

## **New Practices in Flexible Learning**

### **Mobile learning: handheld innovations in flexible learning**

**Evaluation report**

**Ian Whitehouse**

**November 2004**

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# 1 Executive Summary

## 1.1 Introduction

This evaluation report for the project *Mobile learning: handheld innovations in flexible learning* is provided to the Australian Flexible Learning Framework. The report has been prepared by the project evaluator to inform readers in relation to the project's objectives and evaluation parameters, its methodology, evaluation tools and data, the project learning and its results and impacts.

It is timely at this point to acknowledge the efforts and endeavours of all who participated in this project. As detailed within the project manager's report, the extensive list of acknowledgements is indicative of the commitment, participation and energy that has surrounded this project. This is, I believe, a testimony to the quality of the project and its achievements within the timeframes and resources provided.

## 1.2 Key outcomes

The key outcomes for this project have been to:

- **develop** teacher and student activity models based around a series of detailed instructional templates and activity plans
- **explore** handheld, on-the-job, flexible delivery concepts for normally desk-bound activities
- **undertake** a complete analysis and review of available handheld technology and its usefulness in workplace training
- **inspire** staff to participate in innovative training delivery and assessment
- **break** new ground through the application of unique interoperable technology to enhance blended-delivery options and flexibility of training
- **share** knowledge in the international m-learning environment through participation in the Australian Flexible Learning Community and the MOBIlearn project <http://www.mobilearn.org>
- **utilise** partnerships with industry to jointly design, develop, deliver and trial specialised learning designs and content using handheld technology
- **actively** seek out opportunities for applying this technology in workplace training environments
- **provide** alternative solutions for accessing training needs in rural and remote locations including Indigenous communities
- **present** learning processes using technology that will be attractive to young people
- **encourage** increased cooperation and exchange of ideas across state and territory borders by forging mutually beneficial links and partnerships with other training providers and organisations.

### 1.3 Conclusion

Each of these outcomes has been achieved on a number of levels. More importantly, a strong foundation has been laid by this project from which future projects may choose to launch. The outcomes have been demonstrated through the various relationships and partnerships that have been developed and fostered directly as a result of this project and the general acceptance by most participants to 'have a go'. Testimony to this can be found within the milestones.

An example of this is the story from the Royal Tasmanian Botanical Gardens (RTBG) as relayed to me by the project manager. One of the trial participants was using a PDA and, over lunch, discovered that a person could use a wooden skewer to navigate their way on the PDA instead of using the normal stylus pen. This anecdote is a good example of *experiential learning* that may well have been triggered by curiosity and a need to know more and represents a valuable, though unanticipated, outcome.

## 2 Acknowledgements

### 2.1 Project team

**Marcus Ragus** - Institute of TAFE Tasmania, Project Manager; coordination of core and working parties, research and evaluation, content development and project process, industry liaison

**Kirsty Sharp** - Institute of TAFE Tasmania, Flexible Learning Consultant and Manager Flexitrain; research and evaluation, content development and project process,

**Ian Whitehouse** - GlobalNet ICT, Project Evaluator and Consultant; information communications technology

**Stephen Brain** - Institute of TAFE Tasmania, Web Technologist; IT technical specialist, content development

**Dr Robin Petterd** - Other Edge, Technical and Design Consultant; multimedia design, project web design and development, *Pete's Vegie Patch* resource content and design

**Adam Maxwell** – Institute of TAFE Tasmania, Multimedia Designer; *Plant Adaptations* and *Catalogue of Tree Disorders* resource design and development

**James Newton** - Adaptive Technology Consultant & Trainer; accessibilities PDA trial and evaluation

**James Oates** - Drysdale Institute of TAFE; *Food and hospitality* resource, content and trial development and delivery

**Peter Cocker** - Institute of TAFE Tasmania, Team Leader of Horticulture, Northwest; PDA's and the capture of student signup documentation

**Peter Higgs** - Institute of TAFE Tasmania, Manager Learning Media Services; copyright and intellectual property advice

**Trevor Hill**- Institute of TAFE Tasmania, Manager IT Support and Infrastructure; IT support and IT industry liaison

**Richard Farely**- Institute of TAFE Tasmania; IT support and equipment facilitation

**Richard Ormerod**- TOPS office supplies, Hobart, Tasmania; equipment advice and support

**Damian Pozzi** - Institute of TAFE Tasmania, Graphic Artist; photography and video

**Andrea Neale** - Institute of TAFE Tasmania, Project Officer Community Services and Health; adviser for access and equity issues

**Jon Grant** - Institute of TAFE Tasmania, Group Leader; Horticulture industry liaison and review

## 2.2 Project Partners

### 2.2.1 The Royal Tasmanian Botanical Gardens staff team

<b>Richard Symmonds</b>	Manager Botanical Estate; staff management and coordination at RTBG
<b>Natalie Papworth</b>	<i>Catalogue of Tree Disorders</i> resource
<b>Jean Gray</b>	<i>Plant Adaptations</i> resource
<b>Anne Griffin</b>	<i>Pete's Vegie Patch</i> resource
<b>Alan Macfadyen</b>	<i>Catalogue of Tree Disorders</i> resource
<b>Megan Brown</b>	<i>Pete's Vegie Patch</i> resource
<b>Margot White</b>	<i>Plant Adaptations</i> resource
<b>Chris Macfadyen</b>	<i>Pete's Vegie Patch</i> resource
<b>Jai Thorpe</b>	<i>Pete's Vegie Patch</i> resource
<b>Andrew McGown</b>	<i>Foreshore Walk Project</i>
<b>Alistair Hodgman</b>	<i>Pete's Vegie Patch</i> resource, assessment resource

### 2.2.2 New South Wales, New England Institute of TAFE

**Case study development and evaluation**, PDA Building resource, OH&S induction

**Sam Meredith**, Manager Online Projects, Armidale Campus

**Mike Leahy**, HT Building and Construction, Armidale Campus

**Chris Richter**, Multimedia Developer, Inverell Campus

**Daniel Dacey**, Multimedia Developer and part-time Teacher, Armidale Campus

### **2.2.3 Indigenous projects**

**Lyndel Holten** - Institute of TAFE Tasmania; Indigenous liaison and coordination

**Jason Rittman** - Institute of TAFE Tasmania; Indigenous liaison and coordination

**Jenny Longy** – Cape Barron Island; community contact and liaison

**Kerry Mansell** – Cape Barron Island; community contact and liaison

### **2.2.4 Industry sponsorship**

The project team wishes to acknowledge the sponsorship by Hewlett-Packard® Australia to the project through the loan of six HP iPAQ models.

### 3 Background

This evaluation report for the project *Mobile learning: handheld innovations in flexible learning* is provided to the Australian Flexible Learning Framework. This report has been prepared by the project evaluator to inform readers in relation to the project's objectives and evaluation parameters, its methodology, evaluation tools and data, the project learning and its results and impacts.

I came into the role of evaluator for this project in July 2004 as a result of the original evaluator taking leave. The project manager provided me with a briefing in relation to where the project was at and what was planned throughout the life of the project. This was supported with project-relevant background materials and access to the shared workspace.

Throughout this project's life cycle, I have met regularly with the project manager who has provided verbal and written updates in relation to the project deliverables together with some discussion in relation to issues, opportunities and considerations. This approach has been positive and proactive in its formulation and has allowed for a strong working relationship that has been valued by both parties. Evidence of this is supported by the strong level of trust and commitment that has existed throughout the project.

The project *Mobile learning: handheld innovations in flexible learning* has been required to demonstrate a number of project milestones which have encompassed the core project deliverables. Some of the key ones are shown in table 1 below.

Project Execution Plan (PEP)	Team communication strategy
Initial research summaries	Industry sign-off
Technology validation report	Needs analysis of trial sites
Intellectual property and copyright working documentation	Mid year progress report
Content exemplars	Hardware / software research strategies
Templates	Case studies
Handover of compiled project outputs	Intellectual property compliance
Intellectual property and copyright working documentation	

Table 1 – Core milestones

## 4 Objectives and evaluation parameters

This project has included a number of key objectives and evaluation parameters. These have been encompassed within the project outcomes which, in turn, have been directly aligned to the Framework goals:

- to have stronger collaboration between industries, communities and VET providers
- to increase flexible delivery options for rural and remote communities and VET providers
- to increase the innovative use of flexible learning in the workplace.

The areas that participated included; horticulture/tourism, food and hospitality; community services and health, workplace assessment practices, remote and Indigenous communities This has been achieved through this project by the need to:

- **develop** teacher and student activity models based around a series of detailed instructional templates and activity plans
- **explore** handheld, on-the-job, flexible delivery concepts for normally desk-bound activities
- **undertake** a complete analysis and review of available handheld technology and its usefulness in workplace training
- **inspire** staff to participate in innovative training delivery and assessment
- **break** new ground through the application of unique interoperable technology to enhance blended-delivery options and flexibility of training
- **share** knowledge in the international m-learning environment through participation in the AFLC and the MOBlearn project <http://www.mobilearn.org>
- **utilise** partnerships with industry to jointly design, develop, deliver and trial specialised learning designs and content using handheld technology
- **actively** seek out opportunities for applying this technology in workplace training environments
- **provide** alternative solutions for accessing training needs in rural and remote locations including Indigenous communities
- **present** learning processes using technology that will be attractive to young people
- **encourage** increased cooperation and exchange of ideas across State and Territory borders by forging mutually beneficial links and partnerships with other training providers and organisations.

More specifically, these objectives and evaluations have been achieved on a number of levels and it is considered that a strong foundation has been laid by this project from which future projects in this area may choose to launch. The outcomes have been demonstrated through the various relationships and partnerships that have been developed and fostered directly as a result of this project and the general acceptance by most participants to 'have a go'. Testimony to this can be found within the milestones.

## 5 Methodology

This project has deployed a range of methodologies in its pursuit of excellence. This range has included both the use of qualitative and quantitative research approaches. It has also been supported by a number of effective strategic documents, reports, data collection tools and supporting resources to ensure the best possible outcome for this project and which have included:

### Strategic documents

- team communication strategy
- hardware / software research strategies

### Reports

- initial research summaries
- technology validation report
- needs analysis of trial sites
- intellectual property and copyright working documentation
- intellectual property compliance
- industry sign-off
- evaluation milestones

### Data collection tools

- case studies
- handover of compiled project outputs
- written questionnaire
- reflective analysis by pilot participants (voice, hardcopy, etc)
- video taped semi-structured interviews

### Supporting resources

- asynchronous discussion area involving all project trial participants
- trial resource examples
- content exemplars
- templates

The methodologies deployed for this project are considered to be appropriate in that they have been, in many cases, developed through extensive consultation with stakeholders and subject experts and with the goal of ensuring the highest possible level of success. An example is the identification and development of an additional survey instrument entitled *Quick Poll*, which was firstly discussed and then developed. The inclusion of consultation has allowed for the reconsideration of aspects that were deemed to have been missing, yet necessary, as it sought additional background information that might be used to support this and future mobile technology projects.

## 6 Evaluation tools

The project has utilised a suite of evaluation tools in its endeavours to be purposeful and meaningful. The tools have provided a structured set of arrangements that have been effective in relation to managing the project.

The evaluation tools used for this project have included the:

- **initial research summaries** - which were designed to reflect the early and background research in relation to the use of PDAs for learning and assessment purposes. It incorporated an interesting mix of research summaries across a variety of situations including a mix of relevant case studies and technology references.
- **technology validation report** – that was designed to ensure that the technology was a valid, user-friendly opportunity for education and assessment. This included the development and utilisation of an equipment evaluation survey.
- **needs analysis of trial sites** – which included the consideration of equipment and hardware requirements. Aspects that were considered included:
  - PDAs, memory cards and camera
  - software that was appropriate for the hardware
  - software that was cost effective, yet provided the best possible learning and assessment options.

A web browser and a PDA version of PowerPoint® called Pocket Slides™ were selected and adequate training was provided to support the project. The use of a variety of trial sites, along with the support provided to the sites, was effective in relation to the trials. Also effective was the diversity of learning opportunities and/or assessment methods that were trailed, as utilisation of such tends to build valued relationships and support.

- **intellectual property and copyright working documentation** – were developed and used to ensure that all intellectual property and copyright considerations were considered. This aspect of the project was encompassed within pages 4, 9 and 10 of the industry agreement, thereby reducing the risk in relation to this component of the project. This is a good strategy because it provides for the key aspects of this milestone to be contained within a single document. I am sure industry has appreciated this approach.
- **industry sign-off** – involved the development of a suite of resources that made up this aspect of the project. A substantial amount of energy has been put into the development of a set of supporting resources which in part is evidenced by the suite of documentation that has been developed to support this deliverable.

**Note:** The evaluator is aware that, at the time of preparation of this report, not all industry areas have been able to sign-off. This was due to complexities arising through the project that restricted them from doing so.

- **milestones, case studies and user evaluations** – have been utilised to collect meaningful data for this project. They have included numerous documented milestones and case studies, compiled project outputs, written questionnaires, reflective analysis by pilot participants (voice, hardcopy, etc) and video taped semi-structured interviews.

## 7 Evaluation data

As detailed in the previous section, this project has utilised a range of evaluation tools to obtain purposeful and meaningful project data, along with detailed information on the findings being available through the project report.

Generally, the evaluation data collected has been of a high quality. However the number of respondents available for some surveys was only small and, therefore, reliance on the evaluation data should be carefully considered. This said, the trend is that the data collected will be of use and of value when considered in relation to the 'whole' project and not 'bits' in isolation.

The data that has been captured through documented milestones, the numerous case studies, compiled project outputs, written questionnaires, and reflective analysis by pilot participants (voice, hardcopy, etc) and video taped semi-structured interviews generally point to strong support for the project and its outcomes. Some participants have provided some insightful feedback in relation to particular aspects of the project that readers need to be made aware of. This has included:

- a detailed account of the use of PDAs for those with a sight disability
- anecdotal reflection in relation to using the technology for learning within rural and remote communities, and
- the benefits of having a multi-functional resource (PDA) within a work environment that has the potential to be used for more than this project's intention.

The appendices section of this report contains a number of milestones that have taken account of a number of reportable aspects related to this section. In addition, the project report also provides a reflective account of the project journey and is supported by commentary in relation to the analysis, reflection and evaluation of the data. As such, this aspect of the evaluation report should be read with the project report in mind and, where appropriate, reference to the various appendices and sections is recommended.

## 8 Project learning

The project learning for most participants of this project has been significant. Issues, opportunities and challenges that have played a major role in this project have included:

- delivery logistics
- resource development
- team development and partnerships
- technology
- Indigenous aspects

**Delivery logistics** – the geographical logistics that this project originally envisaged have proven to be very challenging. The challenges have come in many forms including infrastructure, motivation and time availability to commit to the project.

**Resource development** – a number of resources were developed as a key aspect of this project. A number of key learning aspects occurred and included the requirements and needs appropriate to a PDA environment, that is, what works and what does not. For example:

- limiting the text quantities
- setting specific size boundaries when designing for a PDA so that the resource could fit on a screen without the need for a horizontal scroll bar and reduced vertical scrolling
- background and font colours were very critical
- use of proprietary products needed to be considered carefully and supported by training
- context for the use of the resource
- sound and multimedia activities that were to be used for learning and assessment.

**Team development and partnerships** – many aspects of the project reported real benefits that the PDAs offered in relation to their workplace teams. This was particularly evident at the Royal Tasmanian Botanical Gardens where some participants had never worked together before. The use of PDAs within their workplace offered an insight into other areas of the organisation and enhanced team moral. This aspect tends to suggest an improved workplace 'sense of community' which is supported by Richard Symmonds, Manager Botanical Estate who said, 'We can identify areas to move staff into that would be of benefit to the organisation. This is a very positive outcome.'

**Technology** – the use of PDA's, and more specifically Pocket PCs, throughout the project has highlighted some important aspects. These aspects have included:

- **use** of the equipment; for example, the device needs to be kept charged and should be reset regularly
- **appropriateness** of the equipment for the environment that it is being used in; for example, in the Royal Tasmanian Botanical Gardens many of the participants work outdoors and hence appropriate equipment protection is important
- **Indigenous aspects** – after a number of discussions with the project manager, it became obvious that this project would not reach its end point by the due date. The

project manager, through his final report, has extended this discussion further. However, it is important to note the following in this evaluator's report: the advice from the community is that we must first build strong relationships and friendships with communities and that this can take time.

The project has seen much learning through the engagement of participants with mobile learning and assessment activities. This is evidenced through the identified values that have been shared in relation to the various learning and assessment resources and opportunities. Such tends to be reflective of a shift in mobile learning in terms of its acceptance and appropriateness.

## 9 Project results/impact

Not often does a project have the opportunity to impact across such a diverse group of individuals and their learning environments. This project has had a significant impact in relation to informing learners, practitioners and the wider learning community alike in relation to this area of learning. It has also set a wide foundation from which to build upon in relation to further research. Key aspects of the results and/or impacts in relation to this project's outcomes are demonstrated by the cross sectional view. Evidence of this is the:

- **contribution** made in relation to increased knowledge for the development of mobile learning practice and through the development of mobile learning content that has been trailed in work places.
- **investigation** and evaluation into a range of handheld equipment opportunities that may be able to be used in the delivery and assessment of mobile learning.
- **example** of good practice in relation to collaboration with industry and community groups through partnership arrangements. This included aspects of personal development and team building by the provision of innovative options that have increased the awareness for flexible learning using mobile technology.
- **deepened** understanding and appreciation of the learning needs of rural and remote communities.
- **innovation** that has been evident throughout this project and has included the development of the virtual PDA (simulator) and the hot spot image map that allows users to navigate their way through their learning program.



- **multiple opportunities** for the potential to use PDAs as wireless communication devices for activities in addition to learning and/or assessment.

## 10 Conclusions

In conclusion, it is felt that the enormous amount of interest that this project seems to have been generated among the learning community, needs to be highlighted. The project manager has reported, on a number of occasions, the significant level of enquiry and interest. This view is well supported through the case studies, video interviews and the survey responses.

The key aspects that have been evaluated through this project that have been considered to be purposeful and effective have been the:

- strategic documents that have been developed for this project
- reports that have informed the participants and others
- data collection tools that have been effective and vital to the success of this project
- supporting resources that have been developed and which can only be described as innovative and exemplary.

This evaluation report has been prepared on the basis of the information, discussions and electronic resources provided to the evaluator. It is recommended that the other project materials, including the project report, be reviewed for additional information and further reading in regard to each aspect of this report.

## 11 Recommendations

A quote from the project manager's final report is timely as it perhaps is reflective of a view shared by the evaluator.

At the end of this project, the team finds itself at the cusp of a very promising future in mobile learning. Constant advances in technology, combined with a movement away from conventional learning delivery practices, ensure the future of this innovative area. Although there is so much more to explore, we feel that the project team has provided a small example of the potential of mobile learning during the short period available for this project.

Marcus Ragus, *New Practices in Flexible Learning* project report, part 1, November 2004

It is within the context of this promising future that the following four recommendations are made in regard to this report. Specifically, it is recommended that:

1. **more** emphasis should be directed towards this technology for learning by increasing the time and resources available for projects. This is seen as critical to allow projects to reach their full potential by being able to take advantage of the learning that is discovered through the project and then feeding that back into the project. The Indigenous learning referred to earlier in this report serves as an example supporting this recommendation. This scalable approach is considered to be strategic in nature and therefore, if well managed, effective.
2. **the future ideas and concepts** that have been identified through this project be considered as a basis for future projects. An example would be the PDA simulator. If the concept of mobile simulators was to be further explored and developed, the opportunities for industry in relation to learning and workplaces may have significant potential.
3. **equipment and users'** needs should be carefully considered. Examples of such considerations include landline and network (LL&N), cost, robustness, hardware and software inclusive of plugins that are required to support this approach to mobile learning. As the technology changes so rapidly, it is considered appropriate to recommend that all future mobile learning projects be required to undertake an environmental scan in relation to equipment and users as a condition of their project approval.
4. in order to increase the independence of the evaluator role and to allow the evaluator to confirm aspects of future projects, that a purposeful **evaluator final report survey questionnaire** be incorporated. An example questionnaire is attached in the appendices.

These recommendations should be read in conjunction with the final project manager report *Mobile learning: handheld innovations in flexible learning*.

## 12 Appendices

### 12.1 Appendix 1: Evaluation forms

#### 12.1.1 Single user evaluation

Users name (optional): \_\_\_\_\_

#### 1. Rate your initial impression of the handheld.

1 – I hate technology, 5 – Interesting, 10 – Great, I want one

1-2-3-4-5-6-7-8-9-10

#### 2. After using the handheld what statement best reflects your opinion?

- Unsure of its potential, I would like to trial its use for a longer period
- I hate technology, this would not be suitable for me
- I find this technology great, it would be useful to me, I want one now
- It would not suit my current requirements
- This might not be suitable for me but I can see its potential for others

#### 3. What statement best describes the main activity you used the handheld for during the pilot? Circle the appropriate areas

learning/ assessment/ work/ personal activity/other

Briefly describe the activity:

\_\_\_\_\_

**4. How easy was the handheld to use? Rate from**

**1**[Really difficult to use, I would not use it again]-**5** [straight forward with some experimentation] **10**[Easy no problems]

**1-2-3-4-5-6-7-8-9-10**

Briefly explain your answer?

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**5. Was the activity useful to you?**

**Yes / No**

Briefly describe the reason for your answer:

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**6. Would you use the activity resource (the program, software, learning resource) or something similar again if you had access to it?**

**Yes / No**

Briefly describe the reason for your answer:

---

---

**7. Did the activity enhance your overall experience?**

**Yes / No**

Briefly describe the reason for your answer:

---

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**8. Would you like to see more activities made available using this technology?**

**Yes / No**

Briefly describe the reason for your answer:

---

---

**9. Did you encounter any difficulties or problems using the handheld?**

---

---

**10. What surprised you most about the handheld?**

---

Why? \_\_\_\_\_

## 11. Would you use a handheld again?

**Yes / No**

**If No**, why not? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**If yes**, rate the way in which you would like to use it?

**1 – [I would not like to use it for this], 2 – [I would occasionally use it for this],  
3 – [I would really like to use it for this]**

**1-2-3** As an electronic diary and organiser

**1-2-3** As a device to assist my learning through the use of digital learning and assessment resources

**1-2-3** As a device to communicate (beam, SMS, email information to others with similar devices)

**1-2-3** To play games

**1-2-3** To access the internet

**1-2-3** To read my emails

Other please explain \_\_\_\_\_

**Thank you for undertaking this evaluation**

## 12.1.2 Evaluation of project process

Name: \_\_\_\_\_

**1. How has participating in the project benefited you (your personal development) as an individual in your workplace?**

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**2. Do you think that the project has benefited the organisation?**

**Yes / No**

If yes, how?

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If no, why not?

---

---

**3. What ongoing impact will the project have on you?**

---

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**4. What ongoing impact will the project have on your organisation?**

(eg, on organisational IT infrastructure, management process, team building etc)

---

---

**5. Has the project provided valid and practical outcomes?**

**Yes / No**

If yes, what?

---

---

If no, why not?

---

---

**6. Rate the following**

1 – no use for me, 5 – useful, 10 – Very useful to me

Technology introduction days ..... 1-2-3-4-5-6-7-8-9-10

Microsoft® PowerPoint® training..... 1-2-3-4-5-6-7-8-9-10

Microsoft® FrontPage® training..... 1-2-3-4-5-6-7-8-9-10

Project management contact and assistance..... 1-2-3-4-5-6-7-8-9-10

PDA resource development process..... 1-2-3-4-5-6-7-8-9-10

Use of PDA technology ..... 1-2-3-4-5-6-7-8-9-10

Working on the individual project teams ..... 1-2-3-4-5-6-7-8-9-10

**Comments**

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**What would you like to see continue as a result of this project and how do you think this could happen?**

---

---

---

**Thank you for undertaking this evaluation**

### 12.1.3 Learner/practitioner/assessor/trainer evaluation of PDA use

Name: \_\_\_\_\_

#### 1. What was your initial impression of the handheld?

---

---

#### 2. How do you see it now and has your opinion changed?

---

---

#### 3. What was the main activity you used the handheld for during the pilot? Circle the appropriate areas:

**learning/ assessment/ work/ personal activity**

Briefly describe the activity:

---

---

#### 4. Was the activity useful to you?

**Yes / No**

Briefly describe the reason for your answer:

---

**5. Would you use the activity resource (the program, software, learning resource) again if you had access to it?**

**Yes / No**

Briefly describe the reason for your answer:

---

---

**6. Did you use the handheld for anything that you did not expect to? Why?**

---

---

**7. Was there anything you thought you would use the handheld for that you didn't? Why?**

---

---

**8. How easy was the handheld to use? Rate from**

**1**[Really difficult to use, I would not use it again]-**5** [straight forward with some experimentation] **10**[Easy no problems]

**1-2-3-4-5-6-7-8-9-10**

Please explain your answer?

---

**9. Can you please list all of the activities you used the handheld for during the trial. You might like to look through the applications/ start menu on the PDA to make sure you cover everything.**

---

---

**10. Did you talk about the trials with co-workers, co-students, family, and friends? What was their level of interest?**

---

---

**11. How often during the day would you estimate you used the handheld?**

**[1 to 2 times] – [3 to 6 times] – [7 to 10] – [11 or more]**

What prompted you to use it during the day?

---

---

**12. Did you use the organising tools such as the diary and address book? If so, could this become part of your work life?**

---



**13. How did the use of organising tools on a handheld compare with a standard written diary or organiser?**

- I don't use or need a diary / organiser
- I would be more inclined to use it than a standard written diary / organiser
- I prefer a standard written diary / organiser

Why? \_\_\_\_\_  
\_\_\_\_\_

**14. What surprised you most about the handheld?**

\_\_\_\_\_

Why? \_\_\_\_\_  
\_\_\_\_\_

**15. Would you use a handheld again?**

**Yes / No**

**If No**, why not? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**If yes**, rate the way in which you would like to use it?

**1** – [I would not like to use it for this], **2** – [I would occasionally use it for this], **3** – [I would really like to use it for this]

- 1-2-3** As an electronic diary and organiser
- 1-2-3** As a device to assist my learning through the use of digital learning and resources
- 1-2-3** As a device to house assessment resources
- 1-2-3** As a device to communicate (beam, SMS, MMS, email information to others with similar devices)
- 1-2-3** To play games
- 1-2-3** To access the Internet
- 1-2-3** To read my email

Other please explain \_\_\_\_\_

**Thank you for undertaking this evaluation**

### 12.1.4 Equipment evaluation survey

Your name (optional): .....

To what extent do the following statements describe the technology identified for use in the New Practices in Flexible Learning, m-learning trials and their potential for use in your context?

Please write 1, 2, 3, 4 or 5 in the box next to each statement, as follows:

- 1 Strongly disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly agree

Leave the box blank if you are not sure, or you have no basis for making a judgement.

#### The technologies detailed in the validation report and outlined during the equipment presentation days:

1. Have potential as valid tools for learning in my area.	<input type="checkbox"/>
Comment:	
2. Potentially, will assist in the delivery of learning to my particular client market	<input type="checkbox"/>
Comment:	
3. Would benefit staff within my team, organisation.	<input type="checkbox"/>
Comment:	
4. Will suit the particular trial I / we have identified for the New Practices in Flexible Learning project.	<input type="checkbox"/>

Comment:

***Additional comments or suggestions:***

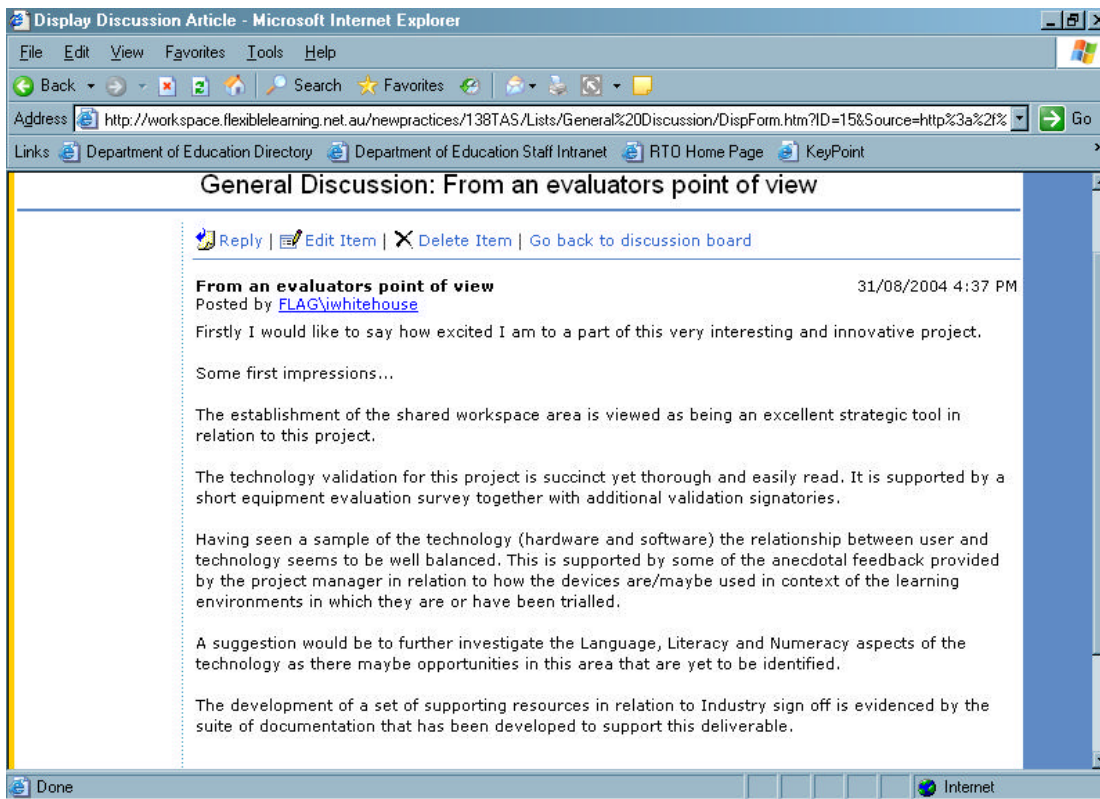
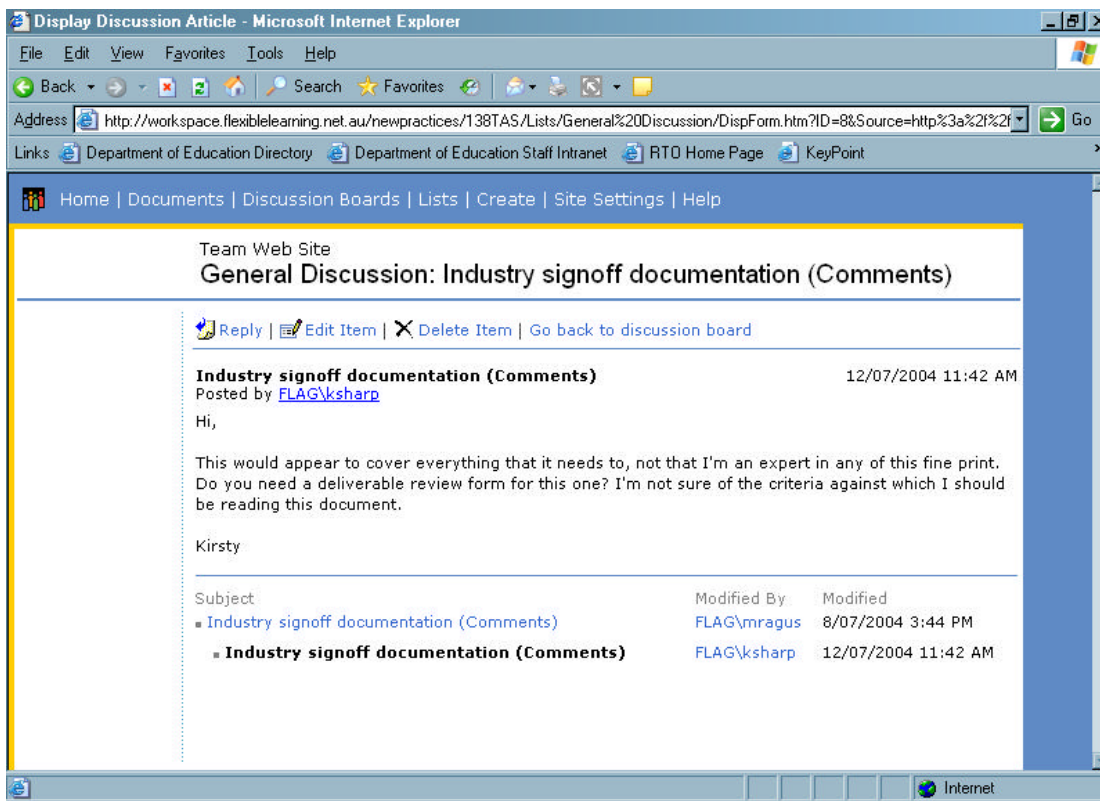
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## 12.2 Appendix 2: Snapshots from the shared workspace



## 12.3 Appendix 3: Evaluator's report excerpts

A number of reviews were conducted against select criteria. The following is a summary of the evaluator's findings.

### 12.3.1 Technology validation report

<b>Purpose</b>	To determine whether the technology validation report fulfils the determined criteria of the original proposal and the needs of the identified client groups and industry sectors
<b>Acceptance criteria</b>	<ul style="list-style-type: none"> <li>• Project stakeholder requirements detailed including associated costs, availability and sustainability of desired equipment</li> <li>• Client equipment trials are undertaken and user evaluations documented</li> <li>• Evaluations presented to core group for review and final recommendations made</li> </ul>
<b>Comments/ conditional acceptance criteria</b>	<ul style="list-style-type: none"> <li>• The technology validation for this project is considered to be sound. The research into the various devices is succinct yet thorough and easily read. It is well supported by a short equipment evaluation survey together with additional validation signatories. Having seen a sample of the technology (hardware and software) the relationship between user and technology seems to be well balanced. This is supported by some of the anecdotal feedback provided by the project manager in relation to how the devices are/maybe used in context of the learning environments in which they are or have been trialed.</li> <li>• A suggestion would be to further investigate the Language, Literacy and Numeracy aspect of the technology as there maybe opportunities in this area that are yet to be identified.</li> <li>• Another good project deliverable.</li> <li>• Really enjoyed the example of being able to use a wooden skewer rather than the stylus pen (lateral thinking at its best).</li> </ul>
<b>Date</b>	22 <sup>nd</sup> August 2004

**12.3.2 Industry sign-off**

<b>Purpose</b>	To determine whether the industry sign-off procedure has fulfilled the determined criteria of the original proposal and the needs of the identified industry groups and the project team.
<b>Acceptance criteria</b>	<ul style="list-style-type: none"> <li>• Industry provided with clear details outlining structure and purpose of the project</li> <li>• Clearly identified trial profiles that have been developed in conjunction with industry and learners, that have been determined as fulfilling required needs of all stakeholders</li> <li>• Required industry staff involvement and their roles in the project</li> <li>• Required contracts / agreements determined and signed by all parties</li> </ul>
<b>Comments/ conditional acceptance criteria</b>	<ul style="list-style-type: none"> <li>• To date as reported to me by the project manager a substantial amount of energy has been put into the development of a set of supporting resources in relation to this deliverable. This is evidenced by the suite of documentation that has been developed to support this deliverable. To date one industry has signed off on this deliverable with the project manager advising that others have/will give their in principle support.</li> <li>• The quality and range of what has been provided seems to be well thought-out and considered in relation to this deliverable.</li> </ul>
<b>Date</b>	22 <sup>nd</sup> August 2004

### 12.3.3 Team communication strategy

<b>Purpose</b>	To determine whether the team communication strategy meets the needs of the team and allows for sufficient flexibility to evolve as the team dictates.
<b>Acceptance criteria</b>	<ul style="list-style-type: none"> <li>• All team members and other key stakeholders to be notified of the opportunity to attend project meetings by way of an advanced calendar of events</li> <li>• Apart from face to face meetings team members and other key stakeholders will be assisted and encouraged to use other communication options including a shared online environment and an ongoing online reference blog</li> <li>• Team members roles are negotiated through consultation and mutually agreed upon</li> <li>• Team members involvement, input and work clearly acknowledged</li> <li>• Team members will be provided with the required documentation needed to undertake the project including the project plans and evaluation reports they will also be consulted in the development and or any changes that might result with this documentation</li> </ul>
<b>Comments/ conditional acceptance criteria</b>	The establishment of the shared workspace area is viewed as being an excellent strategic tool in relation to this project and more specifically this deliverable. I have been shown the workspace and am currently awaiting access but have received the required supporting documentation in support of this deliverable. Well done.
<b>Date</b>	22 <sup>nd</sup> August 2004

### 12.3.4 Intellectual property and copyright working documentation

<b>Purpose</b>	To determine whether Intellectual property and copyright working documentation has fulfilled the determined criteria of the original proposal and the needs of the identified industry groups, the project team and required legislation.
<b>Acceptance criteria</b>	<ul style="list-style-type: none"> <li>• Clearly outlines Intellectual property and copyright as it impacts on the project</li> <li>• Details implications for project team participants, industry and clients</li> <li>• Identifies required documentation needed such as talent release and location agreement forms</li> </ul>
<b>Comments/ conditional acceptance criteria</b>	<ul style="list-style-type: none"> <li>• The project deliverables for this milestone are, as always, well considered given the tight project timelines. As indicated in your email 27<sup>th</sup> October 2004, the outcomes for this milestone are encompassed within pages 4, 9 and 10 of the industry agreement.</li> <li>• This is a good strategy because it provides for the key aspects of this milestone to be contained within a single document. I am sure industry has appreciated this approach.</li> </ul>
<b>Date</b>	31 <sup>st</sup> October 2004

### 12.3.5 Needs analysis of trial sites

<b>Purpose</b>	To determine whether the needs analysis process of trial sites fulfils the determined criteria of the original proposal and the needs of the identified organisation.
<b>Acceptance criteria</b>	<ul style="list-style-type: none"> <li>• Targeted clients participating in the project clearly detailed</li> <li>• Trial sites clearly described and requirements identified</li> <li>• Evidence of, scope and details of client consultation process clearly outlined</li> <li>• Evidence of research, documentation and evaluation process detailed</li> <li>• Clear evidence of the results analysis process undertaken</li> </ul>
<b>Comments/ conditional acceptance criteria</b>	<ul style="list-style-type: none"> <li>• Once again a tidy set of arrangements for this milestone that hopefully will provide the project with much exciting data.</li> <li>• I really do like the variety of trial sites and the way you have proposed to support them in relation to the trials. I also like the different aspects of trailing that each site proposes to undertake. This tends to indicate a trusted and valued relationship and I suspect strong support for this project.</li> <li>• As we have discussed it will be interesting to see what and how the results analysis processes are offered up to you in the coming few weeks and to see whether they are different from the needs analysis document.</li> </ul>
<b>Date</b>	31 <sup>st</sup> October 2004

### 12.3.6 Content exemplars

<b>Purpose</b>	To determine whether the project Content Exemplars fulfil the determined criteria of the original proposal and the needs of the identified client groups.
<b>Acceptance criteria</b>	<ul style="list-style-type: none"> <li>• Required copyright and/or intellectual property rights, and/or talent/location releases accompany content</li> <li>• Content exemplars are able to be used without modification, given appropriate hardware/ software availability</li> <li>• Content is presented in an accessible format</li> <li>• Content exemplars have been trialled and evaluated prior to release, and evaluation outcomes detailed</li> <li>• Suggested implementation/ instructional plan for use of content exemplars</li> <li>• Content is applicable to identified industry/ community context - with respect to cultural values and commercial in confidence information</li> </ul>
<b>Comments/ conditional acceptance criteria</b>	<ul style="list-style-type: none"> <li>• The content exemplars are just terrific. They look and function generally quite well in a PDA environment and seem to be effective in relation to the learning environment and to the various users in the main. For example the use of a navigation map so as to allow users to navigate their way through the resources and the use by assessors to record assessments by photo and text.</li> <li>• Important to note the feedback received in relation to the trials and report on this in the final report as there are some important points here.</li> </ul>
<b>Date</b>	13 <sup>th</sup> November 2004

### 12.3.7 Templates

Purpose	To determine whether the project template resources fulfil the determined criteria of the original proposal and the needs of the identified client groups.
Acceptance criteria	<ul style="list-style-type: none"> <li>• Templates are presented in an accessible format</li> <li>• Hardware and Software requirements for using templates is included in template documentation</li> <li>• Learning design rationale is included with template documentation</li> <li>• Templates have been trialled and evaluated prior to release, and evaluation outcomes detailed</li> <li>• Required copyright and/or intellectual property rights, and/or talent/location releases accompany templates</li> <li>• Suggested implementation/ instructional plan for use of template</li> </ul>
Comments/ conditional acceptance criteria	<p>Following discussions with the project manager, I feel it is important to note the relationship between the templates and the content exemplars. The use of the templates as a basis for the suite of content exemplars is a good strategy. After all what better way to test them for effectiveness, workability and so forth.</p> <p>The benefit for those who use these templates I suspect is will be found in the adaptability of the template suite of resources that you have demonstrated within the exemplar milestone.</p>
Date	13 <sup>th</sup> November 2004

### 12.3.8 Case studies

Purpose	To determine whether the project case study resources fulfil the determined criteria of the original proposal and the needs of the identified client groups.
Acceptance criteria	<ul style="list-style-type: none"> <li>• Information from appropriate persons has been gathered in a variety of ways, from at least 3 participants (for example; learners, trainers or employers) in the case study</li> <li>• Learnings are presented in such a way that they are readily accessible to VET practitioners for transfer to their own context, which may include written, visual, video or audio documentation</li> <li>• Impact of pilot on learner engagement, access to learning and integration of work and learning to be identified</li> <li>• Impact of pilot on trainer issues – convenience, organisational processes, ease of use - to be identified</li> <li>• Impact of pilot on workplace to be identified – performance improvement, accessing opportunities to integrate, enhance business work sloses, engagement of staff in learning and learning support</li> <li>• Required copyright and/or intellectual property rights, and/or talent/location releases accompany case studies, with respect to cultural values and commercial in confidence information</li> <li>• Methodology, including timeframe and required resources, for conducting case study is included</li> <li>• Nature of industry of enterprise/ community partnership is described</li> <li>• Communication meets accessibility guidelines</li> </ul>
Comments/ conditional acceptance criteria	<ul style="list-style-type: none"> <li>• The ‘diversity’ of the various case studies is perhaps the best outcome for this milestone and, I suspect, will build a strong foundation for the future based upon the various learnings (both formal and informal). The video interviews and written case studies formulate and document a wonderful learning journey for all who have been a part of the project either as a participant or as an observer.</li> <li>• Another key aspect has been the mix, variety and the varying degrees of successes that participants experienced. For example, James’ case study for those with vision impairment.</li> </ul>
Date	13th November 2004

## 12.4 Appendix 4: Quick Poll

# Australian Flexible Learning Framework

## Supporting Flexible Learning Opportunities

### New Practices in Flexible Learning

#### Mobile learning: handheld innovations in flexible learning

#### Quick Poll

**Question 1** If you had an opportunity to undertake flexible learning using a portable device what would your preferences be?

	<p><input type="checkbox"/> personal digital assistant (PDA)</p> <p><input type="checkbox"/> mobile phone</p> <p><input type="checkbox"/> smart phone (combination)</p> <p><input type="checkbox"/> other eg. paper, laptop etc. (please specify) <input style="width: 100px; height: 20px;" type="text"/></p>
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**Question 2** Do you regularly use or own any of these?

	<p>personal digital assistant - regularly use <input type="checkbox"/> own <input type="checkbox"/> neither <input type="checkbox"/></p> <p>mobile phone - regularly use <input type="checkbox"/> own <input type="checkbox"/> neither <input type="checkbox"/></p> <p>PDA / phone (combination) - regularly use <input type="checkbox"/> own <input type="checkbox"/> neither <input type="checkbox"/></p> <p>smart phone / PDA (combination) - regularly use <input type="checkbox"/> own <input type="checkbox"/> neither <input type="checkbox"/></p>
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**Question 3** If you had a choice which of the following devices would you prefer (including but not necessarily only for learning), please rate from 1 (high) to 3 (low) for your order of preference.

	<p><input type="checkbox"/> personal digital assistant (PDA)</p> <p><input type="checkbox"/> mobile phone</p> <p><input type="checkbox"/> PDA / phone (combination)</p> <p><input type="checkbox"/> smart phone / PDA (combination), smaller screen size</p>
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**Question 4** What type of learning and assessment would you prefer? You may select multiples.

	<p><input type="checkbox"/> interactive learning and assessment, interacting either with other learners or technology assisted</p> <p><input type="checkbox"/> coaching in the workplace</p> <p><input type="checkbox"/> just in time/anytime any where learning and assessment</p> <p><input type="checkbox"/> use of technology in the learning and assessment process</p> <p><input type="checkbox"/> on campus classes</p> <p><input type="checkbox"/> workbooks, texts</p> <p><input type="checkbox"/> work based project</p> <p><input type="checkbox"/> other (please specify) <input style="width: 100px; height: 20px;" type="text"/></p>
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**Question 5 Please rate your level of access to technology (eg. computer, laptop, mobile phone, PDA, etc)?**

	<p><input type="checkbox"/> no access</p> <p><input type="checkbox"/> restricted access eg. limited time in the workplace to some or all equipment</p> <p><input type="checkbox"/> unrestricted access either some or all equipment</p> <p><input type="checkbox"/> other (please specify) <input type="text"/></p>
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**Question 6 Would any of the following issues be a barrier to you and limit your use of portable technology?**

	<p><input type="checkbox"/> small screen size</p> <p><input type="checkbox"/> weight of device eg. laptop</p> <p><input type="checkbox"/> accessories e.g. PDA stylus</p> <p><input type="checkbox"/> Other (please specify) <input type="text"/></p>
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**Question 7 Have you been involved in any flexible learning in the past five (5) years; eg. WebCT, toolboxes, online learning?**

	<p>Yes <input type="checkbox"/> No <input type="checkbox"/> Other please specify <input type="text"/></p>
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**Question 8 If you could design the ultimate mobile learning device, what would it be and what could it do?**

	<p>Please specify <input type="text"/></p>
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**Question 9 What is your gender and age?**

	<p><b>Gender</b> Female <input type="checkbox"/> Male <input type="checkbox"/>      <b>Age</b> 15 – 19 <input type="checkbox"/> 20 – 35 <input type="checkbox"/> over 35 <input type="checkbox"/></p>
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**(Include survey return details)**

## 12.5 Appendix 5: Evaluator draft final report survey questionnaire

1. Who needs to be acknowledged in relation to the final evaluator's report from within your project group?


2. Do you have any additional background information that you would like to see included within the final evaluator's report?


3. Can you please provide comments in relation to the project's objectives and evaluation parameters that you would like to see included within the final evaluator's report?


4. Can you please provide comments in relation to the project's methodology that you would like to see included within the final evaluator's report?


5. Can you please provide comments in relation to the project's evaluation tools that you would like to see included within the final evaluator's report?


**6. Can you please provide comments in relation to the project's evaluation data that you would like to see included within the final evaluator's report?**


**7. Can you please provide comments in relation to the project learning that you and/or your team has experienced that you would like to see included within the final evaluator's report?**


**8. Can you please provide comments in relation to the project results and/or impact(s) that you and/or your team have experienced that you would like to see included within the final evaluator's report?**


**9. Do you have any additional or concluding comments that would like to see included within the final evaluator's report?**


**(Include survey return details)**

**For more information contact:  
Framework Communications Team  
Phone: (07) 3234 1852  
Fax: (07) 3237 0419**

Mobile learning: handheld innovations in flexible learning

Evaluation report

**Email: [enquiries@flexiblelearning.net.au](mailto:enquiries@flexiblelearning.net.au)**