

# Digital Storytelling for Reflection and Engagement: a study of the uses and potential of digital storytelling

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## Introduction

This review investigates the pedagogic potential of digital storytelling by reviewing how the technique and the technology involved are being used in different contexts. Digital storytelling can be remarkably effective both for the story maker and the viewer, with potential for learning, reflection and self-discovery. As such, it can be a potent weapon in the pedagogic arsenal, particularly in respect of active learning.

## What is digital storytelling?

Essentially, a digital story is a media artefact that combines a narrated audio-text with still images to tell a story. The artefact is recorded, edited, stored (and potentially shared) digitally. Originally, the digital storytelling movement, which started in San Francisco, used the technique as a method for therapy, in which autobiography was used as a tool for self-discovery (see, for example, <http://www.storycenter.org/cookbook.pdf>). The early users of digital storytelling were keen to exploit the emergence of a new set of digital media tools for use in self-reflection and for investigating issues of identity.

The American Digital Storytelling Association defines digital storytelling as 'the modern expression of the ancient art of storytelling (in which) stories derive their power by weaving images, music, narrative, and voice together, giving deep dimension and vivid colour to characters, situations, experiences and insights' (<http://www.microsoft.com/windowsxp/using/digitalphotography/prophoto/bridges.msp>). Digital stories combine a spoken 'text' with still images, sometimes with music or sound to create what is in effect a short 'mini-movie'. Although facilitated by the technology the form is not driven by it and the primary focus for digital stories is traditionally the script. The combination of the text or narrated story, voiced by the author and accompanied by carefully selected images (usually photographs) can create a powerful tool of communication. Digital stories are relatively low-tech, being made easily on a computer with basic hardware and software. The finished products have the advantage of being durable and readily accessible and transferable.

## The 'story' in digital storytelling

At its most effective, digital storytelling is a powerful tool of emancipation, revelation and discovery to maker and viewer alike. The effectiveness of a digital story depends primarily on the 'story' it tells, enhanced by the images.

Most effective digital stories are short: up to two and a half minutes long only, comprising not more than 200-250 words. In effective stories of any media there is usually a sense of causality and development or progression from one point somehow to another and completion. The same applies to digital stories, and this fact is crucial in

distinguishing the form from simple reports. The importance of having a story at the heart of a digital story – with a beginning, an end and some development and interest between those points – is vital. Those digital stories which lack this characteristic are essentially descriptive, and while they can be interesting they are generally much less compelling for the viewer. It is important, however, to note that without feedback from the participants it is impossible to gauge whether the process of making the stories was in itself useful or even transformative regardless of the end result.

People tell stories to make sense of experience and to teach beliefs and values to others. Narratives in most manifestations usually carry a moral message from the maker / writer to the audience or reader; this affects digital storytelling too. However, even where a moral message can be detected in a personal digital story, there is something about the form that seems to prevent the story from seeming overly didactic or like instructional or educational programmes.

The use of storytelling as the basic form of knowledge transfer and teaching is very powerful and has proved enduring over millennia. Digital storytelling is essentially the application of technology to this age-old experience of sharing personal narratives and seeking to teach and learn from them. What is different, and what makes these digital stories so potentially powerful, is the availability of the tools for developing, enhancing, storing and disseminating the stories in new ways.

Before turning to look at digital storytelling and the process of making digital stories in more depth, it would be useful to investigate the importance of narrative and storytelling, since this lies at the heart of digital storytelling.

## **Using Narratives**

Writing in 1939, Walter Benjamin argued that storytelling was existentially threatened by the technological era of impersonal information (Kearney, 2004). For him, a 'culture of instantaneous and fragmented sensations' was eroding the transmission of commonly shared experience and, he argued, this would damage the notion of community and historical memory. Although mediated by the changing historical and technological environment in which it operates, storytelling has not disappeared and as a form it remains as pertinent as ever.

Stories are our attempts to explain, understand and account for experience. Experience does not automatically assume narrative form, but rather we construct stories through the process of reflection on experience. Storytelling is the bread and butter of everyday interpersonal experience, providing a means of communication, interaction, organising, perception, reflection, thought and ultimately action. In this light, we can see that creating narratives is a kind of causal thinking, in which the narrator seeks to fit their experience into some form of narrative schema (Robinson & Hawpe, 1986). This process, of making a story from experience is a heuristic one, involving judgement and skill. Making stories involves using a causal pattern and integrating what is known with what is conjectured. Narratives are a basic agency for human empathy because they address the listener, reader or viewer (in the case of a digital story) as a human being, rather than as members of a class, sect or university. Thus a story allows us to relate to each other as another self.

For the philosopher Hannah Arendt, narratives are a fundamentally communicative form, because, as she sees it, a story 'amplifies the circle of selfhood into an enlarged mentality' and because all narrative is written with the anticipated communication with others in mind (Kearney, 1998). Thus, Arendt argues, narrative is a mode of 'representative thinking'. By making the narrator the subject of his own story, narrative identity is both subjective and intersubjective. Hermeneutical philosopher Paul Ricoeur also saw narrative-making as a process of socialisation, because by giving our story and receiving those of others, we 'renarrate' ourselves and increase our understanding of others (Kearney, 1998).

For Ricoeur, there is a parallel between narrative imagining and 'the practical wisdom of moral judgement' and building on Aristotle he believes that narrative is particularly well-suited to ethics because it deals with the singularity of human experience (Kearney, 1995). Ricoeur also attributed the functions of persuasion, vision and initiative to narrative: by 'persuasion' he meant that the storyteller is never ethically neutral, and thus that narrative identity is never innocent – presupposing certain interests and anticipating certain ends; by 'vision' he meant that through narrative imagination we are enabled to explore imaginatively and to envisage essential connections between our actions and their ends; by 'initiative' Ricoeur implies that through the extended possibilities of narrative imaginings we are able to view ourselves more clearly and thus we open the possibility to inaugurate new beginnings.

## **Organisation of a story**

While most stories are temporally ordered, not all temporally ordered accounts are 'narratives'. What distinguishes a story from a scientific paper or a repair manual is the criterion of 'connected succession' (Mishler, 1995). This implies that there is a relation of causality and / or thematic coherence between the represented events that goes beyond the temporal ordering. Mishler argues that in addition to having an opening and a closing, a story needs to have a point, a meaning.

What distinguishes narrative as a form of discourse is that it always has a plot. This plot does something. The plot combines the episodes and the overall story told into a meaningful whole. It does so through the plot's capacity to reconfigure into narrative what was already configured in language prior to the narrative through the conceptual network that allows us to speak meaningfully about human action (Pellauer, 2007). This conceptual network is highly varied, including concepts such as reason for, cause, action, passion, work, agent goal etc. According to Ricoeur, what narrative does is that it takes discourse that is already 'mimetic' (i.e. that it signifies or 'figures' action within itself) and adds new discursive features to it that give it a new meaning by turning it into the story of 'doing something'. Narrative also has the possibility of extending the discourse about action to encompass things that happen not only in time but over time to include their possible long-term and previously unseen consequences. Narrative's power lies in the fact that it tells a story about human action and its meaning which when it is heard or read and understood can contribute to refiguring our understanding of human action and its possibilities.

Narrative is able to combine both a chronological and non-chronological dimension into a meaningful whole by extracting a configuration from a followable succession of events. The result of this new configuring is the creation of what Frank Kermode has called 'the sense of an ending' which is a different and refigured time. According to Ricoeur, this refigured time ideally makes it possible for us to make better sense of the ordinary everyday time in our lives.

Breaking up stories into the different elements, as he perceives them (abstract, orientation, complicating action, evaluation, result or resolution), Mishler makes the point that most of a story is made up of 'evaluation', and that although the statements associated with evaluation do not fit into the temporal or chronological ordering of the story, they are none-the-less requisite parts of the story. Evaluative statements, the part of a narrative that give meaning to and interpretation of, also reveal the attitude of the narrator to the narrative. By emphasising certain aspects of the story, the narrator reveals what they perceive to be the parts of relative importance. This process is one of critical selection.

The selectivity necessitated in telling a story is a strength: the storyteller has to reflect on what is the essence or the meaning of the story they are conveying, and the story should mirror this process. Arendt argues also that stories do not replicate or literally recreate reality but are discoveries. By selecting or omitting information, by creating a sequence and by reflecting on a situation from different angles the narrator is attempting to 'discover and reveal what happened in a way that is faithful to reality and at the same time illuminates it' (Arendt, quoted in Pellauer, 2007).

## **Telling stories**

Anyone who tells a story is influenced by factors of memory, motivation and context, all of which contribute to what he or she includes in their account. The storyteller will also (perhaps unconsciously) seek to project a certain image of himself or herself to the audience or potential audience. Some psychologists view the construction of personal narrative as being central to the development of a sense of identity because of its potential of giving meaning to experience and personal actions. Narrative provides a very useful method for people to make sense of their identity and experiences. This has been recognised in many fields including psychology, journalism, anthropology and social work (Goldstein, 1990, quoted in Nygren & Blom, 2001). Stories are very apt at capturing human experience. The attractiveness of storytelling to educators primarily lies in the implicit critical thinking skills that are involved in the creation of any story. The process of constructing a story requires numerous cognitive strategies to come in to play, such as comparing, selecting, inferring, arranging and revising information. The process leads to the construction of a new story or narrative based on existing information, reflection, supposition and evaluation. The new story will have affected the maker through the production, especially in terms of the reflection that is required, and the impact of the final product. Making and telling the story transforms it from the unspoken perhaps unformed nature which it had while it was latent in the mind, and makes it more real. Storytelling requires the active use of prior knowledge and experience, thus enriching the cognitive resources which are available for future narrative thought and analysis (McDrury & Alterio, 2003).

## **Digital storytelling and critical thinking**

Telling a story is in itself an activity that requires a degree of critical awareness – knowing what to leave in and what to omit, selecting information and description that will substantiate the story, judging the audience, and presenting the piece in a way that the audience (whether one person or a group) will find compelling, interesting and engaging. Anecdotally, students often find that putting together a coherent narrative is significantly more difficult than they had imagined – this can be for a variety of reasons, from emotional bars to verbalising and sharing an experience, to the logistics of organising and writing details.

The crucial question for digital storytelling in the field of learning is whether critical analysis and reflection can be brought to bear in a 'story' which isn't 'personal' i.e. for example, a topic at university. It seems a likely potential flaw to using digital storytelling for non-personal topics is that through this methodology all stories have the tendency to become personal, through the connected processes of reflection that requires students constantly to put themselves (rather than the content) at the heart of their studies. Arguably, this means that learning through this method inevitably becomes 'personal' and centred on the learner and their experience, rather than primarily content-driven. It remains to be seen whether digital storytelling can effectively bridge the gap between its highly effective uses as a tool for subjective reflection (generated by, inspired by and created by the author) and as a vehicle for objective and dispassionate analysis of academic topics.

## **Storytelling and digital storytelling in pedagogy**

The skills required to make a story are the highly transferable and widely applicable skills associated with critical thinking. Critical thinking involves gathering evidence from all senses including verbal and written expression, reflection, observation, experience and reasoning. Ultimately, critical thinking is the mental processes of discernment, analysis and evaluation, which should reconcile scientific evidence with common sense (see <http://www.infed.org>).

Education can also benefit from the aspects of reflection that are intrinsic in most successful storytelling. Reflective learning, according to David Boud, is founded on three aspects: returning to experience, attending to feelings and evaluating experience (see <http://www.infed.org/foundations/f-refl.htm>). All three elements are met in the process of creating a narrative. Making a digital story also involves some degree of creativity, in using a technology and software to transform an experience or something learned into an artefact that can be viewed by others and potentially also assessed. Goldstein (1990) has argued that the amalgamation of theoretical knowledge, experience and creativity combines to form something better and more mysterious than knowledge, namely wisdom. Even if the goals are not so mighty, it is clear that there are many possible uses and outcomes for storytelling and especially digital storytelling in education.

There is also an interesting parallel to be made between narrative thinking and scientific thinking, both of which seek to establish cause and effect relations from numerous factors. Of course the goal of scientific thinking is to produce an abstract, context-free principle, whereas a narrative thought produces a story, which is concrete and context-bound. In narrative thinking the role of the point of view of the 'author' is very significant, meaning that a story is personal as it incorporates the feelings, values and opinions of the person who made it. Narrative thinking also involves elements of uncertainty, inevitably since a story is a version of reality and truth, and is open to interpretation.

## **Storytelling as a heuristic process**

By retrospection and review we can test the continued validity of a story of an experience. Perhaps through the discovery of new information, or through changing interpretive outlooks, attitudes change and a re-evaluation of the causal linkage which organised the original story is prompted. This process of review, or narrative repair, could occur spontaneously during the story making process, or later perhaps when the story is shown or told. This has important implications for reflective learning.

## **Critical thinking and the pedagogy of storytelling**

The story in a digital story is subject to the same planning and purging of every story-to-be-told in whatever form. But the maker is also faced with the additional challenge of thinking critically about effective combinations of the audio and visual elements (see <http://www.jasonohler.com/>). In the process of making digital stories, a student has to locate and order images and artefacts that meaningfully support the message of their text. This requires critical awareness by the story maker of the meaning he or she wishes to convey. This process also incidentally increases students' media and technology literacy and helps them develop a discerning eye to select among resources.

Digital storytelling is trumpeted as a useful tool in the promotion of deep learning. Deep learning, as opposed to surface learning, is a term used to describe the kind of learning process that involves the critical analysis of new ideas and linking them to already known concepts and principles, which leads to understanding and long-term retention of concepts so that they can be used for problem solving in unfamiliar contexts (see [http://www.infed.org/deep\\_learning](http://www.infed.org/deep_learning)).

Advocates of digital storytelling as a deep learning tool point to the convergence of four student-centred learning strategies facilitated by the technique:

- student engagement;
- reflection for deep learning;
- the effective integration of technology into instruction;
- project based learning.

(Barrett, 2006)

## **Digital storytelling, literacy and skills**

The text is crucial to digital storytelling and although the final product focuses on the spoken word, the script for those words is what makes the story effective and successful; hence the emphasis often placed on the narrative generation aspect of the digital storytelling process.

Using digital storytelling in education could support a move away from the traditional reliance on written text as the primary method of teaching and learning. Clearly, this has broad implications in terms of inclusion, course design and assessment. Students who face challenges of literacy could benefit from the shifted emphasis away from text towards multimedia presentation. Students who have been disadvantaged by the primacy of text could be emancipated by digital storytelling (see [http://www.icvet.tafensw.edu.au/ezone/year\\_2006/feb\\_apr/feature\\_digital\\_storytelling.htm](http://www.icvet.tafensw.edu.au/ezone/year_2006/feb_apr/feature_digital_storytelling.htm)). But this could be viewed as a homogenising factor, which would actually result in a general 'dumbing down' and lowering of the overall achievement level – particularly since digital stories are not assessed with the same 'subject content' criterion of conventional methods (see below).

Conversely, some digital storytelling experts are keen to stress the importance of the written word to the creation of digital stories. For Jason Ohler, the strength of digital stories lies in their potential to blend digital, oral, art and written literacies, creating 'literally a portfolio unto itself' (see <http://www.jasonohler.com/storytelling/assessment.cfm>). He proposes that while oral storytelling plays a key role in the generation of narrative and remains a crucially important form of communication, writing is the pathway to the finished digital storytelling product. (Thus potentially undermining the possibility that the finished story

could be in any way 'lightweight' compared to more traditional student output.) Although the result is an audio track, writing is the primary material for planning and creating the story. Thus it could be seen that even when the technology becomes yet more sophisticated (for example enabling easier production and manipulation of video), digital storytelling will still involve writing and conventional literacy. Writing for digital stories requires students to synthesise a range of different literacy skills: depending on the task set they might have to combine create writing, personal reflection, and clear staging or organising of the text. More academic, topic specific projects, require the students to plan and script report-style analysis. There is little current evidence of digital storytelling being used successfully in this context.

Digital literacy is also heralded as an important and useful facet of digital storytelling. Arguably, it is increasingly important for students to be IT / digitally savvy, so educational methods which promote digital literacy (meaning the using of technology effectively, creatively and wisely – see <http://www.jasonohler.com/storytelling/assessment.cfm>) could be increasingly pertinent. For Ohler, technology should serve as 'an imagination amplifier' (implying of course that the way it is used should exploit but not be driven by the technology) and that students should be enabled to master the technology. For Ohler, this fits into his wider agenda of improving students' 'media literacy'. He believes that by training them to create their own media, they would better appreciate the huge persuasive power of technology and media in the society they inhabit and be able to evaluate (and resist?) its pull.

## **Eliciting narrative**

Recognising that storytelling is a useful way for storytellers to give meaning to their experiences, the issue is raised as to how the story can be made / brought out. The most prevalent approach in most fields is in the form of an interview dialogue in which the researcher elicits information from the respondent through questions. Less directional and structured narratives can also be captured by the researcher asking the respondent to verbally narrate situations or events. Narratives are usually acquired through research interviews with open questions, which form a discourse that is then analysed, reconstructed and given meaning by the researcher. Eliciting narratives in this way ensures an important role for the interviewer or researcher, in that he / she will direct and shape the discourse through the questions or prompts. The role of the researcher would again be relevant after the interview in choosing which information to select from the discourse with which to reconstruct the narrative.

The researcher's actions are thus significant to shaping the content and form of the narrative and in reconstructing. By asking the respondent to document his / her own narrative, the storytelling process changes profoundly as it crosses from oral to written as a distance is placed between the author's experience and the narrated events, raising consciousness. This means that it intensifies the sense of self and conscious interaction between persons, and narrative becomes an objectified experience and thus becomes distanced / alienated from the storyteller.

The tradition of storytelling has contained oral and written forms. The stories that are transmitted orally tend to be more personal than those committed to text. They are more fluid, less static and have more scope for development and reformation each time the story is told. In this way, storytelling can be seen as an intensely social process, and one which is well suited, within education to communicative and group activities (Alterio, 2002). By contrast, stories which are written and conveyed as text are a fixed, 'captured' representation or interpretation of a particular time or event. Where an oral

storyteller has the chance to spontaneously edit the story he tells, in relation to his or her audience and personal attitude and in respect of prevailing circumstances, the writer of a story has no such scope. Once the word is committed to paper (or otherwise recorded), it becomes fixed, and thus distanced from the author. The fact that the written word is seen as more permanent, and that it does not suffer from the transient or ephemeral nature of the spoken word has led some to believe that it is therefore 'a more reflected expression' (Nygren & Blom, 2001). A digital story can, in theory, combine the advantages of both traditions: the personal connection and emotional input is provided in the authorial voice, while the written script offers the element of reflection.

Writing down a narrative, compared to natural speech means that the author does not have to depend on memory in the moment of telling the story, and can take time to reflect and draw together a story. A person who delivers a spoken scripted narrative thus has more potential for reflection through the process. If the reflection comes in the writing process, it raises the question of what value is added through presenting / narrating the story.

Comparing the pros and cons of a free-spoken narrative to one that is scripted before being spoken, Nygren & Blom (2001) conclude that one of the positive experiences of using prepared narratives is that the 'empirical material is more structured, as well as more reflective, than the transcripts from interviews. The higher degree of reflection implies that the story is more 'understood' by the narrator. Thus the material can be assumed to say much about the narrator's self-conception, something that is important in research on identity, life-stories etc.'

There are some disadvantages inherent in the digital story form, notably in relation to limitations associated to the requisite brevity of a short narrative. A short narrative may seek to present a large story but, as with any story, it will not be exhaustive – other versions can be made, information can be added and changed. The conciseness of a short narrative can lead to 'over-interpretation' of its meaning. Likewise, the very shortness of the form can lead to a superficial self-reflection, as the writer does not have the textual space to penetrate his or her own story. In this way it could be seen that the form actually limits the expression / presentation of self-reflection, as aspects will inevitably have to be dropped or restrained to fit in to the limited size format.

Having a subject commit a narrative to writing before it is spoken also serves to remove the 'midwife effect' that an interviewer can have. An interviewer can lead a respondent to talk about subjects that the solitary writer might not pay attention to or for whatever reason may choose not to mention. Committing the narrative to written text raises the issue of whether the narrator should be adept at writing or expressing himself or herself clearly in written form.

## **Narrative collaboration**

Making narratives through collaborative activity demonstrates the heuristic nature of the narrative thinking process. When collaborating on making a story, the narrative is tested by members of the group, evaluated and revised to represent a consensually validated account and interpretation of the event or situation. This process requires collaboration, negotiation and accommodation. In working together to create a mutually acknowledged / accepted truth, the storytellers increase their understanding of each other. This fact makes narrative transactions a useful tool for encouraging social reflection and producing mutual understanding and potentially, social cohesion.

## **Making a digital story**

Making a digital story is a process that is interesting and valuable in its own right. Intellectually and emotionally, creating a story involves cognitive processes of reflection evaluation and creation, while technically the production of a digital story can require some degree of new media literacy.

It can be seen therefore that the process that goes into making a digital story can be meaningful and useful in itself, even if the final product is not 'effective' or entertaining (however defined). By the same measure it is not guaranteed that a story which has had the benefit of professional production, in the form of a staged and structured story development process, technical assistance with recording and editing, will necessarily be any more effective than one made unaided. That said, in an age where presentation and appearance count for so much, and where we are surrounded by examples of slick media production, we are likely to judge more favourably stories which are aesthetically satisfying, regardless of their content.

Digital storytelling is only a method, an instrument that can be used in a variety of ways and with many different possible outcomes. In itself it is not a product, untouchable except by experts. There are certain norms that have come to typify the form (such as a length of about two and a half minutes, an average number of words, the use of a single, authorial voice), but these are not strictures. They represent a form that has been shown to 'work' well for the purposes for which different groups have applied it. However, it is an evolving form and its manifestation and uses within education need not be determined by its use in any other field. It is clear that digital storytelling combines a number of useful facets and depending on how it is used, it could offer distinct contributions to the field of teaching and learning. Generally the method associated with digital storytelling offers the potential to:

- promote deep reflection, review, analysis and ordering of information (e.g. a project, a topic, an experience);
- value emotional / personal input;
- make sense of experience;
- encourage cooperative activity;
- create powerful end products that can have a transformative effect on maker and viewer alike;
- develop capacity for self-review;
- build confidence;
- give a voice to the unheard or marginalised.

Specifically within pedagogy, digital storytelling has the potential to:

- build and use technology / media skills;
- develop literacy skills;
- provide an alternative to written-based project work;
- stimulate critical-thinking faculty;
- promote deep learning;
- enhance student engagement and motivation;
- enhance the learning experience.

(Alterio, 2002)

## Digital storytelling and skills

It is clear that a variety of skills can be developed, practised and honed via the making of digital stories. Firstly, there are the hard to quantify skills such as capacity for reflection on a topic or about oneself, and skills associated with personal development and interpersonal skills. Secondly, there are the literacy and media literacy skills and technical skills. Thirdly, there are study skills such as techniques for promoting deeper learning which can also derive from experience with digital storytelling.

For some in the field, digital storytelling is mainly about the process involved in making the story. These include:

- narrative generation;
- reflection;
- analysis of material;
- analysis of self in relation to material;
- organising and sorting information for use;
- use of personal and technological / technical skills.

For some using digital storytelling in education, the end product created is almost inconsequential when compared to the skills acquired through the process of making the piece. That is, digital storytelling represents a useful vehicle for teaching certain skills, and therefore the topic and content of the resulting digital file is less important. For others, acquiring the IT skills required to facilitate the documenting of a story are not among the principal aims, although they are often a bi-product. For Robyn Jay, who uses digital storytelling in adult education in New South Wales, this 'learning by stealth' is a convenient side effect of the more important and therapeutic process of reflection (see [http://www.icvet.tafensw.edu.au/ezine/year\\_2006/feb\\_apr/feature\\_digital\\_storytelling.htm](http://www.icvet.tafensw.edu.au/ezine/year_2006/feb_apr/feature_digital_storytelling.htm)).

## Using Digital Storytelling in Education

Digital storytelling is potentially a very useful teaching and learning tool. Storytelling is recognised to have many uses and benefits in education. Moon (1999) suggests that stories can offer a 'vehicle to facilitate learning', while Nygren & Blom (2001) advocate its potential for letting students 'give meaning to their experience'.

Digital storytelling has the potential to empower students. Facilitated by the teacher, digital stories are initiated and directed by the student. This ownership of the project from start to finished product confirms the status of the student at the heart of his / her learning. The stories allow students to express themselves as they are narrated by the students themselves from students' own words. For students who are encouraged to reflect on what they have learnt and to make sense of their learning experience and organise information into a short and easily accessible multimedia clip, making a digital story poses interesting challenges on several levels. It also has the advantage (and challenge) of involving many different skills both creative and technical, some of which may be new to them.

Anecdotal evidence also suggests that many students also find making digital stories fun and engaging. The challenge that digital storytelling in education poses is how to harness the massive potential of the story form, with its possibilities to inspire, engage, transform,

through a process that will endow it with opportunity for reflection, critical thinking and problem solving (Ohler, 2006). Advocates of reflective practice in education argue that we all carry within us creative learning capabilities, one of which is storytelling. They propose that there can be significant learning outcomes when storytelling is used in reflective, thoughtful and formalised ways (McDrury & Alterio, 2003).

Digital storytelling has the advantage over an ordinary, live presentation in that it remains a physical artefact that can be revisited or disseminated at any point. Digital storytelling captures more than just the subject matter that would be retained by a PowerPoint presentation. The crucial difference is that a digital story retains a commentary and the emotional content invested in the piece by its originator and producer. This fact could be very useful for a student who wishes to look back over both the subjects / projects they have completed, and over their own educational and personal development.

### **Assessment / evaluation of digital stories and digital storytelling**

If digital storytelling is to be used as a learning tool it needs to have workable means of assessment. Currently, there is considerable variety in the methods of assessment and in the criteria applied to evaluate both the product and the process of digital storytelling.

For some practitioners assessment focuses on evaluating the story itself for evidence of student reflection. Rather than assessing the process as it happens (in terms of monitoring to observe group collaboration and discussion, or to witness the verbalised development of ideas), it is preferred to use the evidence of such processes as captured in the produced story. Moon's *Map of Learning* (Moon, 1999) and McDrury & Alterio's *Model of Reflective Learning* (Mc Drury and Alterio, 2002) can be used as frameworks against which to evaluate stories.

| <b>Moon's Map of Learning</b>    | <b>McDrury &amp; Alterio's Model of Reflective Learning</b> |
|----------------------------------|---|
| Level 1: Noticing                | Story Finding   |
| Level 2: Making Sense            | Story Telling   |
| Level 3: Making Meaning          | Story Expanding   |
| Level 4: Working with Meaning    | Story Processing  |
| Level 5: Transformative Learning | Story Reconstructing  |

Moon's *Map of Learning* is a useful model to locate reflection but it does not offer scope to categorise the collaborative aspects of the storytelling process, nor does it capture the way in which stories can be developed and expanded as they are produced. McDrury & Alterio's *Model of Reflective Learning* is more explicitly applicable to storytelling and is concerned with categorising the stages of the collaborative storytelling process: from finding, to telling, developing and rebuilding the story. This model can therefore be used to supplement Moon's scheme.

The problem with this assessment perspective, which focuses on the development of a story as a vehicle for reflective and process learning, is that it can trivialise the importance of the story as an artefact. Where the story becomes a vehicle for 'making

learning explicit' to assessors, the actual manifestation of the story can fall by the wayside. Simon Turner, a lecturer in Media at the University of Gloucestershire, who also worked with the Capture Wales project (<http://www.bbc.co.uk/wales/audiovideo/sites/galleries/pages/capturewales.shtml>), argues that 'people are far more inclined to use a tool such as this if it can be perceived as having value, and the first time they will come across it is by watching other people's work' (Turner, *pers. comm.*). The final product can start to function only as a means to an end, that is, assessment. This utilitarian approach denigrates the importance of the final story and diminishes the potential of the story to affect its audience beyond the assessors. Not only could this strategy demean the stories in the minds of the story makers, and thus could be quite self-defeating, but it is also unsustainable. One of the strengths of the digital form is the recyclability of digital stories: they can be accessed, reviewed, shared, and reflected upon. And yet, stories that are technically weak are unlikely going to be enjoyable or interesting to watch, let alone inspirational or transformative. Stories that are badly produced are unlikely to become effective pedagogic resources for others.

Turner recommends that basic qualitative benchmarks should be applied to each finished story, ensuring that the technical production values are adequate. Turner believes that simple factors, such as having clarity of sound should be basic features of a 'successful' story. Since, for him, presentation of the final story is vital: 'I suppose you could equate this to writing a book – doing the research, thinking about the content, working out your approach and so on. The last thing you would want to do is to publish it badly, with spelling mistakes, poor description, etc.'

Although Moon's *Map of Learning* and McDrury & Alterio's *Model of Reflective Learning* are very useful, they do not encompass criteria for assessing many other factors which contribute to the effectiveness of a story. These factors include how the story was made (in terms of focus on the task, group work, research, planning, structuring) and presentational features such as the number and clarity of voices, appropriateness of the images and language, and the technical proficiency of the final story. To assess these factors, Jason Ohler offers an alternative framework of 'Evaluation Traits', which aims at comprehensively assessing most aspects of digital storytelling including non-reflective parts. For him it is important to assess everything, including as much of the formative work as possible, since the final story is just 'the tip of the iceberg'. This is an important consideration and addresses the concern that some staff may have regarding the appropriateness of digital stories as a form of assessment, particularly if they are concentrating on the final 'product'. However, when looking at the overall process involved in the development of a digital story, it should be appreciated that the complexity of reflection, the development and reworking of a suitable narrative and the choice of appropriate images etc., will be similar to the development processes for other assessments, such as essays or poster presentations.

| <b>Jason Ohler's list of possible digital story evaluation traits</b> |  |
|---|--|
| Story   | How well did the story work? This trait can address structure, engagement, character transformation or any of the other qualities of story. In fact, an entire rubric can be devoted to evaluating the quality |

|                                |  |
|--------------------------------|--|
| Project planning               | Is there evidence of solid planning, in the form of story maps, scripts, storyboards, etc.?  |
| Media Development Process      | How well did the student follow the media development process?   |
| Research                       | Was the student's project well researched and documented?  |
| Content understanding          | How well did the student meet the academic goals of the assignment and convey an understanding of the material addressed?  |
| Assignment criteria            | Did you require stories to be under two minutes, use no more than 10 images and 30 seconds of music and provide citations in MLA format? Whatever your criteria, be clear and stick to them.                           |
| Writing                        | What was the quality of the student's written work exhibited in the planning documents, research, etc.?  |
| Originality, voice, creativity | How creative was the production? Did the student exhibit an original sense of voice and a fresh perspective?   |
| Economy                        | Was the information presented through the story sifted, prioritized and told without detours?  |
| Flow, organization and pacing  | Was the story well organized? Did it flow well, moving from part to part without bumps or disorientation?  |
| Presentation and performance   | How effective was the student's actual presentation or performance? This includes burning a DVD, posting the story on the Web site effectively, performing it before an audience, or whatever the assignment required. |
| Sense of audience              | How well did the story respect the needs of the audience?  |
| Media application              | Was the use of media appropriate, supportive of the story, balanced and well considered?   |
| Media grammar                  | How "bumpy" was the story? There are many facets of media grammar, and you may want to choose a few to focus on.   |
| Citations, permission          | Has everything that is not original been credited? Have permissions been obtained where necessary? Do citations appear in the format required by the project?  |

(Taken from <http://www.jasonohler.com/storytelling/assessment.cfm>.)

Ohler suggests that from this list, the teacher or facilitator should choose up to six 'traits' (of which the students are made aware) which will be used to assess the story and story-making process. An additional alternative is provided by David Arts, who has a concise framework of assessment criteria, which he breaks down in to aspects assessed by those monitoring the process of story making, and aspects to be evaluated by assessors who are outside the production process.

| <b>For advisors who are helping students</b> |  |
|--|--|
| Engagement (20%)                             | Student is interested and engaged in working, uses his or her time wisely, and works appropriately with others.  |
| Inventiveness (20%)                          | Student used a story map, board or other planning method that helped him or her think about how he or she would tell his or her story. Student sought feedback and thought critically about how to improve his or her story.   |
| Reflection (20%)                             | Student thoughtfully explained how and why he or she chose to create his or her story. His or her answers to the questions are thorough, organized and creative.   |
| <b>For outside reviewers</b>                 |  |
| Execution (20%)                              | Student used images to creatively tell the story behind the words. Student uses his or her natural speaking voice, as well as music (optional) and effects (optional) to support (without taking away from) the meaning of his or her story.                           |
| Communication (20%)                          | Student tells a PERSONAL STORY about an object, person, event or place that profoundly impacted him or her or someone he or she knows. Student's digital story articulates a clear message and tells a compelling and engaging story the view connects to emotionally. |

(Taken from <http://www.jasonohler.com/>.)

Of course an unresolved issue with all of these methods of assessment is that they minimise the importance of subject content as opposed to student reflections on the subject content or the process of learning that subject content. The strategy of using digital storytelling to encourage a focus on student reflection has been challenged by some staff, who have a content, rather than a process, oriented approach to learning.

## Other Uses of Digital Storytelling

Digital storytelling has been used in a variety of community settings often with the aim of helping people understand and explain their identities, especially in conflicted settings or in marginalised groups (such as among indigenous communities in Australia, or refugees in the Welsh Valleys). Digital storytelling can help the storyteller from whatever context foster a sense of their own identity and individuality, particularly when the production process is partly collaborative. Within the educational environment, issues of investigating and establishing identities are also pertinent.

Digital storytelling can also be a tool of social empowering, and as such is used in several different initiatives across the globe. Many of these projects give a 'voice' to learners who are usually not heard, as a result of their illiteracy and / or marginal status. The Bay Area Video Coalition uses digital storytelling to engage and empower at-risk youth in San Francisco (see <http://www.bavc.org/>), while there are several projects in Australia that aim to address the issues associated with indigenous communities. One such project, in the North Coast Institute, New South Wales, Australia, uses digital storytelling to enable mature-age literacy students to tell stories of their lives (see [http://www.flexiblelearning.net.au/flx/go/home/news/flex\\_latest/cache/bypass?sector=flexlatest&id=3084](http://www.flexiblelearning.net.au/flx/go/home/news/flex_latest/cache/bypass?sector=flexlatest&id=3084)). According to Robyn Jay, these 'snapshots' on their lives are apparently very effective and entertaining productions, and crucially also provide the vehicle for the students to reflect on aspects of their identities which may be challenging. The process also enables the students to use the software (Moviemaker) to make pieces that are authentically their own creation. The same project has worked with indigenous students within the context of community arts, providing the opportunity for indigenous artists to create individual stories that can be used as a CV, in which they can showcase selected artworks accompanied by their own commentary or explanation. This is a method of documenting and potentially marketing their works (see [http://www.icvet.tafensw.edu.au/powerhouse\\_2005/papers/telling\\_tales2.pdf](http://www.icvet.tafensw.edu.au/powerhouse_2005/papers/telling_tales2.pdf)).

### Digital storytelling in a multimedia society

Most teenagers have some experience in dealing with the tools that are used to create digital media and many have extensive experience in generating original digital content and sharing it online. It is argued that using digital storytelling in education provides a way for students to learn using technologies with which they are already familiar or conversant. The logic runs that students of the so-called Net-generation learn and acquire knowledge in different ways to previous generations, relying increasingly on interactive media (principally the Internet). Digital storytelling, which has an inherent media likeness to these novel knowledge acquisition routes, is an appropriate learning tool to use with this generation. Using digital stories as an educational tool allows students to use technology skills which they probably already possess, and to enhance those skills and develop proficiency with multimedia applications.

For those students who come to education without technical literacy skills (for example, those who come as mature students or through widening participation), whom Prensky (2001) has referred to as 'digital immigrants', the use of digital storytelling offers a way in to digital literacy – especially as part of collaborative student working.

The use of digital storytelling technology fits neatly with the common technology experience of young people today, operating as they do in a multimedia society, currently experiencing the flourishing of video-sharing and social networking sites (such as *YouTube* and *Facebook*). But providing material to populate these sites hardly seems like a reasonable justification for subjecting students to using digital storytelling in their studies. There is a general acceptance and encouragement for people to record themselves digitally and to share and disseminate the files. It has been argued that the skills required for the ability to effectively use new media to create an engaging multimedia piece are actually more relevant than those required for writing an essay for example.

The growth and popularity of 'user-generated' sites is testimony to an increasing bifurcation of the roles of creator and consumer. We live in a technology-rich, time-poor consumerist society, where, it is argued, an audience is more likely to be 'captured' by a well-produced bite sized, pre-packaged product than by a length of text which might require some intellectual effort to unpack.

## **Conclusions and Recommendations**

Digital storytelling offers many possibilities within and beyond education. In education, the technique is still at an experimental stage, but digital storytelling potentially offers new ways for students to learn, present and reflect on their work, using technologies which are pertinent to them.

As a technique, digital storytelling offers advantages in terms of the engagement of students with their subject group and beyond.

The technique also provides a vehicle for the use of relevant media literacy skills already possessed by many students in our technology-driven age. Yet the relative simplicity of the software favoured by digital storytelling practitioners in education means that even those 'digital immigrants' can develop basic digital literacy through making digital stories, especially when the story making process is a collaborative one between students.

Digital storytelling also offers to develop other skills, including those associated with the conventional storytelling, such as selecting, ordering, evaluating and presenting information. When applied to an educational task these stages constitute critical thinking, a highly transferable skill. However, whilst the brevity of the traditional digital story may encourage deep reflection in some (as they review what is essential to arrive at a concise 200 word 'story'), in others the imperative for shortness will be a hindrance.

The effectiveness of the form varies hugely, and depends on it being used for suitable subjects by students who have clear motivation to produce the story and through a clear, meaningful task.

The concept of telling stories and teaching and learning from them is not new, and much of the praise for digital storytelling (especially its value for reflective practice) could apply equally to ordinary storytelling. But evidently the modern technological manifestation is far more attractive. And, it is true, there are aspects of digital storytelling that do make the form much more suited to the modern educational environment than just the oral tradition, such as its potential for tangential or tacit skills training, its permanence and potential for subsequent reuse – whether by the originator or by others.

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