

Working around the words

Unpacking language learning in vocational training



“It wasn’t until I did the task that I learnt the word.” (Learner 2015)

A guide for organisations and resources for tutors

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Overview:

Working around the words

Who is this guide for?

This guide is for organisations who want to see where they are at in terms of embedding and wish to support their staff to develop embedding capability. It includes insights into literacy development in the trades, models and resources for capability development and strategies and resources for tutors.

What will I find?

Section A – information about embedding, a touch of theory and some models and approaches.

Section B – a range of strategies and resources that tutors can start using.

Section C – a number of professional development tools to build capability.

Where should I start?

If you want to understand why this approach is important and what needs to be done in terms of your organisation, start with Section A.

If you want to go straight to some strategies and resources you can use, go to Section B.

If you want to run some capability building workshops and build awareness, start with Section C.

All the sections are relevant for anyone working in the area of developing language and literacy in a trades training environment but the above should help you find a starting point.

Part A

Working around the words in your organisation

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How to use the resources

It is well known that students learn the specialised language of their trade better and more easily if the language is 'embedded' in trades learning, so that they learn it as part of learning their trade. This means that tutors need to take on the role of helping learners learn the language. We know that supporting tutors to embed language into their programmes is a gradual process. Organisations will find that their tutors may be on very different points of a continuum in terms of how tutors are supporting language learning through their trades teaching and the rate at which each individual tutor will move across that continuum will vary.

We have learnt through *The Language in the Trades Education Project* and through our individual work with tutors that identifying what is already working well and building on that (a strengths-based approach) is the best way to support tutors to try new things in their teaching. We suggest that before you begin using some of these resources you take stock of where your tutors are currently sitting in terms of their readiness to implement some changes to their teaching practice. We have identified some markers or milestones on the pathway to becoming a proficient embedder of language in trades teaching. Later in this book we have aligned each of these markers with one of the resources or initiatives we have created for organisations to use.

The continuum of where tutors are at in embedding language: where do you sit?

Tutor is unaware of language element of teaching their trade or is not engaged with PD initiatives related to language

Tutor is interested in strategies for embedding language and will work with advisors or independently to learn some new strategies

Tutor has begun to identify the way that they are embedding language in their programme and is actively seeking new ideas to include in their practice

Tutor deliberately pre-empts and plans language embedding as part of their usual lesson planning process

Tutor reflects on own practice and shares ideas with colleagues

Why is language important?

What does the research say?

*“Language is part of practice and it is through practice that people learn”
(Lave and Wenger, 1991)*

What did tutors tell us?

*“When you can walk like a builder and talk like a builder, then we can
have a conversation” (Carpentry tutor, 2015).*

Communication

Language, and specifically trades words (vocabulary), is important. In order to be able to communicate and understand in any trades or vocational area we need to be able to understand and use the specific language, that is the words and phrases that are used in that context. If vocabulary is central to understanding and using language in any context (Hirsh & Coxhead, 2009), then understanding the words of the trade is key to learners being able to learn the content and ‘walk and talk’ like a builder, plumber or engineer.

Identity

Language is also important because it helps to create a kind of identity kit (Gee, 2000) where the words we use and how we use them help to identify who we are. Being able to ‘walk like a builder and talk like a builder’ and be recognised as a builder cannot happen unless a learner can understand and use the language of the building trade, and use that language in the ‘right’ way. Learners may learn that a particular saw is called a ‘skill saw’ but then they may need to know that on the building site, it is usually called a ‘skilly’. Once they know the carpentry language and they can use it, especially in the way experienced carpenters use it, they can begin to develop a trade identity.

Apprenticeship approach

What is interesting about language learning in a trades training context is that language appears to be acquired through doing the job or practising the trade, rather than through a more formal or academic process of doing language or literacy activities in a tutor fronted classroom. This reflects the apprenticeship approach that the research describes where “Language is part of practice and it is through practice that people learn” (Lave and Wenger, 1991). It is in the practice of the trade, the apprenticeship, that the language is learnt. So, rather than specialised words being explicitly taught in a classroom, it is through carrying out the practical tasks where attention is drawn to language. As a carpentry learner said when asked how he learnt the language of carpentry, “We learn as we go” (Carpentry learner, 2015). Therefore, if language is important, especially the specific words of a trade, then this ‘learn as we go’ approach is a key element in helping learners develop a trades language and learn their chosen trade.

What do learners need to know?

What does the research say?

Gee states that “words give meanings to contexts just as surely as contexts give meanings to words” (p.190, 2000). This means that the words themselves can create different meanings and contexts and different situations can change the meaning of a word.

What did tutors and learners tell us?

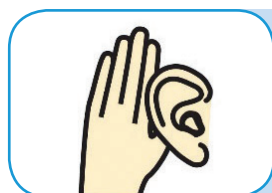
The tutors say that learners need to know the specialised words “because they’ve got to talk the same lingo” (Tutor, 2015), that is, use the same language and words that the tutors are using in that context.

Learners say, “You have to use the lingo to show your understanding” (Learner, 2015).

Knowing a word

There are different aspects to knowing a word, depending on how it needs to be used (Nation, 1991). A good starting point is to think about which of the four skills learners will need to use the word with:

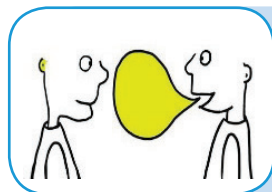
How would learners need to use trade specific language?



Understand the word when they hear it (listening)



Understand the word when they see it written down (reading)



Use it when they speak



Use it when they write

What do we need to teach about a word?

Learners will need to know:

Meaning	...the meaning of the word if they are to understand and/or use it in any situation.
Meaning in different contexts	...how the meaning of the word changes in different contexts: <i>building envelope / paper envelope.</i>
Words it usually goes with	...which words this word normally goes with: <i>spark plug/ sump plug/ glow plug</i> so they can use it.
How to use it in a sentence	...where this word goes in a sentence and what words need to be used with it: You <i>engage</i> a <i>clutch</i> - <i>engage</i> is the action, <i>clutch</i> is the thing.
Word parts	...word parts to help them with spelling, understanding and using different 'family' words, by adding parts at the front and back: <i>prestressed, stress, stressed.</i>
Spelling	...how to spell the word accurately if they have to write it down and recognise it if they see it in print or on the board.
Pronunciation	...how to say it clearly and accurately: <i>soffit</i> - the second part of this word is louder than the first - if they need to say this word.
Slang terms	...the slang term, the words that are usually used: <i>skill saw = skilly</i> - if they want to sound authentic in specific situations.

Learners will not always need to know every aspect but these are the key elements to keep in mind when implementing the strategies in this guide.

It's all about the strategies!

What about existing resources?

There has been a reasonable amount of investment in literacy related embedded activities in the tertiary sector. A lot of these activities require tutors to adapt them to their teaching context and also require time and preparation in terms of resource development. These resources can be useful in a range of contexts. However, our interactions with tutors indicated challenges around recontextualising and using these resources in a trades training context.

What did tutors and learners tell us?

What this research identified was that, in the trades that we investigated, both tutors and learners expressed a reluctance to engage with specific literacy related activities that are readily available:

“Vocab games don't work with the class” (Tutor, 2015).

In fact some were more specific and spoke negatively about what they referred to as: *“Word matches and silly little games” (Tutor, 2015).*

Learners also confirmed that: *“We didn't come here to play kindergarten games - we came here to build houses” (Learner, 2015).*

How have we developed these resources?

The resource outcomes from the language in the trades project have been developed with the tutors and learners in mind. The tutor and learner feedback indicated that the best approach would be to focus on what was already being done well by the trades tutors and build on these core ideas. The clear theme that came through in observations and discussions is that what the tutors do well is utilise teaching strategies to embed language rather than create specific paper based learning activities. Harnessing this willingness to use strategies and acknowledging the reluctance to develop or use literacy activities and resources that may not be appropriate for the teaching and learning situation has underpinned the development of these teaching resources.

Our approach:

- Identify what tutors are already doing well
- Build on these existing strategies with specific ideas and examples
- Build in new ideas that scaffold change where needed

What do we still need to do?

We have now built a base of strategies and an approach to embedding language that they fit around the way that trades tutors teach and learners learn. Now that we have this base, we would like to add to the bank of specific examples and ideas that underpin each strategy. Gathering these from the sector and sharing them on a wider scale would further build this body of knowledge.

An apprenticeship approach

What does the research say?

According to Chan (2016), apprentices learn by watching, practising and asking questions. Tutors can help them to learn by showing them, coaching them, letting them try and supporting them to practise on their own.

What did tutors and learners tell us?

Demonstrating/ modelling and encouraging learners to learn by 'doing' is the natural fit for most tutors. This became clear in interviews with tutors where they confirmed this practical emphasis:

"We just use it, always use it, demonstrate, show...most important what it is used for" (Tutor, 2015)

"The learning doesn't happen sitting in the classroom" (Tutor, 2015)

Learners also often confirmed that they preferred this approach to learning the language:

"It wasn't until I did the task that I learnt the word" (Learner, 2015)

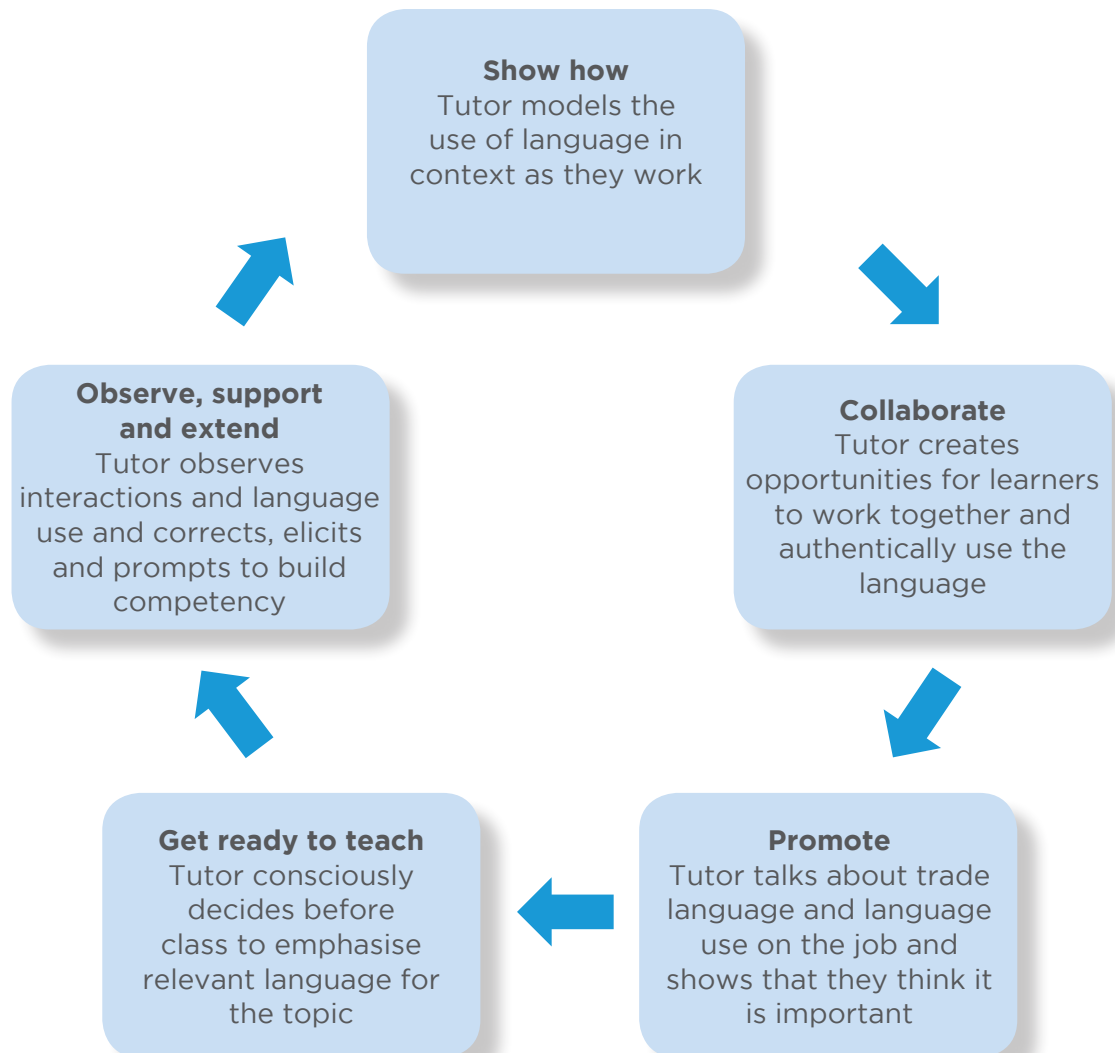
What can you do about it?

One thing that is clear about the way many trades tutors teach is that they use an apprenticeship approach, where a high emphasis is placed on the practical learning and doing. This is one of the key ways a trade is learnt.

This research identified a number of strategies that indicate tutors naturally utilise an apprenticeship approach when embedding the learning of the language associated with their trade. By categorising these strategies we have identified a model (see next page) that could be considered when thinking about the way that language is embedded.

Tutors may enter the model at any point depending on their interest, experience and confidence. Each of the steps in the model has been aligned with a corresponding strategy poster and video in the following sections of this guide. We suggest that organisations embrace the apprenticeship approach to embedding language and engage tutors by approaching embedding from the perspective of tutors and learners themselves and the way in which they naturally and authentically teach and learn.

The model



Using the model

1 - Show how

Before tutors are even aware of or interested in consciously embedding the language of their trade they will be modelling the correct use of language as they work. Through their demonstration they will be modelling what tools and processes are called, how to pronounce the word, how to use it correctly in context and also which words in the trade belong together.

See strategy posters and videos for 'show how' – Model and draw attention to

2 - Collaborate

This may occur consciously or unconsciously. As tutors set up pair or group activities and create authentic activities in the workshop that require collaboration and interaction they will be encouraging learners to collaborate and through this collaboration use the language. As tutors become more aware of their practice they may start to shape these interactions to ensure learners are building their language competence.

See strategy posters and videos for 'collaborate' – Create opportunities for use

3 - Promote

As tutors' awareness and interest in the language aspect of their trade teaching grows, the promotion of the language of the trade as something that is important will grow. The tutor may talk more about words themselves but they may also talk about 'talking the talk'; or the way language is used on the job. The promotion of language may be visible in the workshop and tutors may actively correct language and support use of correct terminology.

See strategy posters and videos for 'promote' – Set up an authentic language environment

4 - Get ready to teach

When tutors become more confident and interested in embedding language they may start to intentionally and consciously prepare to include language in their teaching. This may mean they will ensure they have a strategy/ies in place in each session to emphasise the important language. It may also mean that they make decisions about what language is important and anticipate what language may be challenging for learners and adapt their lesson accordingly.

See strategy posters and video for 'get ready to teach' – Pre-empt and prepare

Also – Planning for the words in tutor talk (p.41) and wordlists may begin to be used at this point.

5 - Observe, support and extend

As tutors become more intentional and deliberate in their teaching, they may be planning for their embedding of language more often. Tutors may also be more aware and reflective of the teaching strategies they are using. At this point, tutors may start to notice the way that learners are using or not using trades specific language more often. As awareness grows, tutors may begin to intentionally support and extend learners with strategies that they know are appropriate for learners. Tutors may have a wide variety of strategies that they confidently use and adapt to meet the language needs of their learners.

See strategy posters and videos for 'observe, support and extend' – Support and explain, Elicit, Utilise first language in the learning process

At this point, tutors may move beyond teaching strategies and try developing teaching and learning activities for inside the classroom as well as in the workshop or on the building site. Sample resources in the appendix may be appropriate to share with tutors at this time.

Part B

Tutor resources

As we have emphasised throughout this guide, a focus on teaching strategies and an apprenticeship approach to embedding technical vocabulary was identified through this research as being most suitable for trades tutors. Beyond the strategies we have developed and included, there are some specific teaching approaches and resources that may be of benefit or provide a model that can be built on for further resource development. This section includes:

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Teaching strategies

This section contains a range of teaching strategies that were identified in 'The Language in the Trades Education Project' research as being used effectively by tutors to teach the language of their trade. Each of the strategies have been underpinned by ideas for implementation and practice examples. These strategies can be printed out as posters so they can be displayed for quick and easy reference.

Strategy 1

How can I *draw attention* to the words?

“Put it on the whiteboard” (Tutor, 2015)



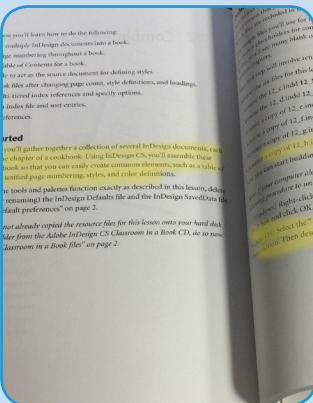
Write a word list on the board

- Write a list of the important words in the topic you will be covering
- Refer to the list as you come to each term
- Use words from the list to recap key ideas from the lesson



Emphasise and reiterate terminology

- When you know a word is important, draw attention to it as you mention it
- Repeat important words and ask learners to repeat them too
- Use the word as it comes up in context and encourage learners to do as well



Point out keywords in texts

- As you work through texts, encourage learners to underline or highlight important terminology
- Ask learners to add important terminology to their glossaries
- Get learners to scan texts to find important words

Practice examples of ‘Drawing attention to’

“These are the important words you need to know today. I have written them here and will point to them as they come up. If you think I have missed any, make sure you tell me.”

Examples of the tutor ‘drawing attention to’

“This page is about prepping a wall. As you read it, can you please highlight all of the tools that you need to use for each stage of the job?”

“This is a vernier caliper. It is used to... What’s it called?”

Strategy 2

How can I *create opportunities* for use?

"We learn as we go" (Carpentry learner, 2015)

"...working with it and doing the jobs around the word" (Carpentry learner, 2015)



Support use of correct terms

- Learners review their and each other's written work for use of correct terms
- When talking, repeat the word with intonation and repeat until learners respond with correct word
- Get learners to listen to your use of correct terms and challenge your use



Create opportunities for pair and group work

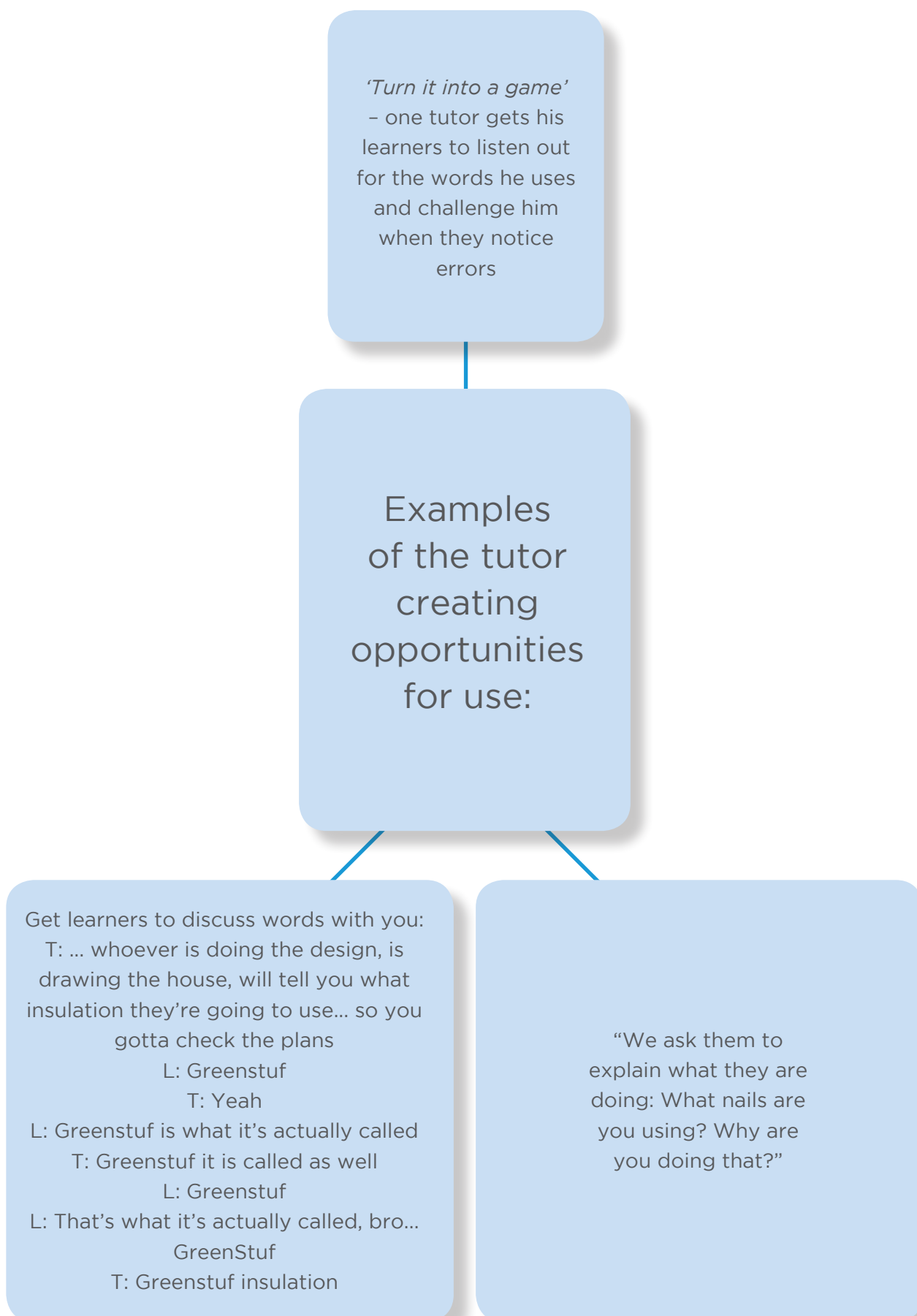
- Put learners in groups and pairs so they can use the language to discuss what they need to do
- In the workshop, break tasks up so one learner has to tell another learner what to do
- In groups, give learners different roles so they can use the language e.g. instruct, do, check, summarise



Get learners to describe what they are doing as they do it

- Ask learners to repeat back to you what they need to do
- Ask learners to describe what they did when they have completed a task
- As learners work on a task, monitor and ask them to describe to you what they are doing

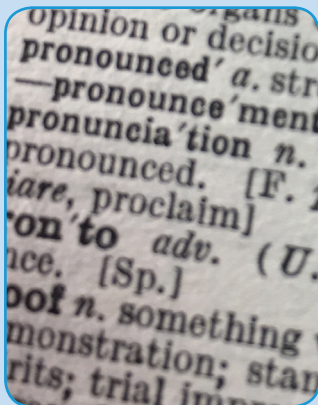
Practice examples of 'Creating opportunities for use'



Strategy 3

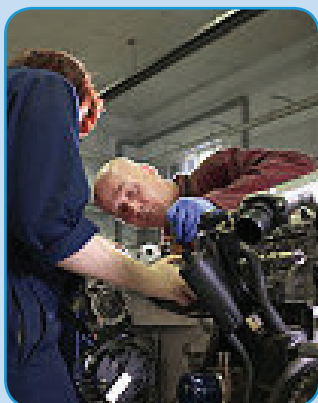
How can I *model* the words?

"We just use it, always use it, demonstrate, show...most important what it is used for" (Tutor, 2015)



Model pronunciation

- Emphasise new words as you say them to help learners hear them and listen out for them
- If learners say new words incorrectly, just repeat the correct pronunciation back to them so they can hear it and say it
- Show learners how to pronounce a word by showing word stress: 'process / e'quipment



As you talk, show learners the different contexts for using words

- Use it with other words: building envelope
- Show what sentences and phrases the words can be used in
- Show what situations different words should be used in - talking to: colleagues; clients; suppliers



Use the words around the practical work

- When you are teaching learners the practical task and giving them instructions
- When you are describing what you are doing
- When you are naming tools, equipment, materials and processes

Practice examples of 'Model'

When a learner makes an error, some tutors just repeat the word with the correct pronunciation for the learner to listen to and repeat:

L: Dumbling studs

T: Doubling, doubling studs

L: Doubling, gibbing

Examples of the tutor 'modelling':

Some tutors talk through the process as they go, using the correct terminology e.g. "Ok, I am going to use the skilly for this one"

Some tutors say what things are called:

L: If you only do two points, foresight and is the other one called an intermediate or...?

T: If you do, you always start with a backsight then if you do two points they are called intermediate and if it's your last point you call it your foresight 'cause that tells you it's finished.

L: Ok, it's finished.

T: Yeah, yeah. Ok at least you're getting the terminology

Strategy 4

How can I *elicit* the words?

“Don't answer learners until they use the correct word' and 'Elicit the correct term' ...challenge and argue” (Tutor 2015)



Prompt

- Repeat the learner's error with correction to prompt them to use the right word (be mindful of tone and be encouraging when correction is given)
- Use feedback, “Do we call it this or?”
- Use unfinished sentences, “We could use a...?”



Ask questions

- What do you call this?
- What do we mean by 'intermediate'?
- Is this an 'x' or a 'y'?
- Tell me what you are doing with the.....



Instruct and encourage

- Give a clear instruction, e.g.: *When you ask for fibre glass, call it 'Pink Batts'.*
- Encourage learners to ask each other for meanings and key words
- Encourage learners to ask you for meanings and key words

Practice examples of 'Elicit'

Ask questions to prompt use of a word:

T: ... What's above here?

L: Frame

T: It's a frame but it's got a certain name

L: lintel

T: Lintel, but you know at this stage we call them lintels ok and it might be called a beam, just a timber beam ok?

Examples of the tutor 'eliciting':

Some tutors use prompts to try to get their learners to use the right words:

L: Isn't it ... take it again, is that square?

T: Plumb

L: Move

T: Is that plumb?

L: Plumb and square

T: Move your thumb, just plumb Mike, just plumb, no square there.

Some tutors elicit other names for something:

T: So Pink Batts itself is a brand name, you know, Nike. So when you ask for the product, you ask it... you say Pink Batts, Pink Batts is actually a brand name of what?

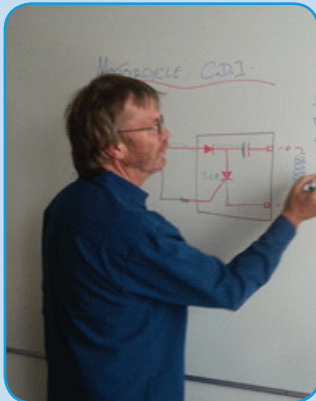
L: Fibreglass

T: Ok. Just because everybody knows what Pink Batts is, so we just call it Pink Batts.

Strategy 5

How can I *pre-empt and prepare*

"I love the glossaries" (Learner 2015)



Identify and emphasise words at the start of the lesson

- Get learners to tell you what words they already know about the topic
- Give learners words at the start of the class so they can identify what they already know
- Give learners words from the topic to categorise based on how they understand the words



Prepare resources to support the learning

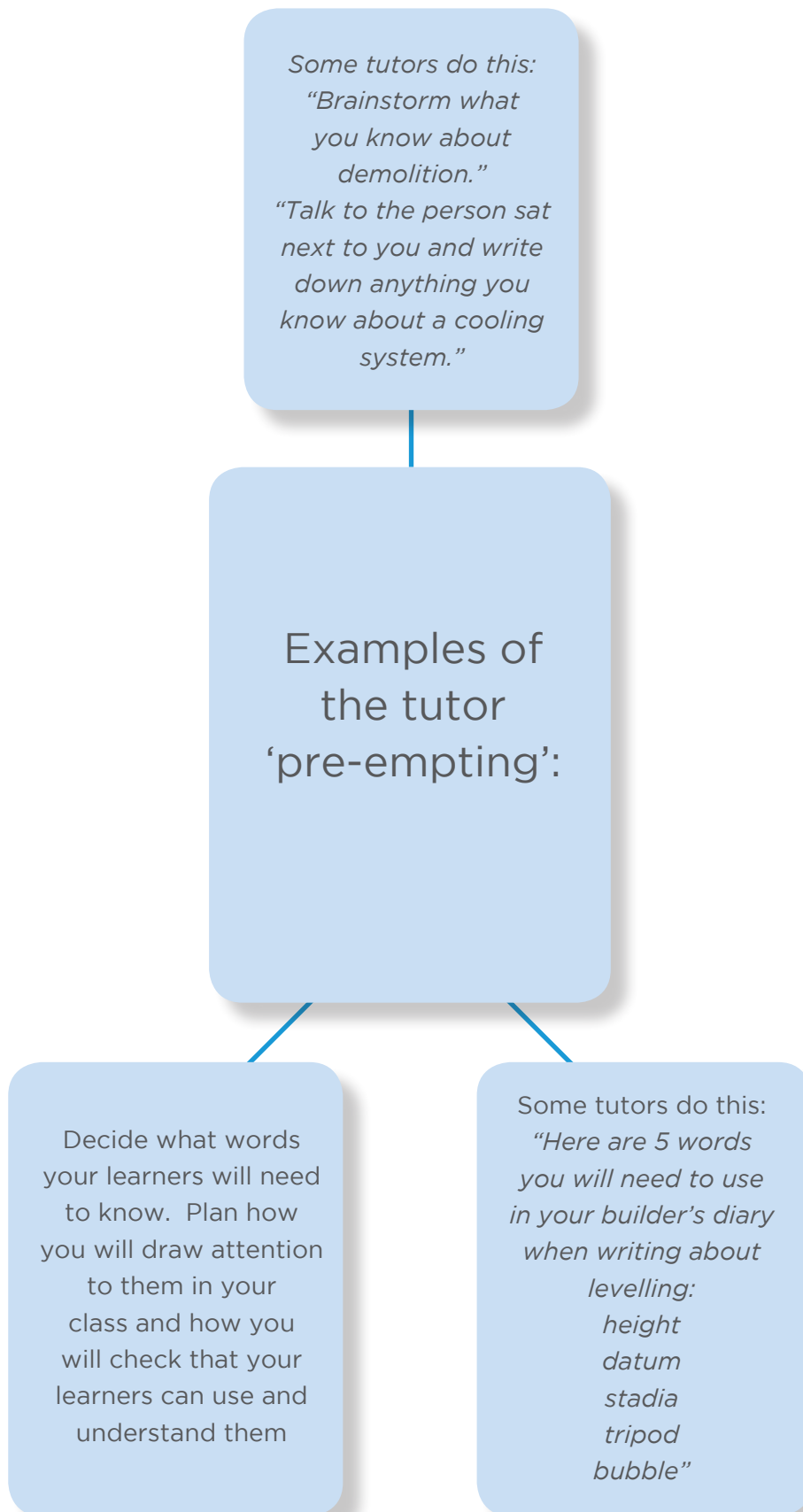
- Develop glossaries for the topic you are focusing on
- Develop word lists for each topic of the most important words learners will need to understand and use
- Use the 'vocabulary reflection sheet' to think about how you will focus on words in class



Identify what words might come up in the session

- Scan through what they will read - what words do you think they may have trouble with?
- Look at the words coming up in your class - are they are a 'need' to know or 'nice' to know?
- If they are a need to know, put some support in place for learners to understand them; if they are a nice to know, replace them with plain English

Practice examples of 'Pre-empt and Prepare'



Strategy 6

How can I *support and explain*?

“Avoid words ... don't say ‘calculation’, say ‘problem solving’ (Tutor, 2015)

“Use different synonyms... use more commonly than use more technical ... use it from the get go” (Tutor, 2015)



Use synonyms to scaffold

- Use common, then more technical words
- When you use a technical word, make sure you follow it with a common word they will know
- Once they have the common word, then the technical word, teach them slang words if this is appropriate: saw - skill saw - skilly



Give examples

- “This is called a lintel”
- “A load bearing wall is a wall that carries the weight of a roof”
- “Fibre glass and polystyrene are types of insulation”



Draw visuals or demonstrate

- Draw a picture when you use the word
- Use real objects and name them
- Draw diagrams to illustrate/explain processes and label them so learners can see what words to use where

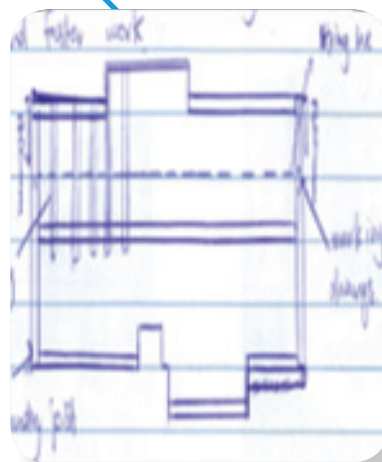
Practice examples of 'Support and explain'

Some tutors explain what each letter stands for:
*T: And flashing tapes is all part of the W...
WP... is all part of the WPPS. It's a water penetration protective system.*

Examples of the tutor 'supporting and explaining':

Some tutors explain what symbols and letters mean:

T: ...so the D is for your doubling stud, the T is for the trimming stud and then you've got a jack stud.



Strategy 7

How can I set up an *authentic language* environment?

“Teach them building slang: saw - skill saw - skilly” (Tutor, 2015)



Explore and promote the language related tasks learners need to complete in the workplace

- Display examples of texts that language learners will need to use in the workplace
- Get learners to identify skills they will need based on these examples
- Display key language in learner’s first language with translation



Use the jargon

- Use the words they will need to use in the workplace
- Use the slang
- Use the common phrases



Make authentic workplace language and literacy tasks part of the learning

- If learners need to write things like job sheets or invoices, practise these in class
- Practise the kind of tasks that are undertaken in a building site, hair dresser’s salon, workshop, etc
- Get learners to change common words they use into authentic language: e.g. builders say ‘timber’ not ‘wood’.

Practice examples of ‘Set up an authentic language environment’

Get learners to fill in ‘job sheets’ using correct terminology as they would, for example, in a mechanic’s workshop

Examples of a tutor ‘setting up an authentic language environment’:



Once learners know the technical terms, tutors often use the slang that would be used on a building site: “Pass the skilly” (instead of skill saw).

Strategy 8

How can I *utilise first language* in the learning process?

"We ask Ben... he will give us the meaning and then we underline it and write the meaning next to it" (Learner, 2015)



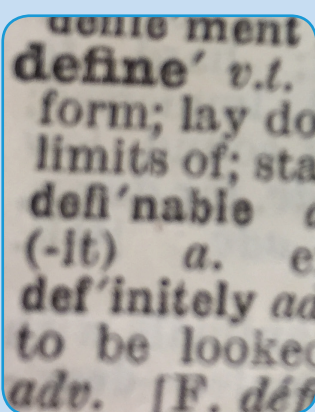
Use first language first

- Get learners to talk about something first in their first language or write about it in their first language so they can focus on ideas, before they focus on language
- Put first language terms around the learning space so learners see their language is recognised
- Encourage learners to use their first language



Use peer learning and draw on learners' strengths

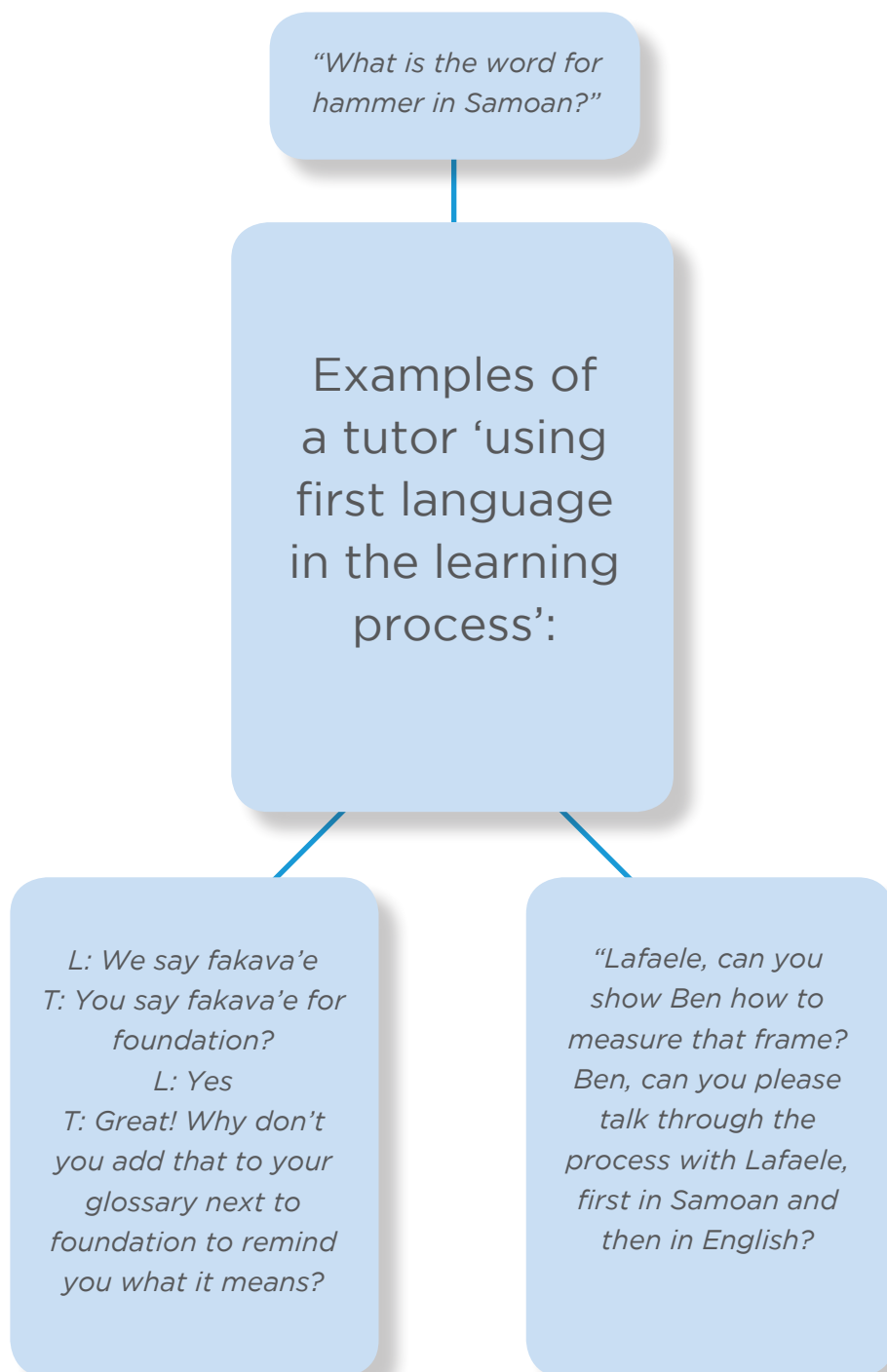
- Get learners to give each other instructions once they have understood them
- Get learners to discuss processes and topics together
- Encourage learners to ask each other first before they ask you
- Get learners to teach you technical word translations in their first language



Use translations and compare meanings

- Translate key words into first languages - many learners will be able to do this for you
- Where there is no first language equivalent, discuss a first language phrase that could be used
- Compare similarities between first and second language terms

Practice examples of 'Utilise first language in the learning process'



Videos

What the tutors say?

This section contains 9 videos showing tutors talking about how they work around the words in their teaching context. The videos have been designed to be a quick reference guide for tutors to refer to when thinking about strategies they could use to ensure the technical vocabulary in their course is easily understood by learners.

Some key factors in the development of these videos:

- It is the tutors talking about what they do with the words in their contexts.
- They require little to no preparation time from tutors to use as a source of ideas.
- They are fully embedded into the teaching; they are not an add-on or extra activity that learners need to do.

How can tutors use them?

If you are a tutor, choose any one that you would like to explore and as you watch, note down any ideas you can use in your lesson or you can adapt to support your learners to understand the words in your context.

How can organisations use them?

If you are someone who is working with and supporting tutors to embed literacy, the videos can be introduced in a number of ways:

- Put them on staff intranet or learning management sites
- Email the videos out one at a time to relevant staff
- Play one video in each staff meeting over a period of weeks and discuss
- Use them as a starting point and encourage staff to film their own video to share with colleagues

List of videos:



Use First Language in the Learning Process.mp4



Support and Explain.mp4



Set up an Authentic Language Environment.mp4



Pre-empt and Prepare.mp4



Model.mp4



Elicit.mp4



Draw Attention to.mp4



Create Opportunities to use the Language.mp4



Case Study- The Relationship Comes Before the Learning.mp4

The videos can be located here:

www.ako.ac.nz/knowledge-centre/the-language-in-the-trades/

Building glossaries

This section contains information on how to build glossaries based on how frequently a learner may see a word, hear a word or have to use it in writing or speaking. It also contains examples of glossaries that have been developed based on word frequency lists that identify the most common words for that trade that learners need to be able to understand and use.

Glossaries: How to make them and how to use them

What did learners tell us?

Many learners said that alongside asking their tutor and asking a friend - 'looking it up in the glossary' was one of the go-to strategies they used when they did not know a word.

Glossaries are important for a number of reasons:

Terminology: For many vocational areas, there are usually many specialised words (a trades-specific terminology) that learners may not know but which they need to be able to understand and use in order to be able to read, write, listen and speak in this area and learn the subject.

Learner need: In any one class there will be a whole variety of learners with different language and literacy levels. Glossaries can help these learners understand the subject they are studying and be a resource for learners at all levels.

Building an identity: For many learners, being able to understand and use the language of the trade gives them a trade identity, so being able to understand and use the terminology (e.g. saw or skill saw or skilly) helps them to build this new identity.

Meeting literacy benchmarks: In New Zealand, learners need to meet Step 4 of the 'Learning Progressions for Adult Literacy and Numeracy'. Being able to understand and use specialised words is part of being able to meet Step 4. Making sure learners have access to good glossaries helps this.

Building glossaries:

When you write your glossary, the following questions will help you work out which words to choose and what information you need to include:

1. Is this a nice-to-know or need-to-know word? Focus on the most important words that your learners need to be able to understand and use.
2. Do learners need to understand the word (listening and reading) use the word (speaking and writing) or both? Once you have decided, this will help you choose what information to put in your glossary.

3. What do they need to know about the word? Have a look in the table below. Your answer to question 2 will help you decide which sections to include:

Word (spelling)	Other words it goes with	Sentence	Meaning	Pronunciation	Family words	Slang	Image
Calculation	<i>Building calculation</i>	<i>Building calculations should always be double-checked.</i>	<i>To work out an answer to a problem.</i>	<i>Calcu'lation</i>	<i>Calculate</i>	<i>Calc</i>	$3^2 = 9$ $11 \times 7 = 77$

How do I find out if this is a useful word?

If it is a frequent word, it should probably be in your glossary. A useful website that can show you how often a word occurs and help you decide whether to include it is 'lexutor': <http://www.lexutor.ca/vp/eng/>

It shows you which words:

- Are in the 1000 most frequent words of English - common everyday words.
- Are in the 2000 most frequent words of English - common everyday words.
- Are on the Academic words list - words usually found in academic writing.
- Are 'off-list'. These are words that are not common everyday words and they don't usually appear in academic texts. These are probably the words from your course that you will need in your glossary.

In a carpentry course, *datum* occurs 24 times in the reading resource so learners will need to know this word, but *transmission* only occurs once, so it is more important to include *datum* than *transmission*.

You can also use the Lextutor website to check your definition and make sure you are not using academic words where you don't need to. Check out the example below:

Air-over-hydraulic brakes: Brakes utilizing a hydraulic system assisted by an air pressure system.

This shows us all the words in blue are in the 1000 word list, all the words in red are 'off-list' and related to the topic (engineering), and the words in yellow are academic. Try and avoid using difficult words in your definitions. Often you can't avoid using technical words in your definitions (like hydraulic), but 'utilising' could be replaced with 'using' and 'assisted' could be replaced by 'helped' so the definition reads like this:

Air-over-hydraulic brakes: Brakes using a hydraulic system helped by an air pressure system.

This way we can cut down barriers to learners' understanding and make glossaries more useful.

How could you use glossaries?

Glossaries can be used in a variety of ways. Learners can do the work of finding meanings as they go or tutors can provide a large scale glossary with the meanings already inserted. Some ideas are listed below:

Using glossaries

- Develop activities for learners to work together to find meanings for words.
- Develop glossaries yourself or help learners develop their own, inside and outside of class.
- Put definitions on resources close to where the words are being used, e.g. on the same page.
- Build glossaries on the board as you teach.
- Put them around the learning space so learners can refer to them.
- Put them in online spaces e.g. where learners are writing portfolios, and organise them into topics so learners have access to the words as they write.
- Include links to more information and images about the word if you can.

Keeping glossaries current:

- As you and your learners use them, think about what words need to be added or cut out.
- Check with other tutors to see which words they are using and including.
- Ask your learners to let you know how useful they are and if anything needs to be changed or added.

Word frequency lists

Word frequency lists have been developed for Engineering, Plumbing, Carpentry and Automotive. These lists have the most frequently used words in each of the trades. These can be used in a range of ways to support learners to understand the technical words of their programme.

Word frequency lists are not listed alphabetically because it is the frequency of the words which might be the most important factor.

Look through the list and highlight words which are:

- Often used at the start of a course
- Tend not to be well known by students in previous years
- Used in everyday English but have a particular use in your trade
- Related to a particular topic, such as Health and Safety.

Glossary examples based on word frequency lists

Example of glossary use in Engineering Fabrication

In engineering the word lists have been divided into relevant topics; they have also been put into alphabetical order so that learners can navigate them more easily. The words have been added to a blank glossary which learners are encouraged to fill in as they work through the course. The tutors have also used the word lists to help the learners to identify the words that they should be emphasising. Tutors also use the words in quizzes and as part of their recap activities. Below is an example of a blank glossary that learners are required to fill in for the topic of Machining:

Machining Glossary

Word	Is this the name of a tool? X or ✓	Is this a process or something you do? X or ✓	Write the meaning in your own words	Draw a diagram if it helps you
accurate				
adjust				
aluminium				
angle				
bolt				
calculate				
cast				
centre				
check				
chuck				

Example of glossary use in Plumbing

Plumbing tutor, Ken Hodge, has used the word list to build a digital glossary in PDF format that learners can access from home. The glossary lists definitions of each of the terms. This is particularly useful for learners who are doing block courses as they are only in class for a small portion of their study. Ken also includes hyperlinks to more information and videos about the word or term when they are available.

Audit

An official inspection
Example: Gasfitters issue code of compliance documents for gas installations. From time to time the Plumbers, Gasfitters and Drainlayers Board may audit the gas fitter to ensure the work is being done correctly.

Backflow

A term in plumbing for an unwanted flow of water in the reverse direction. It can be a serious health risk due to the contamination of potable water supplies.
For drainage systems a Reflux valve is installed to stop sewage or stormwater flowing back up a drainage system in times of high rainfall or when unable to cope with high flows. Often installed at a boundary before sewage enters a NUO system.

Bacteria

A member of a large group of unicellular microorganisms which have cell walls but lack organelles and an organised nucleus, including some which can cause disease.

Bar

Bar is a unit of pressure defined as 100 kilopascals. It is about equal to the atmospheric pressure at sea level.

Base

In plumbing and drainlaying it is used to describe the following section at the bottom of a stack or vertical discharge pipe where the direction changes from a vertical pipe to a horizontal.

Bend/spring

A fitting to change direction of flow 45° or more. Changes of direction under 45° is less commonly known as a spring. A bend has a radius twice that of the diameter of the pipe size. See diagram.

Bidet

A fixture or type of sink intended for washing the genitalia, perineum, inner buttocks and anus of the human body, and is typically installed in a bathroom.

Boiler

A boiler is the water heater that heats water for purposes other than hot water for sanitary use. They are generally used for radiator systems or creating steam for steam systems.

Bolt

Bolts are headed fasteners with external threads suitable for a non-tapered nut. They require a nut (or some other female thread) as a counter - to lock the joint.

Boundary

The outer perimeter of a property, section or area.

Boundary joist

The joist that runs 90° off the end of the floor or ceiling joist on the outermost part of the structure.

Branch

A lateral pipe coming off or joining to a main run of piping. Also known as a lateral branch. Could be of any angle and smaller than the main run.

Example of glossary use in carpentry

In Carpentry, learners need to write a diary or portfolio detailing all the practical work they have completed. This covers 23 topics covering the process of building a house from setting out and levelling, through to framing, roofing and external cladding. Word lists are being developed to match each of these topics, so learners can see which words are the most frequent for each of the topics and which words they will need to understand and use. Learners can then use these to help them build their own glossaries. Two examples of how they have been set up are below:

Glossary 1: Levelling

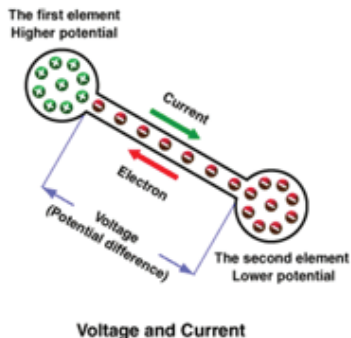
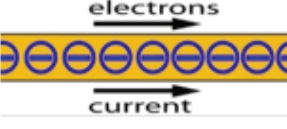

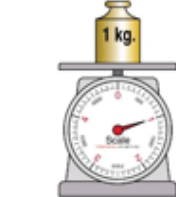

Word or phrase	Meaning	Put it in a sentence
1. level		
2. height		
3. datum		
4. calculation		
5. stadia		
6. peg		
7. vertical		
8. floor		
9. foundation		
10. tripod		

Glossary 22: Demolition

Word or phrase	Meaning	Put it in a sentence
1. demolition		
2. site		
3. building		
4. hazard		
5. safety		
6. plan		
7. debris		
8. dust		
9. asbestos		
10. area		

Example of glossary use in Automotive Technology

In Automotive Technology a tutor has looked at the first 100 most frequent words and divided these into 4 topics: Servicing, Motors, Electrical and Maths and Science. This means that as he works through these 4 topics, learners can be supported to use and understand the most common words. In contrast to the other trades lists included here, these two examples have the definition and a picture. It is useful to note that the definition is based on the tutor's verbal explanations, i.e. how he would normally explain the word to his learners.

<p>5. Current in the Circuit</p>	<p>Electrons moving from a positive terminal to a negative terminal</p>	 <p>The first element Higher potential</p> <p>Current</p> <p>Electron</p> <p>Voltage (Potential difference)</p> <p>The second element Lower potential</p> <p>Voltage and Current</p>
<p>6. Flow of an electrical current</p>	<p>The movement of electrons</p>	 <p>electrons</p> <p>current</p>
<p>7. Measure</p>	<p>Can be Volts, Amps, Ohms Temperature</p> <p>mm-cm-m -Km</p> <p>To measure a quantity of</p>	
<p>8. Unit of measurement</p>	<p>The word unit is used to describe which measurement you are applying to the physical property you are trying to measure</p>	 <p>1 kilogram = 1000 grams</p>
<p>9 Heat can be the result of Resistance, or the transfer of energy</p> <p>E.g. Brake friction</p>	<p>This is when molecules and atoms vibrate in a change of state from the transfer of energy.</p>	 <p>Cold</p> <p>Hot</p>

Planning for the words in tutor talk

In this section you will find some information about what learners and tutors do to teach and learn technical words in their talk. You will also find a planning sheet to help you think about what words may be coming up in your next session that your learners may need help with. Use this sheet to plan what you will do and then reflect on how well you think it worked.

Embedding Vocabulary in Talk

The research shows us that a lot of vocabulary teaching and learning takes place during tutor-talk and tutor-learner interaction.

Tutors often:

1. Ask learners for the meaning of words
2. Prompt learners to use the right word
3. Give learners the meaning of words
4. Give learners words with similar meanings
5. Give learners the more commonly used 'slang' words
6. Correct pronunciation
7. Use more common words before using more technical words
8. Point out the specialised words that learners need to understand and use.

Learners often:

1. Ask their tutor for information about a word (meaning, spelling, pronunciation)
2. Ask another student about a word (meaning, spelling, pronunciation)
3. Correct each other and their tutor
4. Repeat and model what their tutors says.

On the next page is a table you can use to help you plan for and reflect on what you might do in your tutor-talk to help your learners understand and use the words of your trade.

Use the table below to help you plan for the trades words in your next teaching session:



Before the lesson:
<p>What topic are you teaching?</p> <p>What words might be new?</p> <p>How are you going to help your learner use and understand them?</p>
After the lesson:
<p>What words did you draw attention to?</p> <p>What words did learners draw attention to?</p> <p>What did you do to help your learners understand them?</p> <p>Do you think they now understand them? How do you know?</p> <p>What would you do differently next time?</p>

Reading around the words

This section focuses on how you can help your learners in terms of reading the texts of your trade to support learning the technical vocabulary . You will find an approach that you can use with your learners, key questions you can ask and examples of what has been used in a trades training classroom.

An approach to supporting reading to understand technical vocabulary

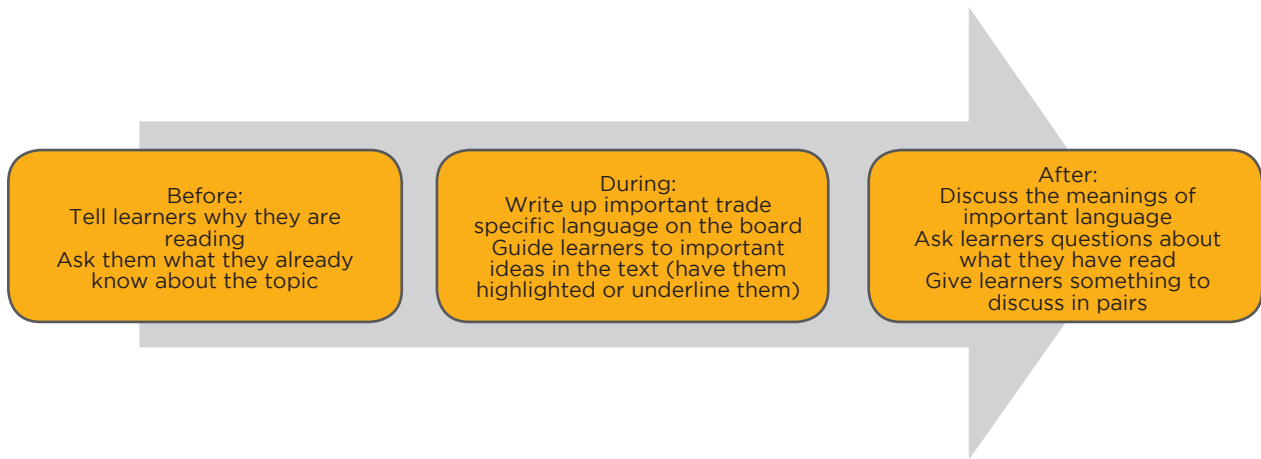
When learners need to read something in class, this is an opportunity to ensure that they are building their trade specific language skills. Having an activity that is contextualised to the topic but not truly integrated into the learning can make learners and tutors feel like it is an add-on and extra work. It is important to make sure that these activities are truly integrated, as well as being contextualised, and take place as part of the normal learning process. As indicated in the research, learners can be reluctant to engage in activities they see as not completely relevant to the task at hand. Often truly contextualised activities require less preparation which can be appealing for tutors who are pressed for time.

Integrated and contextualised activities vs. less integrated 'add on' activities



A simple but effective approach to supporting learners with their reading in class is adopting a 'before, during, after' framework. This involves the tutor doing one or two things before they have learners read something, have learners do something as they read and then getting learners to do something after reading. Examples of each are included on the next page.

Before, during and after framework for reading in class



Example: Reading teaching approach in plumbing

Tool maintenance

Before using the bolt it must be shaped. Often the bolt can be purchased already shaped and sometimes not. To shape the bolt it is heated, usually with an oxy acetylene set until the bolt is cherry red. It is then beaten with a heavy hammer such as a club or engineers hammer on an anvil. The general shape is then made. Try to beat the face smooth as this will mean less filing. It is then filed smooth and tinned.

To tin the bolt it should be re-heated. It needs to be heated hotter than what you would solder with but not to the point where any redness can be seen. Then with a block of sal ammoniac rub the bolt on the sal ammoniac and add solder to the bolt. The solder will then bond giving the bolt a bright silver colour. Once this is done cool the bolt quickly with either placing in a bucket of water or a wet cotton cloth. It is important to use cotton as if the cloth is polyester it will melt.

To keep the bolt in good condition, do not let it get too hot. Over-heating will reduce the life of the bolt and burn off the tinning. Once the copper is exposed it will then allow spirits of salts touch the bare copper and start burning it. The burning pits the bolt so it cannot be cleaned and “tinned”.

When using the bolt keep it clean. This can be done by wiping with a damp cloth or rubbing over the sal ammoniac. Do not let the bolt get too hot.

If using the LPG or bottle type set ups, check hoses often for damage. If the hose gets damaged the gas can leak from the hose causing a potential fire/explosion hazard as well as wasting gas. The connections to the bottles and hand pieces is where most damage may occur.

After a period of time you will need to re-shape and or tin the bolt. When re-shaping just do the same as you would for shaping a new bolt.

(Sample text provided by Ken Hodge, Plumbing Tutor, WelTec)

When giving out the text above, the tutor could do the following:

Note: the tutor talk is highlighted in italics

1. **Tell the learners why they are reading** *“you are reading this to learn how to maintain the tools you will be using to solder”*
2. **Identify the important words before learners read the text** *“On the board here I have listed the important terms you will be reading here; these are words you need to know about tool maintenance and we will talk about them as we go. Can you write them down the right hand side of your page? That way you can write down the meanings when they come up”* **Tutor would then draw attention to these words and explain meanings as they arise** e.g. *“right - bolt.”; that is one of the words on our list. Can you write the meaning in your book?”*
3. **Draw attention to key points in the text** *“Before you start reading can you please underline the first sentence in each of the first 5 paragraphs? These sentences tell you what you are going to read about in that paragraph”*

4. **Have learners predict the content that will be covered** “So now that you have underlined that what do you think we are going to cover in this reading?”
5. **Give learners something to do when they read** “Can you read the first paragraph about shaping the bolt? There are five steps described for shaping the bolt, can you please number them as you read them?”
6. **Discuss what learners have read;** this is the perfect time to bring in those word meanings from the list identified at the start of the session. Once again drawing attention to an important idea when discussing what has been read and asking learners to highlight it is another way to get learners to engage more actively with what they read “Do not let the bolt get too hot, that is really important – you could highlight that point. What other points do you think are really important in this process?”

NOTE: The tutor would adapt this approach depending on the needs of the class and would not always utilise all 6 steps if the literacy or language needs of the learner were low.

See a sample of what a page would look like as a learner is working through it below:

Tool maintenance

Before using the bolt it must be shaped. Often the bolt can be purchased already shaped and sometimes not. To shape the bolt it is heated, usually with an oxy acetylene set until the bolt is cherry red. It is then beaten with a heavy hammer such as a club or engineers hammer on an anvil. The general shape is then made. Try to beat the face smooth as this will mean less filing. It is then filed smooth and tinned.

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If using the LPG or bottle type set ups, check hoses often for damage. If the hose gets damaged the gas can leak from the hose causing a potential fire/explosion hazard as well as wasting gas. The connections to the bottles and hand pieces is where most damage may occur.

After a period of time you will need to re-shape and or tin the bolt. When re-shaping just do the same as you would for shaping a new bolt.

Oxy acetylene:

tinning:
Coating the bolt in solder so solder can flow to tip of bolt

Sal ammoniac:

Solder: 2 or more items joined together by melting a filler metal and putting in joint

Bond:
Joining items - the bond is what holds them together

Spirits of salts:

pits:

Bolt: A tool with a pointed or wedge shaped copper bit

The advantages of an approach like this:

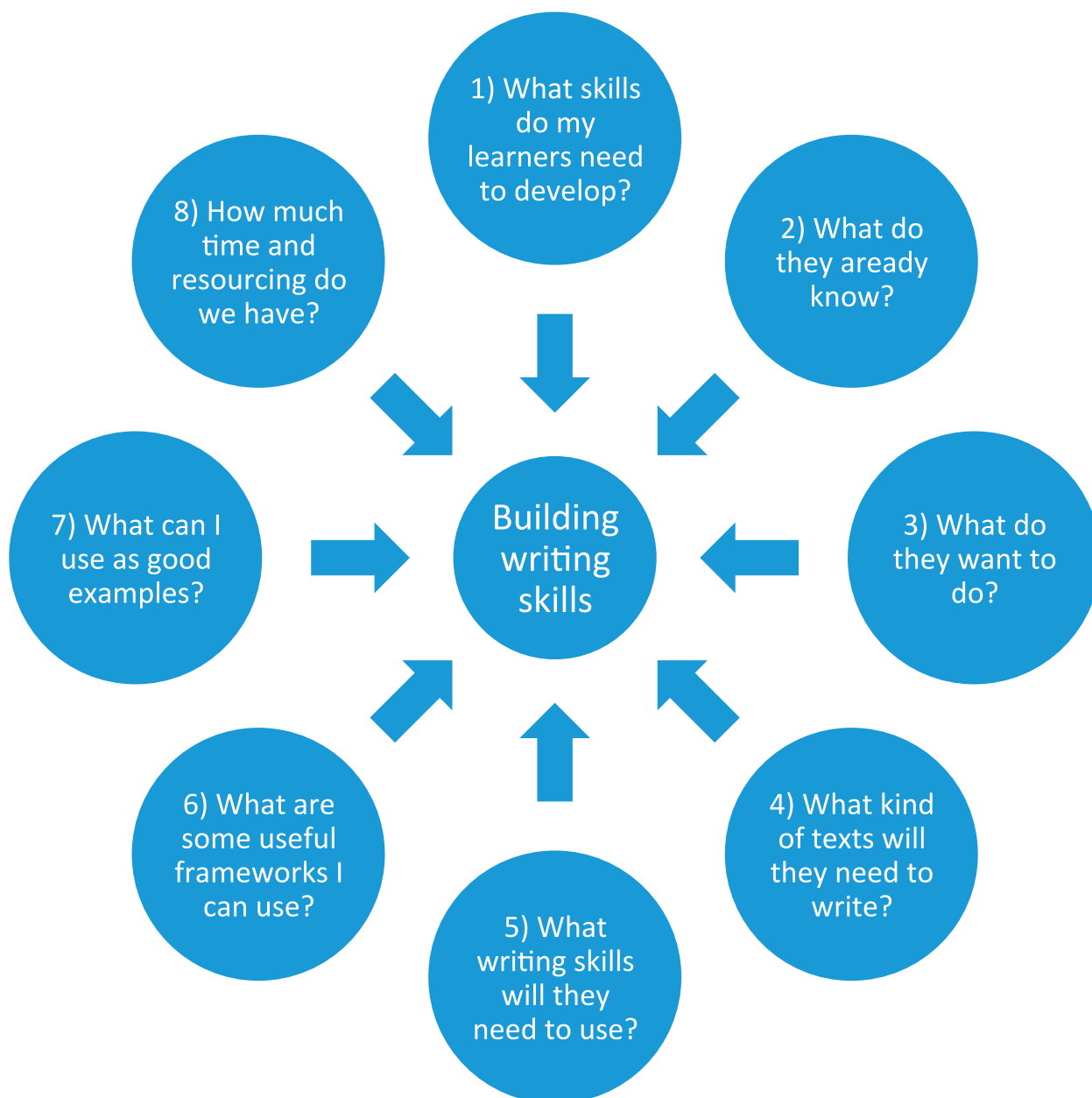
- The support for learning the language of the trade is fully integrated into the learning the students are already doing; learners are not going to see this as an extra.
- There is no additional prep time for tutors to develop a worksheet.
- Once tutors have a few of these strategies to draw on, they can be adapted and added to in order to meet the needs of the group i.e. more or less scaffolding of the terminology based on the literacy ability of learners.

Writing around the words

In this section you will find resources for supporting your learners to write in your context. This includes some examples that show how the approach described here has been used in a trades training context. For a more comprehensive writing resource see: Building Writing Skills in Trades Training: The Case of Carpentry.

An approach to developing contextualised writing activities

There are a number of questions you can ask yourself when developing writing resources. These questions will help you to put together resources that will engage your learners and help them get the most out of their learning. They will also help you make sure you are meeting their needs as well as the learning outcomes you are focusing on. The diagram below shows eight key questions you can ask:



This approach puts the learner at the centre and focuses on what they will need to be able to do, and the context and constraints you are working in. It is underpinned by a process approach to writing which is about breaking down the writing process, scaffolding the tasks and learners learning from each other and building on what they already know.

Example: Planning to embed writing in a carpentry programme

What skills do my learners need to develop?

Each learner is different so there is a range of skills that each learner will need to work on, for example: knowing where sentences begin and end, how to spell and use specialised words and how to edit and check for errors. The resources need to address all of these.

What do they already know?

Each learner brings different skills and knowledge with them so a really useful way to set up any programme, task or resource is to begin by finding out what learners already know. Each task needs to begin by getting learners to build on what they already know.

What do they want to do?

An important way to engage learners is to find out what they want to do. Most learners want to focus on the practical work, not writing. However, they do see the builder's diary as a 'real' piece of writing so all tasks need to focus on this, contextualising each resource to the stage of the building they are working on.

What kind of texts will they need to write?

The main text that learners will need to be able to write is a builder's diary. This is a type of journal that describes the 'what, where, when, why and how' of the building process.

What kind of writing skills will they need to use?

To write an effective builder's diary learners need to be able to: organise their writing, use punctuation to show where sentences begin and end, use and spell carpentry words, describe complex processes in detail and edit and correct their writing.

What are some useful frameworks I can use?

Frameworks can help you cover what you need to and give you a kind of plan. A 'before, during, after' framework (see next page) was used for each of the carpentry resources as well as for the series of resources as a whole. The resources also draw on the Learning Progressions for Adult Literacy (TEC).

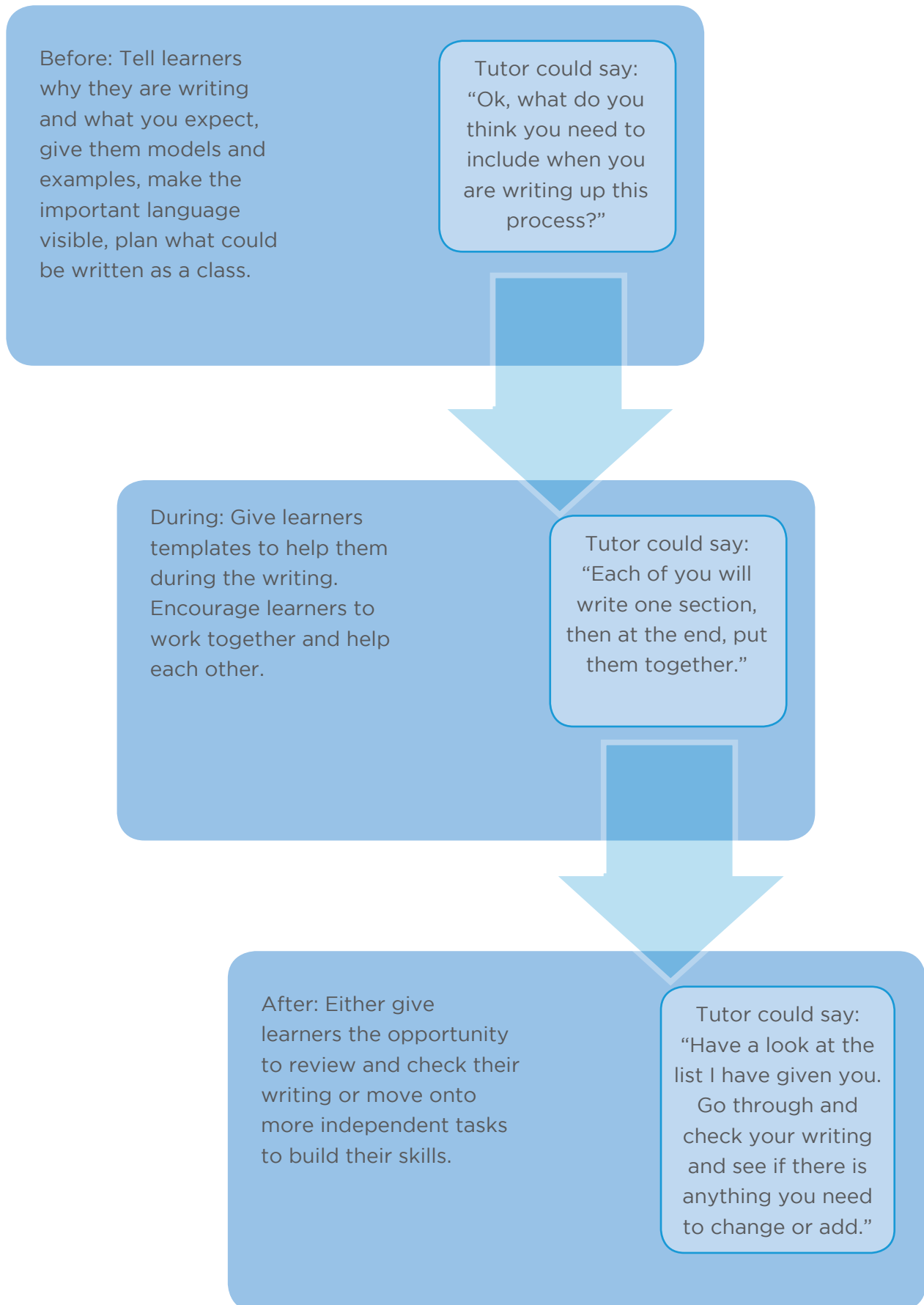
What can I use as good examples?

It really helps learners if they can actually 'see' what they need to be able to write - the end result. The resources need to use good examples of writing from previous diaries, so that learners learn from each other. This also helps ensure texts are at a suitable level for the learners.

How much time and resourcing do I have?

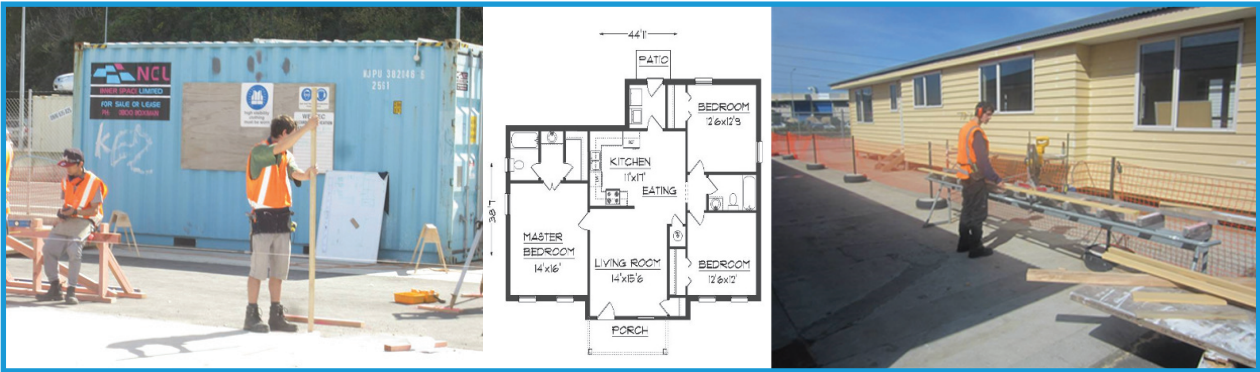
Because the focus on the carpentry programme is on building a house, and because most learners would rather be building than writing, time is limited. Each resource needs to take approximately 30 minutes to allow time for writing diaries after building work is complete.

'Before, during, after' framework for teaching writing



A Builder's Diary

Overview

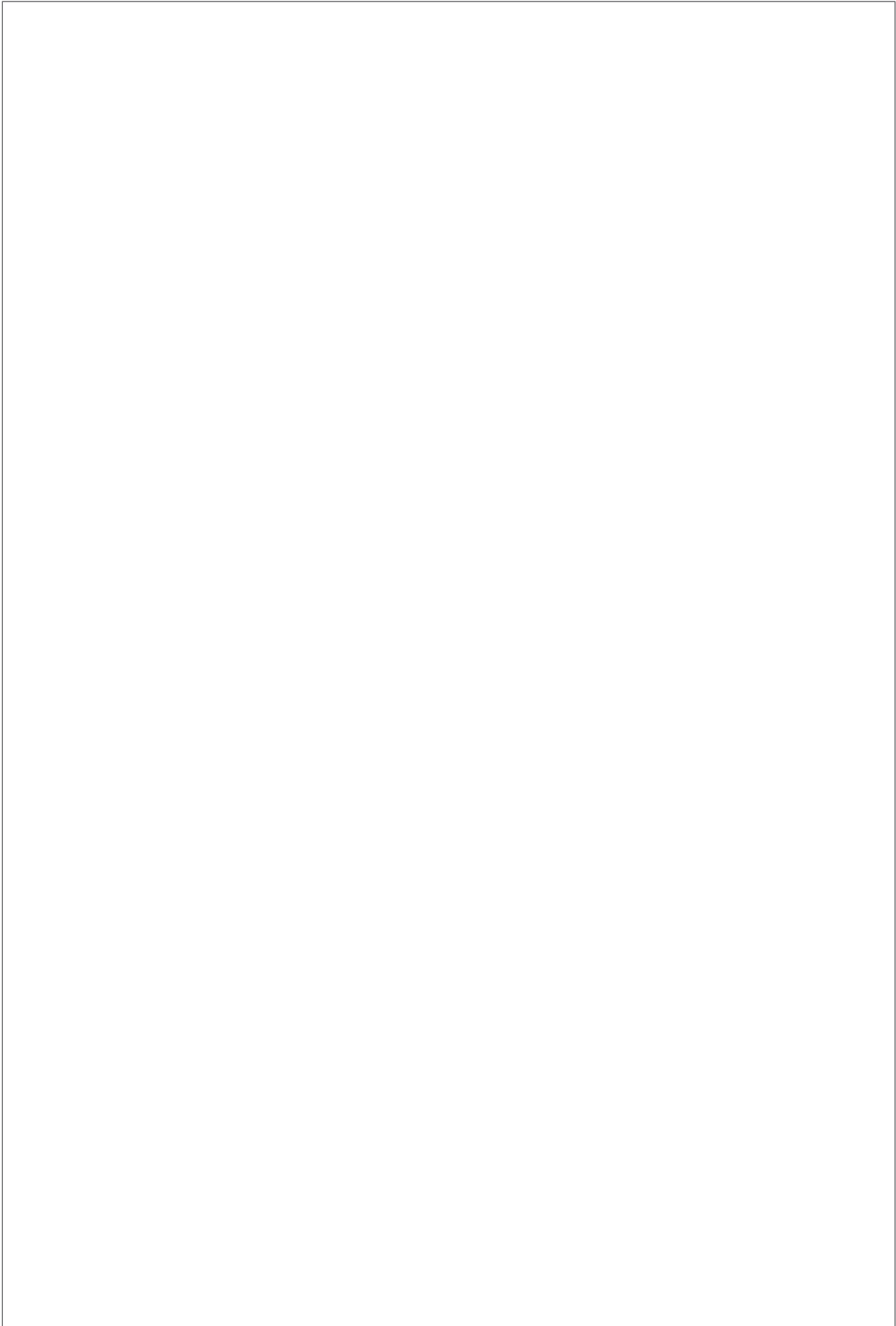


Name:

Date:

A) What do you know?


What do you think you need to write in your builder's diary? Make a list below.

A large, empty rectangular box with a thin black border, intended for the student to write a list of items needed for a builder's diary.

B) Overview

Location: J-Block Building Site, Petone		Weather: Fine
Day: 2	Week: 1	Date: 1/4/14

- Being the slowest, we were the last to finish our profiles. While the others waited with the string line, we put the top piece on our profile boards.
- Shaun marked the 600mm above the datum, squared the line off and nailed it there.
- We then set up the dumpy, screwing it on top of a roughly level tripod, then levelling it using the bubble.
- The datum was 3 sites over. We marked the 140mm mark the dumpy was reading onto the staff.
- Holding the staff on top of each profile, we double-checked the 600mm measurements we had marked before. They were all a bit off, some 3-4mm off, one being 10mm off. This seemed wrong so we double-checked the datum again. It was still the same so we repositioned the height of the profiles.
- The base of the profiles was loose as the nails simply weren't holding well. Using the electric drill, we used concrete screws to lock them in place.



Have a look at the example above:

1. Which day was it written on?
2. Which week?
3. What was the date?
4. What was the weather like?
5. How many points are there?
6. What does the picture show?

What do you think is the purpose of your builder's diary?

Who do you think it is written for?

C) Details

Look back at the diary entry and write down one example of each of the following:

1. What they did:
2. How they did it:
3. The equipment they used:
4. A measurement:
5. A mistake they made:
6. What they did to change the mistake:

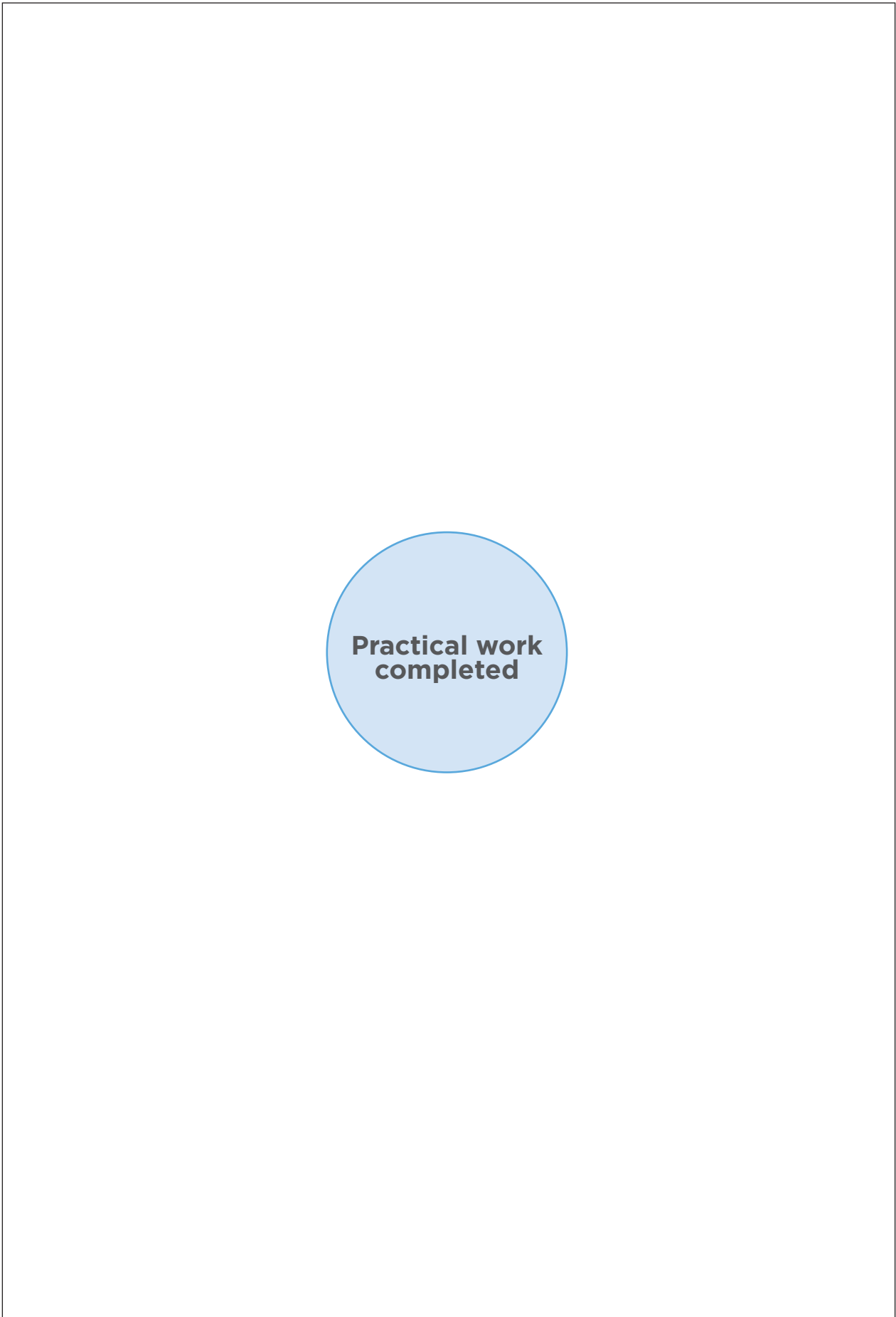
Write any new carpentry words you found in the table below along with their meanings. (Ask your tutor, another student, use your glossaries or?)

Word	Meaning

Go back to your list at the start. Add anything else that you need to write in your diary.

D) Planning your diary

Now, brainstorm what practical things you have done so far that you can write up in your diary:



Practical work completed

Part C

Professional development and workshop plans

This section contains advice on how teaching and learning advisors, managers and capability development staff could implement professional development activities to build the language embedding capability and confidence of trades tutors in their organisation. We have identified a continuum of embedding capability and it is suggested that organisations first decide where they sit on this continuum before they begin development activities with their staff. We have also included 4 x workshop plans.

A workshop plan to build organisational capability in embedding language

In the introduction to this resource we explained that it was helpful to ascertain where your organisation sits on the continuum of embedding language before you make decisions about where to start with the professional development plan. In the diagram below each point on the continuum has been aligned with relevant professional development resources in this book.

Tutor is unaware of language element of teaching their trade or is not engaged with PD initiatives related to language

If your organisation is here, start a publicity campaign about language in the trades. Put the posters around staff areas, on your intranet and start sending out videos to relevant staff - 1 every couple of weeks.

Tutor is beginning to show interest in strategies for embedding language and will work with advisors or independently to learn some new strategies

If your organisation is here, use posters as a basis for a one-to-one conversation with tutors. Send them the link to the full video catalogue.

Tutor has begun to identify the way that they are embedding language in their programme and is actively seeking new ideas to include in their practice

If your organisation is here, begin to introduce workshops. Start with:

1. Needs analysis
2. Reflection tool

Tutor deliberately pre-empts and plans language embedding as part of their usual lesson planning process

If your organisation is here, introduce workshops:

3. Sharing strategies
4. Focusing on the words

It may also be appropriate to start sharing the word lists and model resources with tutors who are keen to know more.

Tutor reflects on own practice and shares ideas with colleagues

If your organisation is here:

Set up cluster groups / regular practice sharing forums to continue to build practice across the organisation.

The strengths-based development approach

The workshop and professional development approach suggested in this section is underpinned by a strengths-based approach. Our work with tutors has highlighted the importance of always starting development activities and discussions with what tutors are already doing well. This builds trust, confidence and engagement in the task ahead.

All of the workshops are underpinned by three questions that reinforce the strength-based approach:

A strengths-based approach to professional development with trade tutors



By taking this approach we are:

- Avoiding deficit thinking, i.e. *'This is what is wrong and this is how you can fix it'*
- Building a bigger pool of ideas and resources to share with each other
- Building confidence in tutors to begin to share their practice with others
- Acknowledging tutors as the experts in their trades and utilising what they already know

The workshops

We have developed a series of workshops for organisations to use depending on where their tutors are on the continuum of embedding capability.

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Workshop 1:

What do my learners need to know?

Learning outcomes – by the end of this workshop:

1. Tutors will be able to identify the challenges that trades specific words create for learners
2. Tutors will be able to identify the important and/or challenging language in their course.

Timing	Learning activity	Teaching strategy	Resources
0-15 minutes	Discussion question: <i>What do we mean by 'trade words/jargon/specialised words/ etc? Why are they important? Think / Pair/ Share</i>	Ask the question, give some ideas and prompts, elicit ideas from groups and put up ideas and definitions on the whiteboard.	White board/ pens and large sheets of paper for participants to make notes on
15-45 minutes	<p>Vocab sorting task: In pairs or groups, tutors sort the words into different categories – <i>What words would be challenging? Why?</i> Possible Groups:</p> <ul style="list-style-type: none"> • Trades • Many meanings • General word • Easier word <p>Barriers words can create: <i>How do words like these affect your learners?</i> Possible answers:</p> <ul style="list-style-type: none"> • Barriers to reading, writing, listening and speaking • Affect understanding of content • Affect understanding and answering assessments • Communication • Confidence etc. <p><i>(Now is a good time for a 10 minute break)</i></p>	<p>Explain the task; choose a word and elicit which group it could go in; monitor and prompt as the pairs/ groups categorise the words. Elicit the lists from the class and write up on the board.</p> <p>Put the question on the board for tutors to discuss in groups. Elicit and discuss.</p>	<p>White board/ pens and large sheets of paper for participants to make notes on</p> <p>Cut up a set of words, 1 set per pair/group of three. Table for categorising the words.</p> <p>White board/ pens and large sheets of paper for participants to make notes on</p>

55-65 minutes	<p>Identifying challenging words Discussion question: <i>How do you identify challenging words?</i></p>	Put learners in pairs to ask each other; elicit the different ways to identify challenging words and put them on the board	White board/ pens
65 - 90 minutes	<ol style="list-style-type: none"> Tutors highlight what words they think may be challenging on their own. Put them into groups based on subject. Tutors check that they have highlighted the same words. Groups swap texts around and see what others have highlighted and add more if they need to with their highlighter. <p><i>Swap texts 3 times so everyone gets to see each topic. As they are highlighting in different colours, it will give tutors the chance to see what other groups see as challenging</i></p>	<p>Explain the activity and give out the texts, one per tutor. Elicit an example of a challenging word, one for each text. Monitor and elicit. Tutors complete the activity and then work in groups.</p> <p>At the end, ask: <i>How many words in each text could be challenging for learners?</i> <i>Write up 5 examples from each text.</i></p>	3 x trades texts (1 x plumbing, 1 x carpentry and 1 x automotive) White board/ pens Highlighters - different colour for each text
90-110 minutes	<ol style="list-style-type: none"> Tutors highlight what words their learners may need help with in the text they have brought. Tutors swap the text they have brought with another tutor's and highlight any additional words they think learners may need help with. Swap texts and tutors see if anything has been changed or added. <p><i>N.B. It is good to get a tutor who is unfamiliar with the subject area to check if there are any other words they would find challenging.</i></p>	Explain the activity; Demonstrate by highlighting one word learners may need help with; monitor, support and elicit; organise the swapping of the texts; feedback at the end - any differences?	Tutors own texts Highlighters White board/ pens

110 - 120 minutes	Reflection question;	At the end say: <i>Turn to the person sat next to you and ask them one thing they can take away from this session.</i> Tutors put their ideas on post-its and stick them to a piece of paper at the back of the room as they leave.	Post-its, 1 x A3 paper.
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Workshop 1:

Vocabulary to sort

Cut up the words in the table below for tutors to sort, discuss and categorise – 1 set of each group of 3 or 4. One blank table for each group (next page).

- Trade words
- Words with more than one meaning
- General word
- Easier word

Trade	Trade word	Trade word	Word with multiple meanings	General word	Easier word
Automotive engineering	electron	molecule	matter	determine	tiny
Carpentry	convection	ceiling	blanket	sustainable	wall
Plumbing	potable	thermal	draw	supplementary	water

One blank table for each group.

Trade	Automotive engineering	Carpentry	Plumbing
Trade word			
Trade word			
Word with multiple meanings			
General word			
Easier word			

Workshop 1:

Plumbing text

Source: © Certificate in Plumbing and Gasfitting workbook WelTec School of Construction (Level 3 programme)

Chapter 8

Solar water heating

Solar water heating (SWH) systems are made up of the same basic components:

- solar collector — to collect the sun's energy and transfer it to the heat transfer fluid
- hot water storage tank — to store heated thermal fluid, or potable water ready for delivery to the user
- circulation system — to transfer heat from the collector to the storage tank
- control and protection — controls the circulation system to ensure maximum solar gain, controls the use of supplementary heating, protects from overheating, freezing and excessive temperatures and pressure
- supplementary heat source — provides heating when the solar energy collected is not enough to supply the hot water load requirements of the user.

Types of solar systems Types of SWH systems include: open loop, closed loop, thermo-siphon, pumped, integrated systems and split systems.

Open-loop systems (Direct heating systems) Open-loop systems circulate the potable water that is to be delivered to the household as hot water directly through the collector. Direct heating systems have potable water in direct contact with the heating source. In these systems water quality must be good enough to ensure that the collector heat transfer surfaces are not restricted by impurities depositing on them, reducing the flow and the heat transfer ability of the system.

Workshop 1:

Carpentry text

Source: © ITP Carpentry Development Consortium/WelTec School of Construction (Level 3 programme)

Insulation materials

Insulating products are classified into the following two main categories based on their performance properties:

- Bulk insulation
- Reflective insulation.

Bulk insulation

Bulk insulation works by trapping dry air in light bulky materials. Still air is a poor conductor of heat so bulky materials that can trap large amounts of air reduce the ability for heat to be transferred by **conduction**. If the material consists of many pockets of small trapped air rather than a large contiguous volume of air the ability to transfer heat by **convection** is also reduced.

The following range of bulk insulating materials is available:

Glass wool

Glass wool is used in walls, ceilings, subfloor and roof spaces and is available as blanket or mat insulation; it is environmentally sustainable as it is manufactured from recycled glass. When laid horizontally it loses volume as it settles, so additional blanket may need to be installed to maintain the required R-value.

The R value depends on the density and thickness of the material.

Sheep's wool and polyester

Sheep's wool, polyester, and sheep's wool/polyester blends can be used in walls and ceiling or roof spaces and are available as blanket or mat insulation. The R value depends on the density and thickness of the material.

Mineral wool

Mineral wool comes in two forms:

- A mat insulation for walls and ceilings
- Blown-in ceiling insulation which requires specialist installation equipment.

The R value depends on the density and thickness of the material.

Workshop 1:

Automotive text

Source: © Wellington Institute of Technology 2012 (Level 2 Automotive Programme)

Electron Theory

Electron theory helps to explain electricity. The basic building block for matter, anything that has mass and occupies space, is the atom. All matter - solid, liquid, or gas - is made up of molecules, or atoms joined together. These atoms are the smallest particles into which an element or substance can be divided without losing its properties. There are only about 100 different atoms that make up everything in our world. The features that make one atom different from another also determine its electrical properties.

Atomic Structure

An atom is like a tiny solar system. The centre is called the nucleus, made up of tiny particles called protons and neutrons. The nucleus is surrounded by clouds of other tiny particles called electrons. The electrons rotate about the nucleus in fixed paths called shells or rings. Hydrogen has the simplest atom with one proton in the nucleus and one electron rotating around it. Copper is more complex with 29 electrons in four different rings rotating around a nucleus that has 29 protons and 29 neutrons. Other elements have different atomic structures.

Workshop 2:

What are you already doing?

Learning outcomes – by the end of this workshop:

1. Tutors will be able to reflect on and share their teaching of trade specific language
2. Tutors will be able to plan for supporting their learners with the language elements of their lessons

Timing	Learning activity	Teaching strategy	Resources
0-20 minutes	<p>Think, pair, share</p> <p>What are you already doing to help your learners with the challenging words? How do you know when they are having difficulty? How do you know when they understand?</p>	<p>Put questions on the board. Elicit one example for each. Monitor, elicit, prompt and support as tutors answer the questions on their own, in a pair and to the class. Elicit and write up answers on the board.</p>	<p>White board/ pens and large sheets of paper for participants to make notes on</p>
20-50 minutes	<p>Brainstorm</p> <p>Ask tutors to think about their next teaching session. <i>What words do learners normally have problems with?</i> (They can bring a text to prompt them, but it is also about the language used in tutor-talk.)</p> <p>Work through reflection tool.</p>	<p>Introduce and explain the vocabulary reflection tool. Monitor and support tutors as they complete it. Tutors work in pairs to share what they have completed. Feedback to the class.</p>	<p>Vocabulary reflection tool</p> <p>White board/ pens</p>
	<p>Discussion</p> <p>In groups tutors go through the glossaries and answer these questions:</p> <ol style="list-style-type: none"> 1. <i>What is the purpose of a glossary?</i> 2. <i>What do you like/what would you change about each one?</i> 3. <i>How do you use glossaries in your teaching?</i> 	<p>Give out samples of glossaries. Ask tutors to look through them and answer these questions:</p> <ol style="list-style-type: none"> 1. <i>What is the purpose of a glossary?</i> 2. <i>What do you like/what would you change about each one?</i> 3. <i>How do you use glossaries in your teaching?</i> 	<p>Glossaries</p> <p>White board/ pens and large sheets of paper for participants to make notes on.</p> <p>A copy of each glossary from the guide for each group.</p>
	<p>Wrap up:</p> <p>Tutors write on post-its:</p> <ol style="list-style-type: none"> 1. <i>What was useful?</i> 2. <i>What wasn't useful?</i> 3. <i>What would you change in this workshop?</i> <p>Tutors put the post-its on 3 x large sheets of paper, each with one of the questions at the top</p>	<p>Explain the activity and that the relevant post-it goes on the paper with the same questions. Put the paper in 3 different places around the room. Tutors do this anonymously. Go through some key pieces of feedback from the post-its.</p>	<p>3 large sheets of paper, each with one of the questions below:</p> <ol style="list-style-type: none"> 1. <i>What was useful?</i> 2. <i>What wasn't useful?</i> 3. <i>What would you change in this workshop?</i> <p>Post-its</p> <p>Pens</p> <p>Pins/blue tack to attach large sheets to the wall</p>

Workshop 3:

Sharing strategies

Learning outcomes - by the end of this workshop:

1. Tutors will be aware of their own teaching strategies used to embed language
2. Tutors will take away new strategies to try in their teaching to help them to embed language

Timing	Learning activity	Teaching strategy	Resources
0-15 minutes	A range of quotes from tutors and learners from the research will be placed around the room. Learners will walk around the room and choose a quote they can relate to and discuss it with someone else. Pairs will report back to the group on their quote and why they relate to that quote.	<p>Explain, facilitate, discuss</p> <p>Draw a table on the white board with two columns:</p> <p>Embedding language in my programme</p> <p>Challenges/ opportunities</p> <p>As tutors report back put up their ideas around the quotes into the two columns</p>	<p>Printed out quotes below and bluetac placed around the room:</p> <p>“When you can walk like a builder and talk like a builder, then we can have a conversation.” (Tutor, 2015)</p> <p>“We didn’t come here to play kindergarten games - we came here to build houses.” (Student 2015)</p> <p>“Vocab games... silly little word games don’t work with the class” (Tutor, 2015)</p> <p>“The learning doesn’t happen sitting in the classroom” (Tutor, 2015)</p> <p>“It wasn’t until I did the task that I learnt the word” (Student, 2015)</p> <p>We just use it, always use it, demonstrate, show...most important what it is used for (Tutor, 2015)</p> <p>“We learn as we go.” (Carpentry learner, 2015)</p> <p>“Avoid word/long words; don’t say ‘calculation’ say ‘problem solving.’” (Tutor 2015)</p>
15-20 minutes	Learners will look at their vocab reflection tool. They will share one strategy they used to draw attention to the vocabulary with the person sitting next to them. They will then share with the group.	<p>Explain, facilitate. Draw a heading on the board:</p> <p>Strategies</p> <p>Start a list on the board with all of the ideas that are shared.</p>	<p>Vocab reflection tool (Appendix 2)</p> <p>Whiteboard, pens</p>

20-25 minutes	Learners will watch the video clip for 'draw attention to'. They will identify one thing in the video that would work for them and 1 that wouldn't	Play video, facilitate discussion. Draw attention to the other videos in the catalogue	'Draw attention' to video
25-45 minutes	In groups of 3-4, learners will be given a poster (each group needs a different poster) and they will select 1 or 2 of the resources they have brought along. Learners will look at the strategies on the posters and identify 3 that they could use to support learners to understand the language in the resource. They will answer the following questions: 1. <i>What strategy/ies would work well when teaching these words?</i> 2. <i>How would you actually implement the strategy e.g. quote exactly what you could say when using that strategy or describe what you would do</i> Learners will share with the group		Strategy posters (from this book) Individual resources brought along by tutors containing trade specific language
45-55 minutes	Take one/ leave one Learners will go around the room looking at the strategy posters, they will note strategies they think they could use and then leave an idea of their own on at least one poster	Facilitator will need to add strategies to digital versions of posters or display ideas for all staff to see	Strategy posters (included in section 1 of this book)
55-60 minutes	Review: Stop/start/keep	Ask learners to identify what they would stop/start/keep from the workshop	

Workshop 4:

Focusing on the words

Learning outcomes- by the end of this workshop:

1. Tutors will be able to develop teaching or learning approaches to support learners to understand the reading tasks required in their programmes
2. Tutors will be able to reflect on model language resources and how they may be relevant to their own programme

Note: Tutors need to bring along one reading task that learners are required to do in their course

Timing	Learning activity	Teaching strategy	Resources
1-10 minutes	<i>Discussion question: What is one thing you do well when you give a learner something to read or write that helps them to understand? Think-pair-share</i>	Ask the question, give some ideas/ prompt, start a list of ideas on the board as they are fed back to the group	White board/ pens or large sheet of paper Paper for participants to make notes on
10-15 minutes	<i>Discussion question: What are some of the challenges that you have when it comes to giving learners something to read in your programme?</i>	Ask questions, prompt, facilitate discussion. Create a list of challenges.	As above
15-25 minutes	<i>Reading activity: learners will complete the guided reading on the plumbing resource provided</i>	Facilitate the guided reading using the 'tutor talk prompts' in blue.	Copy of the plumbing reading for each participant (pg. 46 of this book). Copy of tutor talk prompts for facilitator to read in blue on page 46.
25-35 minutes	<i>Reflect: In groups of 3-4 What strategies did you notice being used? How did they help you to understand what you were reading?</i>	Facilitate discussion: Point out strategies used including: <ul style="list-style-type: none"> • Give a purpose for reading • Identify important words • Draw attention to the words • Draw attention to key points • Predict • Give learners something to do/ engage with while they read • Discuss what has been read 	Whiteboard - add to strategy list
35-45 minutes	<i>Reflect on activity: In groups of 3-4 What strategies did you notice being used? How did they help you to complete the writing task?</i>	Facilitate discussion: Point out strategies used	

45-60 minutes	Design an activity: in groups choose one of the writing or reading tasks you have brought along. Look at the strategies you have been given or draw on the ones you have seen modelled. What could you add to this reading/ writing task to support learners?	Divide into three groups. Give one group 'before' strategies, one group 'after' strategies, and one group 'during' strategies. Ask them to select one or two strategies and apply them to one of the resources they have brought with them	
70-80 minutes	Each group shares their activity: Briefly explain the reading/ writing task they use, then talk through the strategies they have added.	Facilitate discussion. Add ideas to the growing list on the white board, point out and draw attention to strengths in each approach	
80-90 minutes	Reflect: what will you take away? What will you share with your colleagues?	Do a round the room discussion	

Appendix 1

Tongan translation of 100 most frequently used words in four trades

Automotive technology	
check	vakai'i
engine	misini
test	tesu: 'ahi'ahi'i
voltage	volota
figure	fōtunga/fakakaukau'i
pressure	fa'aki 'a ha fa'ahinga me'a 'i ha toe me'a 'e taha
battery	puha 'uhila
vehicle	me'alele/saliote misini
fuel	lolo
circuit	sēkati: halanga takai 'o e 'uhila
air	'ea
complete	kakato
operation/operating	ko hono fakalele 'o ha ngāue pe mīsinu
valve	vaolo
reading(s)	lau pe koe fika 'o ha mita 'oku lau
work	ngaue
control	pule'i/tuhani
resistance	fakafe'ātungia
connect(ed)	fehokotaki/hoko
current	kauleni/anga e vilo 'ae 'uhila
correct	tonu
coolant/cooling	fakamokomoko pe fakamokomoko'i
flow	tafe
require(ed)	fiema'u
sensor	senisā: me'a fakaongo
component(s)	kongokonga
pump	pamu
brake	ta'ofi
condition	tu'unga
cylinder	silinita
record	lekooti/hiki fakamā'opo'opo
switch	me'akamosi
temperature	fua mafana
inspection	sivi'i
wire/wiring	uaea/fakauaea
oil	lolo
measure	fua
fault	fehalaaki
carry	to'o / fua
repair	fakalelei'i
ignition	fakamo'ui
drive	faka'uli
charging	fakafonu
steering	afe'i/konga 'oku ne pule'i e fohe

Carpentry	
requirement(s)	ngaahi fiema'u
figure	fōtunga/fakakaukau'i
building	langa
wall	holisi
timber	papa
roof	'ato
concrete	piliki
installation	fokotu'u
construction	ngāue kotoa pē 'oku fai fekau'aki mo hono langa pe fokotu'u 'o ha fale pe vaka
fixing	fakatonutonu/fakalelei'i
calculation	fika'i/founga kumi pe fika'i 'o ha fa'ahinga me'a
activity	ngāue ke fakahoko
frame	alanga fale pe fa'unga 'o ha fa'ahinga me'a 'oku teuteu ke ngaahi
floor	#N/A
site	feitu'u/tu'u'anga
joint(s)	soini: ngaahi fo'i hoko pe mata hoko
development	fakalalaka
material	matililo: naunau
carpentry	fakatufunga
work	ngāue
consortium	kautaha
point(s)	poini/faka'ilonga
surface	fungame'a
cover(ed)	'ufi'ufi/fakapulou'i
sheet	pepa
bracing	ha'i pe tokoni'i mo pukepuke ha konga ne motu pe fasi/fakafefeka
safety	malu/hao
length	loloa
applied	ngāue'aki ki ai/fakahoko 'o ha fakakaukau
finish	'osi/faka'osi
section	konga
steel	sitila/ukamea
cut	tu'usi/tutu'u/motuki
method	founga
area	'ēlia/feitu'u
level	lēvolo/ma'olunga tataa
specifications	fakaikiiki
complete	kakato/fakakakato
structural	fa'unga
line	laine/laini
load	uta/kavenga/fakauta

unit	'iuniti
speed	oma/vave
injector/injection	inisēkitā
adjust	tukutuku holo/ fe'unuaki
wheel	va'e me'amele pe ko e fohe
heat	vela/mafana
coil	koila
damage	uesia/maumau
position	tu'u'anga
manufacturer(s)	ngaohi'anga koloa
weld	kasa'i
perform(ed)/-ance	ange 'ene fakahoko ngaue
service	sēvesi : kautaha pe ko e ngaue 'oku fai ki ha me'a pe fakalelei
lead	tataki pe pulu fakamamafa
clutch	clutch: kongā 'i he me'alele 'oku molo-ki kae fetongi e kia
bearing	pēlingi
electrical	me'a faka'uhila
terminal	teminolo
pass	paasi pe ngofua
supply	sapalai/fakalato/tokonaki
specifications	fakaikiiki
plug	palaki
step(s)	sitepu
wear	tui/matangatanga
leak(s)/leakage	mama/tutulu
tool(s)	me'angaue
point	poini pe faka'ilonga
procedure	founga fakahoko
power	paoa pe ivi pe mālohi
replace	fetongi
plate	peleti
electronic	'ilekitulōnika pe ngaahi naunau faka'uhila
filter	me'a sivi
light	maama pe ma'ama'a
number	fika/nōmipa
shaft	saafi
contact	fepaki/fetaulaki/fetu'utaki
fail	'ikai ke lava
motor	moto
area	'ēlia/feitu'u
gauge	me'afua/mitafua
spring	sipilingi
level	lēvolo/ma'olunga tatau
transmission	anga hono fakafononga pe fetuku 'o ha me'a
locate(d)/location	'ilo'i hono tu'u'anga/tu'u'anga
tyre	leta/va'e me'alele
spark	sipaaki
compression	kuku'i/mālohi 'o e teke 'a e 'ea
material	matililo: naunau
body	sino

cladding	papa pe kapa kofu/kofutu'a
ceiling	'aofi
set	seti pe me'a 'oku kakato
support	teketeke/langolango/tokoni'i
edge	tapa
door	matapā
joist(s)	ngaahi fo'i ha'i
space	sipeisi: ki'i feitu'u 'atā pe faingamālie
formwork	papa foomu ki he sima
plate	peleti
nail(s)	fa'o
plan	palani
information	ma'u'anga fakamatala
check	vakai'i
centre	lotomālie
table	tepile
stud	tokotu'u: ngaahi fo'i papa tokotu'u 'o ha alangafale
location	tu'u'anga
protection	malu'i
compound	hu'i/feitu'u/'ātakai/ ko ha me'a 'oku ngaahi mei ha 'elemēniti fakakemikale kehekehe 'e ua
design	fotunga
reinforcing	ko hono fakafefeka'i/fakamalohi'i ha me'a ke toe mālohi pe fefeka ange
tool(s)	me'angaue
coat	vali faka'osi 'o ha fale
board	papa
size	lahi/fika
manufacturer	ngaohi'anga koloa
standard	tu'unga
foundation	fakava'e
beam	pimi
bear	fataki/pukepuke/fuesia/kātekina
hazard	fakatamaki
truss	tokotu'u/teketeke
block	poloka
plasterboard	papa palasitaā
house	fale
insulation	ta'ota'ofi/malu'i/pukepuke e mokomoko pe mafana 'o ha me'a
range	faikehekehe
sealant	kilimi fakapipiki/sila
batten(s)	kapa ha'i
lining	fakatonotonu
product	koloa kuo ngaohi
member(s)	memipa
contractor	konitulekitoa/tokotaha taki ngāue pe ngaue'anga 'oku ne fakangaue'i ha taha
metal	metali/ukamea
prevent	faka'ehi'ehi
resistance	fakafe'ātungia
rafter	sā 'o e 'ato ki he fale

relay	relay: ko e ki'i me'akamosi 'oku pule'i pe 'e he 'uhila mo e makinito 'o e mī'sini
run(ning)	lele
meter	mita
gear	kia
job	ngāue ke fai
idle	'aitolo: le'o lelei e misini mo fiemālie he taimi 'oku mo'ui ai 'o 'ikai 'ikai toe matemate

scaffolding	ko hono sikāfōlo'i pe tokoni'i 'o ha me'a
adhesive	me'a fakapipiki/pipiki
pile(s)	fokotu'unga
formula	hu'i pe founa fakafika
maximum	fakangatangata ma'olunga taha
horizontal	holisonitale: fakahangatonu ki tafa'aki pe mei to'ohema ki to'omata'u
height	ma'olunga
flashing	kapa kofu
element	'elemēniti/kongokonga
consent	felotoi
exterior	tafa'aki ki tu'a

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Go to: www.ako.ac.nz/knowledge-centre/the-language-in-the-trades/ for all information, reports, resources and videos relating to this work.

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