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**Project Title: Trialling a Peer Assisted Teaching Scheme in
the Australian Tertiary Education Sector**

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Executive Summary

This project trialled a Peer Assisted Teaching Scheme in five universities across Australia, and was an extension of a project supported by an ALTC Teaching Fellowship in 2010 at Monash University. The aim of the trial was to implement a structured and collegial approach to supporting academic teaching staff to reinvigorate their units.

The outcomes of the project included the development of tailored PATS workbooks, completed by the participants during the trial. Unit evaluation data has been collated and focus group sessions have been held for all participants. The analyses of these have resulted in multiple publications and presentations. Online newsletters (May 2012, Oct 2012 and Feb 2013) have been posted regularly updating on project progress, introducing project members and outlining preliminary results.

The challenges encountered included: recruiting a new project officer halfway through the project, difficulties recruiting and coordinating participants and technical issues with the online PATS resources. A further difficulty with the cross-institutional trial was the different unit evaluation scoring measurements used at the institutions making comparisons of results across universities difficult.

PATS was well received in its multi-institutional trial version. The success of the scheme led to the OLT National Senior Fellowship and coordinators will continue to run the scheme in 2013. Several joint publications about the PATS experiences by authors from different disciplines and universities are underway as a result of the trial and further analysis is expected.

1. Introduction

Teaching quality and student satisfaction is increasingly becoming a focus in the higher education sector. Evaluations of teaching and student experiences are used across Australian universities to measure the students' perceptions of their teachers, the unit and their learning. When these evaluations fall below an acceptable level, there are few, if any, low cost means of providing support to academics to improve teaching and unit quality. The Peer Assisted Teaching Scheme (PATS) is an innovative and collegial scheme to support academic teaching staff interested in reinvigorating their teaching practice. The PATS scheme draws on research that highlights the benefits of peer assisted learning directed at students (Topping 2001), but applies it to academic teaching staff. PATS is informed by Vygotsky's socio-cultural theory (1978) and Lave's situated learning literature (1988; 2009), as well as research promoting careful reflection on teaching practice (Brookfield, 1995).

PATS was initially developed and trialled at Monash University in 2009 to address low student satisfaction with the quality of Information and Communication Technology (ICT) units in the Faculty of Information Technology (Carbone, Ceddia and Wong, 2011). The initial trial expanded into other disciplines at Monash University in 2010, supported by an Australian Learning and Teaching Council (ALTC) Teaching Fellowship grant (Carbone, 2012). A key aim of the project is to provide a low cost, collegial and structured framework for reinvigorating teaching quality. This document will report on the intended and actual project outcomes (2), the successes and challenges encountered (3), the impact of the scheme (4) and future developments of PATS (5).

2. Project Outcomes

Intended Outcomes

1. A “readiness report” that will help faculties decide whether they are ready to be part of the scheme;
2. A consistent and cross university-wide strategy/policy to assist academics wanting to reinvigorate units or improve units that need critical attention;
3. A trial of PATS resources for use in HE sector, and development of improved resources
4. Improved unit evaluations for units;
5. List of barriers, goals and strategies for unit improvement and for wider distribution of reporting and publications; and
6. Leadership skills development for institutional award winners.

Actual Outcomes and Activities

1. A “readiness document” that will help senior managers in faculties decide whether they are ready to be part of the scheme (Appendix 4);
2. The tailored PATS workbooks have been developed for each institution participating in the trial.
3. PATS workshops, briefing, mid-semester catch-up and debriefs completed;
4. List of participants compiled from ECU, The University of Newcastle, Griffith University, University of the Sunshine Coast and Monash University;
5. All participants have completed the pre-, during, and post-semester tasks.
6. The focus group sessions have been held for all participants;
7. Unit evaluation data collated;
8. Online newsletters posted regularly updating on project progress and introducing project members.
9. Submission of co-authored article to Studies in Higher Education;
10. Analysis of pre- and during semester tasks; and
11. Acknowledgement letters sent to participants.

Documentation Developed over Multiple Levels

1. PATS Guide and Instructional Workbook. The online Workbook provides a structured and detailed outline for the process, including informal student evaluation forms, peer observation of teaching forms, etc. (available from: <http://opvclt.monash.edu.au/pats/resources.html>);
2. PATS Newsletters (May 2012; Oct2012; Feb 2013) (available from: <http://opvclt.monash.edu.au/pats/publications.html#newsletters>);
3. A set of course quality attributes based on students qualitative comments in unit evaluation data (Appendix 5); and
4. Academic articles and conference papers published outlining various aspects of the scheme (Appendix 3 for a full list).

Promotional Dissemination Activities Completed for 2012

1. Presentations and workshops:
 - Peer Assisted Teaching, RMIT, Business IT and Logistics retreat. 9 Nov 2012
 - Outline of the National Teaching Fellowship, OLT Australian Learning and Teaching Fellows

- Forum, 1-2 Nov 2012
 - CADAD PATS Presentation: Update on trialing a Peer Assisted Teaching Scheme across five universities, 25-26 Oct 2012
 - Presentation of Peer Assisted Teaching Scheme, ACPHIS 2012 Annual Workshop Langham Hotel, 27-28 Sep 2012
 - A showcase of PATS, ACD ICT ALTA Event, University of South Australia, 10 Aug, 2012
 - Paper presentation, Carbone, A. (2012) *Peer Assisted Teaching Scheme – A way of creating, sustaining and developing new connections*. In proceedings of the 35th Higher Education Research and Development Society of Australasia (HERDSA) Annual International Conference. Hobart, Tasmania, Australia, 2-5 Jul 2012
 - PATS workshop and presentation, Griffith University, 31 May -1 Jun 2012
 - Trialling peer review in a mentoring program, Australian Catholic University, 24 May 2012
 - Trialling a Peer Assisted Teaching Scheme into the Australian Tertiary Education sector, Council Australian Directors of Academic Developers, 19-20 Apr 2012
 - PATS workshop, Fourteenth Australasian Computing Education (ACE) Conference, RMIT, Melbourne 29-1 Feb 2012
2. Co-authored journal articles submitted: see Appendix 3.
 3. Online newsletters detailing progress of PATS (<http://opvclt.monash.edu.au/pats/publications.html>).

3. Successes and Challenges

Successes

- Funding of a multi-institutional trial sponsored by CADAD led to the OLT National Senior Fellowship.
- PATS champions will become PATS co-ordinators for their institutions and will continue to run the PATS scheme in 2013 and be part of the National Senior Fellowship program.
- The focus group sessions provided the research team with overwhelmingly positive responses to the scheme by participants from all five universities. Participants described the scheme as: ‘collegial, confidence-building, helpful, informative, structured, interesting, and positive’.
- Joint publications by authors from different disciplines and universities.
- Invitations to present at conferences and act on project reference groups.

Challenges

- Recruitment of participants.
- Issues with the online workbook meant that participants could not enter their data online. This process is now in the process of being streamlined.
- The different unit evaluation scoring measurements make it difficult to compare results across universities.
- Coordination of academics.
- Collecting data and analysing data when it is submitted in different forms or scanned.

4. Impact

The CADAD funded PATS scheme led to the OLT National Senior Fellowship program to expand the PATS program throughout approximately ten universities Australia-wide. The PATS scheme has encouraged close networking within the participating universities and has resulted in drafting multiple joint publications of authors from different disciplines and universities. PATS has encouraged a focus on the Learning and Teaching agenda and given participants the structure to reflect on their L&T practice. Impact has been measured by:

- Improved student evaluation results. Results across all universities have not fully been analysed but preliminary student unit evaluation results, for example, for Monash University PATS participants reveal that all three mentee/mentor partnerships showed an increase for

question UW5 Overall I was satisfied with the quality of this course with +0.3, +0.5, +1.3. A paper has been accepted for ITiCSE 2013:

- Carbone, A., Ross, B. and Ceddia, J. (2013). Five Years of Taps on Shoulders to PATS on Backs in ICT. *Conference on Innovation and Technology in Computer Science Education (ITiCSE 2013)*, The University of Kent, 4-7 July 2013 [accepted].
- Uptake of PATS into 8 higher education institutions and 2 private providers (confirmed to date).
- Embedding the scheme into existing universities programs (Eg: Griffith PRO-teaching project; ECU Graduate Certificate in Higher Education; The University of Newcastle Business and Law Teaching leaders).
- The initiation of PATS coordinators across institutions and faculties, along with the physical workbook and the redevelopment of the online workbook will ensure upscaling and sustainability.

5. Future Developments

1. Complete analysis of data in the following areas:
 - a. Barriers academics face from re-invigorating their unit
 - b. A review of the types of goals set and strategies
 - c. Informal student feedback
 - d. Peer-review
 - e. Changes in unit evaluations
2. Five further co-authored articles are planned and in progress under these areas.
3. Development of online-interactive workbook on Moodle.
4. Set of one leaflet flyers around course quality attributes from the students perspective; barriers against unit re-invigoration; setting L&T goals, informal student review processes, peer review.
5. The findings and experiences from the CADAD sponsored trial will inform future PATS schemes.

6. References

- Brookfield, S. (1995). *Becoming a Critically Reflective Teacher*. San-Francisco, CA, Jossey-Bass
- Carbone, A., Ceddia, J., and Wong, J. (2011). A Scheme for Improving ICT Units with Critically Low Student Satisfaction. *Innovation and Technology in Computer Science Education (ITiCSE)*. Darmstadt, Germany.
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- Lave, J. (1988). *Cognition in Practice: Mind, mathematics, and culture in everyday life*. Cambridge, UK, Cambridge University Press.
- Lave, J. (2009). The Practice of Learning, Contemporary Theories of Learning: Learning Theorists... in Their Own Words. K. Illeris. London; New York, Routledge: 200-208.
- Lave, J. and E. Wenger (1991). *Situated Learning: Legitimate Peripheral Participation*. New York, Cambridge University Press.
- Topping, K. J. (2001). *Peer assisted learning: A practical guide for teachers*. Cambridge, MA, Brookline Books.
- Vygotsky, L. S. (1978). *Mind in Society*. Cambridge, MA, Harvard University Press.

Appendix 1 – Implementation Plan

Date	Stage	Key tasks	Milestone or deliverable	Progress
Jan-Feb	Start	Appoint project officer Apply for ethics	na	A
Feb-Mar	Team preparation and initial planning (attached to just prior/post first CADAD meeting 2012)	Explained PATS resources Modify resources for needs of individual institutions Discuss unit evaluation instruments	Deliverable 1: Set of tailored PATS workbooks for institutions Deliverable 2: Online PATS workshop that can be shared cross institutions or hardcopy instructional workbook revised and tailored for institutional needs	A
Mar-Apr	Faculty EOI and recruitment of participants	Team members to liaise with ADEs and HoSs in their own institutions regarding interest in process Liaise with ADEs and HoSs to discuss: s2, 2011 UE results, partnership formation, recruitment and incentives Send out invitation letters	Deliverable 3: A 'readiness report', recording of issues faced CADAD members to recruit participants Deliverable 4: List of recruits (mentee and mentors)	A
Jun-Oct	PATS in Action	Each institution conducted a briefing session with partners Distributed instructional workbook, coffee vouchers, explained process in detail Conducted mid-semester follow-up with participants Conducted briefing session with partners Distributed acknowledgement letters and incentives (Sem. 1)	Deliverable 5: Analysis of results of pre-semester tasks Deliverable 6: Analysis of results of during semester tasks Deliverable 7: Analysis of results of post semester tasks	I
Nov-Feb	Report writing	Seven focus group sessions organised and conducted by Monash team Drafted co-authored article based on academics' experiences of PATS trial Distributed acknowledgement letters and incentives (Sem. 2)	Deliverable 8: Joint publication of "From taps on the shoulder to PATS on the back: Experiences engaging academics with the Peer Assisted Teaching Scheme" submitted to Studies in Higher Education Deliverable 9: Final report to CADAD	A

A = achieved; I = in progress

Appendix 2 – Budget

Budget as @ 17 Feb 2013

Item	Project plan	Actual	Comment
Personnel Project Officer (HEW 3, Step 7 \$44,345 x 1.30) 1 day/wk for 40 weeks	\$8,869	12,832.50 ¹	Over spend \$2,832.50
Transcriptions of four audio taped focus group interviews	\$816	\$0	In kind
Consumables	\$315	\$0	In kind
Total	\$10,000	12,832.50	

Note 1

Salary Project Officer Anicca Main \$2,957.68

Salary Project Officer Bella Ross \$9,874.82

Appendix 3 – Publication Progress

Peer refereed journal articles	Progress
Carbone, A. (in press) <i>Opportunities and challenges faced in attempting to improve units with critically low student satisfaction. Higher Education Research and Development (HERD)</i> . Accepted for publication 2014.	A
Carbone, A. , Phelan, L., Drew, S., Ross, B., Cottman, C., Stoney, S., Lindsay, K. and Readman, K. (2013) From taps on the shoulder to PATS on the back: Experiences engaging academics with the Peer Assisted Teaching Scheme. <i>Journal of Higher Education</i> [submitted]	S
Cottman, C., Tout, D., Carbone, A. et al. (in progress) Breaking Down the Barriers to Teaching Improvement <i>Teachers and Teaching</i>	I
Carbone, A. , Lindsay, K., Ross, B., et al. (in progress) Setting SMART Goals and Strategies <i>Teaching in Higher Education</i>	I
Carbone, A. , Ross B., Phelan, L., Drew, S., Cottman, C., Stoney, S., Lindsay, K. and Readman, K. (in progress) Improvements to unit evaluations across all institutions - before and after PATS. <i>Studies in Higher Education</i>	I
Phelan, L. McBain, B. Tout, D., Carbone A. et al (in progress) Informal Student Feedback. <i>Assessment and Evaluation in Higher Education</i>	I
Drew, S., Carbone A. , Lindsay, K., Ross, B. et al. (in progress) Peer Review. <i>Assessment and Evaluation in Higher Education</i>	I
Full refereed conference papers	Progress
Carbone, A. , Ross, B. and Ceddia, J. (2013). Five Years of Taps on Shoulders to PATS on Backs in ICT. <i>Conference on Innovation and Technology in Computer Science Education (ITiCSE 2013)</i> , University of Kent, UK, 1-3 July 2013	AD
Carbone, A. and Ceddia, J. (2013). <i>Common Areas for Improvement in Physical Science Units that have Critically Low Student Satisfaction</i> . Learning and Teaching in Computing and Engineering (LaTICE). Macau, 22-24 March 2013	AD
Carbone, A. , Ceddia, J., Simon, Mason, R., D’Souza, D. (2013). <i>Student Concerns in Introductory Programming Courses</i> . Fifteenth Australasian Computing Education (ACE) Conference, University South Australia, 29-1 Feb 2013.	AD
Carbone, A. (2012) <i>Peer Assisted Teaching Scheme – A way of creating, sustaining and developing new connections</i> . In proceedings of the 35th Higher Education Research and Development Society of Australasia (HERDSA) Annual International Conference. Hobart, Tasmania, Australia. 1-4 July 2012	A
HERSDA showcase papers	
HERDSA 2013 showcase abstract – A Smarter PATS: a Place for Conversation and Reflection (Kate Lindsay et al - submitted)	S
HERDSA 2013 showcase abstract– PATS: Creating space to break down the barriers to teaching improvement (Caroline Cottman et al. - submitted)	S
HERDSA 2013 showcase abstract– Creating a Smarter Observation Instrument: Focusing PATS Peers on Developmental Goals (Steve Drew et al. - submitted)	S
HERDSA 2013 showcase abstract– PATS: Creating collegial places to close the feedback loop(Liam Phelan et al. - submitted)	S

A = achieved; I = in progress; N = not yet started; S = Submitted;

AD = Achieved, and Monash data collected over period of ALTC fellowship and CADAD project (but separate from core CADAD team)

Appendix 4 – Senior Management Decision Points

PATS Senior Management decision points

- Who will participate?
All staff – new staff – sessional staff – tutors – staff with low UEs – ECDF- other
- What will be the policy regarding participation?
Optional – strongly encouraged – mandatory
- What form will the process take?
Mentor/mentee – reciprocal partnership
- Who will act as mentors?
Teachers with education focus – outstanding teachers – colleagues within same organisational unit – colleagues within same discipline- other
- How will program participation be supported?
coffee vouchers – conditional/unconditional funding – time relief – credit for other academic development programs
- What type of reporting will take place?
submission of workbook – changes to UE – other
- Who is notified when the scheme is complete?
PDP supervisor- HoS- ADE - Dean –Director Education Quality
- What type of follow up will occur after completion of PATS?
focus group – performance development review

Worked Example

Example - Faculty of Information Technology

- Who will participate?
– Open to all academics but academics responsible for units in the critical attention or needs improvement zone are invited/encouraged to participate.
- What will be the policy regarding participation?
– Strongly encouraged
- What form will the process take?
– mentor-mentee
- Who will act as mentors?
– Teachers with an outstanding reputation
- How will program participation be supported? (approved Faculty Board 1/2012)
– Academic funding of \$500 at end of semester (unconditional vs. Conditional)
– Adjustment to workload to recognise 30 hours commitment to the program
– Coffee vouchers supplied by the faculty
- What type of reporting will take place?
– letter outlining changes to unit evaluations; report to Faculty Senior Leadership
Team
- Who is notified when the scheme is complete?
– Associate Dean(Education) - Director of Education Quality – Faculty Senior Leadership team
- What type of follow up will occur after completion of PATS?
– focus group sessions

Appendix 5 – Course Quality Attributes

Category	Sub Category	Code Description	Check
Unit	challenge	The level of challenge and difficulty of the overall unit	
	content	The choice of topics that are covered in the unit, including programming language used	
	organisation	The way that components of the unit are arranged	
	relevance	The real world scenarios in the unit to and whether the unit was current.	
	workload	The size and number of things to do in the unit	
Lecturer	control	The amount of control the lecturer has over disruptive students in class	
	knowledge	Refers to the amount of knowledge the lecturer portrays to the students	
	presentation	The level of engaging teaching methods used to deliver the material	
	organisation	The way the lecturer arranges the components of the lecture	
	support	The lecturer's availability and attitude towards their students	
Lecture	access	The ease at which the lecture materials can be reached by students	
	challenge	The level of difficulty of the material	
	content	The choice of topics and activities that are presented in the lecture	
	delivery mode	The suitability of the mode of delivery	
	duration	The amount of time allocated to the lecture.	
	structure	The logical sequencing of concepts.	
Tutor	organisation	The way the tutor arranges the components of the tutorial	
	presentation	The engaging teaching methods used to deliver the material.	
	response time	How quickly the tutor responds to student's query	
	support	The tutor's availability and attitude towards their students	
Tutorial	alignment	The alignment between tutorial activities with learning objectives.	
	clarity	The clearness of the requirements of the task	
	length	The amount of time allocated to the tutorial.	
	scheduling	When the tutorial classes are scheduled	
	activity	The type of tutorial activity	
	organisation	The logical sequencing of activities.	

Category	Sub Category	Code Description	Check
Lab	activity	The type of laboratory activity	
	length	The amount of time allocated to the lab.	
Assessment	alignment	The alignment between assignments with learning objectives.	
	content	The choice of tasks required in the assessment.	
	difficulty	The level of difficulty of the assignment	
	feedback	The usefulness of the correspondence in relation to the assessment	
	marking	Refers to consistency of marking, quality of feedback, timeliness, and clarity of marking criteria.	
	organisation	The allocation of marks to components of assessment and due dates.	
	practice	The amount of similar tasks students have experienced	
	quantity	The size and number of assessments	
Resources	specification	The clarity in which assignments were written, submission process and change of requirements.	
	support	The assistance provided to students in relation to their assessment tasks	
	timing	Refers to when the assignment are issued and due	
	availability	Refers to how accessible and ready for use a resource is	
	content	The choice of resources	
LMS	quantity	The amount of resources	
	readings	The suitability of the readings	
Off Campus	ease of use	The simplicity in which materials can be found on the LMS	
	support	The assistance provided to students studying in distance education mode	
	ease of study	The challenges students face by undertaking off campus units	