The Journey to Evidence-Based Policy and Practice in Continuing Education and Training

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Singapore
Countries with national vocational education and training systems are shifting towards stronger, formalised, research based and data-driven policy and strategic planning
The Singapore Experience in moving to evidence-based policy and practice on Continuing Education and Training
The Journey...

• From commitment to action in building a National Workforce Skills Qualifications and Employability Skills System
• Building research capability- establishing the Institute for Adult Learning
• Research and data driven policy and practice
• Some reflections on the nature and uses of evidence
Singapore has traditionally relied upon a high quality school and post school education system to drive growth

- Primary and secondary schools
- Junior colleges
- Institute of Technical Education
- 5 Poly-technics
- 4 Public universities
- 90% + participation in post-secondary school qualifications 2000-2011

But it was not ever thus...
“Manpower 21” (1999) and the 2003 Economic Review Committee Report flagged the need for a continuing (adult) education and training system as a basis for workforce development.
Educational Profile of the Labour Force 2001

Cumulative Employment Change by Sector (Jan ’98 – Sep ’09)

Source: Ministry of Manpower Singapore, Labour Market Q3, 2009
Development of a National CET System 2003 - 2009
Principles & Key Features of this System

• Industry Led
• Open Access
• Skills Framework
• Competency-Based
• Trainer Standards
• CET Qualifications Framework
• Quality Assurance
Singapore Workforce Skills Qualifications System
<table>
<thead>
<tr>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employability Skills System (ESS)</td>
<td>Community and Social Services (CSS)</td>
<td>Generic Manufacturing Aerospace</td>
<td>Human Resource</td>
<td>Wafer-Fab Precision Engineering</td>
<td>Environmental Cleaning</td>
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<td>Retail Training</td>
<td>Finance</td>
<td></td>
<td>Leadership and People Management (LPM)</td>
<td>Textiles and Fashion</td>
<td>Business Management</td>
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<td></td>
<td>Food &amp; Beverage (F&amp;B)</td>
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<td>Creative Industries</td>
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<td>InfoComm Technologies (ICT)</td>
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<td>WSH</td>
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<td>Landscape</td>
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<td>Professional</td>
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<td>Precision Engineering</td>
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<td>Floristry</td>
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<td>Security</td>
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<td>Healthcare Support</td>
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<td>Service Excellence</td>
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<td>Trade Specific</td>
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<td>Tourism</td>
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<td>WSH for Marine WSQ</td>
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<td>Process Industries</td>
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Establishment of the Institute for Adult Learning April 2008
International Collaborations

New additions…
The Institute for Adult Learning has established a Research Division, the key objectives of which are:

• to build research capability and capacity in CET and
• conduct research to inform policy and practice in CET and enhance the effectiveness of CET provision.
The 3 Centres for Research

- Centre for Research in Learning
- Centre for Skills, Performance and Productivity Research
- Centre for Evaluation and Innovation Research
# Examples of Research Projects

## Centre for Research in Learning

<table>
<thead>
<tr>
<th>Recent Projects</th>
<th>Current Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSQ Workplace Learning and Assessment</td>
<td>WSQ Diploma in Adult and Continuing Education: Curriculum and quality courseware designers</td>
</tr>
<tr>
<td>Reflexive Practitioner Research for Professional Learning in CET</td>
<td>Tools for learning and training design</td>
</tr>
</tbody>
</table>

## Centre for Skills, Performance & Productivity Research

<table>
<thead>
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<th>Recent Projects</th>
<th>Current Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills Utilisation in Singapore</td>
<td>Organisational Skills Strategies and Productivity</td>
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<tr>
<td>Participation, Learning Outcomes and Impact of the Employability Skills Programme</td>
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## Centre for Evaluation and Innovation Research

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<th>Recent Projects</th>
<th>Current Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of a CET monitoring and evaluation framework</td>
<td>Evaluating and understanding PME workforce development</td>
</tr>
<tr>
<td>Understanding the Singaporean Adult Educator</td>
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</tbody>
</table>
Research and Data Driven Policy and Practice
2010- 2011...
• The impact and outcomes of generic employability skills training
• The effect of training on lower skilled workers
• Workforce training and contextualisation on CET in Singapore
• Flexibility and movement between CET-Higher Education boundary
• What skills are utilised in work
• The importance of skills formation and training on workforce and industry productivity
Previous Research in Singapore

Source: Ang Boon Heng, The Impact of Structured Training on Workers’ Employability and Productivity, 2006, p12
IAL Study 2010
Training Impact Findings

**PROMOTION**

- No workers: 74%
- Very few workers: 14%
- Some workers: 10%
- Majority of the workers: 1%
- Almost all workers: 1%

N=84

**GIVEN WIDER RESPONSIBILITIES**

- No workers: 44%
- Very few workers: 23%
- Some workers: 25%
- Majority of the workers: 5%
- Almost all workers: 4%

N=84

**MONETARY REWARD (PAY INCREASE OR BIGGER BONUS)**

- No workers: 74%
- Very few workers: 13%
- Some workers: 6%
- Majority of the workers: 1%
- Almost all workers: 6%

N=84

**GIVEN A DIFFERENT JOB**

- No workers: 74%
- Very few workers: 15%
- Some workers: 10%
- Majority of the workers: 0%
- Almost all workers: 0%

N=84

Source: The Employability Skills Programme 2005-2010 Participation, Outcome and Impact, IAL
Benefits Perceived By Employers Of Employability Skills Training Accruing To The Organization And To Workers

Source: The Employability Skills Programme 2005-2010 Participation, Outcome and Impact, IAL
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Percentage of Low Skilled Workers, 1998 - 2009

Source: Ministry of Manpower, Report on Labour Force in Singapore, 2008 and 2010. These are economically active resident aged 15 years and above with secondary and below qualifications. It excludes foreign workers.
However ..... 

• While the percentage of Low Skilled Workers (LSW) in Singapore fell from 65% to 48% of the workforce (1998 – 2009)

• The Singapore Labour Force has increased from 1.546m to 1.985m

• 90% of new entrants are skilled

• The actual reduction in numbers of LSWs is <50,000
• The impact and outcomes of generic employability skills training
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• Numerous studies (Cornford, 2005; Hager et al, 1996; Hawke, 2004) report the effectiveness of contextualisation and work-based learning

• IAL studies (Bound, 2010 and Willmott, 2010) have shown that CET in Singapore is highly (+95%) classroom centric

• Employers indicated they prefer contextualised training and workplace based learning

• Employer engagement in active post-training skills application is weak
EMPLOYER ENGAGEMENT IN POST-TRAINING SKILLS APPLICATION

- Supervisors aware of the new skills learnt: 22% (Often) + 47% (Always) = 69%
- Opportunities were given to utilize the skills: 39% (Often) + 29% (Always) = 68%
- Supervisors discussed with workers how they could apply the new skills in their jobs: 25% (Often) + 22% (Always) = 47%
- Workers were given extended responsibilities to apply the skills: 25% (Often) + 10% (Always) = 35%
- Supervisors coached workers on how to improve the skills: 18% (Often) + 16% (Always) = 34%
- Changes in work functions and job routines made as a result of the skills: 17% (Often) + 11% (Always) = 28%

Source: The Employability Skills Programme 2005-2010 Participation, Outcome and Impact, IAL
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Derivation of the Broad Skills Index (BSI)

BSI = Minimum Qualification Required for the Job + Initial Learning Time Required to Perform the job + Extent of Continuous Learning Required for the Job
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The nature and sources of evidence

- Comparative studies
- Industry data
- Broad labour market data
- Data and research on training
- Research-based evidence on learning
... Research Capability Development

• Drawing in researchers from established institutions
• Graduate research degrees
• Research clusters around key themes
• Research seminars and symposia
• Encouraging innovation
• Publication and dissemination
Observations (3)

Applications of research-based evidence to inform policy change...
Thank you!

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