



## Telematics Course Development Fund Trust

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# Strategies and designs for new technologies: e-learning for youth

## Final report

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<b>Overview</b>	<b>2</b>
<b>Scan of literature on youth learning and instructional design for e-learning</b>	<b>2</b>
<b>Models and strategies for young learners using new technologies</b>	<b>4</b>
Teacher ICT profile	4
Learner profile	4
Teaching and learning strategies	5
Instructional model	5
<b>How learners engage with e-learning: findings from the project research</b>	<b>7</b>
Focus group results	7
<b>Benefits of e-learning for youth – a teacher’s perspective</b>	<b>8</b>
Findings	8
Challenges	9
<b>Conclusion: digital storytelling - a model for engagement</b>	<b>10</b>
Resources	10
<b>References</b>	<b>11</b>

## Overview

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This project explored the development gaps in relation to the needs of youth at risk, specifically CALD youth and their teachers, and new and emerging ICT applications. The project focused on sound educational instructional strategies and design for the use of technology with the target learner group. The project primarily investigated how youth engage with e-learning, teacher readiness to engage with the technologies and models of instructional design for integrating the technologies into learning design.

The project originally identified online voice tools, blogs and possibly pod-casting as e-learning tools and technology that could engage young learners. Teachers were presented with a starter session where the tools and their uses were demonstrated. Teachers selected digital storytelling as the tool with the greatest potential application.

Further investigation into blogging and pod-casting also identified the issues around using these 'social software' tools within an educational organisation. Downloads are restricted and firewalls often prevent access to blogging and pod-casting sites.

Other technologies such as online voice tools and digital storytelling programs can be accessed within most organisations' IT infrastructure. The decision to focus on these technologies and on digital storytelling in particular was influenced also by findings from the literature scan.

## Scan of literature on youth learning and instructional design for e-learning

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A scan of principles of the youth learning and of how e-learning can engage young learners indicates that there is little research specifically around the uptake and use of e-learning tools with NESB youth. Much of the research available refers specifically to the characteristics of generation Y and how they like to learn.

- **Youth learning**

Recent research by Choy & Delahaye (A case for youth learners, 2004) has identified some of the principles of youth learning (as opposed to adult learning) and points out the need for teaching and learning designed specifically for youth. In summary:

- *most youth use a surface approach to learning and are outcomes focused*
- *most youth learning could be facilitated through a directive, but supportive approach where the facilitator plays the role of a motivator and guide*
- *most youth seem to appreciate a relational level of understanding rather than abstract thinking. Their learning is best facilitated through an approach that begins with concrete experience and is followed by reflective observation and then abstract conceptualisation.*

And, what is common to all generations and all groups is that they want to be able to choose the how, when and where of their learning (LeCornu, 2004).

- **Youth and e-Learning**

The Australian Flexible Learning Framework, through its *Inclusive E-learning* project is gathering a growing body of evidence and some very practical exemplars of how teachers are engaging youth in e-learning. Many of the lessons learned are very applicable and relevant to teaching youth with low language and literacy skills.

Some of the emergent principles of youth learning and support to engage younger learners – particularly, but not only, those from non-English speaking backgrounds indicate that:<sup>1</sup>

- *NESB youth in the main, are digital immigrants – i.e. they did not grow up with or have ready access to the technology*
- *NESB youth embrace technology with enthusiasm*
- *typing is preferred to hand writing. In the educational landscape this is fast becoming the norm, it is a skill that many NESB youth need and want to master.*
- *there are differences in how male and female learners operate online, with male learners preferring shorter, more interactive burst of activities*
- *being connected is essential (the learners surveyed for this project indicated that they wanted to learn emailing and navigating the internet - in order to stay connected)*
- *young students prefer specific information about how to perform a particular task or understand a particular topic*
- *young students want their information in small chunks – hence the fact that they are often “tuned in” to blogs – as they tend to cover one topic at a time and in small chunks of text*
- *young people, and specifically NESB, wanted the choice of having their learning materials in audio and text, so that they can have a choice as to how and where they received the information*
- *young people need to develop a product - this was particularly evident in our digital storytelling activities. This is an excellent tool for learners to build skills and confidence in ICT, while at the same time developing a product.*
- *Learning support is a prominent issue – especially with NESB youth.*

Research conducted by Williams and Nicholas<sup>2</sup> finds that:

“computer-mediated learning is also useful for younger learners because they are motivated by the technology rather than daunted by it. Younger learners usually enjoy working with computers and are willing to explore the possibilities of the technology, see it as important, and are not afraid of making mistakes as they explore possibilities. This applies to exploration of the Internet, as well as the use of computers (sometimes including mobile phones), to assist them in completing tasks. The use of other aspects of digital technology, such as digital photography and music, are motivating and interesting to younger learners”.

Learning tasks that make use of interactive e-learning activities have shown remarkable results within the youth sector<sup>3</sup>.

“Young people who were previously thought to have learning and attention disabilities flourished when provided with the right resources (Kharif, 2004: 80). In England and the United States, chronic truancy has been treated not with punishment, but with a separate learning program rich in content embedded within interactive media and edutainment (McGavin, 1997: 2). Anecdotal evidence from this and other youth projects confirms this. Teachers who were part of the digital storytelling project reported improved attendance rates and fewer request for breaks from the young people involved”.

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<sup>1</sup> Peters, K. 2005. E-learning for Target Learner Groups – Youth. Environmental Scan Research Paper to inform the 2005 E-learning for Target Learner Groups Project. AFLF

<sup>2</sup> William, A & Nicholas H. 2005. AMESP Research centre facts sheet: Responding to younger learners with minimal or no schooling. P6.

<sup>3</sup> Creative Industries Faculty; QUT. 2006. E-learning – youth culture. Retrieved from "[http://wiki.media-culture.org.au/index.php/E-Learning\\_-\\_Youth\\_Culture](http://wiki.media-culture.org.au/index.php/E-Learning_-_Youth_Culture)" 14/12/06

Trials conducted for the 2007 Framework Inclusive E-learning project<sup>4</sup> demonstrate that self determined learning, or heutagogy, which develops individual capacity through learner directed rather than teacher directed training, facilitated by the use of technology, is showing significant outcomes in terms of engaging this learner cohort. Students were able to learn *what they wanted, when they wanted, and in the way they wanted to learn it*.

The models and strategies developed as part of this project and informed by the research provide examples of how e-learning in the classroom can and do develop confidence and skills.

### Models and strategies for young learners using new technologies

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As mentioned previously, the project initially identified online voice tools, blogs and possibly pod-casting as e-learning tools and technologies that could engage young learners. Further investigation into blogging and pod-casting raised awareness of some of the issues around using these 'social software' tools within an educational organisation. Downloads are restricted and firewalls often prevent access to blogging and pod-casting sites.

Moreover, teachers identified digital storytelling as a first step towards engagement and an excellent vehicle for up-skilling both students and teachers. They saw the production and publishing of their stories online through blogs, video blogs and podcasting being the logical next step.

Other technologies such as online voice tools and digital storytelling programs can be accessed within most organisations' IT infrastructure. The decision to focus on these technologies and on digital storytelling in particular was influenced also by outcomes of the literature scan:

- NESB youth in the main, are digital immigrants – i.e. they did not grow up with or have ready access to the technology
- young people, and specifically NESB, wanted the choice of having their learning materials in audio and text,
- young people need to develop a product – and through this process to build skills and confidence in ICT

The project developed a model that incorporated these key findings of the research, based on the teacher and learner skills profile.

### Teacher ICT profile

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- Twelve teachers participated in this study, and they had a broad range of computer skills ranging from very basic to very advanced (i.e. having developed materials for online delivery).
- Teachers were asked to make a qualitative judgement about their skills based on the activities they performed as part of their daily teaching.
- Five teachers indicated that their skills were "OK" but that they needed support, or that they have not had enough opportunities to apply the ICT skills acquired during PD sessions.
- Teachers that classed themselves as *intermediate* felt that they were competent in basic skills like emailing, Word, using the Internet and a variety of computer assisted language learning programs.
- Only two teachers described their skills as "*comparatively advanced*".
- The teachers range in age, with a significant percentage described as digital immigrants.

### Learner profile

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The students who participated in the project varied significantly in their ethnic diversity, levels of education, ICT skills and language proficiency.

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<sup>4</sup> <http://www.flexiblelearning.net.au/flx/go/home/projects/2007/inclusive07/pid/418>

A learner profile was established across the participating youth classes. This indicated that:

- most learners had interrupted educational backgrounds
- educational levels varied from between 6 to 12 years of schooling
- ages ranged from 19 to 24.
- students demonstrated a very broad range of ICT skills. While some students were ICT literate in specific skills such as internet and email, they lacked basic word processing and typing skills.
- The students' language levels ranged from 'beginner' to 'intermediate' covering Certificate I to III of the Certificate in Spoken and Written English (CSWE).

## Teaching and learning strategies

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In designing and developing the teaching and learning strategies for this project, the project team wanted to explore the possibilities of using digital storytelling to:

- develop new instructional activities and strategies that use the unique characteristics of interactive electronic environments
- prepare both learners and teachers for working with e-learning
- shift the focus from electronic technologies to *electronically mediated teaching methods*
- develop new understandings of the differences in generations of learners and incorporate these into instructional design for e-learning.

The project team wanted to develop an accessible model that would enable teachers to integrate the technology into their everyday teaching practice, and enable students to apply their knowledge and skills to a range of situations inside and outside the classroom.

## Instructional model

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The instructional strategy that was most effective in achieving these aims was a pedagogical practice widely used in ESL teaching, known as *scaffolding*.

*Scaffolding*, according to Hammond and Gibbons<sup>5</sup>, is "task specific support, designed to help the learner independently complete the same or similar tasks later in new contexts,... effective scaffolding should also result in 'handover' with students being able to transfer understandings and skills to new tasks in new learning contexts, thereby becoming increasingly independent learners".

- **High challenge, high support**

The cornerstones of effective scaffolding are the concepts of *high challenge* and *high support*<sup>6</sup>, both of which were taken into account in the development of the model. As outlined in the teacher and learner profile, the majority of the participants can be classified as digital immigrants. Scaffolding, especially where these two elements are present, is an excellent strategy for engagement for this cohort, as one student pointed out, *it prevents boredom*.

The **support** was therefore provided on two levels:

- to the **teachers** during the professional development stage. This was in the form of mentoring and training provided by experts within and outside the organisation. They also provided ongoing troubleshooting support both onsite and online during this stage of the project.
- to the **learners** in the classroom through peer mentoring and peer support. The teachers involved in the project supported each other and the learners as their confidence, knowledge and skills developed. Many students discovered new found confidence in that their skills in technology were recognised and valued.

The professional development **model** had the following essential elements:

- demonstrate a story that engages the teachers / students

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<sup>5</sup> Hammond, J and Gibbons, P. 2005. *Putting Scaffolding to work, the contribution of scaffolding in articulating ESL education*. Prospect, Vol 20 NO 1. p 8.

<sup>6</sup> Ibid p9

# Strategies and designs for new technologies: e-learning for youth: Final report

- deconstruct the story by demonstrating how it was produced using easy, accessible software
- provide intensive support through clear, simple instructions as well as access to the tools and instructional materials

The high support **model** was implemented with the teachers and then the teachers adapted it for introducing the technology to their students. The teachers also incorporated language skills development and curriculum outcomes

The table below outlines how technology skills were integrated with language skills development and curriculum outcomes:

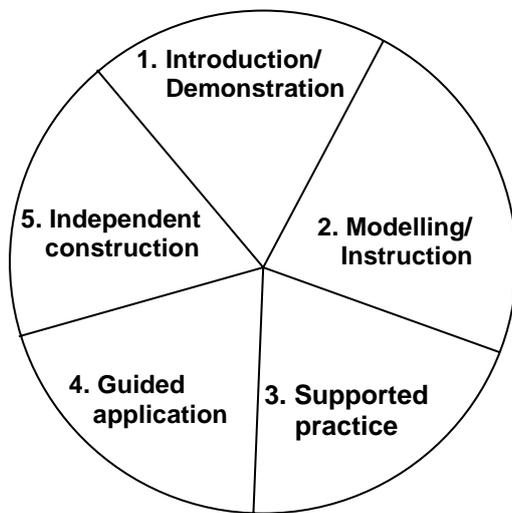


Fig 1 The professional development **model**

Steps	Technology (Applicable to teachers and learners)	Language skills development (Applicable to ESL learners)
1	Demonstration of an engaging digital story	Modelling of language
2	Teaching the skills through explicit instruction and materials  Provision of necessary resources and clear and simple instructions.	Acquisition of language specific to the software / topic.  Developments of language of instruction.
3	<b>Supported practice:</b> Recreation of the same story.  <i>Note: provision of all necessary materials for practice eg: images provided</i>	Writing, pronunciation practice.  Working in groups
4	<b>Guided application:</b> Creation of a story through provision of materials.  <i>Note: provision of necessary materials for practice eg: images provided</i>	Writing, pronunciation practice.  Students write storyboard and record their voiceover.
5	Creation their own stories within specific parameters: <ul style="list-style-type: none"> <li>• teacher negotiates topics</li> <li>• Students collect images with digitals camera / phone</li> <li>• Privacy / copyright issues addressed</li> </ul>	Stories related to specific curriculum outcomes. Some CSWE <sup>7</sup> learning outcomes addressed were: <ul style="list-style-type: none"> <li>• Read a procedural text</li> <li>• Write a short information text</li> <li>• Give spoken instructions</li> <li>• Write a narrative text</li> <li>• Provide spoken information using spoken language</li> </ul>

At the end of the training there was a showcase the students created a set of criteria to evaluate digital stories. The students vote for the best story and the winning student presented with an award.

<sup>7</sup> Certificates of Spoken and Written English

## How learners engage with e-learning: findings from the project research

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The focus on digital storytelling allowed teachers to refine key aspects of the students' current use of technology and the internet in relation to their developing language skills. This project also channelled students' existing engagement and enthusiasm for ICTs towards collaborative, learner centred language learning.

### Focus group results

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A focus group was conducted at the completion of the digital storytelling project. Participants were from Africa, Eastern Europe and Asia, with varying levels of English proficiency.

The researcher therefore presented the students with a print based questionnaire, and asked the students to workshop their answers in small groups.

The students were asked questions about:

- their level of skill and satisfaction with the technology
- its application in helping them learn about and improve their English, specifically around developing independent learning strategies, employability skills and its contribution towards their own personal development.

Digital storytelling using *Photo Story 3 for Windows* software enables students to produce a relatively quick result, whilst still giving students the satisfaction of creating a product that is personally relevant. The findings of the focus group interviews are summarised as follows:

- **Peer mentoring**

The focus group interviews revealed that 50% of the students found the software easy to use. Those who reported difficulties said that "with help from my classmates" they were quickly able to grasp the basics and move on. This reinforces the value of peer mentoring as a strategy to improve English language fluency, facilitated by the introduction of easy, enjoyable and accessible ICT activities.

All the students expressed high levels of satisfaction with the process and the products, as they could see the relevance to their major goal, i.e. improving their English skills.

They particularly appreciated the opportunity to "learn new skills" and they could see its application to many other aspects of their lives.

- **Working with audio**

The students were particularly interested in the audio aspects of the project, and wanted to explore recording their voice in order to practice pronunciation, with 66% of students seeing this as something they wanted to pursue further.

Students particularly liked the idea of scripting and recording a narrative. One student commented on the fact that it required him to think (and plan) in English, whilst others could see that it was improving their speaking, listening and reading skills, broadening their vocabulary, as well as giving them more independence in the classroom.

- **Employability skills**

Student responses around improvements in their generic (employability) skills were also very positive with 83% indicating that they worked well as a team and could see improvements in their ability to do so.

Perhaps the greatest gains were in their ability to plan and organise information. In using such a highly visual medium, the student could quite clearly see how this helped them in assessing their efforts, and were able to reassess their work constantly.

Students also reported real gains in their personal development. Although some (33%) indicated that they were scared to start off with, they all reported feelings of pride in their stories, and they were keen to share them with a wider audience.

- **Level of satisfaction and uptake**

All the students indicated that taking part in this project had improved their confidence in their use of ICTs.

Overall their increased confidence in their ICT skills and the real benefit of using the technology in learning English were the two most beneficial aspects of having been part of this project – many students were intrigued by the fact that they could “learn English and computers at the same time”, and another commented on the fact that it alleviated boredom.

### Benefits of e-learning for youth – a teacher’s perspective

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The aim of this project was to develop instructional strategies and designs for the use of a range of new e-learning technologies, such as online voice tools, blogs and pod-casting as a tool for engagement with NESB youth learners & their teachers in AMES Youth Programs.

This approach was underpinned by the observations from Marc Prensky who suggests that

“all the students we teach have something in their lives that’s really engaging-something that they do and that they are good at, something that has an engaging, creative component to it.....Students certainly don’t have short attention spans for their games, movies, music or internet surfing. More and more, they don’t just tolerate the old ways.... It’s not ‘*relevance*’ that’s lacking for this generation, it is *engagement*.” (M. Prensky, EDUCAUSE review, September/October 2005).

As indicated previously, digital storytelling as a strategy for engagement was the main focus of the work conducted by the teacher across the four sites. As the teacher profiles and feedback indicate, in many cases the teachers also engaged with this particular methodology, and they could see real and immediate benefits. The majority of the teachers could be described as digital immigrants – a term coined by Marc Prensky<sup>8</sup> to describe users that did not grow up with technology, as opposed to youth who are, in the main, digital natives. According to Wikipedia:

“A digital native is a person who has grown up with digital technology such as computers, the Internet, mobile phones and MP3. A digital immigrant is an individual who grew up without digital technology and adopted it later. A digital native might refer to their new "camera"; a digital immigrant might refer to their new "digital camera".

### Findings

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At the conclusion of the project the teachers participated in a focus group session, and completed a questionnaire. The finding as articulated by the teachers can be categorised as follows:

- **Ease of Integration of technology into existing curriculum frameworks**

Teachers reported that the digital storytelling methodology was easily incorporated into their thematic approach to delivery. It worked very well within particular learning outcomes that are covered in the CSWE, such as writing a recount, speaking a recount - and specifically getting students to focus on pacing, pronunciation and intonation.

The teachers actively included the students in the planning of their learning, and they responded very positively to the brainstorming and research activities of their story production.

Teachers did report, though, that it was important to separate writing skills and computer skills at the lower levels. Students need to spend some considerable time in the language classroom to learn to write recounts before they are asked to apply these skills in the computer room.

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<sup>8</sup> Prensky, M. 2001. Digital natives, digital immigrants. Online <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>

- **Fostering an ICT enabled language learning culture within the group**

Teachers reported very positive gains in motivation, specifically motivation to write in English. The students seemed more motivated to work in teams and showed great pride in seeing their names on screen, as well as hearing their own voices. This led them into a new world of e-learning experiences culminating in them creating their own digital stories (incorporating voice tools, capture, production and manipulation of digital images, and scanning). The experience was positive, fun and gave recognition and credibility to their existing knowledge and expertise in using some of these technologies. As one teacher described it: “the feeling of accomplishment was amazing”.

- **Project based peer support**

There was a considerable amount of peer support and teaching occurring amongst the students. Teachers grouped the students so that there was a range of skills and abilities in each group. In addition, the fact that they were able to walk away with finished stories that they could show to their parents, relatives and peers created a lot of pride and feeling of accomplishment in the participants.

- **Growth in personal development skills**

Teachers reported significant increase in student commitment, their willingness to take responsibility for their learning and in seeing the project through to the end. These gains could be recorded against the development of generic (employability) skills outcomes in their course. It also provided students with opportunities to engage with the wider community in producing and promoting the stories.

- **Pathways**

Both teachers and students found that it was possible for them to explore and exploit other funding opportunities as a result of the skills, knowledge and confidence gained in this project. Students felt comfortable enough with their own skills to take on more complex projects.

## Challenges

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The teachers found the following areas relating to the management of the teaching and learning environment a challenge:

- **open enrolments** - the teachers overcame problems with students having missed crucial lessons by encouraging more able students to mentor each other. This worked well and the students enjoyed the experience.
- challenges of working with **less literate students** when writing the stories – using a thematic approach with group work focussing on particular topics worked well here.
- managing the **disparity across literacy and computer skills** is an ongoing problem - involving the more capable students and colleagues were strategies that worked well.
- one teacher reported on challenges in working with **students with intellectual disabilities**. One student was keen but worried about the fact that he could not remember his words/ lines. The teacher ended up helping him by whispering the words to him. His obvious delight in seeing the final products made it very worthwhile.
- **Self paced tutorials** - when asked what they would do differently, teachers reported that they would like a set of very detailed instructions ready for more able students to allow them to continue at their own pace.
- teachers also reported that they would **spend more time on the writing / speaking skills** necessary in preparing the students before starting the production stages of the project.

## Conclusion: digital storytelling - a model for engagement

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The project demonstrated that digital storytelling is an effective model for engagement, particularly when the target group are digital immigrants, i.e. they did not grow up with technology, either through age or circumstance.

Within AMES is has widened our repertoire, **by developing new instructional strategies**. The range of stories created has shown that it works very well in collaborative learning situations, and that both teachers and learners can take small incremental steps in developing their technology skills whilst coping with the demands of teaching and learning English at the same time.

Digital storytelling has proven to be an excellent vehicle for **preparing both teachers and students for e-learning**. It has created a demand for more e-learning tools / experiences from the students, and a vehicle for teachers to create small instructional videos to demonstrate specific tools, skills or even assess competence.

Teachers are more aware, through a do-able, practical process and a highly versatile product, how **electronically mediated teaching methods** can easily become part of everyday practice. They have a set of excellent resources to customise and use in their language and literacy teaching, which cuts down on preparation time and also gives them valuable advice about how to map these activities to specific curriculum outcomes.

Teachers were recently surveyed to establish to what extent the model and the tools have become embedded in their teaching.

One teacher reported:

*'Yes, I use this program as often as I can. I have recently made up a story for the Photo Story 3, called, 'the wedding' which is a **model for recount writing**.*

## Resources

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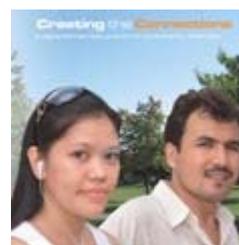
The research conducted as part of this project informed a DEST<sup>9</sup> funded project entitled *Creating the Connections; a digital stories resource kit for adult literacy teachers*. The synergies between these two projects had enabled AMES to develop a very comprehensive resource available to a much wider target audience: i.e. not only teachers of NESB youth but also for teachers of disengaged young people across the various educational sectors, and particularly the secondary and further education system. The resource is available both as CD and online.

Interested teachers can order a CD through the [AMES catalogue](#) or download the complete resource from:

<http://courses.gotafe.vic.edu.au/digitalnarratives/index.htm>

The following link is to the printable resources only from the CD which were designed and developed using the scaffolding methodology from **Strategies and designs for new technologies: e-learning for youth**:

<http://courses.gotafe.vic.edu.au/digitalnarratives/Printable%20Resources/index.htm>



This report and the accompanying resources are available from 7th March 2008 on the Virtual ILC, [www.virtualilc.com](http://www.virtualilc.com), an ESL website developed and maintained by AMES.

They can be accessed by clicking on the Free Resources section on the home page [www.virtualilc.com/dst/index.html](http://www.virtualilc.com/dst/index.html)

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<sup>9</sup> Department of Education, Science and Technology

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