



**Strengthening Literacy and Numeracy  
through Embedding:  
Guidelines for ITOs**

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## Introduction

The purpose of these guidelines is to support Industry Training Organisations (ITOs) to strengthen and extend opportunities for adults to improve their literacy, language and numeracy skills within the training provision of specific industry-related skills.

Literacy is the written and oral language people use in their everyday life and work; it includes reading, writing, speaking and listening. Skills in this area are essential for good communication, critical thinking and problem solving in the workforce. It includes building the skills to communicate (at work) for speakers of other languages

Numeracy is the bridge between mathematics and real life. It includes the knowledge and skills needed to apply mathematics to everyday family and financial matters, work and community tasks.

In these guidelines, the term “literacy and numeracy” is used to refer to all of the literacy, language and numeracy skills described in the learning progressions. For simplicity, “literacy and numeracy” is used in these guidelines to denote either literacy or numeracy or both.

The prime motivation for many adults to participate in workplace learning is to develop their vocational skills to meet work-related goals. However, their success in both the workplace and in training is often limited by poor literacy and numeracy skills. These skills can be strengthened when adult learners have increased opportunities to experience deliberate literacy and numeracy teaching and learning in the broader context of their workplace learning.

The document, *Strengthening Literacy and Numeracy through Embedding: Theoretical Framework*, which accompanies these guidelines, provides the rationale for seeking opportunities to strengthen literacy and numeracy in workplace training. In particular, the theoretical framework describes sets of evidence-based understandings about:

- how adults develop their literacy and numeracy expertise
- the features of effective embedded literacy and numeracy provision
- the workplace as a context for strengthening literacy and numeracy
- effective learning materials and how to develop them
- the role of assessment in strengthening literacy and numeracy
- managing and sustaining change to professional practice.

These guidelines, *Strengthening Literacy and Numeracy through Embedding: Guidelines for ITOs*, indicate the ways in which the theoretical understandings can be applied when ITOs, employers and trainees are developing training arrangements. The guidelines build on work to embed literacy and numeracy into industry training that has been undertaken by ITOs since 2007.

ITOs are recognising and optimising opportunities for literacy and numeracy teaching and learning as the norm rather than the exception. These guidelines are intended to support and sustain this shift by indicating areas where literacy and numeracy can be strengthened through changes to policies and practice.

Each guideline suggests specific actions and prompts that can be used to guide the process of strengthening literacy and numeracy. The actions and prompts do not cover everything that an ITO needs to consider, and some will not be relevant to all ITOs.

## The guidelines

Successful strengthening or embedding of literacy and numeracy into industry training requires vision and leadership from the ITO to ensure shared understandings and beliefs about the value of literacy and numeracy. There is evidence that strengthening literacy and numeracy will contribute to trainees' vocational success and personal development when it is valued by the industry.

There are different approaches that may be taken to strengthening literacy and numeracy in industry training. It is important that an ITO adopts the approach(es) that best fit its philosophy, the varied needs of the industry, the forms of training that are facilitated, the trainees, the staffing, and the teaching and learning materials available.

Strengthening literacy and numeracy means raising awareness about the significance of literacy and numeracy in the workplace, and taking every opportunity to build trainees' literacy and numeracy skills. To do so has implications for the skill development of trainees, ITO staff and stakeholders.

ITOs do not always have complete control over training development and delivery, for example in workplace learning where a trainee has support from an on-site supervisor. In these situations an ITO may strengthen literacy and numeracy in other ways:

- through discussions with employers and industry groups
- by considering literacy and numeracy when recruiting trainees
- through the design of learning materials
- in the support provided by field staff.

### Guideline 1

*Include literacy and numeracy skill development in the core business of the ITO.*

#### **1.1 Action:**

Develop a specific literacy and numeracy strategy through a process of discussion and consultation involving all ITO stakeholders: the literacy and numeracy strategy should be set in the context of the ITO's overall strategy for workforce development. It should outline the ITO's intentions in relation to literacy and numeracy development and guide implementation to enact these.

## Prompts

- Does the strategy situate literacy and numeracy skill development as a fundamental component of the ITO's business?
- Does the strategy reflect knowledge of national and regional industry developments, new initiatives and emerging priorities?
- Does the ITO have planning and stakeholder arrangements to ensure it has sound information about the range of industry sector needs, including the existence, and significance, of any literacy and numeracy skills gaps?
- Have exemplar literacy and numeracy skills profiles within the workforce been developed?
- Have opportunities for strengthening or embedding literacy and numeracy in the design and delivery of current and future qualifications been identified and prioritised?
- Are these opportunities based on information about both current and emerging industry needs?
- Are resources for strengthening literacy and numeracy capability and delivery provided for in the ITO's budget?
- Is the policy to strengthen literacy and numeracy in ITO qualifications and programmes included in promotional and marketing materials?
- Does the ITO have a high-level map of current literacy and numeracy provision and practice across the industry sector?
- Is the literacy and numeracy strategy reflected in the ITO's human resources policy (including recruitment, professional development and performance management)?
- How is the literacy and numeracy strategy supported by other systems and processes within the ITO?

### 1.2 Action:

Ensure the ITO's structure identifies key personnel with responsibility and accountability for championing literacy and numeracy skill development within the ITO.

#### Prompts:

- Have suitable personnel been named and the position profiled within the ITO?
- Will professional development be required to ensure personnel have sufficient understanding of literacy and numeracy skill development to carry out this role (which may be shared by more than one staff member) effectively?
- Is there a process for recruiting, inducting, developing, and managing the performance of personnel for this role?
- Has the role been scoped and budgeted for?
- Has the ITO set targets with key performance indicators for literacy and numeracy development?
- Is there a process for other ITO staff to work with personnel who have this role, in order to make links with their own work?
- In what ways can these personnel assist ITO staff who themselves might have literacy and numeracy needs?
- Does the role include engaging, liaising and making links within the ITO and the wider sectors?

### **1.3 Action:**

Engage industry sectors and stakeholders in strengthening literacy and numeracy skill development.

#### **Prompts:**

- Has the ITO identified key stakeholders or core demands/ critical pathways within their industries?
- Has the ITO developed a plan for engaging key stakeholders in strengthening and promoting literacy and numeracy skill development?
- Is literacy and numeracy development included on the standing agendas of industry advisory groups?
- Do internal ITO staff (including board, field staff and sector advisory groups) understand the significance of literacy and numeracy within the industry?
- Has the ITO identified external expertise that can enable staff to take on the roles and challenges of literacy and numeracy skill development?

## **Guideline 2**

*Prioritise and review qualifications where there are opportunities and/or need to strengthen literacy and numeracy.*

### **2.1 Action:**

Identify those qualifications where strengthening and embedding literacy and numeracy is (or could be) a priority.

#### **Prompts:**

- Are there qualifications that have a history of slow completion or non-completion or where there is evidence (such as feedback from trainees or field staff) that low literacy and numeracy skills may be a barrier to successful completion?
- Are there industries in which trainees have significant literacy and numeracy skills gaps?
- Are there qualifications that may be more suitable than others as starting points, because they will allow more opportunities for literacy and numeracy teaching and learning?
- Are any of these qualifications due to be redeveloped as part of the ongoing review cycle?
- What opportunities have been identified to strengthen literacy and numeracy skill development in on-job training, or in courses that have very limited off-job training?

### **2.2 Action:**

Map the high-level literacy and numeracy demands of high priority qualifications.

#### **Prompts:**

- Have all components of the qualification been considered in the mapping exercise?

- Have the literacy and numeracy demands of the qualification been mapped against the learning progressions?

### **2.3 Action:**

Establish a process for embedding literacy and numeracy skill development into the qualification, and develop an action plan to achieve this.

#### **Prompts:**

- Have the perspectives of all stakeholders been taken into account?
- What is the timeline for the implementation of the action plan?
- How will literacy and numeracy skill development be embedded and made explicit in the aims and objectives of the qualification?
- In what ways are literacy and numeracy skill development explicit throughout qualification documentation?
- How will it be determined if the literacy and numeracy aspects of the graduate profile are met?
- Have literacy and numeracy been included in the qualification review process?
- Has the ITO reviewed and negotiated the capacity of external providers to deliver embedded programmes?

## **Guideline 3**

*Ensure that learning materials (for example, workbooks, session plans) optimise opportunities to learn and practise literacy and numeracy skills while training.*

### **3.1 Action:**

Identify the literacy and numeracy demands, including the full use of learning materials, for a learner to successfully complete the qualification.

#### **Prompts:**

- Have the literacy and numeracy demands of the learning materials been investigated and profiled?
- Are the literacy and numeracy learning opportunities in the resources explicit?
- Are the learning materials based on an instructional design that ensures the materials do not in themselves form a barrier to learning?
- Do the learning materials match the level of the literacy and numeracy requirements of the qualification?
- Do the learning materials provide specific opportunities for trainees to develop literacy and numeracy skills as described in the learning progressions?
- Are the learning materials structured to support trainees to build on the literacy and numeracy skills and knowledge they already have?
- Are the learning materials structured to progressively build trainees' literacy and numeracy skills throughout the qualification?

### **3.2 Action:**

Establish a process for reviewing, and where necessary redeveloping, learning materials.

#### **Prompts:**

- Does the process for reviewing and redeveloping the learning materials take into account the literacy and numeracy skills that trainees need in order to meet the demands of the qualification?
- How does the process for redeveloping the learning materials address literacy and numeracy learning needs and opportunities of the trainees?
- How are trainees' literacy and numeracy skills developed through the learning materials?
- Do the writers of learning materials have the appropriate knowledge and skills to incorporate literacy and numeracy learning into the materials?
- Are suitable quality measures in place to ensure that learning materials are fit for purpose?
- Are materials trialled and piloted with the target audience of trainees before design is completed, and revised where necessary?

### **Guideline 4**

*Ensure that training arrangements take account of literacy and numeracy needs and opportunities.*

#### **4.1 Action:**

Ensure that ITO field staff and assessors are able to recognise trainees who have literacy and numeracy needs, and to organise support where necessary.

#### **Prompts:**

- Have field staff and assessors received training in recognising and understanding the indicators of literacy and numeracy needs?
- To what extent has literacy and numeracy skill development been considered within contracts with on-job training providers?
- Are processes in place for trainees to be given and/or referred on for additional support where necessary?
- How will improvements in trainees' literacy and numeracy skills be evaluated and reported?

### **Guideline 5**

*Ensure that off-job training providers have the skills, systems and programmes necessary to strengthen the literacy and numeracy skills of trainees.*

#### **5.1 Action:**

Ensure that off-job training providers can assess the literacy and numeracy skills of trainees and can provide explicit teaching to strengthen these skills.

**Prompts:**

- To what extent has literacy and numeracy skill development been considered within contracts with off-job training providers?
- Are off-job training providers able to identify and meet the needs of trainees who require additional support for literacy and numeracy?
- Do providers make professional development available for trainers/educators to gain the skills necessary for them to embed literacy and numeracy development within training delivery, in both the short and long term?
- Are specialist literacy and numeracy tutors or learning support tutors available? If so, how will they be used and what opportunities are there for them to become familiar with the content and style of industry training?
- How will providers identify and support trainees who have high levels of literacy and numeracy needs?

**5.2 Action:**

Develop evaluation systems and use these to monitor the outcomes of interventions intended to strengthen literacy and numeracy, to report against contractual obligations and to inform planning.

**Prompts:**

- How will improvements in trainees' literacy and numeracy skills be evaluated and reported?
- Have the literacy and numeracy skills of trainees been improved?
- Has the strengthening or embedding of literacy and numeracy enabled trainees to better meet training outcomes (for example, retention, completion)?
- Has the training provider been able to identify and meet the literacy and numeracy needs of trainees? In what ways have these needs been addressed?
- How has assessment information been used to report on KPIs, and to inform future planning?

## Glossary of terms

Competency	The knowledge, cognitive and practical skills, and the attitudes (including motivation) needed to meet demands or carry out tasks successfully.
Context, contextualise	Contextualising literacy and numeracy learning means using topics, tasks or situations from the places or situations learners live, learn or work in (for example, a vocational course, a workplace) as the basis for literacy or numeracy instruction.
Course	A specific and prescribed series of instructional or study tasks or sessions. Several courses may together form a programme of study.
Curriculum	The content of a course or programme; the topics, tasks and activities that, together, form the teaching and learning within a course.
Demands	Requirements or needs for a task, for example, the reading skill required to read and interpret a document or to carry out an action.
Diagnostic	Used to identify, indicate or characterise something. For example, a diagnostic assessment is used to identify specific skills.
Embedding	Embedding is the systematic and deliberate approach to building literacy and numeracy skills at the same time as building vocational skills.
Integrated instruction	Weaving vocational instruction and literacy and numeracy instruction together. In New Zealand this is now referred to as “embedded instruction”.
Key performance indicators	(KPIs) The pre-defined indicators of expected achievements that may be used to evaluate the work performance of an organisation, a team or person.
Learning support tutor	A tutor who provides specialist support to learners (and/or their tutors) who have learning difficulties.
Needs	The knowledge, skills and abilities that are necessary in order to perform particular tasks or to carry out particular activities.
Numeracy	Numeracy is the bridge between mathematics and real life. A person’s numeracy refers to their knowledge and understanding of mathematical concepts and their ability to use their mathematical knowledge to meet the varied demands of their personal, study and work lives.

Outcomes	Results. The achievement of the goals set for a particular programme, course or learners.
Programme	A planned and coordinated sequence of study to achieve a specified aim. A programme is often made up of separate or linked courses.
Qualification	A recognised acknowledgement that a person has satisfactorily completed a prescribed programme or course of study, and is thereby qualified to undertake or participate in specific work or activity.
Strengthening	In the context of strengthening skills, strengthening means taking every opportunity to recognise and respond to trainees' literacy and numeracy needs.
Teaching team	A group of people who, together, are responsible for instruction within a programme. In a tertiary organisation, teaching teams may comprise a mix of tutors who are specialists in subject, discipline, vocational or work areas as well as tutors who are specialists in teaching literacy and/or numeracy.
Tertiary education organisation	Institutes of technology and polytechnics, universities, wānanga, private training establishments, industry training organisations, other tertiary education providers, rural education activities programmes.
Vocational	Related to work.