see figure 1) describes a shared vision of learning and of learners with implications for schools as they plan, assess, monitor and report on learning outcomes.

**Figure 1. Learning Framework**
The National Inquiry into the Teaching of Literacy (2005) recommended that ‘all education authorities and school leaders examine their approaches to the teaching of literacy and put in place an explicit, whole school planning, monitoring and reviewing process in collaboration with school communities and parents.’

The South Australian Profiling High Numeracy Achievement (2001) project asserted that ‘more substantial and enduring changes to numeracy practices require a whole school response to ensure an integrated and coherent approach to school planning, professional development and resource acquisition. In other words, cultural and structural changes are needed to support changes at the level of the classroom.’

ESSENTIAL ELEMENTS OF WHOLE SCHOOL PLANNING

Hill and Crevola (1998) used the insights of two decades of educational research to develop a practical framework for school-based improvement and planning. To improve literacy and numeracy in Archdiocesan schools, elements of their framework adapted in the model of whole school planning (see Figure 2) involve schools in:

- developing a shared understanding of their beliefs and values about teaching and learning
- identifying implications of student diversity and developing supportive community partnerships to improve teaching
- setting standards and prioritising targets for improving literacy and numeracy
- creating conditions in which literacy and numeracy can be taught explicitly and systematically (pedagogy and classroom organization)
- developing systematic and ongoing procedures to assess, monitor and report students’ literacy and numeracy achievement
- making specific adjustments for learners having difficulty
- being strong leaders and undertaking ongoing professional learning in literacy and numeracy.

IMPLICATIONS FOR WHOLE SCHOOL PLANNING

There is no single way to plan a whole-school approach to literacy and numeracy, and school communities are in the best position to decide what method will work best for them. However, many schools have found that action learning processes bring about real growth and development.

In general, such processes move through the following phases, but not necessarily in a linear fashion:

- raising awareness
- reflecting on the effectiveness of current practices
- collecting and analysing data
- setting targets
- prioritising goals and documenting action plans
- monitoring progress
- reviewing and reflecting on results.
Whole School Approaches

To be effective, the process must ensure that students’ learning of literacy and numeracy is continuous and cohesive across learning areas and years of schooling. Being committed to the process, making decisions collaboratively at the school level, and having these reinforced by teachers in the classroom, will improve outcomes.

Figure 2. Elements of Whole School Planning

Any one of these elements can be a starting point for reflection, discussion and action, but because they are interconnected, it will be necessary to deal with them all eventually. It is also important to recognise that as schools already engage in planning, literacy and numeracy improvement planning is not a discrete process.
Literacy is a social practice. It requires the flexible and sustainable mastery of a repertoire of practices with texts of traditional and new communication technologies via spoken language, print and multimedia. 

Contemporary understanding identifies literacy as a social practice that occurs in social contexts such as those at home, at school and in the wider community. These literate worlds must connect so that students can understand their experiences in these different contexts, and use literacy effectively both in, and beyond the school. That is, literacy is not only concerned with the development of skills, but the way these skills are used in particular contexts to interpret and construct meaning.

THREE ASPECTS OF COMMUNICATION

To become literate in contemporary and future societies students must master three overlapping aspects of communication:

- **Oral**: the systems of spoken language. This may be Standard Australian English, but also includes, for many Queensland children, other community languages spoken by their family and peers.
- **Written**: the systems of alphabetic writing and print culture that include the traditional elements of reading and writing. These also include those other formalized codes that have developed in parallel to spoken and written language, such as Braille and sign language.
- **Multi-modal**: the combined visual, gestural, audio, spatial and linguistic systems as they are represented in print and digital media.

ELEMENTS OF LITERATE PRACTICE

- **Speaking** is a dynamic, interactive social communicative process. It is used for a range of purposes (social, personal, cultural and aesthetic) and changes according to audience and context. Purposeful talk allows us to shape our thoughts into meaning and extend and refine our understanding of language. A focus on talk to extend and consolidate literacy learning provides a bridge into writing and the more formal demands of literacy.

- **Listening** is a dynamic, interactive process that allows us to make sense of language. It involves the active and purposeful interpretation of verbal and nonverbal cues. Effective listening combines two processes—analysing sounds, intonation, words and grammar, and interpreting the context, purpose and function of utterances, the shared knowledge between listener and speaker, as well as world knowledge.

- **Reading and Viewing** are social practices used to make meaning of print and still and moving images for a range of purposes. Meaning is made when the codes associated with the three cueing systems - semantic, syntactic and graphophonic are drawn from to interrelate what is new to what is already known. Learning to read means learning to bring meaning to a text in order to comprehend it.

- **Writing and Shaping** are social practices used for a range of purposes to communicate with an audience over time and/or distance. They involve the selection and combination of print and visual codes and conventions using knowledge of cultural and situational context, grammar, sentences, encoding words and letters.
Within reading and writing, spelling is the ability to encode and decode conventional letter sequences, by drawing on sound-letter relationships, knowledge of frequently occurring letter strings, awareness of the meaning of word parts, and recognition of spelling patterns in words absorbed from other languages.

REPERTOIRE OF PRACTICES

The Four Resources Model (Freebody & Luke 1999) outlined in Figure 3 describes the practices literate people in all areas of communication use to engage with a wide range of traditional and contemporary texts. These include core digital literacies such as searching the internet, navigating using hyperlinks, evaluating content, assembling knowledge and producing non-linear texts. The model also helps teachers plan appropriate and balanced programs for learning literacy, and can be used to map and evaluate the scope and effectiveness of a whole school program.

Figure 3. Four Resources Model

<table>
<thead>
<tr>
<th>Code breaker</th>
<th>Text participant</th>
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<tbody>
<tr>
<td>Practices required to ‘crack’ the codes and systems of written, spoken, visual and multi-modal texts</td>
<td>Practices required to make cultural meanings from texts</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Text user</th>
<th>Text analyst</th>
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<tbody>
<tr>
<td>Practices required to use texts effectively in a range of social contexts</td>
<td>Practices required to analyse, question, critique and transform texts</td>
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MULTILITERACIES

Understanding what it means to be literate changes as the world changes. New communication technologies and the effects of culture and context have changed the ways we understand and apply literate practices. Students need to learn how to read, write, and use multimedia texts that combine print information with visual, audio and other forms of representation in non-linear ways. The term ‘multiliteracies’ is used to describe the linguistic, cultural, visual, audio, spatial and behavioural modes of communication that have resulted from rapid technological change. Being multiliterate also requires an ability to design, redesign, critically analyse and transform texts.

LITERACIES IN THE CURRICULUM

It is necessary to think of literacy in two broad senses—as an instrument for all teaching and learning, and as an object of overt teaching and learning. Teachers and students use language and literate practices in the classroom to make and negotiate meanings specific to learning areas. Students demonstrate their learning of content through their literacy skills, which are therefore a tool for learning, as well as an indicator of school success.

All learning areas have specific language demands for talking, listening, reading and writing, and students need appropriate skills to be able to participate. All teachers are therefore responsible for developing teaching practices that deal with these different literacy requirements.
The way many schools are organised means that teachers - who are alert to the opportunities in integrated programs or in specific learning areas, where they can give explicit instruction in composing and comprehending relevant texts - can teach literacy in all learning areas. For some years of schooling, however, learning areas are often separated, with a number of teachers interacting with individual students, thus spreading the responsibility for ensuring ongoing literacy learning.

**IMPLICATIONS FOR WHOLE SCHOOL PLANNING**

Continuity in the development of each student’s literacy through a planned whole school approach includes:

- programming for language and literacy across all learning areas
- providing experiences with multiple text genres, modes and media forms
- a balance of spoken and print texts and engagement with digital and online texts
- recognising that different practices are required to compose and comprehend texts of different media
- analysing the speech and writing structures of different subject areas
- developing an awareness of the technical and abstract language and genres used in subject areas
- teaching reading and viewing from subject specific texts
- using popular, media and community texts as objects of study and points of connectedness with students’ life worlds
- developing sequences of lessons in which students’ control of literacy grows cumulatively
- designing sequences of lessons where the movement between teacher-led and independent learning of literacy is deliberately planned
- the teaching of literacy skills in a consistent, explicit and systematic way across the curriculum
- monitoring progress in literacy to determine students’ progress towards the achievement of outcomes
- evaluating the success of programs, and redirecting and refocusing teaching and learning activities where necessary
- selecting and constructing appropriate print, visual and multimodal texts as resources for literacy learning, such as books, charts, posters, videos, films, websites, CDRoms.

Adapted from [QSCC Literacy Position Paper 2001](#)
Numeracy is the ability to use mathematics effectively to meet the general demands of life at home, in paid work, and for participation in community and civic life. **Numeracy, a Priority for All**, DETYA 2000

The development of numeracy requires that students gain confidence and experience in using their mathematical knowledge in everyday situations and in all areas of study. **Numeracy in Teacher Education: the way forward in the 21st century**, 2005

In schools, numeracy is an integral component of learning and critical thinking across all curriculum areas. It requires students to develop the ability and disposition to use and interpret mathematical concepts, skills and representations fluently and critically, so that they can operate successfully and purposefully in diverse contexts.

**KNOWLEDGE AND PRACTICE**

Willis (1998) suggests that there are three aspects of numeracy—mathematical, contextual and strategic. To develop numeracy as practical knowledge, students need a blend of different kinds of ‘know-how’.

They develop their

- mathematical know-how by increasing their mathematical repertoires or knowledge
- contextual know-how by doing purposeful real-world numeracy tasks in real-world contexts
- strategic know-how by learning how to choose and apply appropriate mathematical concepts and skills to deal with unfamiliar problems. This requires adaptive thinking, intuition and judgement.

To use these three types of know-how effectively in a particular context, a person must be able to act concurrently as:

- a fluent operator—using mathematical knowledge and skills fluently in familiar contexts
- a learner—using mathematics to make sense of something new or to cope with unfamiliar situations
- a critic—critically judging and questioning how appropriate the mathematics chosen and used are.

Numeracy practices involve students in:

- selecting the appropriate methods for making calculations in a given context (written, mental, calculator)
- forming reasonable estimates when working with numbers and measures
- knowing and using a variety of ways to represent number and quantities
- using spatial concepts to design and represent objects and make sense of maps and plans
- collecting, organising and representing data to ask questions and make decisions
- recognising patterns and predicting trends
- selecting and using appropriate instruments and tools (including technology) for a given task
- selecting, using and interpreting mathematical language and symbols.

**NUMERACY IN THE CURRICULUM**

All curriculum areas have specific numerate practices that students need to learn and use in order to participate and succeed.

All teachers are therefore responsible for identifying, planning for and implementing practices that explicitly deal with these numeracy demands. Teachers support student learning by:

- identifying and dealing with numeracy in the moment
- explicitly planning for and teaching the mathematics required to engage with numeracy in contexts across the curriculum
BELIEFS & UNDERSTANDINGS: NUMERACY

- giving students time and opportunities to work things out for themselves and with peers
- developing students’ strategic and critical thinking by assisting them to reflect and communicate about the way they approach and solve problems and perform tasks
- engaging students in purposeful tasks
- enabling students to explore numeracy demands in different contexts
- helping students make sense of situations where the mathematics is unfamiliar or difficult
- developing teaching repertoires that include: demonstrating, modelling (thinking aloud), sharing (eliciting student contribution) and facilitating independent group and individual task completion and problem solving.

As the mathematical knowledge required to meet numeracy demands becomes more complex, all teachers need to:

- develop their personal numeracy skills
- recognise the role of numeracy and the demands and opportunities it presents within their areas of specialisation
- teach numeracy across the curriculum, drawing on the knowledge of specialist mathematics teachers to integrate mathematics with other curriculum areas
- collaborate with specialist mathematics teachers to support their understanding of the mathematics required to support the numerate practices of particular learning areas.

IMPLICATIONS FOR WHOLE SCHOOL PLANNING

A whole school approach to improve numeracy requires both focus and leadership. Effective teaching and learning practices and effective home, school and community partnerships are critical. Schools also need to address the predominant factors that influence students’ numeracy outcomes. These are:

- teachers’ beliefs about, and attitudes towards numeracy
- teachers’ own mathematical ability and knowledge
- a learning environment that is safe, supportive, draws on students’ prior experience and knowledge and is intellectually challenging
- the time teachers give to numeracy development
- ongoing professional support.

Hogan (2002) suggested that an effective starting point is to undertake a ‘numeracy audit’ to provide information about numeracy demands across the curriculum, to inform school judgements about action that needs to be taken and to extend teachers’ knowledge about strategies required to develop students’ numeracy. Such an audit would include:

- determining staff, student and parents views on numeracy
- analysing school and curriculum documents and student samples
- identifying issues that arise from reviewing information
- developing a plan of action.
STUDENT DIVERSITY

Queensland’s communities continue to grow in cultural and linguistic diversity. A highly mobile population, economic fluctuation, changing cultural mix and the influence of mass media, globalisation and information and communication technologies contribute to the diverse literacy and numeracy needs of students.

The Literate Futures Review (2000) identifies the socio-economic factor as the strongest indicator of poor literacy achievement, but points out that this intersects with others in complex ways. Teaching to accommodate this diversity requires each school community to identify and understand what factors affect the literacy and numeracy development of its students, and to develop specific responses that ensure improved outcomes for all.

COMMUNITY PARTNERSHIPS

A partnership between home, school and community provides a broad basis for the mutual support and development of students’ literacy and numeracy. To build genuine partnerships with families and communities schools need to:

- know their communities and build relationships with them
- understand the diverse languages and cultures in their communities
- recognise and value the significant knowledge and resources that families have to contribute
- encourage two-way communication and learning between home and school.

Community partnerships developed in middle and senior years of learning include work placements, school-based traineeships and apprenticeships, community service, guest speakers, scholars-in-residence, fast tracking and enterprise education projects.

Cairney et al (1995), use the terms ‘family literacy’ or ‘community literacy’ to describe the literacy practices that occur in these respective contexts. They suggest that family and community involvement in children’s literacy learning is potentially of great value. Research shows a positive correlation between family literacy and cultural practices, and children’s school achievement. They state that while it is less clear to what extent matches and mismatches between literacy practices at home and school contribute to or impede school literacy and success, there appears to be strong evidence that such a relationship exists.

The solution is not to view some families as somehow deficient and hence to institute ‘remedial’ action. Rather, there seems a strong case for the development of closer partnerships between home and school which enable teachers to gain insights into the literacy [numeracy] practices of their children’s families and hence change their practices at school to optimise all children’s chances of success. … such partnerships will permit families to gain a greater insight into the literacy [numeracy] practices of schooling and thus make choices concerning the forms of support they will offer their children at home.

Cairney et al 1995

IMPLICATIONS FOR WHOLE SCHOOL PLANNING

Building on ‘differences’ and ‘capacities’ already present in the school community results in sustained improvement in students’ literacy and numeracy. To develop an inclusive approach to education that goes beyond either tolerance or negative labelling, it is necessary to recognise the effect of student diversity on learning outcomes. To respond effectively, schools need to identify and analyse demographic and school-based information relating to literacy and numeracy achievement such as:

- employment levels in the area
• education levels of parents
• average household income
• language(s) spoken
• community resources
• family mobility
• students’ literacy/numeracy performance profile to identify any discernible patterns, for example
  o gender
  o students with an Aboriginal or Torres Strait Islander background
  o students with a language background other than English
  o students from diverse cultural backgrounds
  o students in socio-economically disadvantaged circumstances
  o non-urban students
• school-based records of learning progress
• factors that affect learning success e.g. school phase readiness, social/emotional and physical well-being, specific learning difficulties, attendance.

Seeing students and their communities as already competent and knowledgeable is a crucial step in developing appropriate programs and pedagogies. To achieve this, schools can:

• look at ways of learning more about the differences and similarities between literacy/numeracy practices at home and at school to improve mutual understanding and recognition
• help parents and teachers examine how they work on literacy and numeracy with students, and decide if they need to change their views or actions to achieve their goals
• identify ways of communicating and disseminating educational information among members of the school community, including school staff, students and community members
• focus on communicative processes within the school community and how these can work positively or negatively towards desired outcomes
• identify successful strategies for establishing and maintaining partnerships between schools and their communities
• make students the starting point of the curriculum and provide multiple points of entry to new learning
• develop a broad and flexible repertoire of teaching strategies to address the different backgrounds, capabilities, and learning styles of students
• involve students actively through dialogue, negotiation and reflection about what they understand, their goals for learning, learning processes and outcomes
• consider whether different students need different modes of assessment to demonstrate their learning.

To support the development of students’ literacy and numeracy, parents or caregivers need information on:

• how students learn literacy and numeracy and how they can help them at home
• how literacy and numeracy are taught in the school
• what outcomes are expected.

It is important that families be involved at each phase of student development, but particularly at crucial transition points.
Standards and associated targets are a starting point for planning and redesigning education programs. They indicate reasonable student progress against which performance can be measured.

Fullan, Hill and Crevola (2006) state that the mission of schools is to help all students to meet high standards of education by working towards sustainable improvement, so that 90–95% of students meet agreed standards of literacy and numeracy. These high expectations need to be reflected in explicit standards that establish a benchmark for evaluating performance.

**IMPLICATIONS FOR WHOLE SCHOOL PLANNING**

Established standards include the National Benchmarks for Literacy and Numeracy as minimum requirements. Schools are required to report annually against these to their communities. State testing programs, which link to these benchmarks, provide the Archdiocese with information necessary to meet Australian Government accountability requirements.

Benchmark statements set minimum acceptable standards of achievement only, that is, the level of literacy and numeracy a student must have in order to make progress at school without undue difficulty. Many students will achieve well beyond these, while some may struggle to meet them.

Schools may therefore develop their own standards, benchmarked against best practice, while continuing to use the national benchmarks as a minimum requirement.

They need to set their targets in accordance with their community profiles, literacy and numeracy demands across the curriculum, and actual patterns of school performance.

To do this, they will need to continually and systematically monitor and assess their performance.

Schools must be willing to have high expectations that translate into specific targets for both staff and students. Targets are quantifiable performance levels or changes in performance to be achieved in a specific time.

They enable schools to plan where they are going, and to answer the question ‘how will we know when we have got where we want to be?’

Targets need to be agreed—teachers can then use this consensus as the starting point for developing the processes and strategies necessary to meet or exceed established standards. Schools should regularly monitor how well they, and the students, are reaching the targets.
Learning is individual, so not all students will become literate and numerate in the same timeframe and in the same way. Some students, though they have received what could be considered adequate and responsive instruction, will still need further specific support to meet required standards. Making appropriate adjustments depends on:

- planning and commitment at the whole school level
- effective classroom teaching
- early intervention and scaffolding
- support and scaffolding throughout the years of schooling
- the selection, development and planning of appropriate programs.

**IMPLICATIONS FOR WHOLE SCHOOL PLANNING**

To support all learners effectively, schools require the commitment of the entire staff. They also need to develop educational policies and procedures that apply to the whole school. For example, they need to:

- develop specific policies for students at risk
- develop systematic procedures for identifying, planning, teaching, and monitoring progress
- maintain and regularly update systematic records
- employ experienced and well qualified staff to coordinate whole school approaches
- give teachers opportunities for professional learning
- encourage community involvement (e.g. by conducting parent/family programs, recruiting volunteers for assisted reading, introducing peer tutoring or buddy systems to create a school culture of cooperation and acceptance)
- involve other professionals for referrals, teaching, and the professional development of teachers
- use resources creatively (e.g. use staff flexibly to provide a range of regular classroom and coaching opportunities appropriate for individual student needs)
- use appropriate teaching materials that motivate students to learn.
Research has consistently shown that of all the things that schools can control, it is the quality of teaching that directly and most powerfully affects student learning outcomes. The Queensland Schools Reform Longitudinal Study (QSRLS) identified that teacher variation within a school makes a greater contribution to student outcomes than does variation between schools. (Ladwig et al, 2000).

Ensuring successful literacy and numeracy outcomes for all students, therefore, relies on a consistent whole school approach to planning and teaching. However, this does not necessarily mean that every classroom will look the same. The Snow Report (1998) stated that no single instruction method works best for all children. ‘Effective teachers are able to craft a special mix of instructional ingredients for every child they work with. There is [however] a common menu of materials, strategies, and environments from which effective teachers make choices.’

Developing students’ literacy and numeracy requires explicit and systematic teaching that is responsive to their needs, and a ‘one-size-fits-all’ approach will not suffice. The demands of the 21st century world in which students live call for a flexible and sustainable approach, which caters for a range of learners, learning styles and contexts. A balanced approach to the teaching of literacy and numeracy is evidenced by:

- a clearly identifiable structure to lessons and instructional blocks
- clear organisational routines and management strategies
- a positive and consistent classroom climate
- clear and articulated expectations about students’ learning
- high levels of engaged learning time
- a balanced repertoire of pedagogical approaches
- a shared understanding of effective literacy and numeracy strategies
- a balance of teacher-directed and student-centred teaching.

**IMPLICATIONS FOR WHOLE SCHOOL PLANNING**

As teachers are the key to student success, there needs to be a strong focus on effective pedagogies. Pedagogy links theories and beliefs about teaching and learning to teaching practice in a consistent and coherent way. For teachers to maintain excellence they need to be reflective practitioners. They need to deepen and refresh their own knowledge and engage in professional learning with their colleagues. It is important that practices for teaching of literacy and numeracy align with articulated beliefs and understandings about learners, learning and learning environments. Schools need to audit the way they:

- establish high expectations for learning
- provide relevant and meaningful learning contexts
- identify clear purposes for learning experiences
- use relevant and appropriate resources
- provide explicit instruction
- encourage reflection, discussion and sharing of learning
- monitor learning to provide information for future planning.

The QSRLS [2000] Productive Pedagogies framework identifies the dimensions of intellectual quality, connectedness, supportive classroom environments, and recognition of difference as central to good practice. These can be a basis on which to reflect on pedagogy. A number of elements define each dimension. Within any lesson, unit or teaching episode, elements of each dimension should be present.
Assessment, monitoring and reporting are purposeful, systematic and ongoing processes for informing students, teachers, parents/caregivers, schools and systems about achievement and progress over time. They serve the purposes of:

- demonstrating accountability
- measuring progress in learning
- establishing starting points for teaching
- providing information for future whole school planning.

These processes involve collecting, managing and analysing the data that schools require to promote and maintain their effectiveness, and to drive whole school improvement. Effective schools thus have evidence that they are achieving positive outcomes for their students. They have quantitative and qualitative data they can use to determine if they have met their targets, and if they have made progress towards ensuring that all students meet agreed standards.

Assessment and monitoring also involve collecting and recording information to be used when making judgements about student learning. Assessment is both formative and summative and involves a range and balance of tools and techniques. Although all areas of the curriculum have literacy and numeracy demands that underpin student learning outcomes, progress is largely assessed in the English and Mathematics areas. The purpose of identifying and explicitly teaching literacy and numeracy practices within a curriculum area is to improve student learning outcomes in that area. Developing ways to effectively monitor progress in literacy and numeracy in all learning areas is an ongoing challenge.

Reporting is the process of communicating the information gained from assessing and monitoring students’ achievement and progress. Schools negotiate reporting practices with parent communities, and conduct them regularly and routinely in a cyclical manner. Students’ literacy and numeracy progress is currently reported to parents/caregivers in Years 3, 5, 7.

**IMPLICATIONS FOR WHOLE SCHOOL PLANNING**

Effective whole school assessment, monitoring and reporting processes consider:

- the principles and purposes of assessment, monitoring and reporting practices
- the background characteristics of students
- assessment, monitoring and reporting as integral to the planning and teaching cycle and vital for future planning
- the results of comprehensive, diagnostic and developmentally appropriate assessments of every student, mapped onto appropriate monitoring frameworks
- the role of teachers’ judgement (of student performance) and how teachers can develop consistent judgement practices
- the extent to which targets have been met.
To improve literacy and numeracy outcomes, it is not only necessary to plan on a whole school basis, but also to recognise that literacy and numeracy are the core business of education. To ensure positive outcomes for students, schools must commit time, personnel and resources to the task. It is also important that they identify those in the school who have the relevant knowledge and can offer leadership and support.

The Report of the Literacy Review for Queensland State Schools (2000) found that successful literacy [and numeracy] programs in schools are driven by people in roles such as strategic administrator, operational key teacher, or literacy and/or numeracy leader. Strong leadership prioritises literacy and numeracy improvement through a whole school planning process that engages schools and their staff in:

- reflecting on the effectiveness of current teaching practices
- investigating possible reasons for different levels of student achievement
- considering the impact of social, cultural and technological change
- learning more about effective literacy and numeracy practice in schools
- organising, planning, resourcing, and sustaining programs to improve outcomes for all students.

IMPLICATIONS FOR WHOLE SCHOOL PLANNING

Schools with a high capacity for leadership are communities that embrace leadership for all, learning for all, and success for all. These schools have a network of structures such as teams, learning communities and study groups, and processes such as reflection, inquiry, dialogue, action learning, mentoring and coaching.

THE ROLE OF THE PRINCIPAL AND SENIOR LEADERSHIP TEAM

School principals are responsible for curriculum leadership. With respect to literacy and numeracy development, this role includes the following responsibilities:

- building a collective vision for literacy and numeracy with staff, parents and the wider community
- leading a data-informed, collaborative process of whole school planning
- documenting decisions made in this process as a strategy for achieving improved learning outcomes
- developing an implementation plan in collaboration with the school community
- extending staff’s professional knowledge and practice in literacy and numeracy.

TEACHERS TAKING A LEADERSHIP ROLE

A major focus of the role of literacy or numeracy leaders (in those schools that have them) is to support teachers in:

- implementing school literacy and numeracy plans
- planning, managing and coordinating literacy and numeracy programs
- improving their practice through mentoring and coaching
- developing, implementing and monitoring progress against individual literacy and numeracy plans, particularly for students identified as at risk.
THE ROLE OF TEACHERS

Research shows that quality teaching depends upon teachers’ knowledge of:

- how students learn best
- how to assess ability and growth
- how to use assessment information in forward planning and how to use appropriate intervention strategies.

Quality teaching involves knowing students, and understanding their diverse backgrounds and learning needs. Ongoing professional learning is essential for teachers to teach literacy and numeracy.

PROFESSIONAL LEARNING

Teachers’ learning and professional development are at the heart of student achievement, and thus whole school change. Any professional learning plan needs to identify and build on the expertise of the whole school community. The Nothing Left to Chance research (2002) found that what makes a difference in schools is ‘that professional development is targeted, is readily translated to the classroom context, is sustained over time and is acknowledged as important’.

Highly effective professional learning:

- is focused on improving student learning outcomes
- is focused on and embedded in best practice
- is informed by best available research
- is collaborative—involving reflection and feedback
- is evidence-based and data-informed to guide improvement and to measure impact
- is ongoing and fully integrated within the operation of the school
- involves individual and collective responsibility at all levels
- is tolerant of risk taking.

Schools need whole school leadership to initiate, guide, energise and sustain professional learning processes. Involving everyone in leading requires inclusive strategies such as collaborative action research, dialogue and inquiry. Opportunities for professional learning can include:

- quality induction programs
- teachers’ shared and collaborative learning in school
- working in professional learning teams
- opportunities to observe good practice
- opportunities to debrief and reflect on practice
- modelled teaching
- peer coaching and mentoring
- shared research.
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