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EMBEDDING LITERACY AND NUMERACY INTO A VOCATIONAL PROGRAMME

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Key terms:

WITT – Western Institute of Technology at Taranaki

TEC = Tertiary Education Commission

LLN = Literacy, language and numeracy

NCALE (Voc) = National Certificate Adult Literacy Education (Vocational tutors)

DATs = Deliberate acts of teaching

ILP = Individual learning plan

KL, KD, KW, KH = Know the learner, know the demands, know what to do, know how to do it

INTRODUCTION:

This presentation will begin with an introduction to embedding L&N at WITT. We will then display a PPP to show the detail and will conclude with a short workshop demonstrating an example of our activities.

The purpose of this presentation is to illustrate how a collaborative effort by literacy tutors, hospitality tutors and e-learning facilitators produced a model for implementing embedded literacy and numeracy (based on the Learning Progressions¹) into vocational programmes, in this case Food and Beverage, Automotive, Business Studies, Computing and Creative Graphics. The model was developed for students and trainees in the VET sector who were accepted into the course under an open entry policy. In many cases, these students did not have the requisite language, literacy and numeracy (LLN) skills to succeed in the course.

Our experience has taught us that where tutors work as a team, student retention and success rates improve. 'Successful teacher teams are strongly motivated to provide embedded provision; they have time to plan and work together, and are willing to learn from each other.' (NRDC, 2006). Such collaboration involved team-teaching, joint planning, peer observation and peer review. Vocational tutors in particular needed opportunities to learn from one another and from experts in other areas by reflecting regularly on lessons, sharing teaching methods, resources, materials and outcomes. This co-operative approach is supported by New Zealand researchers Thomas and Ward (2009). They agree that effective teaching teams in adult education are learner focused and therefore share both responsibility for and celebration of learner progress. Learner focus for our team involved comprehensive embedding of LLN into course content.

It is now widely recognized that embedding the LLN into a course by linking it to the vocational components of the course is producing improved student outcomes. In short, embedding LLN learning within vocational courses

¹ The Learning Progressions: New Zealand is attempting to ensure that all adults have the crucial literacy and numeracy skills they need for living and learning. The Progressions (4 literacy and 3 numeracy handbooks) have been developed to offer a robust framework for other tools and resources. The Progressions can be used to underpin the development of high quality teaching and learning and also provide a common language for practitioners to share.

See www.tec.govt.nz

will increase adults' motivation for developing their knowledge and skills in LLN (Thomas & Ward, 2009). These links between LLN and vocational learning must be identified explicitly to both learners and tutors. LLN tuition is provided right at the moment it is needed for the vocational task being either discussed or demonstrated. Immediacy is the key here and it requires a tutor to identify a 'teachable moment'. Teaching and learning materials must also reflect the requirements of LLN within the vocation itself and should be differentiated to accommodate learners' different levels of skill.

POWER POINT PRESENTATION:

Slide 1: Small drops of water

Initially we realized that new tutors were already overloaded. To gain buy-in, we focused on regularly providing small bites of information at a time. Each of our meetings began with activating tutors' prior knowledge and we consistently linked teaching to this.

In this way, we kept it simple and non-threatening.

Slide 2: Typical tutor

To develop our training programme, we needed to identify our audience - the 'typical tutor' who would be involved in this project.

Discuss PPP descriptors.

We acknowledged that some tutors were lacking confidence and were possibly afraid. To address this and our assumptions about the tutor we ensured that tutors were aware of:

- What was expected of them– WITT,TEC, faculty, staff developer, learners' demands
- What support was available to meet these expectations – learning support, disabilities tutor, colleagues, staff developer. Our aim was to develop a community of teaching and learning practice
- Further study –NCALE (Voc), Diploma Adult Training and Education

Slide 3: Contents

To gain confidence a tutor needs a sound framework to inform lesson planning and teaching. This framework includes the expectations as above and the four underpinnings identified (explain the four – KL; KD; KW; KH):

- Being aware of group and individual needs (KL)
- Being aware of content materials to use which are easier to teach than others and areas where difficulties may occur, where the written presentation of the material is difficult to follow, etc (KD)
- Being aware of the gaps between where learners are at and what the demands of the course or the assessment are (KD and KL)
- Knowing what to do and how to do it to bridge this gap in a way that acknowledges the strengths within the learners and adult teaching methods

Slide 4: Know the learner

We will now focus on the first of these 4 key underpinnings of the framework.

The learners at WITT are adults of all ages. Note: they are not children. This key fact underpinned all teaching and learning that took place.

Slide 5: Adults diversity in class

The tutor was faced with a group of adults with different backgrounds and needs. He needed to ascertain these needs and be aware of L2, LLN, disabilities etc. Different tools were used to find out where learners were at in terms of content and LLN.

Some of these strategies to know the learner revealed the affective domain of the learners, their previous experiences of learning and their successes and failures. This helped the tutor develop awareness of which methods and approaches had failed in the past.

Focus groups/assessment-(formative, summative and diagnostic)/survey/class performance.

What was discovered provided the tutor with the baseline to begin teaching.

Refer to what was said previously about support within WITT – tutor did not work alone. The Literacy tutor/staff developer assisted with assessments/ team assessments/ analysis of results.

Relationship between vocational tutor and staff developer/literacy tutor was one based on Maori pedagogy – Ako principles of tuakana/teina i.e. Vocational tutor has expert knowledge in own field and the expertise is shared.

Slide 6: Know the demands of the text

Tutor is expert in own field, though may never have looked at unit standards or ITO workbooks before in a critical manner. Tutor may be given a basket of resources produced from ITO which is not user friendly. All of this needs to be unpacked. Modification of industry resources benefitted all learners, not just those with LLN needs.

Slide 7: Subject content

The subject content is predetermined and what has to be done with this content is similarly predetermined. However the tutor could determine the order of the teaching and what support needed to be provided to meet the demands of the course.

When the tutor looked at the demands of the content he needed to:

- Determine the presentation of the material from simple to most complex
- Identify concepts/ ideas and theories and in what order to present them
- Identify a good starting point, based on what he knew about the learner's background knowledge

Assessment demands - what type of responses are required- essays/ paragraphs/ multi-choice- teach this

LLN – vocabulary/ language and text features/difficulty of decoding/ comprehension/too much information on one page. All needed to be looked at in order to obtain help from support staff/other colleagues in department/community of practice

We were never expecting vocational tutors to become literacy and numeracy experts - just to become aware of literacy and numeracy needs of their subject and to get help to find out and to address initially – collaboratively, each an expert. **This was determined by mapping the text in terms of the progressions. A learner profile (+ILP) was developed that reflected the learner in terms of the language and numeracy demands of the content material.**

Knowing the demands of a text was done with small chunks of material – enough for one lesson. Tutor got a feel for the level of the demands from mapping small chunks of course material.

EXPLAIN DATS and teachable moments

Slide 8: Know what to do

Adults develop expertise by building on their existing knowledge, skills and experience. They learn most effectively in meaningful contexts.

Slide 9: How do adults learn? How do I teach?

Understanding how adults learn and what the most effective ways of teaching are, underpinned the lesson plans and the activities. Many tutors had only had experience of being taught as a child and had not had any real exposure to adult teaching methods. We advised tutors to enrol on a course to build confidence and expertise. Many did NCALE (Voc).

Being aware of gaps and being aware of outcomes provided the tutor with identified and specified lesson aims.

Purpose of lesson plan – know what to do and how to do it. Documentation is a tutor's friend.

Identified deliberate acts of teaching pre, during and after reading

Remember to deliberately inform learners what and why you are teaching

How did we make this more stimulating?

Learners had the opportunity to share what they know – co-construct meaning, purposeful activities, student focussed etc

Self evaluation/reflection – what learning took place and how do I know this? – learner evaluation – tutor evaluation – redevelopment of lesson and begin again.

Began by saying one small drop at a time. Our process for supporting tutors involved moving from PD dependence to support team/team teaching/sharing/peer evaluation and learning from peers to independence.

WORKSHOP:

We are now going to give you examples of what we did. We have chosen the first session and first page from the Barista candidate handbook. We can use it to

identify what a learner needs to be able to do to read this text independently with understanding.

Activity 1:

Read this text in pairs and highlight any word that you think might be difficult to read

Activity 2:

Hand out questionnaire and complete in pairs

Activity 3

Discuss answers – so is this a difficult text?

Activity 4

Put on PPP a copy of the Progressions- where do you think this text fits? Where do you think learners are at in Foundation level barista courses?

Activity 5

So how could we use this material to embed literacy and numeracy?

Discuss with partner

Answers to include: map of places, teach place value of numbers, percentage of people in Brazil alone who produce coffee

Find a picture that is more useful to show learners and put on screen

Resources needed:

Copies of text

Copies of questions

Copies of Read with Understanding- or on PPP

Picture of World Map to identify places

In pairs, answer the following questions about the text “Coffee Heritage and Production”:

QUESTIONS	ANSWERS (use specific words from the text to support your answer)
<ol style="list-style-type: none">1. Are there some key words that are 'specialised' (i.e. have a specific meaning in the vocational context)2. Are there any words which might be difficult to understand? Is there anywhere else in the text that could help you find the meaning of this word?	

3. What sort of text is this? 4. How are key points identified? 5. In what way does the picture help you understand the text?	
6. Summarise what this text is about in not more than a few sentences. 7. Where is Brazil and Ethiopia? Could you sketch the continents they are on and locate them? Have a try.	
8. What assumptions has the writer made about the readers and their knowledge of the subject? 9. Do you think this is an easy text to read with understanding?	

References:

NRDC (2006). *Skills for Life Quality Initiative. Embedded teaching and learning*. London: National Research and Development Centre.

Thomas, G. & Ward, J. (2009). *Numeracy for adults: latest findings from teaching and learning research*. Maths Technology Ltd. Tertiary Education Group: Wellington, New Zealand.