

# 2004 ANNUAL REPORT

## Assessment Research Centre

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The report and other details of the Assessment Research Centre are available on the  
Website <http://www.edfac.unimelb.edu.au/LED/ARC/>

## TABLE OF CONTENTS

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<b>INTRODUCTION</b> .....	<b>4</b>
<b>MISSION AND PHILOSOPHY</b> .....	<b>5</b>
<b>PERSONNEL</b> .....	<b>6</b>
<b>CONSULTANTS AND ASSOCIATES</b> .....	<b>7</b>
<b>RESEARCH PROGRAMS</b> .....	<b>8</b>
<b>VOCATIONAL ASSESSMENT RESEARCH</b> .....	<b>9</b>
<b>APPLIED MEASUREMENT RESEARCH</b> .....	<b>23</b>
<b>TEACHING, TRAINING AND SUPERVISION</b> .....	<b>35</b>
<b>2004 INCOME STATEMENT</b> .....	<b>41</b>

## INTRODUCTION

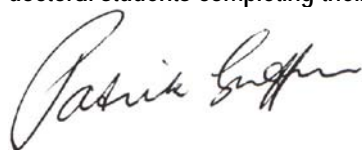
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The Assessment Research Centre (ARC) was established in 1989 at the Royal Melbourne Institute of Technology (RMIT) and relocated to the Faculty of Education at the University of Melbourne in November 1996. Since it began, the Centre has developed a strong research culture and an international reputation for its work in assessment research, development and teaching. In 1997, the Assessment Research Centre, in collaboration with the New South Wales TAFE Assessment Centre, was funded by the Australian National Training Authority (ANTA) to form the Centre for Vocational Assessment Research (CVAR). The Centre was formally recognised by the University of Melbourne and established as a university collaborative Centre in July 1997. In 1999, the links with the NSW TAFE Assessment Centre were relinquished and the Centre continued as an independent body outside the ANTA key centres framework.

The Centre's mission is to promote change and improvement in the fields of assessment, reporting and applied measurement. To achieve this mission, the Centre undertakes research, consultancies and development projects, and participates in higher and vocational training in both award and non-award programs.

A national and international program of research, development and teaching has been pursued, with activities undertaken within Australasia, Europe, North America, Asia and Southern Africa. Projects have included research and development studies in schools, higher education, vocational education and industry. Collaborative projects have been established with universities, research organisations and government departments in Australia (with organisations from Queensland, Western Australia, New South Wales, Victoria and Tasmania), New Zealand, France, Vietnam, Hong Kong, Southern Africa and the United States, reflecting the truly national and international nature of the Centre's profile and emphasis. Nationally competitive projects have been successfully won through tender procedures and the Centre has retained its status as a recognised provider of training for non-award courses.

The Centre implemented, with the Centre for Program Evaluation (Department of Education Policy and Management), a Masters Degree in Assessment. The Centre's teaching program attracts local postgraduate students as well as students from other Australian states, Hong Kong, Vietnam, Indonesia, Bangladesh and Pakistan. In 2004, the Centre staffing included eleven research and administration staff and a new group of graduate research students joined the Centre. This maintained the critical mass of research staff and enabled some consolidation of the research agenda. Links with other research centres within the Faculty of Education (Centre for Program Evaluation and the Centre for Applied Educational Research) further strengthened the research culture of the Centre. This has been an excellent year for completions and graduations, with five doctoral students completing their studies over the past twelve months.



Professor Patrick Griffin

## MISSION AND PHILOSOPHY

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The Centre focuses on improving assessment and reporting in education and learning through a four-step process of research, publication, development and training. These provide the framework for strategic planning by the Centre and guide the Centre's core business as well as its link to the University's mission. Research that leads to change, strategically affects change, or sets up the basis for change and improvement in assessment, forms the focus of the Centre's work. International transfer of the research output is regarded as the test of its theoretical strength.

### Research

The Centre focuses on research either in or using assessment. All activities and projects have a research focus and emphasise assessment or evaluation models based on assessment. The Centre's research program is the basic tool for educational change. Assessment research is regarded as a way of testing ideas, of checking the theoretical and practical nature of theories, new approaches and ideas.

### Publication

Through publishing the research outcomes in a variety of media to cater for a wide variety of audiences, the Centre is able to disseminate its ideas and procedures to assist the change process.

### Development

The development strategies employed by the Centre translate research outcomes into materials that practitioners can evaluate and use. The end user is one who can judge the practicality of research outcomes and their application potential. This is the basis of the change and improvement practices. Therefore, the development of materials is also given priority in each project.

### Training

Each project at the development stage plans a series of seminars, workshops, publications and other means of dissemination. Training also assists research and development to be disseminated. It makes research available for widespread use. This is the technology transfer of the Centre's work.

The Centre conducts a series of short course training programs in assessment research and related fields. Graduate supervision and teaching of award and non-award courses complements the Centre's research program by having graduates actively participating in, or even managing, components of the Centre's research agenda.

## PERSONNEL

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### Director and Chair of Education (Assessment)



Professor Patrick Griffin, B.Sc., M.Ed., T.S.T.C., Ph.D., F.A.C.E.

### Professorial Fellow



Professor Ray Adams, B.Sc. (Hons), DipEd., M.Ed., Ph.D.

### Research Fellows



Dr Shelley Gillis, B.B.Sc.,  
Grad. Dip. (Applied Psychology), Ph.D



Dr Margaret Wu, B.Sc (Hons)  
Grad Dip (Computer Studies), DipEd. M.Ed, Ph.D.



Dr Nguyen Thi Kim Cuc  
B.Ed., M.Ed., Ph.D.



Ms Kerry Woods,  
BA (Hons)

### Administrative Officer

Ms Sue Griffin

### Administrative Assistant Multimedia Support



Ms Avilyn Tan

### Research Associates



Ms Leanne Calvitto  
B.App.Sc. (Hons)



Mr Nathan Zoanetti  
B.Sc.

## CONSULTANTS AND ASSOCIATES

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Mr Bob Andersen	Mr Le Tu Tin	Dr Pham Thi Ly
Ms Andrea Bateman	A/Professor Glenda MacNaughton	Professor Bridie Raban
Ms Rosemary Callingham	Mr Andy Mak	Ms Lee Reynolds
Dr Dinh Thi Kim Thoa	Dr Jenepher Martin	Ms Sandy Shum
Ms Do Hanh Nga	Dr Lynette Martin	Ms Leanne Smith
Mr Mark Dulhunty	Professor Geoff Masters	Dr Patricia Smith
Mr Duong Mong Ha	Dr Magdalena Mok	Professor Max Stephens
Professor Gay Edgecombe	Professor Nguyen Quang Xung	Dr Peter Storey
Mr Wally Fung	Assoc. Prof Nguyen Phuong Nga	Mr Michael Taylor
Mr Phil Holmes Smith	Mr Nguyen Ngoc Tai	Mr. Barry Tomlinson
Ms Doris Huminicki	Ms Nguyen Thi Nhi Chau	Mr Simon Tham
Ms Bella Irlicht	Dr Nguyen Thi Quy	Mr Truong Cong Thanh
Adjunct Professor John Iazard	Ms Nguyen Thi Tuyet	Dr Manjula Waniganayake
Mr Ken Jorgensen	Mr Jeff Olson	Ms Maureen Welch
Professor Jack Keating	Professor T. Neville Postlethwaite	Dr Edwin Wong
Ms Stacey Kerr	Dr Ken Ross	Mr Xuan Thanh Pham
Professor Le Ngoc Tra	Mr Peter Noonan	Dr Alex Yeung
Ms Le Thi Hoang Ha	Ms Sylvia Oates	Ms Hua Zhang
Mr Le Tu Luc	Dr Carl Parsons	

## RESEARCH PROGRAMS

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The Centre conducts its activities in research and development as well as its teaching/administration programs. Each area has a co-ordinator responsible for project development, proposal preparation and project scheduling and publication of outputs. Program areas are as shown below and details of each project are provided in following sections.

### Research

1. Competency Based Assessment Projects
2. Applied Measurement Projects

### Teaching

3. Teaching, Training and Supervision

## 1. Vocational Assessment Projects

- 1.1 Primary Teacher Development Project: The Trialling of Competency Standards and Assessment Procedures for Primary Educators in Vietnam
- 1.2 The Development and Trialling of Differentiated Assessment Tasks within VET in School Studies.
- 1.3 An Integrated Approach to Assessment of Higher Order Competencies.
- 1.4 The Victorian Qualification Authority's Credit Matrix
- 1.5 Credit Matrix Consistency Study
- 1.6 The Validation and Interpretation of the Scoring Criteria within the WA Graded Performance Model
- 1.7 NSW TAFE Grading
- 1.8 Assessing Competencies at the Diploma and Advanced Diploma Levels

## 2. Applied Measurement Projects

- 2.1 Effectiveness of the Primary Native English-Speaking Teacher Scheme in Hong Kong
- 2.2 Creative Problem Solving
- 2.3 General Ability, English and Mathematics (GEM) Test
- 2.4 New South Wales Biliteracy Project
- 2.5 Australian Students' Knowledge and Understanding of Asia
- 2.6 Rasch Model Scaling of the Royal Australasian College of Surgeons' MCQ Examination
- 2.7 Evaluation of the Pilot Implementation of the Victorian Department of Education and Training's Ultranet Program

## 3. Teaching, Training and Supervision

- 3.1 2004 Graduates
- 3.2 Graduate Student Supervision
- 3.3 Award Teaching Subjects
- 3.4 Non Award Teaching

## VOCATIONAL ASSESSMENT RESEARCH

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The vocational assessment research program comprises a suite of research projects that investigate the practices and processes of both industry and VET based assessments. The aim of the program is to inform and improve policy and practice in the assessment of competencies and performances. Projects involve the examination of performance based assessment practices that occur within criterion-referenced frameworks. They use standards, profiles, benchmarks or outcome statements and require judgements and inferences as well as analysis of evidence.

## **1.1 Primary Teacher Development Project: The Trialling of Competency Standards and Assessment Procedures for Primary Educators in Vietnam.**

### **Staff**

P. Griffin, S. Gillis, T.K.C. Nguyen, L. Calvito (with P.N. Nguyen, T.K.T. Dinh, T.T. Nguyen, T.H.H. Le, M.H. Duong, T.N.C. Nguyen, N.T. Le, T.L. Pham, H.N. Do, N.T. Nguyen)

### **Summary**

This project follows from a previous study that was funded by the World Bank to establish a conceptual framework for defining and assessing a set of teacher profiles for primary school teachers in Vietnam. The draft teacher professional profiles were designed to specify standards for teachers at each stage of their development, from a beginning teacher to experienced and advanced. The current project has been funded to empirically calibrate and review the profiles to ensure that they contain an adequate standard for primary teaching competencies across all levels of development and acquisition. Furthermore, an important aspect of the study is to establish the necessary infrastructure required to successfully implement the standards for their intended multiple uses (i.e., in the development of training programs, assessment of teacher competencies, classification and certification of teachers, as well as monitoring growth over time). This aspect of the project entails the development and validation of assessment tasks and scoring procedures, the provision of necessary training for assessors and trainers, support materials and system design features that will ensure the continuous capacity raising model for teacher development, including an online management and recording system.

### **Funding Source**

World Bank, Primary Education Co-ordination Unit, Ha Noi

## Publications

- Gillis, S., Griffin, P., & Nguyen, T.K.C. (2003). *Assessor guide: Teacher primary profiles*. The University of Melbourne.
- Gillis, S., Nguyen, T.K.C., & Griffin, P. (2004) *Guides for teachers, assessors, principles and third parties in the assessment of primary teacher profiles in Vietnam*. The University of Melbourne.
- Griffin, P. (2000). *Handbook for teachers and assessors on primary teacher competency assessment. Frequently asked questions and answers*. World Bank in Vietnam Human Development Section: Ha Noi.
- Griffin, P., Gillis, S., & Nguyen, T.K.C. (2003). *Draft profiles and evidence guide*. The University of Melbourne.
- Griffin, P., Gillis, S., & Nguyen, T.K.C. (2003). *Inception report on primary teacher project: An inception report to the Project Management Unit*, The University of Melbourne.
- Griffin, P., Gillis, S., & Nguyen, T. K. C. (2004, 28 November - 2 December). Developing and validating primary school teacher standards in Vietnam. Paper presented at the Australian Association for Research in Education, AARE 2004 International Education Research Conference, The University of Melbourne.
- Griffin, P., Gillis, S., & Nguyen, T.K.C. (2004). *Primary teacher profiles with criteria*. The University of Melbourne.
- Griffin, P., Gillis, S., & Nguyen, T.K.C. (2004). *Primary teacher profiles with requirements*. The University of Melbourne.
- Griffin, P., Gillis, S., & Nguyen, T. K. C. (2004). Vietnam primary teacher development project. Component A: Phase 3 report (Stage 3 Report).
- Griffin, P., Nguyen, T. K. C., & Gillis, S. (2003). *Teacher standards, competencies and assessment in Vietnam's primary schools: A report on the Teacher Standards Project*. 48th World Assembly of the International Council on Education for Teaching and the Annual Conference of the Australian Teacher Education Association: Teachers as Leaders: Teacher Education for a Global Profession, Melbourne.
- Griffin, P., Poynter, G., et al. (2000). *Development of prototype teaching standards for primary teachers in Vietnam*. World Bank Primary Education Project Management Unit: Ministry of Education and Training: Ha Noi, Vietnam.
- Nguyen, T.K.C., Gillis, S., & Griffin, P. (2004). *Materials for training assessors*. The University of Melbourne.

## **1.2 The Development and Trialling of Differentiated Assessment Tasks within VET in School Studies**

### **Staff**

P. Griffin, S. Gillis, L. Calvitto, J. Connally, M. Jelinek, M. Dulhunty

### **Summary**

The Assessment Research Centre has been funded by the Australian National Training Authority (ANTA) to test the feasibility of a standards referencing approach to grading of assessment in VET in School courses for purposes of university selection. The project arises from a national study conducted in 2000 of Year 12 VET subjects and VET modules embedded within Year 12 subjects that were considered for university entrance (Griffin, Gillis, Keating & Fennessy, 2001). This study identified a conceptual assessment and reporting model with potential to raise the quality of VET assessment, improve university and community perceptions of the value of VET, and provide detailed information to employers on student achievement. The current study tested the model to determine whether it could assist in defining students' performance on a scale or continuum and allow for the application of scores or grades, which provide more detailed advice to employers and assist with determining university entrance.

### **Funding Source**

Australian National Training Authority and the NSW Department of Education and Training

## Publications

- Gillis, S. (2000). Square pegs for round holes or best fit assessment: Grading assessment of VET courses within Senior Secondary Certificates. Paper presented at the VETNETWork 2000 Biennial Conference, 22-24th November 2000, Melbourne.
- Gillis, S., & Griffin, P. (2001). Assessment and reporting of courses in VET Senior Secondary Certificates. National ACACA Meeting, Melbourne.
- Griffin, P. (2000). Assessment and reporting in a standards referenced framework. Paper presented to the Assessment Conference for the New South Wales Association of Independent Schools. Sydney, October 23.
- Griffin, P., & Gillis, S. (2001). Using indicators of quality to infer competence. Paper presented at the National ACACA Conference - Bringing Assessment and Curriculum Issues Together, Sydney.
- Griffin, P., & Gillis, S. (2001). Competence and quality: Can we assess both? Paper presented at the National Conference 'Up-Grading Assessment?' Kangan Batman TAFE: Melbourne, May.
- Griffin, P., & Gillis, S. (2002). Scored assessment for VET in Year 12: Pilot materials, Metal and Engineering training package. The University of Melbourne.
- Griffin, P., & Gillis, S. (2002). Scored assessment for VET in Year 12: Pilot materials, Business Services training package. The University of Melbourne.
- Griffin, P., & Gillis, S. (2002). Scored assessment for VET in Year 12: Pilot materials, Information Technology training package. The University of Melbourne.
- Griffin, P., & Gillis, S. (2002). Scored assessment for VET in Year 12: Pilot materials, Hospitality training package. The University of Melbourne.
- Griffin, P., & Gillis, S., (2003). A trial investigation of a standard referenced framework: Progress report, July. The University of Melbourne.
- Griffin, P., Gillis, S., & Calvitto, L. (2003). A trial investigation of a standard referenced framework: Progress report, October. The University of Melbourne.
- Griffin, P., Gillis, S., & Calvitto, L. (2004). Connecting Competence and Quality: Scored Assessment in Year 12 VET. Submitted to the NSW Board of Vocational Education and Training.
- Griffin, P., & Gillis, S. & Jelinek, M. (2003). Student assessment record booklet: (THH02) Hospitality training package. The University of Melbourne.
- Griffin, P., & Gillis, S. & Jelinek, M. (2003). Student assessment record booklet: (BSB01) Business Service training package. The University of Melbourne.
- Griffin, P., & Gillis, S. & Jelinek, M. (2003). Student assessment record booklet: (ICA99) Information Technology training package. The University of Melbourne.
- Griffin, P., & Gillis, S. & Jelinek, M. (2003). Student assessment record booklet: (MEM98) Metal and Engineering training package. The University of Melbourne.
- Griffin, P., & Gillis, S. & Jelinek, M. (2003). A trial investigation of a standards referenced assessment model for VET in School courses: (THH02) Hospitality training package. The University of Melbourne.

- Griffin, P., & Gillis, S. & Jelinek, M. (2003). A trial investigation of a standards referenced assessment model for VET in School courses: (BSB01) Business Service training package. The University of Melbourne.
- Griffin, P., & Gillis, S. & Jelinek, M. (2003). A trial investigation of a standards referenced assessment model for VET in School courses: (ICA99) Information Technology training package. The University of Melbourne.
- Griffin, P., & Gillis, S. & Jelinek, M. (2003). A trial investigation of a standards referenced assessment model for VET in School courses: (MEM98) Metal and Engineering training package. The University of Melbourne.
- Griffin, P., & Gillis, S. & Jelinek, M. (2003) (Eds.). Resource support kit for teachers: (THH02) Hospitality training package. The University of Melbourne.
- Griffin, P., & Gillis, S. & Jelinek, M. (2003) (Eds.). Resource support kit for teachers: (BSB01) Business Service training package. The University of Melbourne.
- Griffin, P., & Gillis, S. & Jelinek, M. (2003) (Eds.). Resource support kit for teachers: (ICA99) Information Technology training package. The University of Melbourne.
- Griffin, P., & Gillis, S. & Jelinek, M. (2003) (Eds.). Resource support kit for teachers: (MEM98) Metal and Engineering training package. The University of Melbourne.
- Griffin, P., Gillis, S., Keating, J. & Fennessy, D. (2001). Assessment and reporting of VET courses within Senior Secondary Certificates. Expanding opportunities for youth. New South Wales Department Education and Training, Australian National Training Authority: 105.
- Griffin, P., Gillis, S., & Taylor, M. (2002). Scored assessment for senior secondary certificates. Paper presented at the National Conference of the Australian Association for Research in Education, Brisbane, December.

## **1.3 An Integrated Approach to Assessment of Higher Order Competencies**

### **Staff**

P. Griffin, S. Gillis, J. Connally, (with K. Jorgensen, S. Oates, S. Kerr, L. Smith, P. Gillan, L. Reynolds, S. Wood, D. Cooper, D. McArdle, M. Tarrant, & R. Lee)

### **Summary**

In collaboration with the Department of Defence, ACT and the Australian Emergency Management Institute (AEMI), the Assessment Research Centre explored an innovative approach to the assessment of higher order competencies in the public safety and public service industries by integrating developments in two fields of study: performance appraisals and psychometrics. The three-year study addressed an hitherto unresolved issue - how multiple sources of evidence about multiple components of competency judgements can be synthesised and used to inform holistic judgements of workplace competence. Two areas of investigation underpinned this study. The first was identifying a method of obtaining and synthesising data from multiple observers and the second was the method of separating the components of competency. Neither of these had been adequately addressed in the Australian Vocational Education and Training System, but each was pertinent to almost every industry sector and in many instances to other forms of distance education. This study explored how multiple sources of evidence could be synthesised and how components can be separated. It also examined the influence of the source of evidence (eg. peer, self and supervisor judgements) on overall decisions of competence.

### **Funding Source**

Australian Research Council Strategic Partnership for Industry Research Training (SPIRT)  
Australian Emergency Management Institute and Department of Defence – Joint Education and Training,  
Canberra

## Publications

- Bateman, A., (2003). *The appropriateness of professional judgement to determine performance rubrics in competency based assessment*. Master of Education thesis. The University of Melbourne, 2003.
- Bateman, A., Griffin, P., & Gillis, S. (2003). *The appropriateness of professional judgement to determine performance rubrics in competency based assessments*. Paper presented at the NZARE/AARE Conference, Auckland, December.
- Connally, J., Griffin, P., & Gillis, S. (2003). *A multi source measurement approach for the assessment of higher order competencies*. Paper presented at the NZARE/AARE Conference, Auckland, December.
- Connally, J., Jorgensen, K., Gillis, S., & Griffin, P. (2002). *An integrated approach to the assessment of higher order competencies*. Refereed paper presented to the Australian Association for Research in Education, Brisbane, December.
- Connally, J., Jorgensen, K., Gillis, S., & Griffin, P. (2003). *A multi-source measurement approach to the assessment of higher order competencies*. Paper presented at the Sixth Australian VET Research Association Conference "The changing face of VET", Sydney, 9-11<sup>th</sup> April.
- Gillis, S., (2002). Rural VET students. *Directions in Education: Australian Council for Educational Administration*, 11(7), 1-2.
- Griffin, P. (2000). *Competency based assessment of higher order competencies*. NSW State Conference of the Australian Council for Educational Administration, Mudgee, NSW.
- Griffin, P. & Gillis, S (1998). Competency based assessment of structured workplace learning. *The Australian Journal of Vocational Education and Training in Schools*, 1(1), 13-18.
- Griffin, P., & Gillis, S. (1999). *Evaluation of vocational assessment processes and practices*. Paper presented at the AARE NZARE Conference, Melbourne, November.
- Griffin, P., & Gillis, S. (1999). *Assessing higher order vocational competencies: A multi source approach*. Paper presented at the AARE NZARE Conference, Melbourne, November.
- Griffin, P., & Gillis, S. (1999). *Discussion paper: The establishment of a competency based assessment system for emergency management*. Assessment Research Centre, The University of Melbourne.
- Griffin, P., & Gillis, S. (2003). *The assessment management information system*. Computer software program, The University of Melbourne.
- Connally, J. (2003) *A multisource approach to the measurement of higher order competencies*. Unpublished Doctorate of Philosophy thesis. Faculty of Education, university of Melbourne
- Wood, S., Gillis, S., & Cooper, D. (2002). *Higher order assessment against emergency management competency standards*. Paper presented at the Australian Association for Research in Education, Brisbane, December.

## 1.4 The Victorian Qualification Authority's Credit Matrix.

### Staff

S. Gillis, A. Bateman, P. Noonan and M. White

### Summary

The Victorian Qualifications Authority commissioned a collaborative research team, representing the University of Melbourne, Ballarat University and Peter Noonan Consulting, to develop credit matrix model. The Victorian Qualifications Authority (VOA) developed a model for recognising the complexity of learning units delivered in senior secondary, Vocational Education and Training and Higher Education sectors within Victoria. The approach taken during the construction of the model was based on a combination of both theoretical and psychometric approaches to scale development. The theoretical approach was used to initially identify a set of five domains (Application, Autonomy, Accountability, Problem Solving and Knowledge) that could be used to recognise varying levels of unit complexity. Each domain was operationalised into a variable using indicators identified in international models as well as the relevant literature, and panelled on representatives within each of the educational sectors. The resultant Complexity Measures were then empirically tested and validated through survey techniques in which 254 participants were requested to complete a questionnaire on a unit of learning in which they delivered as part of their routine teaching/training. Participants were requested to a) supply background information about the unit of learning, b) judge which of the indicators within each measure best captured the complexity of their unit, and c) rate each measure on its perceived effectiveness in defining the true complexity of the unit. The data collected demonstrated the validity, accuracy and internal consistency of each Complexity Measure. The results also showed that the correlations among the five measures were significant, yet moderately positive, thus having direct implications for the factor structure that should underpin the Complexity Model. Two variations of the model were produced from this initial investigation: a six level structure and an eight level structure, each underpinned by the five domains: Application, Autonomy, Accountability, Problem Solving and Knowledge (refer to Gillis, Bateman, Noonan & Keating, 2004 for further information).

### Funding Source

Victorian Qualifications Authority

## Publications

- Bateman, A., Gillis, S., Noonan, P., & Keating, J. (2004). Victorian Qualifications Authority Principles, Definitions and Guidelines for Applying the Credit Matrix, Victorian Qualifications Authority: Melbourne.
- Gillis, S., & Bateman, A. (2004). The development of a model for recognizing complexity of units of learning across Schools, VET and Higher Education Sectors. Paper presented at the AARE Conference, Melbourne, December.
- Gillis, S., & Bateman, A. (2005). The Development of a Framework for Assessing Complexity of Units of Learning Across Schools, VET and Higher Education. Refereed paper presented at the AVETRA Conference, Brisbane, April 13-15.
- Gillis, S., Bateman, A., Noonan, P., & Keating, J. (2004). Victorian Qualifications Authority Credit Matrix Model Final Report Volume 2: Complexity Model Survey Process and Outcomes, Victorian Qualifications Authority, Melbourne. <http://www.vqa.vic.gov.au/vqa/pdfs/CMdrftmodelVOL%202.pdf>
- Noonan, P., Bateman, A., Gillis, S., & Keating, J. (2004). Victorian Qualifications Authority Credit Matrix Draft Model Final Report Volume 1, Victorian Qualifications Authority: Melbourne. <http://www.vqa.vic.gov.au/vqa/pdfs/CMdrftmodelVOL1.pdf>

## 1.5 Credit Matrix Consistency Study

### Staff

S. Gillis, L. Calvitto, P. Griffin, M. Wu, and T.K.C. Nguyen

### Summary

The Victorian Qualifications Authority (VQA) commissioned the Assessment Research Centre at the University of Melbourne to examine the degree to which the Detailed and Level Descriptors, thought to underpin the Credit Matrix, yielded consistent outcomes when administered to units of learning. Specifically, the study sought to examine the level of agreement in ratings that were made by different experts, when judging the complexity of a range of identified qualification units drawn from the Business field of study. An expert panel selected forty qualification units, thought to be representative of the eight levels of complexity. Each unit was assigned a level. Twenty raters, nominated by the VQA, participated in the study. Data were collected across two sessions, with attendance at either session discretionary to the participant. Four groups of raters were formed to represent varying levels of the Australian Qualifications Framework. Each group had five raters and one set of 15 units to judge. Groups 1 and 2 were a mixture of VCE, VCE VET, VCE IB and/or VET experts. Group 3 comprised experts within the VET Sector and Group 4 were all experts within the higher education sector. Raters were required to independently judge the complexity of each unit using the Detailed (i.e., KNOWLEDGE, AUTONOMY, ACCOUNTABILITY, CONTEXT) and Level Descriptors (i.e., summary) developed by the VQA. They were also required to indicate their level of rating confidence on each measure and to provide qualitative feedback about the descriptors, guidelines and the process. Groups 1, 2 and 3 produced good estimates of inter-rater reliability across all domains. Group 4 also showed good levels of inter-rater reliability across all domains with the exception of CONTEXT. Within each group, raters were the most consistent when rating the LEVEL domain. As expected, the average ratings of the groups were found to be more reliable than one single rater's rating. Significant high positive correlations among the five measures were also found suggesting that there was one overarching factor that underpinned the unit complexity ratings.

### Funding Source

Victorian Qualifications Authority

### Publications

Gillis, S., Griffin, P., Wu, M., Calvitto, L., & Nguyen, C. (2004). *Credit Matrix Model: Analysis and Report on Consistency*, Assessment Research Centre, Melbourne.

## **1.6 The Validation and Interpretation of the Scoring Criteria within the WA Graded Performance Model**

### **Staff**

S. Gillis, P. Griffin and A. Bateman

### **Summary**

The WA Department of Training has commissioned the Assessment Research Centre to calibrate and interpret the generic, grading scoring criteria used to recognise student achievement in vocational education and training programs. The project aims to examine the psychometric properties of the generic criterion used and develop band level descriptions for use in reporting student achievements that are consistent with a competency based assessment framework.

### **Funding Source**

Western Australia Department of Training

## 1.7 NSW TAFE Grading

### Staff

S. Gillis

### Summary

Technical advice on grading performance within a competency based assessment framework was provided to NSW TAFE through a series of workshops, seminars and conference presentations. Four pilot sites were arranged to pilot a standard referenced model for grading performance in agriculture/horticulture, creative arts, business and metal and engineering to occur in 2005.

### Funding Source

NSW Department of Education and Training

### Publications

Gillis, S., & Griffin, P. (2004). Using Rubrics to Recognise Varying Levels of Performance. *Training Agenda: A Journal of Vocational Education and Training*, 12(2), 22-24.

## 1.8 Assessing Competencies at the Diploma and Advanced Diploma Levels

### Staffing

S. Gillis S., J. Connally., K. Jorgensen., P. Griffin., S. Oates., L. Calvitto, C. Deftereos, S. Kerr, L. Smith.

### Summary

The Assessment Research Centre, in conjunction with the Department of Defence, developed a methodology of assessing competencies at the Diploma and Advanced Diploma levels of the Australian Qualifications Framework. Competencies at these levels are complex, with a strong focus on the management of contingencies and the transferability of skills. These dimensions are difficult to assess using direct observation methods of actual or simulated performance. The appropriateness of traditional indirect and supplementary methodologies can also be limited by the fact that many of the higher order competencies, although critical to successful performance in the job, are not frequently used. Through collaborative research arrangements, the two organisations developed a methodology using multiple sources of evidence to provide a valid and reliable method of assessing these higher levels of competencies. The findings of the research were a result of a strategic partnership grant funded by the Australian Research Council, through the ARC Linkage Program Scheme. The training materials produced for the professional development workshops were a follow up initiative of the Reframing the Future through funding received in the Sub-program for Staff Development. The workshops were funded to provide high quality professional development in the assessment of higher levels of competencies in the Australian Vocational Education and Training System. The workshops outlined how multiple sources of evidence could be synthesised and used to inform holistic judgements of workplace competence in a simple yet fair, valid, reliable and cost effective manner. The workshops were held across six states and territories involving a diverse range of participants from public, private and non-profit organizations, with approximately 450 attendees.

### Funding Source

The Australian National Training Authority's Reframing the Future – Sub Program for Staff Development.

### Publications

Assessment Research Centre and the Department of Defence (2003). *Assessing Competencies at the Diploma and Advanced Diploma Levels. National Workshops*, The University of Melbourne, Melbourne.

Gillis, S., Griffin, P., Connally, J, Jorgensen, Oates, S, & Deftereos, C. (2004). *Assessing Competencies at the Diploma and Advanced Diploma Levels: Evaluation Report*, The University of Melbourne, Melbourne.

Gillis, S., Griffin, P., & Pigdon, K. (2001). *PARIS: Performance Assessment and Reporting Integrated System: Multi Media Project*, The University of Melbourne.

## **APPLIED MEASUREMENT RESEARCH**

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This program involves a range of research development and teaching projects that focus on psychometrics, test development, performance and competency assessment as they are applied in schools, higher education, TAFE and workplaces. Projects are undertaken at local, state, national and international levels. The goal of the program is to identify ways of improving assessment that involves instrument development and measurement theory.

## 2.1 Effectiveness of the Primary Native English-Speaking Teacher Scheme in Hong Kong

### Staff

P. Griffin, K. Woods, N. Zoanetti (with E. Wong, P. Storey, A. Yeung, W. Fung, R. Hon)

### Summary

A baseline data analysis for the study of the Primary Native English-speaking Teacher (PNET) program in Hong Kong was conducted during 2004. The sample for the 2004 data analysis included 1174 P1 students and 1505 P2 students being taught by a NET, from 136 schools as directed by the Education and Manpower Bureau (EMB). The sample will be extended to include P3 students in 2005 and P4 students in 2006. It will thus support both cross-sectional and longitudinal analyses of student achievement.

The instruments used in the study were the *Profiles in English as a Second Language* (Griffin, Smith & Martin, 2003) and the *Interview Test of English Language* (ITEL-ed) (Griffin, Tomlinson, Martin & Adams, 1992). Background and demographic information was collected from students, parents, NETs, local teachers and school heads. These data are baseline measures, against which data collected in 2005 and 2006 will be compared as part of a value-added analysis of student achievement and the contextual factors that support language development. The results of calibrating scales of student achievement and attitudes, and analysis of demographic and background variables, were reported to the Education and Manpower Bureau, Government of Hong Kong SAR, in October 2004. In December 2004, workshops were held in Hong Kong to present an overview of the 2004 baseline data analysis and to familiarize teachers with the data collection procedures for 2005.

### Funding Source

The Government of the Hong Kong Special Administrative Region, Education and Manpower Bureau

## Publications

- Griffin, P., Smith, P. G., & Martin, L. (2003). *Profiles in English as a second language*. Melbourne: Robert Andersen & Associates Pty Ltd.
- Griffin, P., Tomlinson, B., Martin, L., Adams, R., & Storey, P. (2004). *An interview test of English (ITEL-ed)*. Melbourne: Profile Press International.
- Griffin, P., & Woods, K. (2004). Evaluation of the primary native English-speaking teacher scheme in Hong Kong. (First Annual Report): Assessment Research Centre, University of Melbourne.
- Griffin, P., Woods, K., Yeung, A., Storey, P., Wong, E., Fung, W., & Hon, R. (2004). *Evaluation of the primary native English-speaking teacher scheme in Hong Kong: First annual report*. Parkville: The University of Melbourne.
- Griffin, P., Woods, K., Storey, P., Yeung, A., Wong, E., Fung, W., & Hon, R. (2004, December). *Evaluation of the primary native English-speaking teacher scheme in Hong Kong: Baseline data collection*. Paper presented at the International Language in Education Conference, Hong Kong.

## **2.2 Creative Problem Solving**

### **Staff**

P. Griffin, A. Mak, K. Lai, M. Wu, M. Dulhunty, L. Calvitto, N. Zoanetti

### **Summary**

This project was undertaken in collaboration with the North Shore Development and Coaching Centre (NSDC Pty Ltd) and its colleges. Items along the strands of classification, application and reasoning were designed by the Assessment Research Centre to test the problem-solving skills of pupils at Years 3 to 8 in Melbourne, Sydney and Brisbane. Testing was held late October or early November of each year. The items assessed the pupils' performance in different key steps in the problem-solving process, in situations that were both familiar and unfamiliar to the pupils. Reports on the performance, together with constructive feedback, were given to each participant after the test. The project was supported by an ARC Strategic Partnership for Industry Research Training (SPIRT) grant partnered by the NSDC Pty Ltd.

### **Funding Source**

Australian Research Council Strategic Partnership for Industry Research Training (SPIRT)  
North Shore Development and Coaching Centre

## Publications

- Griffin, P. (2002). Assessment: From relative to absolute. *Directions in Education*, 12(3), 4.
- Lai, K. (2001). *A multi-component model for test item design*. Paper presented at the 2001 annual conference of the Australian Association for Research in Education, Fremantle, W.A., 3-6 December.
- Lai, K., & Griffin, P. (2001). *Linking cognitive psychology and item response models*. Paper presented at the 2001 annual conference of the Australian Association for Research in Education, Fremantle, W.A., 3-6 December.
- Lai, K., & Griffin P. (2001). *Improving student problem-solving performance: A new approach based on mathematically modelled behaviour*. ARC SPIRT Project Report. Assessment Research Centre: The University of Melbourne.
- Lai, K., Griffin, P., Mak, A., Wu, M., & Dulhunty, M. (2001). *Modelling strategies for problem solving*. Paper presented at the 2001 annual conference of the Australian Association for Research in Education, Fremantle, W.A., 3-6 December.
- Wu, M. (2003). *The application of item response theory to measure problem-solving proficiencies*. Unpublished doctoral thesis, The University of Melbourne.
- Wu, M., & Adams, R. (2003, April 21-25). *Modelling mathematics problem-solving item responses using a multi-dimensional IRT model*. Paper presented at the American Education Research Association Annual Meeting, Chicago.
- Wu, M., Griffin, P., Dulhunty, M., & Mak, A. (2002, December). *Teaching strategies in problem solving*. Paper presented at the AARE Conference, Brisbane.

## 2.3 General Ability, English and Mathematics (GEM) Test

### Staff

P. Griffin, L. Calvitto, M. Wu, N. Zoanetti, K. Lai, M. Dulhunty

### Summary

Tests have been designed to measure General Ability, English and Mathematics (GEM test). They are administered early in March each year and initially to students in years 4, 5 and 6, in colleges run by the North Shore Development and Coaching Centre based in Melbourne, Sydney and Brisbane. Each year the tests attract a number of students not enrolled in the North Shore Development and Coaching Centre. The aim of the tests are to monitor student progress in the three subject areas. The multiple choice format items in the tests are designed and scored by the Assessment Research Centre. Reports containing overall individual performance in each subject is given to each participant after the competition, including basic statistics on inter-student and intra-student comparisons. Constructive feedback is also given to the student.

### Funding Source

North Shore Development and Coaching Centre

### Publications

Calvitto, L., & Dulhunty, M. (2003). *North Shore GEM Trial Test: General Ability Level 6*. North Shore Development and Coaching Centre: Sydney.

Calvitto, L., & Dulhunty, M. (2003). *North Shore GEM Trial Test: General Ability Level 5*. North Shore Development and Coaching Centre: Sydney.

Calvitto, L., & Dulhunty, M. (2003). *North Shore GEM Trial Test: General Ability Level 4*. North Shore Development and Coaching Centre: Sydney.

Calvitto, L., & Dulhunty, M. (2003). *North Shore GEM Trial Test: Mathematics Level 6*. North Shore Development and Coaching Centre: Sydney.

Calvitto, L., & Dulhunty, M. (2003). *North Shore GEM Trial Test: Mathematics Level 5*. North Shore Development and Coaching Centre: Sydney.

Calvitto, L., & Dulhunty, M. (2003). *North Shore GEM Trial Test: Mathematics Level 4*. North Shore Development and Coaching Centre: Sydney.

- Calvitto, L., & Dulhunty, M. (2003). *North Shore GEM Trial Test: English Level 6*. North Shore Development and Coaching Centre: Sydney.
- Calvitto, L., & Dulhunty, M. (2003). *North Shore GEM Trial Test: English Level 5*. North Shore Development and Coaching Centre: Sydney.
- Calvitto, L., & Dulhunty, M. (2003). *North Shore GEM Trial Test: English Level 4*. North Shore Development and Coaching Centre: Sydney.
- Calvitto, L., & Wu, M. (2004). *North Shore GEM Trial Test: General Ability Level 6*. North Shore Development and Coaching Centre: Sydney.
- Calvitto, L., & Wu, M. (2004). *North Shore GEM Trial Test: General Ability Level 5*. North Shore Development and Coaching Centre: Sydney.
- Calvitto, L., & Wu, M. (2004). *North Shore GEM Trial Test: General Ability Level 4*. North Shore Development and Coaching Centre: Sydney.
- Calvitto, L., & Wu, M. (2004). *North Shore GEM Trial Test: Mathematics Level 6*. North Shore Development and Coaching Centre: Sydney.
- Calvitto, L., & Wu, M. (2004). *North Shore GEM Trial Test: Mathematics Level 5*. North Shore Development and Coaching Centre: Sydney.
- Calvitto, L., & Wu, M. (2004). *North Shore GEM Trial Test: Mathematics Level 4*. North Shore Development and Coaching Centre: Sydney.
- Calvitto, L., & Wu, M. (2004). *North Shore GEM Trial Test: English Level 6*. North Shore Development and Coaching Centre: Sydney.
- Calvitto, L., & Wu, M. (2004). *North Shore GEM Trial Test: English Level 5*. North Shore Development and Coaching Centre: Sydney.
- Calvitto, L., & Wu, M. (2004). *North Shore GEM Trial Test: English Level 4*. North Shore Development and Coaching Centre: Sydney.

## 2.4 New South Wales Biliteracy Project

### Staff

L. Calvitto, P. Griffin, N. Zoanetti

### Summary

The Curriculum Support Unit of the New South Wales Department of Education and Training has commissioned the Assessment Research Centre at the University of Melbourne to analyse data collected from 1998, 1999, 2000 and 2001 cohorts. The data has been collected using English, Vietnamese and Chinese tests with students in schools in New South Wales. The students are undertaking different language programs and come from different ethnic backgrounds. The data will be analysed using item response theory. Multi-level modelling will also be used to examine the variance components from the hierarchical structures in the data and to explore the effects of the different explanatory variables on student performance. Reports on the analysis will be sent to the Department of Education and Training in New South Wales.

### Funding Source

New South Wales Department of Education and Training

### Publications

Griffin, P., Calvitto, L., & Woods, K. (2003). *Data analysis for the 2000 cohort (Year 1) in the NSW Bilingual/Biliteracy Program*. Assessment Research Centre. The University of Melbourne.

Griffin, P., & Zoanetti, N. (2004). *Data analysis for the 2001 cohort in the NSW Biliteracy Program*. Assessment Research Centre. The University of Melbourne.

## **2.5 Australian Students' Knowledge and Understanding of Asia**

### **Staff**

P. Griffin, K. Woods, M. Dulhunty (with K. Kirby and M. Welch of the Asia Education Foundation)

### **Summary**

The Assessment Research Centre at the University of Melbourne was commissioned to conduct a survey of Australian students' knowledge and understanding of Asia. Specifically, the aims of this project were to collect and analyse national data on Australian primary and secondary students' knowledge about Asia, and to identify patterns of educational context that influence students' knowledge and attitudes. The research also aimed to provide state and territory schools with calibrated attitudinal and achievement tests of Australian students' knowledge, attitudes and understanding of Asia, and to assess the effectiveness of the Asia Education Foundation's Access Asia schools program. More than 7000 students from all Australian states and territories took part in the study, and background data were collected from students, teachers and principals (the latter in all states except New South Wales). Scales were developed and analysed to identify levels of knowledge, understanding and attitude. These levels were then analysed according to data from student background, program involvement, teaching practices and school policy. Results revealed variations in student learning that were systematically linked to school and teacher commitment to studies of Asia as well as to curriculum and resource use.

### **Funding Source**

Commonwealth Department of Education, Science and Training under the National Asian Languages and Studies in Australian Schools (NALSAS) Strategy

## Publications

Griffin, P. (2002, November 13-14). *Knowledge and understanding of Asia: Using a common item pool to gain a national picture*. Paper presented at the 7th Roundtable on Assessment - Equating, Old Parliament House, Canberra.

Griffin, P., & Woods, K. (2003, December). *Knowledge and understanding of Asia*. Paper presented at the Annual Conference of the Australian Association for Research in Education, Auckland.

Griffin, P., Woods, K., & Dulhunty, M. (2004). Australian students' knowledge and understanding of Asia : A national study. *Australian Journal of Education*, 48(3): 253-267.

Griffin, P., Woods, K., & Dulhunty, M. (2004, December). *Australian students' attitudes to learning about Asia*. Paper presented at the Annual Conference of the Australian Association for Research in Education, Melbourne.

Griffin, P., Woods, K., Dulhunty, M., & Coates, H. (2002). *Australian students' knowledge and understanding of Asia*. Canberra: DEST.

## **2.6 Rasch Model Scaling of the Royal Australasian College of Surgeons' Basic Surgical Sciences Multiple Choice Question Examination**

### **Staff**

P. Griffin, M. Wu, N. Zoanetti, and K. Woods

### **Summary**

In 2004, Rasch scaling was conducted on five of the Royal Australasian College of Surgeons' consecutive Basic Surgical Sciences MCQ examinations using the *Quest 90* (Adams & Khoo, 1995) software package. Items that were common to multiple tests were used to calibrate all tests to a single, anchored item-difficulty scale. This scale was extended across all items to determine the relative item difficulties in the five tests under investigation. Exploration of candidate reporting formats was also undertaken as part of this project. The production of kidmaps for various item subsets was trialed and eventually implemented for evaluation by the Royal Australasian College of Surgeons.

### **Funding Source**

Royal Australasian College of Surgeons

### **Publications**

Griffin, P., Wu, M., & Zoanetti, N. (2004). *Rasch Model Scaling and Reporting for the Royal Australasian College of Surgeons Basic Surgical Sciences MCQ Examination*. Parkville: Assessment Research Centre.

## **2.7 Evaluation of the Pilot Implementation of the Victorian Department of Education and Training's Ultranet Program**

### **Staff**

P. Griffin, T.K.C. Nguyen, K. Woods and L. Calvitto

### **Summary**

The Assessment Research Centre at the University of Melbourne has been asked to evaluate the pilot implementation of the Victorian Department of Education and Training's new technology-based tool, the [Student@Centre](#) Ultranet, in twelve pilot schools. The Ultranet initiative is expected to establish an innovative information management model to support system-wide school improvement, including a range of integrated teaching and administrative functions. The evaluation will include the development of a range of data collection instruments for use by schools and the Department, and identification of opportunities for improvement over the pilot period and strategies to inform a full rollout of the Ultranet across Victorian schools.

### **Funding Source**

Victorian Department of Education and Training

## TEACHING, TRAINING AND SUPERVISION

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### 3.1 2004 Graduate Students

Shelly Gillis - The domains of vocational assessment decision-making

Margaret Wu - The application of item response theory to measure problem-solving proficiencies

Rosemary Callingham - Numeracy assessment: From functional to critical practice

Sugiarto - Validity of a school-based measure of vocational competence as a predictor of job performance: A study of technicians who graduated from vocational secondary schools in Indonesia

Sandra Lea Wood - Factors influencing the vocational decision making of high ability adolescent girls

Mark Dulhunty - Detection of educator cheating on student multiple-choice items with real data

### 3.2 Graduate Student Supervision

#### PhD

Name	Thesis	Status
Maurice Curwood	The impact of the implementation of a competency based training and assessment system in the workplace	Complete
Justin Connally		
Fung Yik Wo	Supervisor judgement in the assessment of classroom performance of teachers in training	Incomplete
Maree Ryan	The vertical curriculum: Catering for gifted students' differentiated development and educational needs	Incomplete
Phillip Holmes Smith	Investigating the use component of the concerns-based adoption model (CBAM): Developing a level of use questionnaire (LOUQ)	Incomplete
Margaret Forster	Text difficulty and the measurement of reading growth	Incomplete
Anne Forwood	An investigation of a hierarchy of leadership attitudes	Incomplete
Marian Mahat	Including the excluded	Incomplete
Le Luc Tu	Investigating effects of student reading proficiency and socio-economic and cultural status on their performance at item level in international "real-life" mathematical tests	Incomplete

**Doctorate**

<b>Name</b>	<b>Thesis</b>
Hayden Downing	The value added nature of the assessment of workplace performance quality
Michele Rahmani	Mauritius and inclusion. A study of teachers' attitudes toward the inclusion of students with special needs in regular primary schools.
Geraldine Ferry Smith	Victorian modern cursive handwriting and students with learning disabilities
Michael Francis	To be advised

**Masters Degree (Thesis Component)**

<b>Name</b>	<b>Thesis</b>	<b>Status</b>
Patricia Nicholson	Assessment of clinical competencies in the perioperative environment: Influence of the assessors	
Kathryn Nicholson	Trial of a scored assessment approach to assessment of manutention workplace competencies	Complete
Catherine Boldiston	Equating assessment tests	
Nguyen Kim Thu	To be advised	
Raymond Peck	The construct validity of international schools assessment tests	
Elizabeth Fear	Listening and learning: Auditory processing ability and its relationship to literacy and behaviour	
Shereen Kindler	To be advised	
Martin Koomen	To be advised	
Daniel Singh		Incomplete

### 3.3 Award Teaching Subjects

The study of assessment subjects reflects the latest theoretical understanding, research methodology and analytical tools available in the field. Skills gained are cross-disciplinary and by their very nature are applicable to diverse fields or work. This study area assists professionals to move into roles as

- Psychometricians
- Behavioural science researchers
- Assessment consultants
- Policy makers
- Performance auditors
- Strategic planners
- Managers of large organisations

#### Study Options

A range of postgraduate courses are offered in the field of assessment:

#### Postgraduate Certificate of Assessment and Evaluation

This course introduces the key concepts, theories and skills underlying assessment, measurement and psychometrics and provides credits towards a Masters of Assessment and Evaluation. Most subjects are offered by online mode of delivery. The Postgraduate Certificate can be completed six months full time or one year part-time.

#### Master of Assessment and Evaluation

Designed to enable graduates to design and manage assessment programs at a high level. The course prepares graduates to develop an advanced knowledge and understanding of the theory and practice in assessment.

#### Subject Selection

The Postgraduate Certificate and the Masters of Assessment and Evaluation offer three options, which reflect the major study areas open to students. Students can specialize in either assessment or evaluation, or study a combination of assessment and evaluation subjects. Students enrolled in the generalist Master of Education, Master of Training and Development or Doctor of Education may also complete subjects in the assessment strand.

## **Subjects in Assessment**

The assessment specialist strand enables students to acquire state of the art skills in the design, development and application of assessment, measurement instruments and psychometrics for purposes related to research, learning, credentialing selection and policy development. More information regarding subjects in assessment is available online or from the student handbook. Subjects in the assessment strand are:

### **472-611 Introduction to Assessment\*\***

Students explore the modes of data collection, recording mechanisms and interpretation frameworks. An in-depth study of the use of pupil assessment data with specific emphasis on linking assessment results to the teaching and learning cycle and an examination of how this leads to tensions for accountability is examined.

### **472-612 Assessment Instrument Development \*\***

Students develop and trial two types of assessment instruments: objectively and subjectively scored instruments. Students explore the constraints that both forms of assessment impose and develop procedures for analyzing and interpreting data collected from both forms of assessment.

### **476-661 Assessment Design and Analysis\*\***

This subject provides an understanding of, and practical skills in, assessment design, analysis, reporting and monitoring.

### **476-662 Competency and Performance Assessment \*\***

Students investigate performance and competency-based assessment strategies that can be applied in a variety of contexts including schools, industry, higher education and further education. The subject explores current policy directions, as well as contemporary issues within the field, including grading, validity and reliability principles, quality assurance, reporting and the assessment of higher order competencies. Students are given the opportunity to develop specialized, state of the art skills in the design, development and review of performance tasks and scoring rubrics suitable for use in applied settings.

### **476-664 Advanced Measurement and Psychometrics#**

This unit provides an advanced understanding of item response modelling and psychometric theory. The subject examines item response theory from an advanced perspective, including the development of single and multiple parameter models, their specification, estimation and evaluation.

**476-694 Educational Measurement, Assessment and Evaluation \*\***

This subject provides an overview of the nature of educational measurement, assessment and evaluation by contrasting various perspectives, purposes, models and procedures used in evaluation and monitoring programs.

**476-695 Assessment and Reporting for Student Learning#**

This subject focuses on the relationship between learning and assessment procedures and how, by building on this relationship, both learning and assessment may be improved. Students apply the lessons of their critical evaluation of assessment and reporting to the design and evaluation of assessment and reporting policies and practices in an educational program.

**481-814 Project in Assessment or Evaluation#**

This subject is designed to enable students to apply knowledge acquired in previous subjects in the Postgraduate Diploma or Masters of Assessment and Evaluation to a social or educational problem. Students apply this knowledge to a project of relevance to them in the workplace.

**482-612 Evaluation Project \*\*^**

This subject is designed to enable students to apply knowledge acquired in previous subjects to a social or educational problem.

\* Subject available online

^ Subject available in the Postgraduate Certificate of Assessment and Evaluation

# Subject available in the Master of Assessment and Evaluation

### 3.4 Non-Award Teaching

The Centre delivers a range of professional development programs for client organisations in applied measurement, classroom based assessment and reporting as well as vocational and industry based assessments. Workshop delivered in 2004 included:

Gillis, S. (2004). *Designing Rubrics to Grade Performance*. NSW Department of Education and Training sponsored *Making Competency Based Assessment Work Seminar*. April 1.

Gillis, S. (2004). *Designing Rubrics to Grade Performance: A Standard Referenced Assessment Approach*. NSW Department of Education and Training sponsored *Making Competency Based Assessment Work Seminar*, August 10.

Gillis, S. (2004). *Principles underpinning Graded Assessment: Critique of prevailing perceptions*. Paper presented to the *Grading – Models, Principles and Costs Workshop*, NSW TAFE, Sydney October 13-14<sup>th</sup>.

## 2004 INCOME STATEMENT

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Research Programs	Income
Vocational Assessment	
Applied Measurement	
Training and Teaching	
Administration / Services	
<b>TOTAL</b>	

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