Learning and Teaching Investment Fund 2011

Final Project Report

Submission date: 17 February 2012

Title of project: Using a media annotation tool to enhance learning that is work-relevant and enables industry collaboration (A multiple case study evaluation across disciplines and sectors to inform models to achieve this)

Strategic objective(s) addressed:
To be work-relevant and industry-partnered

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1. Executive summary

RMIT University’s media annotation tool (MAT) is an interactive and innovative tool that enables learners to engage with video. Evaluation work from a 2009 pilot study with physical education students suggested that MAT was ideal for active learner-centred engagement with video, was pedagogically sound, and teacher friendly. Recommendations from the pilot study included integrating and examining MAT in further learning scenarios, including work-integrated learning options, thus forming the basis of this 2011 LTIF project.

This project incorporated a collaborative approach by academics from varied disciplines and across academic colleges who each had work-relevant learning needs for integrating MAT into learning and teaching, and most of these included industry participation in the learning processes. The participating teachers, from the disciplines of chiropractic, medical radiations, and education (undergraduate); law (postgraduate); property services, and audio-visual technology (vocational); formed key project contributors, plus their student cohorts. Examples of industry participation included industry representation in videos (by interview, or demonstrating or role playing practice), and/or providing feedback to students in MAT. Examination was via a multiple-case study of the varied learning cohorts’ use of MAT in their respective work-relevant contexts, to inform models of MAT use and the development of guidelines and publications to support wider application of such models.

The project produced both process and product outcomes. The process of integrating this new educational technology into nine case cohorts over six disciplines involved MAT training and support mechanisms for teachers and students, learning design, and meetings and reflections on the various case applications of MAT. The student experience—being key to the project—was captured over two semesters by surveys, observations, interviews and learning artefacts. The teacher experience (plus that of industry representatives where possible) was harnessed by interactive interview. Each integration was unique and data analysis is underway post-project into 2012 to examine MAT’s effectiveness in the varied contexts. From this, models of work-relevant learning that optimise virtual authentic learner engagement are in development. Early indicators are that MAT is more effective in engaging learners where learner-learner and learner-teacher interactions are included in the learning design, and where there is clear linkage to assessment.

As for products, a suite of guides have been produced, informed by the experiences of this project. These include two manuals: ‘Teacher Instruction Guide’ and ‘Student Instruction Guide’; and two quick guides: ‘Group Set-up Quick Guide’ and ‘Media Annotation Quick Guide’. These guides have benefitted from peer and student review from within the project and external to project, and feature case use examples from the project to further illustrate MAT integration options. Additionally, two further quick guides were produced early in the project to support student video production needs. The full case models (in development) and the guides (completed) will be available to support further use of MAT in the University, and as new products, these will be open to further (post-project) evaluation.
2. A list of outcomes (scholarly and instruction guides)

Dissemination products and/or processes to engage others beyond the project are either completed, in press, in review, or in production. For full details please refer to Section 4, 'Dissemination strategies and outputs'.

Summarised here are the completed, in press and in review papers, products and presentations.

Completed:
Marchiori, G. & Colasante, M. (2011). ‘Attaching your Flip Camera to the tripod’ and ‘Downloading your Flip Camera video’; Flip cam laminated technical support flyers to supplement product supplied Flip Cam instructions
Jardine, J. & Colasante, M. (plus input from project team members and peer reviewers) (2012) MAT Guides:
• Manuals: ‘Teacher Instruction Guide’, ‘Student Instruction Guide’
Learning spaces: Physical, Virtual or Contextual, 25 November 2011
http://www.rmit.edu.au/seh/staff/ltforum
http://www.rmit.edu.au/seh/staff/ltforum#_4._Reflecting_with

In-press or in-review:
3. Project outcomes and impacts

Dissemination has occurred during project progression, and several publications are currently underway (as noted in the project process and product outcomes, Sections 1 and 2). This reflects the volume and complexity of the data still in analysis processes. The publications currently in development are on various practical and/or theoretical foci, on single or across multiple cases, with most of the team members across the three colleges actively involved in writing.

The discussion that follows continues the themes of process and product outcomes. First, the ‘process’ discussion turns to preliminary evidence of student impact from the integrations and related research. Then the ‘product’ discussion lists the major products then teases out the MAT guides a little further (and refers to further detail and the guides in Appendix 4).

Process outcomes

Integration:
Integrating this new educational technology into nine case cohorts over six disciplines (Table 3.1) resulted in:
- 380 students having access to MAT in their learning
- various work-readiness learning requirements explored via an interactive multi-media approach.

Table 3.1 Student exposure to MAT over the nine case cohorts

<table>
<thead>
<tr>
<th>Tertiary sector</th>
<th>Discipline</th>
<th>2011 Semester 1 / 2</th>
<th>Number of student members of MAT</th>
<th>Work-readiness theme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Postgraduate</strong></td>
<td>Juris Doctor (law)</td>
<td>1</td>
<td>32</td>
<td>Advocacy skills</td>
</tr>
<tr>
<td><strong>Undergraduate</strong></td>
<td>Education (literacy)</td>
<td>1</td>
<td>18</td>
<td>Literacy teaching skills</td>
</tr>
<tr>
<td></td>
<td>Education (visual arts)</td>
<td>1</td>
<td>59</td>
<td>Visual arts teaching skills</td>
</tr>
<tr>
<td></td>
<td>Chiropractic</td>
<td>2</td>
<td>78</td>
<td>Clinical thinking for clinical cases</td>
</tr>
<tr>
<td></td>
<td>Medical Radiation</td>
<td>2</td>
<td>57</td>
<td>Image evaluation skills</td>
</tr>
<tr>
<td><strong>Vocational</strong> (TAFE)</td>
<td>Property Services (Cert IV, traineeship)</td>
<td>1</td>
<td>40</td>
<td>Customer service</td>
</tr>
<tr>
<td></td>
<td>Property Services (Cert IV, owners’ corporation)</td>
<td>1-2</td>
<td>29</td>
<td>Conducting meetings</td>
</tr>
<tr>
<td></td>
<td>Property Services (Diploma)</td>
<td>2</td>
<td>28</td>
<td>Customer service and leadership</td>
</tr>
<tr>
<td></td>
<td>Audio-visual Technology (Diploma)</td>
<td>2</td>
<td>39</td>
<td>Quality service</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>9 cohorts, 6 disciplines</td>
<td></td>
<td></td>
<td>380</td>
</tr>
</tbody>
</table>


Visual examples of student interactions with MAT can be found in the appendices (Appendix 3).
Note: several project teachers plan to continue using MAT in 2012 courses (either same, alternative or additional courses); some of whom also intend to continue to evaluate MAT’s effectiveness.

Research:
The extensive data is still in analysis for this project. Examining MAT’s effectiveness in the varied contexts has resulted in a large volume and range of information currently under analysis, including:

- harnessing the student experience over two semesters by surveys, observations, interviews and learning artefacts
- harnessing the teacher (and industry representative where relevant) experience over two semesters by observations and interviews.

As an example, tabled below is some preliminary findings across the four undergraduate cases (within the nine cases of the project), of student evidence of interaction in MAT (Table 3.2). Marker numbers (average and range per student, and total) represent annotations students created anchored to segments of video. The high numbers of video for the education cases reflects the volume of student-created videos, compared to professionally produced videos used in the chiropractic and medical radiations cases. High percentage of student access or activity is evident in three out of the four cases, where in the fourth case MAT use was optional. In this case approximately half of the students interacted voluntarily.

Table 3.2 Undergraduate student activities in MAT

<table>
<thead>
<tr>
<th>Case</th>
<th>Students active in MAT</th>
<th>Marker average (range)/student; total</th>
<th>Videos used in MAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education (literacy)</td>
<td>17/18=94%</td>
<td>3 (0-17); 58</td>
<td>30</td>
</tr>
<tr>
<td>Education (visual arts)</td>
<td>53/59=90%</td>
<td>4 (0-16); 231</td>
<td>112</td>
</tr>
<tr>
<td>Chiropractic</td>
<td>75/78=96%</td>
<td>Vid 1: 15 (13-23); 1161; Vid 2: 7 (2-17); 512</td>
<td>1; 1</td>
</tr>
<tr>
<td>Medical Radiation</td>
<td>28/57=49%</td>
<td>10 (0-58); 276</td>
<td>10</td>
</tr>
</tbody>
</table>


Across student interactions with MAT, it was rewarding to observe and harness data detailing their experiences. For example: witnessing directly their frustration with features of the technology lead to key improvements to MAT for 2012 users; and student delight when they received peer and/or teacher feedback in MAT. The project team looks forward to sharing detailed findings with the learning and teaching community within RMIT forums and beyond in academic publications as the data analysis matures and academic publications continue.

Product outcomes

The range of product outcomes from this project includes:

- models of work-relevant learning that optimise virtual authentic learner engagement which are in development (due to co-dependency on data analysis completion and write-up/publication processes)
- guides of how to use MAT (see below and appendix 4)
• flyers on how to use flip cams and download videos (see appendix 5)
• academic publications (see sections 2 and 4)

The guides:
The guides were informed by the year of interaction with, and observation of, students and teachers using MAT, and supporting their use of MAT, followed by peer review. The guides include two manuals and two quick guides: ‘Teacher Instruction Guide’, ‘Student Instruction Guide’, ‘Group Set-up Quick Guide’, and ‘Media Annotation Quick Guide’.

Table 3.3 Basic structural differences in teacher and student versions of the manuals

<table>
<thead>
<tr>
<th>MAT Teacher Instruction Guide:</th>
<th>MAT Student Instruction Guide:</th>
</tr>
</thead>
<tbody>
<tr>
<td>52 page manual</td>
<td>32 page manual</td>
</tr>
<tr>
<td><strong>Sections:</strong></td>
<td></td>
</tr>
<tr>
<td>How to Use This Guide</td>
<td>How to Use This Guide</td>
</tr>
<tr>
<td>Section One: Information about MAT</td>
<td>Section One: Information about MAT</td>
</tr>
<tr>
<td>Section Two: Getting Started</td>
<td>Section Two: Using MAT</td>
</tr>
<tr>
<td>Section: Using MAT</td>
<td>Section Three: Additional Information</td>
</tr>
<tr>
<td>Three: Completion</td>
<td>Three:</td>
</tr>
<tr>
<td>Section Four: Additional Information</td>
<td></td>
</tr>
<tr>
<td>Section Five:</td>
<td>Additional icons to sign-post features</td>
</tr>
<tr>
<td>(speech bubble, 'Case', etc.)</td>
<td>Less complex; simpler sign-posting</td>
</tr>
</tbody>
</table>

Quality control processes involved peer review of the guides. Non-project participants / non-MAT user teachers reviewed the guides in early draft form, providing valuable feedback including corrections, clarifications, plus validation to use original concept design layout of manuals (not yet fully evident in draft). Support staff were consulted for answers to specific areas that required clarification. The final draft versions were peer reviewed by two LTIF (MAT) team members / MAT user teachers, who identified minor corrections, initiated an item addition, and gave approval. During peak production, the two lead authors held near daily meetings and engaged in turn-taking with the guides to refine and progress to finalisation.

The guides were conceptually designed from two fronts: (a) flexibility offered to cater for reader choice, and (b) design layout to support this. Discussion to support this is provided in Appendix 4.

Access recommendation:
It was intended to house the suite of guides in the new website for MAT that was in the original project plans, with a link to this website from the currently empty ‘Help’ button in MAT. In the interim, it is recommended by this LTIF team that the two Quick Guides are linked to the Help button until a web home is found for the guides, which can later be linked to the MAT Help button.
4. Dissemination strategies and outputs

In alignment with the ALTC (now OLT) Dissemination Framework, dissemination will be reported here under two classes, that of ‘engaged collaboration and dissemination’ and ‘information provision’.

Engaged collaboration and dissemination

Engaged collaboration and dissemination occurred throughout the project execution. This was required not only to ensure project success, but to better equip participants for MAT learning and teaching integration into the future once project supports ended, plus promote success for future use of MAT within the university. Additionally, because of the nature of this as a cross-college project, the three academic colleges of the university now have informed MAT users within their ranks.

Examples of engaged dissemination and collaboration from the project includes:

- MAT training/demonstration sessions to prepare participating teachers from the three colleges and their teaching assistants in how to use MAT (February 2011); these involved mixed participants from the various disciplines, colleges, and sectors, and some attended more than one session
- Support to teachers using MAT by the trained teaching assistants as required, for reasons of just-in-time support and/or consolidating skills with MAT
- In-class MAT training sessions to prepare each student cohort on how to use MAT: one to five training sessions were provided for each of the nine cohorts, depending on class size (18-78 students); conducted just-in-time for each cohort over semesters 1 and 2
- Teachers and general staff who attended the College of Science, Engineering and Health Learning and Teaching Forum 2011 - "Spaces and Beyond"; Learning spaces: Physical, Virtual or Contextual, 25 November 2011, were treated to a hands-on experience with MAT in the:


- Discussions with MAT’s developer/programmer (EduTAG) on emerging usability issues that had tool refinement implications, resulting in several improvements incorporated into the tool. (Note: this replaced the anticipated report to the ‘MAT Implementation Reference Group’ included in the project application, as this group no longer meets)
- Academic writing workshops were held at both team level (November 2011) and sub-team levels (ongoing); writing teams and goals were planned within the team and follow-up writing teams formed; smaller writing team sessions are active and continuing.

Information provision

Information provision for this project started during the project and continues post-project. The nature of collecting data from March through November 2011 meant that data analysis continues (as anticipated) beyond the project year, with academic writing commenced and continuing as further data analysis results are incoming. There are several publications in progress across the project team, and it is envisaged that these will be published in 2012 and 2013 (depending on writing completion dates and publishing turn-around times). The information provision or dissemination so far includes products completed, in press, in review, or in production:
**Completed:**
Marchiori, G. & Colasante, M. (2011). ‘Attaching your Flip Camera to the tripod’ and ‘Downloading your Flip Camera video’; Flip cam laminated technical support flyers to supplement product supplied Flip Cam instructions
Jardine, J. & Colasante, M. (plus input from project team members and peer reviewers) (2012) MAT Guides:

**In-press:**

**In-review:**

**In-progress:**
ascilite conference symposium of four MAT papers (in progress) on: the project (Colasante & Lang); education case(s) (Lemon); Juris Doctor case (Douglas); chiropractic/health (Kimpton & Hallam). Future Challenges – Sustainable Futures, Wellington 25-28 November, 2012
Douglas, K., led paper (in progress) on blended learning methods across the MAT cases
Warren, W. led paper (in progress) on technological challenges of the new educational technology early adopter
Colasante, M. led paper (in progress) on models of MAT use for authentic learning
Colasante, M. led paper (in progress) on vocational (TAFE) case comparisons in using MAT
Kimpton, A. led paper (in progress) on a longitudinal look at case-based learning in chiropractic: paper to video to MAT
Mandarano, G. led paper (in progress) on a case study of MAT use for the medical radiations reflective practitioner
5. Evaluation of project outcomes

In alignment with the ALTC (now OLT) ‘ALTC Grants Scheme – Evaluating Projects’, there are a series of key evaluation questions that can be asked of a project, from which some will be applicable depending on the type of project, and what is being evaluated.

For this project, the most informative discussions arise from the following ALTC key evaluation questions:

1. What processes were planned and what were actually put in place for the project?
2. To what extent have the intended outcomes been achieved?
3. Were there any variations from the processes that were initially proposed, and if so, why?
4. What factors helped and hindered in the achievement of the outcomes?
5. What measures, if any, have been put in place to promote sustainability of the project’s focus and outcomes?

(Ref: ALTC Grants Scheme – Evaluating Projects, 2008, p.9)

The selected questions above have been used to evaluate this project under the following headings:

• Project plans versus project actuals (encompassing first three questions, part of fourth)
• Key project success factors (relating to most of the fourth question)
• Sustainability of the project’s focus and outcomes (relating to fifth question)

Project plans versus project actuals

The table below shows the pre-project planned key project outcomes, forecasted per quarter. It also tables whether these outcomes were achieved, plus notes any variations from the plan (Table 5.1).

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Key Project Outcome/s (Per application revised &amp; approved, Jan 2011)</th>
<th>Achieved / Not achieved</th>
<th>Notes; Variations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ethics submitted and approved</td>
<td>Achieved</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sem 1 participating cohorts:</td>
<td>Achieved</td>
<td>Minor variation: a-v technology sourced existing video rather than student produced</td>
</tr>
<tr>
<td></td>
<td>- academic preparation activities complete (learning design in MAT; training in MAT use; etc); Video production complete (JD); student self-collected videos in progress (education, property services, a-v technology); informed consent gained; pre-test survey collected; students trained with MAT (teacher and assistants); commenced MAT L&amp;T integration</td>
<td>Achieved</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sem 2 participating cohorts:</td>
<td>Achieved</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- early preparation activities commenced and planned for completion pre-sem 2</td>
<td>Achieved</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Project meetings conducted, notation made</td>
<td>Achieved</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EduTAGs work commenced, and advanced (~</td>
<td>1/3): MAT refinement and extension; train the ‘trainers’ in MAT</td>
<td>Achieved in part (Training demonstrations)</td>
</tr>
</tbody>
</table>
2. Sem 1 participating cohorts:
- Video production complete; student self-collected videos; student support in using MAT (teacher and assistants); data collected: obs and interv, students, academics, industry reps (audio record); post-test survey collected; thank you vouchers distributed (and JD expert paid)  
   Achieved

Sem 2 participating cohorts:
- early preparation activities completed ready for sem 2; Video production commenced (Geology); student self-collected videos in progress (property services, a-v technology)  
   Achieved

LTIF progress report in first full draft  
   Achieved

Appoint research assistant; begin help with data collection and transcription  
   Achieved

Project meetings conducted, notation made  
   Achieved

EduTAGs work progressed to over half-way mark (~ 2/3)  
   Not yet achieved

Variation: unanticipated staff leave in EduTAG

3. Research assistant to commence transcribing data  
   Achieved

Finalise and submit LTIF progress report  
   Achieved

Sem 2 participating cohorts:
- academic preparation activities complete (learning design in MAT; training in MAT use etc); informed consent gained; pre-test survey collected; students trained in MAT (and teacher and assistants); student support in using MAT (teacher and assistants); commenced MAT L&T integration  
   Achieved in the main

Variation: The Engineering (Geology) cohort, expected to use MAT in Semester 2, was unable to participate due to workload issues

Project meetings conducted, notation made  
   Achieved

EduTAGs work finalised  
   Not yet achieved

Variations:
1. MAT refinement and further development: MAT refinement achieved in 4th quarter; further development (eg. Stage II) not yet achieved;
2. MAT website to house guides, etc., not yet achieved

4. Sem 2 participating cohorts:
- student support in using MAT (teacher and assistants); data collected: obs and interv, students, academics, industry reps (audio record); post-test survey collected; thank you vouchers distributed  
   Achieved

Variation: Project leader unanticipated leave meant assistance from proxies to:
1. collect some post-survey data; (2) help produce the MAT guides

Research assistant continue transcribing data and commenced data analysis  
   Achieved

Note: This was anticipated to spill over into the 2012 year, as data collected from March to November 2011.
<table>
<thead>
<tr>
<th>Project meetings conducted, notation made, particularly to support commencement of draft LTIF final report</th>
<th>Achieved</th>
</tr>
</thead>
</table>

*Post-project activities – to what extent they are at:*
Prominent in the project’s application, but not obvious in the previous table (Table 5.1), are the key project products. This is because they could only be produced after the four quarters, once the work of 2011 was complete.

In summary, these post-project products were expected to include the following:

> *Evaluation will be by way of multiple-case study using mixed data collection methods employing both qualitative and quantitative methodology. Products developed from evaluation findings will include*
> 1. models and guidance notes to help populate a learning and teaching webpage on MAT for RMIT teachers to support future uptake of MAT
> 2. an organisational report to RMIT’s EduTAG (via the MAT Implementation Reference Group) including outcomes and any emerging useability issues
> 3. research papers to disseminate findings in national and/or international scholarly communities.

*(Ref: Colasante LTIF 2011 project application, p.5)*

These items are addressed below.

**Instruction guides** - Achieved
The suite of guides were completed post-project, informed by the student, teacher and support staff experiences with MAT over the year, across the nine cases of the project. They were peer reviewed in draft by non-project teachers, then reviewed in final version by project members. *(See Section 3 and Appendix 4.)*

**Evaluation; Data analysis activities; Publications** - Not yet achieved (in progress)
The nature of qualitative research is such that the emerging themes provide co-investigators of the project clues to mine the data further on various theoretical positionings. This data analysis is maturing and offering the co-investigators different lenses from which to write-up the findings into academic publications that will benefit MAT users at RMIT as well as the wider academic community.

**Production of models of use** - Not yet achieved (in progress)
Production of various models of how to use MAT from the case integrations are intended to offer others in the university ideas of how to integrate MAT into their learning and teaching, and are emerging from the nine cases of the project. These models are under development during the final stages of data analysis, to be disseminated in theoretically and practically useful and meaningful forms. These models are expected to be available later in 2012.

**Feedback to EduTAG on emerging useability issues** - Achieved
The ‘MAT Implementation Reference Group’ noted in the project’s application is not currently operational. Outcomes and any emerging issues related to useability were therefore reported directly throughout the project to EduTAG. This resulted in key technological fixes and improvements to MAT, which 2012 MAT users will benefit from.

**Key project success factors**
The single most important key success factor for this project was the generosity of participation by the project team, plus the people who supported us.
As project leader I could not have asked for a better, more enthusiastic team to work with - but it was more than this. It was the nature of different perspectives of the team members from different colleges, sectors, disciplines, and experiences. It was how everyone was willing to form a team and share with each other candidly and generously, plus form sub-teams as needs arose for various specialised areas to address. It was clear all year through that the intent was to successfully achieve project aims, plus more.

The people who supported our project team in achieving success came from quite a variety of areas across the university (and beyond, i.e.: industry). This can be seen from the long list of acknowledgements (Appendix 1). People generously provided support without expecting accolades, but without them our project would have likely achieved less than it did. This most certainly would have to include the student cohorts, who generously gave MAT a ‘go’ and provided voluminous feedback.

Therefore, our key success factor: dedicated people.

Sustainability of the project’s focus and outcomes

At this stage, it is difficult to rate the sustainability of MAT into the future, that is, scaling up the use of MAT in learning and teaching within the university and beyond. This is teased out below under the headings of:

• Sustainability for the project participants
• Sustainability for scaling up

**Sustainability for the project participants:**
Products developed and processes put in place as part of this project should enable project participants to continue using MAT into 2012 and beyond, but there are some factors to consider:

MAT competence:
• MAT training and support mechanisms put into place in 2011, plus the instruction guides produced, should see confident use into 2012, however,
• Teaching assistants employed by the project to support teachers, including co-training student cohorts in MAT use, will not be funded post-project

Videos / filming
• Videos professionally produced for use in MAT will be available for re-use in learning and teaching activities beyond the project
• Flip cam sets purchased to sustain the filming of student work and/or role plays (used by three of the cases) could support these student cohorts into the future
• The Brunswick library trial of housing and administering student loans for Flip cam sets for the project could be evaluated for extension into 2012

MAT refinement and development:
• MAT was refined at the end of 2011 in response to findings in observing student use of MAT, plus student and teacher feedback; several key improvements will ensure MAT use is improved into 2012.

**Sustainability for scaling up:**
Products developed as part of this project should assist future MAT users into 2012 and beyond, but there are some factors to consider, particularly related to processes:

MAT competence:
• The project training and support mechanisms need to be formalised if scaling up is to be fully supported; perhaps ITS service desk, TALS, and ITS Training involvement is now timely
• The instruction guides produced will help non-project users of MAT; the project team recommends that while waiting for a website to house the guides, at minimum the Quick Guides are linked to the ‘Help’ button in MAT which is currently unpopulated
• The models of use, once complete, should be useful to stimulate ideas of how to use MAT in learning and teaching activities

Videos / filming
• Support processes already exist within the university for production of videos for use in MAT, but may need additional capacity for scaling up. (Note: the project paid for video production overflow not able to be produced by EduTAG, but future MAT users may not have access to funding)
• Further Flip cam sets could be considered for purchase to sustain wider use of student-created videos, or teacher captured student role-plays, etc., although student personal devices add to the mix
• The Brunswick library trial of housing and administering student loans for Flip cam sets for the project could be evaluated for extension into the future and into other RMIT libraries

MAT refinement and development:
• Project participants recommend that the planned further development of MAT is completed into Stage II (image and digital text annotation), and forward planning of Stage III (inversion of MAT activities into a media-rich report). Some of the project participants had and still have a need for fine granular image annotation more so than video annotation
• More technical savvy participants suggest MAT is re-built independent of SMPL (another RMIT L&T tool that forms the ‘back-end’ of MAT), to allow further-fine tuning of the tool
• Thinking bigger than RMIT scaling-up alone, considerations need to be given to moving MAT from a current in-house program to either commercial software or free/open-source shareware with RMIT acknowledgement and kudos. Any considerations for opening MAT up to the open-source community could factor in the product maturation that occurs once a community of interested people work together to enhance technology.
6. **Budget report**

- What was the amount of funds approved?
  
  $46,000

- What was the final amount of funds acquitted?
  
  $48,110

A financial statement (in PDF), signed by the team leader and relevant Finance Manager of acquittal of funds is provided as an appendix (Appendix 2). It provides a statement of income and expenditure against the budget categories specified in the approved project proposal.

7. **Appendices**

1. Acknowledgements

2. Financial report (I/O 360298)

3. Examples of student interactions with MAT:
   - Postgraduate example: Image of MAT as used by Juris Doctor students
   - Undergraduate example: Image of MAT as used by Medical Radiations students
   - Vocational (TAFE) example: Image of MAT as used by Property Services students

4. MAT Instruction Guides:
   - Design discussion
   - Manuals:
     - ‘Teacher Instruction Guide’
     - ‘Student Instruction Guide’
   - Quick guides:
     - ‘Group Set-up Quick Guide’
     - ‘Media Annotation Quick Guide’.

5. Additional guides:
   - Flip cam laminated technical support flyers to support laminated versions of the product supplied Flip Cam instructions
   - Attaching your Flip Camera to the tripod
   - Downloading your Flip Camera video
APPENDIX 1  Acknowledgements

The project team would like to acknowledge and thank all those who contributed to this LTIF project, in various support and participatory roles; whether paid, voluntary or in-kind, the assistance was invaluable.

Student participation:
- All the students across the nine cohorts who used MAT in their learning, and particularly to those who generously consented to being involved in the project and provided extensive feedback

Industry representative involvement in MAT learning and teaching activities:
- Juris Doctor: Peter Condliffe; Stephen Carlton
- Property Services: Melinda Bool; Rob Pitcher; Rod Martinich
- Chiropractic: Mick Webb
- Medical Radiations: Adam Steward

MAT technical training:
- MAT demonstrations: Jody Fenn and Darren Smith (EduTAG)
- Teaching assistants; classroom and teacher support: James Jardine (multiple cohorts), Craig Gardner, Ben Smith
- Classroom and teacher support: Geoff Marchiori (SEH); Tass Katsoulidis (BUS), Tom Palaskas (BUS)

MAT technical support:
- Urgent trouble-shooting: Bill Lane (EduTAG)
- Support; development/programming solutions to student feedback: Darren Smith (EduTAG)
- Teaching assistants: James Jardine, Craig Gardner, Ben Smith

Flip cam laminated technical support flyers to supplement product instructions:
- Production (and lamination) of flyers: Geoff Marchiori (SEH)

Video advice and production for use by teachers in MAT:
- Videos produced: Rod McCrohan (multiple videos) (BUS), Iain McKay (EduTAG)
- Acknowledgement of videos produced prior to 2011 (AV Services; EduTAG)

Finance and HR/payroll advice and assistance:
- Processing invoices; answering queries: Joan Saville (SEH), Denise Ferdinands (SEH)
- Financial reports: Scott Roderick (SEH)
- Comprehensive advice on employing/paying casual staff; payment for existing staff: Karl Hughes (HR)

Ethics support from HREC team:
- Guidance re trial process of low-risk but multi-college ethics approval, in particular: Barbara Polus
- Sub-project team – ‘research’: Josephine Lang (DSC), Kathy Douglas (BUS), Amanda Kimpton (SEH), Narelle Lemon (DSC), Wendy Warren (DSC), Giovanni Mandarano (SEH), Michele Ruyters (BUS)

Library support for student access/borrowing of flip cam set (flip cam, tripod, instructions)
- Brunswick library support; resource management: Bernadene Sward (Manager Library Liaison, DSC)
- Facilitator: Annette Sullivan (manager RMIT Carlton Library)
- Brunswick library staff (plus additional thanks to project team member Wendy Warren)

Privacy advice on wording on Flip-cam instructions related to privacy:
- Advice: Kathy Bramwell (Governance and Planning Office)

Research data assistance:
- Data entry: Stephanie Vella (SEH)
- Interview transcription: Annette and her team (Outscribe)
- Data analysis: Karen Corneille (DSC)
- Artefact capture for analysis: James Jardine; Geoff Marchiori (SEH)
- Survey administration assistance (during project leader’s absence): Heather Pisani (SEH)

Production of MAT guides:
- Co-subject matter expert: James Jardine (with project leader, plus input from project team)
- Consultation: Darren Smith (EduTAG)
- Draft product peer reviewers: Brad Paez (DSC), Margaret Hanrahan (DSC), Greg Schaefer (SEH)
- Final product (inter-project) peer reviewers: Wendy Warren (DSC), Rebekha Naim (DSC)
- Graphic and design support: James Jardine, Geoff Marchiori (SEH)
Project design refinement discussion/advice (pre-project):

- Late 2009: Tass Katsoulidis (BUS), Ruth Moeller (DSC)
- Late 2010: Josephine Lang (DSC)

Sponsorship of the project

- Approval and ongoing sponsorship: Gillian Palmer (DVC(A)), Geoffrey Crisp (Dean L&T)
- Availability during project to answer queries and provide support: Diana Cousens (LTU)
- Time allowance for project leader; accommodating casual staff: Julianne Reid (APVC(A)), Warren Nageswaran (Academic Development Group, SEH)
APPENDIX 3  Examples of student interactions with MAT

A-3.1 Postgraduate example: Image of MAT as used by Juris Doctor students
A-3.2 Undergraduate example: Image of MAT as used by Medical Radiations students
A-3.3 Vocational (TAFE) example: Image of MAT as used by Property Services students

Please note: any student work represented in images presented in this report is digitally altered on one of two levels:

1. Where the student has given written consent for their learning artefacts in MAT to form part of the project and research work: all identifiers are digitally altered

2. Where the student has not given written consent for their learning artefacts in MAT to form part of the project and research work: all identifiers are digitally altered PLUS any entries by the student are digitally removed

Further notes relating to this are provided under each image.

A-3.1 Postgraduate example: Image of MAT as used by Juris Doctor students

In this Juris Doctor example, interaction is evident by the number of coloured markers across the video timeline, which are also represented by the marker list (replaced with X’s).

Experts participated two-fold: role-play in video, and feedback to students – both evident in this image.

Note: This screen capture shows expert participation in MAT; and where student name, number, profile image and student-created marker list have been altered to generic replacements (with thanks to Marchiori, G., (SEH)).
A-3.2 Undergraduate example: Image of MAT as used by Medical Radiations students

In this Medical Radiations example, interaction is evident by the number of coloured markers created by a single student across the video timeline, which are also represented by the marker list on the lower right.

Expert participation involved an experienced radiographer demonstrating image critique techniques across a series of 10 videos.

Note: Although this screen capture is from a student’s MAT site who has given permission to use his/her MAT learning artefacts, names, student numbers and profile image have been altered to generic replacements (with thanks to Jardine, J.)
A-3.3 Vocational (TAFE) example: Image of MAT as used by Property Services students

In this Property Services example, interaction is evident by the participation in the video production (role-play). Four students in the group (listed on left) created a number of coloured markers across the video timeline, also noted by the corresponding marker list on the lower right.

Note: Although this screen capture is from a student’s MAT site who has given permission to use his/her MAT learning artefacts, names, student numbers and profile image have been altered to generic replacements; plus student faces in the video have been deliberately blurred (with thanks to Jardine, J.)
A-4.1 Design discussion

The guides are conceptually designed from two fronts:
- flexibility offered to cater for reader choice, and
- design layout to support this

**Flexibility to cater for reader choice:**
Readers can choose between the manual-styled or quick guide offerings, and within each of the products, can choose which components they read.

Those who need minimal support can refer straight to the quick guides. The teacher might use both ‘Group Set-up Quick Guide’ and ‘Media Annotation Quick Guide’ (the latter to better support their students’ use of MAT). The student in most cases will only require the ‘Media Annotation Quick Guide’. The type of teacher who finds the quick guide sufficient will be relatively IT savvy, and not require additional explanation. They may have already planned their learning design in MAT (or are perhaps not interested in learning design yet and will work that out experientially). Additionally, the quick guides are intended to be useful to teachers and students who have learnt how to use MAT previously (perhaps with the manual), but now only need quick, just-in-time reminders.

For those who like to learn with extra detail and/or additional support, the full instruction guides are available. Within these manuals there are options for the reader to be selective in their reading, as the design layout allows for reading components that they require and/or are interested in, supported by visual sign-posting (see design layout section below).

**Design layout:**

**Quick guides**
The quick guides are each set up as single page flyers with several sign-post headers to draw easy attention to each required section, and each small section has succinct step-by-step technical instructions plus small support images to illustrate the feature of MAT referred to (Figure 4.1).
Teacher and student instruction guides
Both the teacher and student instruction guides are provided in landscape view, for ease of on-screen reading, divided into two columns for smaller device half-page reading if desired. The teacher guide, being the most complex in detail, is sign-posted throughout to facilitate choice and reading preference. Additional icons used in the teacher guide are not used in the student guide as the student version is less complex and headings and diagrams sign-posted sufficiently.

Typical of most of the sections, on the left of each page (column one) there is informative but succinct step-by-step technical instructions. Where instructions require a chatty type introduction, for example to put the steps into context, this is marked in the teacher guide with a small orange speech bubble icon - to differentiate the ‘chat’ so those revisiting the guide for just the how-to steps can be alerted to skip the chat and go straight to the steps below. (See Figures A4.1 and A4.2 below.)

On the right hand side (column two), there are additional supports to the instructions. These appear in 3 different formats and each has its own look to alert the reader. The first of these, ‘Notes’ provide useful factual support detail, in a succinct format, sometimes as a caution or a definition, etc. These appear as pale grey notes with a small pencil and paper icon. Secondly, figures provide visual supports to the step-by-step instructions sitting to their left, and include mainly screen shots of MAT cut down to focus on the relevant feature to support the instructions. Overlays, for example arrows, are added wherever pinpointing is required.

The third item offered on the right-hand side of the page are the cases. Each ‘Case’ is presented framed in a grey border with a small orange and white ‘people’ icon, that is, two overlapping heads not unlike the single heads used in social media as placeholders for a profile image, but representing people interacting. The intent is to alert to a sharing of ideas and experiences of other people who have used MAT. All the cases presented are from the LTIF project, bar two (one is from the preceding MAT pilot, another from an earlier trial), and all offer a short case story to help illustrate an example of a ‘why’ factor to the corresponding steps given on the left. Those readers who do not need this further illustration or are revisiting the guide can easily skip the cases because of this clear sign-posting.
Figure A4.3: Page 23 as a sample page from the MAT Teacher Instruction Guide

Any larger diagrams or schema are given single pages (one column) to allow detail to be seen and read. The schematic diagrams offer comprehensive labelling of MAT (see below for schema in miniature.)

Figure A4.4 (a & b): The schematic diagrams offer comprehensive labelling of MAT; one within the ‘Information about MAT’ section of the guide labels major features (seven); another more detailed schema is in the guide’s appendix (29 features labelled). (Graphic designer: Marchiori, G., SEH.)

Schema shown here in miniature; please see instruction guides for full sizing plus label lists.

A-4.2 Manuals; A-4.3 Quick guides

Provided as separate PDF files:

‘Teacher Instruction Guide’ (A-4.2a); ‘Student Instruction Guide’ (A-4.2b)
‘Group Set-up Quick Guide’ (A-4.3a); ‘Media Annotation Quick Guide’ (A-4.3b).
APPENDIX 5       Additional Guides

The Flip cam technical support flyers to support laminated versions of the product supplied Flip Cam instructions:

- Attaching your Flip Camera to the tripod
- Downloading your Flip Camera video

are provided separately in a single, two-page PDF file (A-5).