

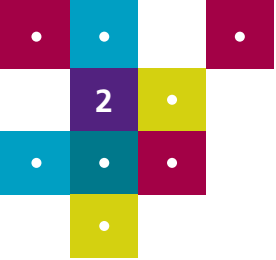
**Applying  
Information  
and Research**

---

**Good Practices  
from 2005**

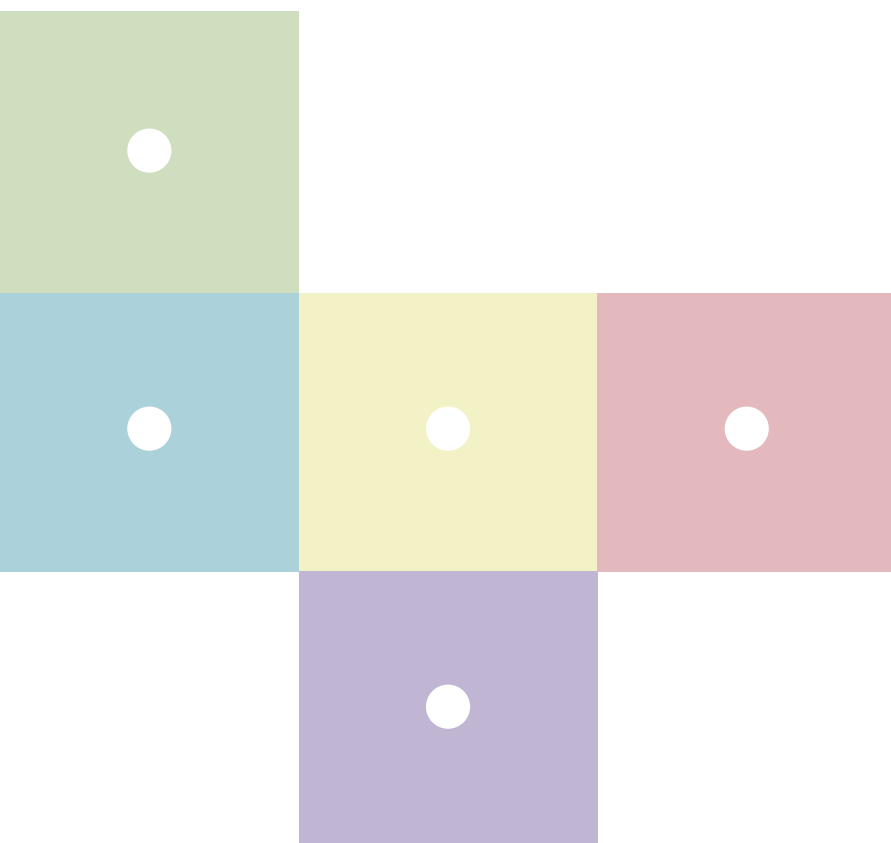


Developing Australia's VET workforce to  
implement the national training system



## **CONTENTS**

Applying Information and Research: Good Practices from 2005 .....	<b>3</b>
Engaging with research and information.....	<b>4</b>
Critically examining, evaluating and validating research and information.....	<b>6</b>
Applying research and new knowledge to practice .....	<b>7</b>
Disseminating new knowledge and practices.....	<b>8</b>
What knowledge and skills do VET practitioners need?.....	<b>8</b>
Factors assisting and hindering the application of information and research.....	<b>9</b>
The importance of facilitation .....	<b>9</b>
Final comment.....	<b>10</b>
References, resources and further reading .....	<b>10</b>



## APPLYING INFORMATION AND RESEARCH: GOOD PRACTICES FROM 2005

As part of the Reframing the Future initiative, the sub-program 'Applying Information and Research' funds project teams to make use of the extensive research and information relevant to the Vocational Education and Training (VET) sector. These projects are not about doing research, but are about linking with and applying research and other information, using a workbased learning approach.

In 2005, twelve Applying Information and Research projects focused on the following topics:

- Language, Literacy and Numeracy (LLN) and Training Package implementation
- Innovation in VET
- Market responsiveness and demand driven VET
- Catering for different learners – men over 45 years; Kooris; culturally and linguistically diverse; retrenched textile, clothing and footwear workers
- Developing a research culture in a VET institute
- Recognition of Prior Learning
- Graded assessment
- Employability skills
- Use of Training Packages in the health sector
- Delivery models for part-time students
- The value of enterprise vocational education and training.

This publication describes good practices from the 2005 projects. It was prepared by Wendy Perry, Project Manager, Applying Information and Research, Reframing the Future. The publication is intended to provide exemplars for recently-funded project teams and for others interested, about how to apply relevant research and information to VET practice.

### Key messages

The key messages that emerged from a study of the 2005 projects were as follows:

1. VET practitioners are increasingly utilising knowledge and information within their teaching and learning environments to inform and improve their practice.
2. Knowledge built within VET groups and inputs from information and research enable access to new ideas, insights, ways of working and innovation.
3. The application of qualitative and quantitative research data, good practice models and information utilising the processes of action learning creates new knowledge and transforms practice.
4. VET organisations and the VET system benefit from knowledge creation and transformation through:
  - the development of new training approaches and services;
  - innovative approaches to implementing the national training system;
  - new ways of responding to client and learners needs; and
  - improved collaboration, organisational performance and practices.

These findings mirror those in a recent report by the UK's National Research and Development Centre for adult literacy and numeracy, *Generating knowledge and transforming it into practice* (2005), which found that linking research and development together can produce a greater impact:

*It is through development activity that research issues, gaps and critical questions often arise. In turn, research can be actively used to inform teacher education and professional development to help change practice irreversibly for the better. Bringing together research evidence and practitioner knowledge gives us the best platform to transform teaching and learning cultures. (Foreword)*

## ENGAGING WITH RESEARCH AND INFORMATION

Reframing the Future project teams in 2005 used a combination of approaches to connect and engage with research and information. These approaches included scoping the topic then locating and sourcing information and research at the following levels: team, organisational, community, VET sector, state/territory, industry, region/community and international levels.

### Scoping the topic

Participants in Applying Information and Research projects often begin with a broad topic and refine and hone the specific area they are intending to investigate.

The University of Ballarat's project on Language, Literacy and Numeracy initially focused on two main areas of knowledge enhancement:

*The first area focused on exploring the issues surrounding Language, Literacy and Numeracy... and the second on developing the knowledge and skills to address these issues.*

### Identifying internal knowledge sources

Cooloola Sunshine Institute of TAFE (CSIT) identified the existing internal knowledge of individuals (both tacit and explicit) through their working group, the Institute's Academic Board and other meetings.

Challenger TAFE facilitated a 'harvesting' activity at three major campuses where staff were invited to discuss innovative practices and describe proposals of their own.

The Enterprise Registered Training Organisation Forum (ERTOF) developed a 'Knowledge Bank of Issues' in relation to the national training system that was circulated for comment and discussed at their meetings.

The Gordon Institute of TAFE used "...observation of RPL/RCC practices within their own program area, followed by articulation of such practices at an action learning set meeting".

### Connecting with research bodies, experts and researchers

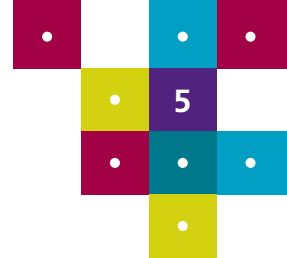
Many project convenors invited the National Centre for Vocational Education and Research (NCVER) staff members and researchers to be involved in their projects. For example, Tony Marsh and Pat Grosse of Goulburn Ovens Murray Regional Council of Adult Community and Further Education (GOMREC ACE) reported that by inviting Barry Golding, University of Ballarat, to be the guest speaker for the first meetings...project partners were able to ask questions to clarify any findings from the University of Ballarat research into men's learning in ACE.

Lyn Wakefield convenor of the Gordon Institute of TAFE's project involved Dr John Mitchell from John Mitchell and Associates, Hugh Guthrie from NCVER, Wendy Perry from Reframing the Future and Damon Anderson from Monash University in their forums to encourage participants to perform the following activities:

- access research and good practice models
- engage with and apply research findings
- gain insight on the range of VET clients and industry and their varying needs and expectations
- interpret and apply relevant knowledge management theory and processes.

### Undertaking activities and exercises

In the TAFE NSW South Western Sydney Institute project, groups were formed to locate and read possibly useful research and then to evaluate, apply and disseminate information to other groups. Individual groups were encouraged to be creative about the way the information was brought back to the whole group. Presentations included mind maps, plays and photos, with all feedback captured on video.



A number of projects also established smaller groups to focus on specific areas of research such as the University of Ballarat. Challenger TAFE structured cross sector working groups to support group process, informal learning strategies and action research tasks.

### **Using face to face forums and discussions**

The Gordon Institute of TAFE held facilitators' meetings and reference group meetings to support their project on RPL/RCC, Graded Assessment and developing a research culture. Project participants attended a series of joint workshops as well as action learning set meetings. Group processes were used such as brainstorming, testing, discussion, problem-solving and sharing ideas.

New solutions were developed through discussion, review, reflection and cross-sector collaboration at Challenger Institute of TAFE.

South Western Port Council of Adult Community Education (SWPCACE) supported, "... a constant level of professional discussion, debate and sharing of explicit and tacit knowledge".

The GOMRC ACFE project on men's learning preferences facilitated five face to face meetings at various ACE centres. These face to face forums were supported by the use of individual learning plans, learning circles, self and peer evaluation and online communication.

### **Meetings with staff members, training providers, industry clients, students and stakeholders**

South Western Port Council of ACE's project "...empowered smaller organisations to research, network and connect with like-minded organisations, share information for a common good and bring into the organisations the experiences and benefits of being actively engaged in workbased learning".

Cooloola Sunshine Institute of TAFE used a series of breakfasts to validate key local industry issues and conducted interviews of current, past and 'lost' students to gain an understanding from the end user perspective.

Participants in GOMRC ACFE's project "...drew upon existing contacts in local organisations with substantial male contingents including Landcare, DSE, community sheds and the Country Fire Association".

### **Attending conferences and forums, making site visits**

Participants in TAFENSW South Western Sydney Institute of TAFE's project on employability skills integration attended the Employability Skills State Conference and explored Canberra Institute of Technology's Think Piece 'Implementing Employability Skills with Generation X'.

South Western Sydney's Institute's project on developing training models for students in child care studies enabled participants to attend a Children Services two-day forum and to meet with TAFE Queensland representatives to find out about Queensland developments.

Participants in the Textiles Clothing and Footwear (TCF) Union of Australia project visited TCF companies, to provide information and to discuss employment and training issues.

### **Developing case studies**

Challenger TAFE used innovators from across education and training sectors to highlight examples and case studies of their own innovative practice.

Central Northern Adelaide Health Services used case studies at their forums to stimulate discussion about the potential use of VET training to assist workforce redesign in health.

### **Searching web databases for recent reports, articles and research**

Many projects produced listings of appropriate websites, search engines, NCVET and DEST reports as well as other relevant information and articles. Participants accessed recognised research portals, contacts in other Registered Training Organisations and other bodies such as industry skills councils that support Training Package implementation.

*Developing annotated bibliographies, literature reviews and background papers*

Many project participants developed templates for annotated bibliographies to collate, organise thematically and summarise materials.

### Using online tools, web based forums, digital stories, wikis and video conference

The participants in South Western Port Council of Adult Community Education's project participated in online activities such as online learning circles. They were challenged to think outside of the normal organisational structures and to reflect as follows:

*The creation of individual digital stories enabled every participant to consider their own journey through self reflection... and knowledge gained throughout the life of the project. The key to knowledge management and creation as a project team was having an online 'place' such as the TAFE VC room to have concurrent as well as reflective discussions, share findings and materials and to engage in the ownership of what was being created and sourced.*

Facilitator Louisa Ellum and Convenor Josie Rose also commented:

*The use of WebCT as a meeting place worked much better than we anticipated. The use of online voice technology was a simple, accessible but very effective vehicle for creating a sense of community and helped participants overcome any initial fear of the technology. Interestingly – although the participants enjoyed the voice technology for the bi-weekly meetings some still preferred to do their reflections in text.*

## CRITICALLY EXAMINING, EVALUATING AND VALIDATING RESEARCH AND INFORMATION

It is important for participants in Applying Information and Research projects to use their professional judgment when accessing, sifting and applying research and information. For example, in the ERTOF project, "Information, research and good practice models of enterprise learning and enterprise RTOs were sourced from the literature and from member's experiences". They were then "critiqued within the literature review" by ERTOF's participants.

Josie Rose and Louisa Ellum, convenor and facilitator for the Southern Western Port Council of Adult Community Education, observed the following:

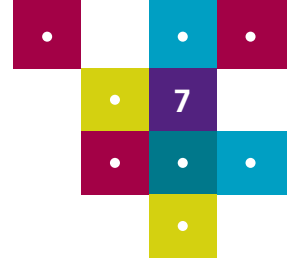
*... the team's objectives were to decipher what would be useful for an end user (specific and general) to use for their research purposes and therefore they had to engage with the research at a level that forced them to use professional judgment and experience to annotate and clearly identify of what use it could be to practitioners. Participants clearly began to use critical judgment when gradually venturing into the research at various levels and were found to start to share findings with their learner group team to compare experiential understanding of its future applications. They also started to devise strategic questions to allow them to search for research that was outside of their own experiences and knowledge. One interesting factor toward the end of the project was the identification of 'gaps' or 'outdated' areas in research that has encouraged them to look at this in the future within their organisations.*

Cooloola Sunshine Institute of TAFE project participants validated research and information they had accessed by talking to stakeholders, clients and learners. Francis Howes, the convenor of the project, reflected on findings from the project's processes:

*Formal processes with our key client gave very valuable feedback on the quality of the information we had collected for them. We learned that what we thought was important was not necessarily the same for them. We also learned to carefully negotiate political considerations as well as issues around confidentiality. These learnings are quite critical to the implementation of the model and cannot be ignored. The political and market landscape therefore needs to be a fundamental part of the early market research for the model.*

Lyn Wakefield, convenor of the Gordon Institute of TAFE's project, described the discussion and debate that team members in pairs or sub-groups conducted, in relation to the value of the identified good practice models they researched. One action learning set benefited from evaluating the research:

*Evaluating the research was a task that all team members enjoyed, and they took a great deal of time in comparing the outcomes of the review. They evaluated the model's suitability for apprentices/trainees and profile students; reviewed the amount of assessment required; looked into suitability for lower level Certificate students, and investigated the amount of support needed to develop the system and the overall effectiveness of the graded assessment model.*



Many project convenors reported that their projects challenged assumptions and created new knowledge related to aspects of the national training system.

Tony March and Patricia Grosse, facilitator and convenor of GOMRC ACFE’s project, commented on the knowledge developed by the participants:

*Project partners tested the research, its application and their own assumptions in their own localities – this was one of the single-most important features of the project – and provided the foundation for the individual projects.*

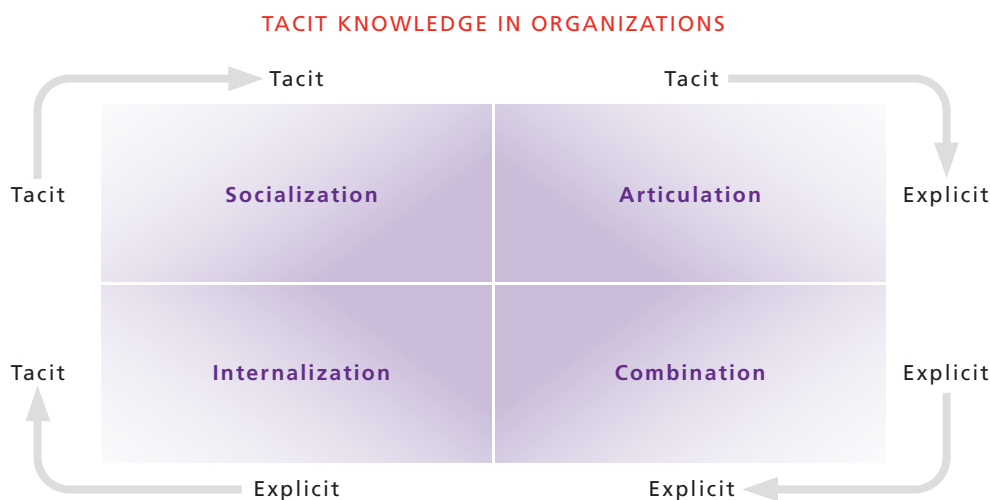
ERTOF’s project participants used a range of activities:

*...reflective activities and group discussions; collection of qualitative and quantitative indicators; formative and summative evaluations including the project convenor maintaining close contact with each member, and regularly checking – both face to face and via email – with their satisfaction level regarding the way the project was unfolding. A survey form was issued to collect additional data from members.*

## APPLYING RESEARCH AND NEW KNOWLEDGE TO PRACTICE

The concepts of knowledge management and knowledge creation underpin the Applying Information and Research projects. *Knowledge Management and the National Training Framework* and *Applying Information and Research: Good Practices from 2003* provide definitions, examples of types of knowledge and knowledge conversion processes.

Nonaka and Takeuchi’s (1995) *Four Modes of Knowledge Conversion* outlines the following conversion processes – socialization, articulation, combination and internalization.



*Externalization [Articulation] – from Tacit to Explicit : Articulate “conceptual” tacit knowledge explicitly through the use of such techniques as metaphors and models.*

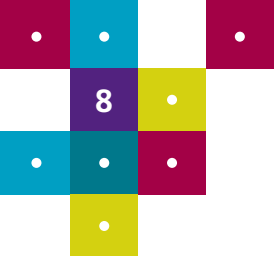
*Combination – from Explicit to Explicit: Manipulating explicit “systemic” knowledge through such techniques as sorting and combining. For this to occur, the knowledge elements must “fit together.”*

*Internalization – from Explicit to Tacit: This is “learning by doing” (operational knowledge) and sharing mental models and technical know-how.*

*Socialization – from Tacit to Tacit: Sharing experiences with others (sympathized knowledge). (Nonaka and Takeuchi, 1995)*

Using workbased learning methodologies and an action learning approach creates new knowledge and transforms existing knowledge, particularly through the process of internalisation. It also enables the “jumping together” or consilience of knowledge from different disciplines and conversion processes.

Research and information can be applied in a variety of ways to produce outcomes and outputs. For example, in RMIT’s project, new knowledge and activities designed in the Language, Literacy and



Numeracy handbook will form the basis of ongoing professional development. Challenger TAFE trialled and evaluated a process for fostering innovative ideas. Cooloola Sunshine Institute of TAFE project participants trialled their market responsiveness model within industry (local council) and the Institute.

The Central Northern Adelaide Health Services project enhanced policy development as follows:

*... by bringing relevant research to the table in a useable form... this project achieved outcomes of individual learning, informing decision makers, and bringing evidence and innovations in VET to the foreground within the State's Health Workforce reform agenda.*

Participants in the Gordon Institute project refined their practices:

*The participants drew freely on the content of [the] material to help refine their own recognition practices. Based on their reading and discussions they highlighted a number of ways in which the Institute could improve its approach to both the granting of Credit Transfers and conduct of RPL. During the project, participants demonstrated greater knowledge of the RPL process, and spoke more confidently about how this may be applied, both in their own Schools and across the Institute.*

## DISSEMINATING NEW KNOWLEDGE AND PRACTICES

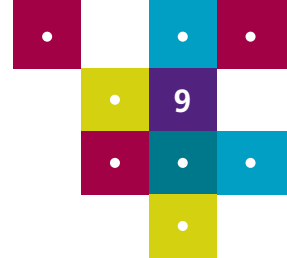
The Applying Information and Research projects used a variety of approaches to disseminate new knowledge and promote project outcomes. These activities have been captured in the table below and are linked to Nonaka and Takeuchi's (1995) knowledge conversion processes.

<p><b>Socialisation</b></p> <ul style="list-style-type: none"> <li>• Networking at VET forums and events</li> <li>• Professional discussions at lunchtimes and incidental locations</li> </ul>	<p><b>Articulation</b></p> <ul style="list-style-type: none"> <li>• Presentations and feedback at staff meetings</li> <li>• Presentation at forums and conferences (such as NCVER, AVETRA and Reframing the Future)</li> <li>• Presentation at professional development and/or planning days</li> <li>• Connection with formal groups and networks</li> </ul>
<p><b>Internalisation</b></p> <ul style="list-style-type: none"> <li>• Involvement of guest speakers, clients, industry and learners</li> <li>• Facilitation of professional development activities based on the project outcomes</li> <li>• Forums to disseminate project findings and good practice</li> </ul>	<p><b>Combination</b></p> <ul style="list-style-type: none"> <li>• Email communication to staff members and executive</li> <li>• Project newsletters</li> <li>• Information in organisation and/or other newsletters</li> <li>• Formal reports</li> <li>• Visual displays of activities, charts and readings</li> <li>• Online forums, digital stories and website information</li> </ul>

## WHAT KNOWLEDGE AND SKILLS DO VET PRACTITIONERS NEED?

It is increasingly understood that VET practitioners require extensive knowledge and skills in the following areas: Training Packages and industry relationships; teaching and learning methodologies; assessment strategies; the Australian Quality Training Framework; and national initiatives and directions. Within each of these areas practitioners need a combination of tacit and explicit knowledge as well as the following:

- an increased awareness of the relevance of research in VET
- an understanding of the concepts of knowledge management, creation and conversion processes
- an ability to see their practice as evolving, changing, improving and continually connecting with research
- an understanding of change management processes and organisational priorities
- new ways of thinking about the organisation and an improved self-understanding and ability to reflect critically on their assumptions.



Additionally, VET practitioners need to be able to internalise and apply this new knowledge to their practice, thinking, planning and organisation. To identify, internalise and apply new knowledge a range of competencies need to be developed including:

- research and information gathering skills
- ability to access the internet, intranet, reports, articles, publications, papers, websites and web forums
- ability to think critically
- professional judgment to review, evaluate and sift information and research
- ability to collaborate with colleagues, other VET practitioners, organisations and research bodies
- ability to see and explore connections to their work and organisation
- ability to base educational decisions on research and information
- ability to use action planning and implementation processes
- team work skills to build on positive practice.

## **FACTORS ASSISTING AND HINDERING THE APPLICATION OF INFORMATION AND RESEARCH**

Some of the factors reported by the 2005 projects which may assist or hinder applying information and research to VET practice are summarised below:

<b>Factors assisting</b>
Provision of access to information: <ul style="list-style-type: none"> <li>• guest speakers</li> <li>• results of research and previous projects</li> <li>• forum attendance – group discussion</li> <li>• websites, articles, reports and information</li> </ul>
Choice of topic
Management support
Introducing research to people in consumable chunks, focused on the immediate issue before them
Focusing on possible outcomes for participants
Identification of risks and management strategies
Effective dissemination strategies

<b>Factors hindering</b>
Lack of understanding of knowledge management theories and application
Lack of clear focus on topic
Too broad a scope for the project timeframe and resources
Feeling overwhelmed by the extent of research and/or specific research areas not covered to any depth
Lack of engagement of the participants
Reframing the Future activity subsumed into a larger project
Limited skills of the facilitator

## **THE IMPORTANCE OF FACILITATION**

Observation over the past four years shows that the Applying Information and Research projects use a variety of facilitation approaches including:

- engaging with and applying research early on in the project, even if on a basic level, to ensure the application process is understood
- devising strategies to create and convert explicit and tacit knowledge
- leading by example through knowledge of latest research and information and where to access it
- understanding knowledge conversion and development processes
- getting to the crux of applying research to action

- using project management skills and demonstrating an awareness of the networks that exist within and outside the organisation
- identifying and planning for risks to the project's successful progress and completion
- using familiarity with issues being discussed to guide participants towards reflecting on how research can inform problem solving, appreciative inquiry and developing new ways of thinking that incorporate new knowledge and research.

## FINAL COMMENT

One of the major challenges for project teams in this sub-program is to convert explicit to tacit knowledge via internalisation. This is often achieved through critically examining, evaluating and validating research and information and then testing new knowledge through application. This new intersection between knowledge and skill impacts deeply on vocational education and training practice and is captured in project teams' outputs and outcomes.

Key insights provided by convenors of project teams in 2005 in their final reports included the following:

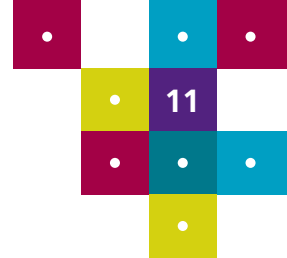
- Applying information and research projects assisted practitioners to develop critical thinking, to identify gaps in the existing research and to question their current practice
- Applying information and research projects resulted in the development of new strategies or recommended strategies for participating organisations
- Applying information and research projects impacted on industries involved, and increased understanding by providers and enterprises of what each could offer the other.

## REFERENCES, RESOURCES AND FURTHER READING

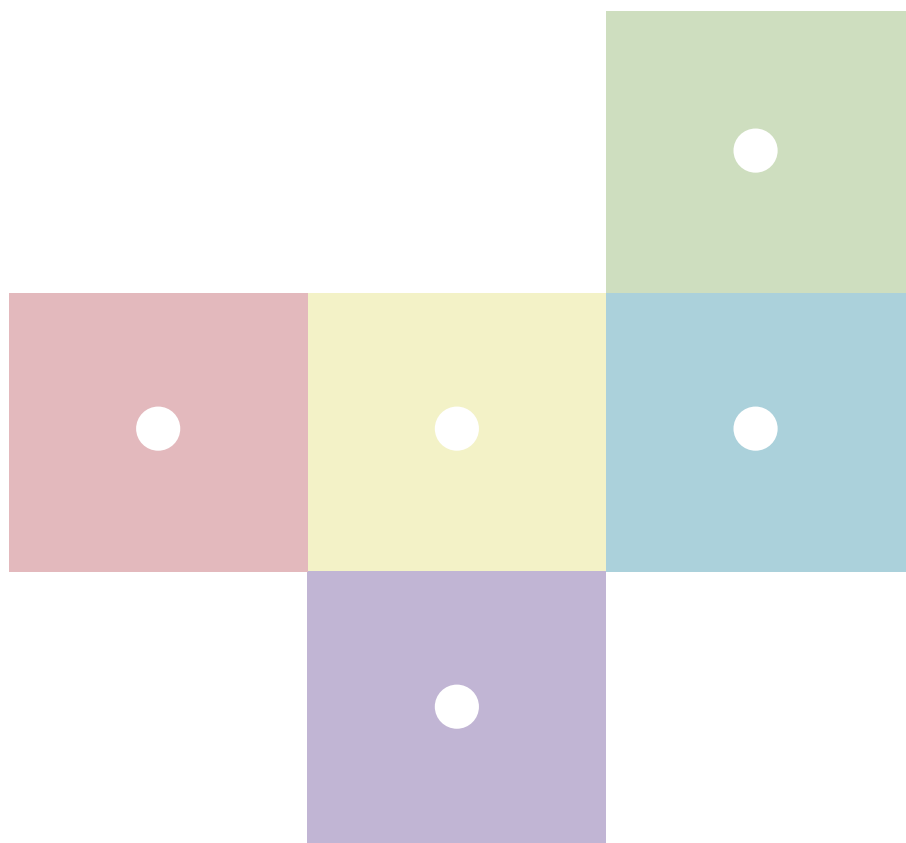
- Gates, B., 2005, in *Special Edition Newsweek*, December 2005 – February 2006, The Washington Post Company, New York.
- Mitchell, J. & Young, S., *Knowledge Management and the National Training Framework: core ideas*, Australian National Training Authority, Melbourne.
- National Research and Development Centre, *Generating knowledge and transforming it into practice, Three years on: what the research is saying*, [www.nrdc.org.uk](http://www.nrdc.org.uk)
- Nonaka, I. & Takeuchi, H., 1995, *The Knowledge Creating Company*, Oxford University Press, New York.
- Perry, W., 2004, *Applying Information and Research: Good Practices from 2003*, Reframing the Future, Elizabeth, South Australia.
- Reframing the Future, 2005, *Facilitating Workbased Learning Groups*, Elizabeth, South Australia.
- Reframing the Future, 2005, *Participating in Workbased Learning Groups*, Elizabeth, South Australia.
- Reframing the Future, 2004, *Using Reframing the Future Web Forums*, Elizabeth, South Australia.
- Skippington, P, 2002, *Learning@Work Good Practice in Workbased Learning*, ANTA, Melbourne.

The examples used in this resource were taken from the final reports of projects, as follows

- Butler, C. & Mitchell, J., 2005, *IAG Ltd Reframing the Future Final Report*
- Fuller, J., 2005, *South Western Sydney Institute of TAFE, Reframing the Future Final Report*
- Howes, F., *Cooloola Sunshine Institute of TAFE, Reframing the Future Final Report*
- Keating, M., 2005, *Textiles Clothing and Footwear Union of Australia Reframing the Future Final Report*
- Marsh, T. & Grosse, P., 2005, *Goulburn Ovens Murray Regional Council of Adult Community and Further Education, Reframing the Future Final Report*
- Morgan, B. & Marr, B., 2005, *RMIT University, Reframing the Future Final Report*



- Nevard, J. & Mitchell, S., 2005, *Challenger TAFE, Reframing the Future Final Report*
- Parkes, R., 2005, *Central Northern Adelaide Health Service, Reframing the Future Final Report*
- Rasmussen, C., 2005, *University of Ballarat (TAFE Division), Reframing the Future Final Report*
- Renshaw, L., 2005, *South Western Sydney Institute of TAFE, Reframing the Future Final Report*
- Rose, J. & Ellum, L., 2005, *South Western Port Council of Adult Community Education, Reframing the Future Final Report*
- Wakefield, L., Mereweather, A., Connor, J. & Foot, A., 2005, *Gordon Institute of TAFE Reframing the Future Final Report*



For more information contact:

**Reframing the Future**

PO Box 425

Elizabeth SA 5112

Telephone 08 8207 9655

Fax 08 8207 9708

[www.reframingthefuture.net](http://www.reframingthefuture.net)

