Project Report

2006 Victorian Equity Projects – An Office of Training and Tertiary Education initiative

Project title: Addressing Literacy and Numeracy Development for Apprentices and Trainees
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Project summary
Apprentices and Trainees often have literacy and numeracy issues, not addressed for varying reasons.

To provide equity in access to education, this project developed vocationally specific assessment tools to identify literacy and numeracy needs; provided Professional Development for teachers and trainers; and designed a model for online self-paced numeracy learning resource (see Attachment 1).

The learners
The target group is made up of pre-apprentices, apprentices and trainees in the following industry training areas: Building Structures & Services, Mechanical Manufacturing, Hospitality, Design Drafting & Interior Fittings and Horticulture.

The age of the students in the target group range from 15 to 66 years, however 84% of the target group is aged between 17 and 25 years of age.

The challenge
The key question for this project was: How can we best support students in the target group to address language, literacy and numeracy issues, thus providing equity of access to education and, therefore, future participation in the workforce?

The project sought to establish the levels of literacy and numeracy needs of the target group when they entered their course. It also aimed to increase the awareness of literacy issues and provide support and professional development for industry trainers and teachers to address the issues through increased understanding of the development of literacy and numeracy skills, teaching
strategies and matching tasks to the literacy & numeracy requirements of the course. Furthermore, it aimed to provide students with a resource to support them during their training.

Teachers consistently reported that the issue is not new, but that they did not have the appropriate tool to identify literacy and numeracy needs. The project has provided each trade area with an assessment tool to identify those students who may require additional support to successfully undertake their studies. There is also reluctance on behalf of students to come forward for assistance. During the project we gained a greater understanding of the challenges of the teachers and trainers in the trade areas in assisting their students. As a result of this project there has been a great effort to review and modify resources, when required, and to look at alternative teaching strategies.

Your approach

It is both an AQTF and OTTE requirement for RTO’s to provide language, literacy and numeracy support to its students. In late 2005 a generic assessment tool was developed to establish the actual level of literacy and numeracy needs amongst the target group across a range of trade areas. This assessment was conducted as part of the induction process in 2006 for all first year pre-apprentices, apprentices and trainees.

Each trade area was consulted to establish vocational specific needs for customisation of the assessment tool. Many trade areas identified changes they wanted to the generic assessment. Some requested alternative Maths questions and others chose different reading texts to make the assessment more contextualised to the industry. Some trade areas were satisfied with the original generic assessment and will continue to use this in future years.

Foundation Studies provided informal Professional Development through meetings and networking opportunities with teachers and coordinators from all the above trade areas. Formal Professional Development was delivered by Foundation Studies staff through Cert IV in Training & Assessment, and teacher workshops.

The results

The assessment tool provided valuable quantitative data on the literacy and numeracy skills of the target group on entry to their course. Quantitative data collected from the assessment indicates that of 819 students who attempted the assessment, 486 (59%) would require some kind of assistance in order to successfully complete their studies. It was identified that of these, 436 (90%) would require assistance with numeracy, 197 (41%) with writing and 100 (21%) with reading. Across the institute it was identified that 78 (16%) of students would require support with numeracy, reading and writing. Study support was provided in 2006 through the Study Skills Advisory Service to individual students and numeracy specific assistance was provided to groups of students by Foundation Studies, in negotiation with the trade area.

Improved liaison and collaboration across departments and faculties has resulted in combined efforts in developing vocationally specific assessment and teaching strategies. Trade teachers feel more supported and more aware of literacy and numeracy issues and strategies. Student support has been improved. The following is a sample of the responses by students to the Foundation Studies teacher following numeracy workshops and assistance:

“I now know how to do it!”

“It’s simple – I didn’t think I could do that”

“I would like to do another test to show my skills”

“It’s good to be able to ask questions”
“I need to refresh my skills, I haven’t be to school for a long time”
“I’ve forgotten how to do percentage, can you help me?”

Students responded well to numeracy support and were happy to ask specific questions, which in a classroom can slow down the lesson and make students feel uncomfortable. A Plumbing teacher’s response was that students would like to resit the assessment now that they have had tutoring on the mathematical concepts experienced in their last assessment task.

The following feedback was provided from a teacher in the Joinery trade area:

I questioned students on a couple of occasions, regarding their tutoring sessions, and found them to be in a much more positive frame of mind and displaying greater confidence in their approach to numeracy and other tasks. The tutoring sessions are a definite advantage in helping students overcome their lack of ability with numeracy.

The online learning sources are included in Attachment 2, which provides some details about the nature of the resource and its applicability to the relevant trade area or skills development.

**Lessons learned**

The project has created a new focus on literacy and numeracy needs of pre-apprentices, apprentices and trainees and the need to address these. Statistics confirmed what many believed to be an issue effecting learning for the target group, but until now had no tool to substantiate these observations. The project has highlighted the lack of foundation skills of a large number of students in numeracy and therefore access to the applied learning involved in the training modules is limited. The students need to work on these basic skills as a bridging to be able to fulfill module requirements.

There has been an increased understanding of the resources and support materials for the trade groups and new ideas generated by teachers and trainers on classroom strategies for training and assessment to ensure more access to information for students. Initiatives have been taken by trade teachers to present material in a way that includes all students in the learning experience.

The project has informed the design model for a self paced online resource for numeracy. The methodology was successful and has been used as a model for each trade area to develop their own assessment tool, or to maintain the generic assessment, according to the needs of each area.

**Contact details for queries regarding the project**

There may be queries from visitors to the website regarding your project.

Please provide details (name, email address and phone) of the contact point in your organisation for any queries on further information about your project.

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**Product 1**

**Literacy & Numeracy Assessment Kit**

- Assessment tools developed to the specification of the different trades taught at NMIT and would be applicable to other TAFE colleges.
The assessment has numeracy/maths, reading and writing components. The assessment kit includes a guide to assist teachers. This is to be used by teachers to identify students who may need extra assistance with their literacy & numeracy skills when they first begin their courses.

A generic assessment tool is being used by: Plumbing; Carpentry; Locksmithing; Fitting & Machining; Metal Fabrication; Jewellery; and Computer Systems & Electrotechnology.

Customised assessment tools have been developed for: Bricklaying; Plastering; Roof Tiling; Floor & Wall Tiling; Caravan Manufacturing; Joinery; Furniture Studies; Health and Aged Care; Child Care Studies; Hospitality; Painting & Decorating; Hairdressing; Business Services / Retail.

Product 2

Online learning Resource

- A reviewed index of literacy and numeracy resources relevant to the target group

To be used by students, teachers and Study Support consultants.

Product 3

Design Model Online for self paced numeracy learning package

The product is a generic, web-based and designed to be delivered via TAFEVC. A feature of the learning resources is that it is audio based. The idea is to provide quick, clear revision of mathematic concepts.

The model can be used by teachers in any area of learning to devise revision of applicable maths / numeracy skills. The revision lessons designed for the target group can also be used by other learners across TAFE. Study Skills consultants can use the resources to assist students with numeracy needs.