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The Impact of Digital Storytelling on Social Agency: Early Experience at an Online University

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ABSTRACT

‘Digital Storytelling’ is a term often used to refer to a number of different types of digital narrative including web-based stories, hypertexts, videoblogs and computer games. This emergent form of creative work has found an outlet in a wide variety of different domains ranging from community social history, to cookbooks, to the classroom. It is the latter domain that provides the focus for this paper, specifically the online classroom at the tertiary level.

The first step in the experiment was to train faculty in the art of digital story creation. After sharing these stories with students as part of the standard “Introduce Yourself” discussion board activity, the next step was to encourage students to reciprocate by producing their own stories. The third and final step in the experiment was to use digital storytelling as the vehicle for the submission of team assignments.

Early feedback from students suggests that listening to and telling ‘true stories’ was a compelling and emotionally-engaging experience, providing an opportunity for ‘transformative reflection’ (Lambert 2000). By including multimedia, learners were able to build upon the fundamentals, presenting content in an easy-to-absorb and compelling way. In terms of team assignments students learned to become more effective actors in collaborative work environments.

The authors conclude that as—in the majority of societies from earliest recorded times —people are ‘hard wired’ both to tell and to listen to stories from a very young age and, significantly, to remember stories, the scope for deep learning using this particular pedagogical tool is considerable.

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1. INTRODUCTION TO DIGITAL STORYTELLING

The term ‘digital storytelling’ is thought to have first been used by Dana Atchley, a performing storyteller in the oldest of human storytelling traditions, who began to use multimedia to support performances in the 1980s. Today it is a term often used to refer to a number of different types of digital narrative including web-based stories, hypertexts, videoblogs and computer games. While the definition of digital storytelling is still evolving, this emergent form of creative work has found an outlet in a wide variety of different domains ranging from community social history, to cookbooks, to the classroom. It is the latter domain that provides the focus for this paper, specifically the online classroom at the tertiary level.

Much of the work on digital storytelling in the education sphere has been done in the United States, and it has been concentrated on the primary and secondary sectors, where practitioners have used it as a method of building multimedia literacy. With some notable exceptions (e.g. Paull 2002), the literature on digital storytelling in the tertiary/adult education sector is quite sparse. Research on the use of digital storytelling in business schools is non-existent (as far as the authors of this paper can see), yet it is fast becoming a feature of corporate presentations, training, and recruitment, and it can be used to create communities of customers. This research lacuna is a bit surprising when one realises that business cases are indeed stories and have a century long tradition, with little to connect their essential method success to the vast history of telling stories both to transmit and create knowledge in human societies.

In early 2006, work began at U21Global—a completely online university with 1500 students in more than 60 countries—to investigate the extent to which digital storytelling might be integrated into the Master of Business Administration (MBA) course; its flagship post-graduate level program. In keeping with the work of Paull (2002), the philosophy was to focus on the ways in which digital stories might help to create a sense of personal and social agency and empowerment within students; characteristics that appeared to be in short supply as virtual distance learners.

The theoretical rationale for this initiative is discussed in section 2 of this paper. It is multidisciplinary, drawing upon literature in the business communication, educational, and socio-psychological domains. Section 3 focuses on the mechanics of digital story creation in its various incarnations, and this is followed in section 4 with a detailed description of how the digital storytelling project at U21Global has been implemented to date. Section 5 reports on the preliminary findings of the project, while section 6 provides a summary and conclusions.

2. THE THEORETICAL RATIONALE FOR DIGITAL STORYTELLING

The Wikipedia entry for storytelling reads as follows: ‘Storytelling is the art of portraying real or fictitious events in words, images, and sounds. Stories are told for entertainment purposes, and often to teach lessons and provide morals. Storytelling is often considered to be a crucial aspect of humanity. Human beings have a natural ability to use verbal communication to teach, explain, and entertain, which is why storytelling is so prevalent in everyday life’. The storytelling entry then goes on to explain that: ‘People in all times and places have told stories. In the oral tradition,

storytelling includes the teller and the audience. The storyteller creates the experience, while the audience perceives the message and creates personal mental images from the words heard and the gestures seen. In this experience, the audience becomes co-creator of the art. Storytellers sometimes dialogue with their audience, adjusting their words to respond to the listeners and to the moment' (Wikipedia, 2006).

More fundamentally, the primal essence of stories and storytelling has been asserted by Reynolds Price as being: 'A need to tell and hear stories [that] is essential to the species *Homo sapiens* – second in necessity apparently after nourishment and before love and shelter. Millions survive without love or home, almost none in silence; the opposite of silence leads quickly to narrative, and the sound of story is the dominant sound of our lives, from the small accounts of our day's events to the vast incommunicable constructs of psychopaths' (Price 1978, cited in Wikipedia, 2006).

Accordingly, we want to first situate digital storytelling within the broadest context; this being a perceived human need to tell stories and the powerful role that storytelling has played throughout times both as a means for transmitting knowledge and experience and creating it. The great odes of Homer were oral stories for many centuries before they were written down. The Hebrew Bible (the Old Testament) was similarly transmitted orally for many centuries before being committed to writing. Indeed the power of stories and myth are so great and ubiquitous in all societies and all times that they continue to shape our psyche and behaviour (see Chinen, 1989; Chinen and Keding, 1998; Campbell, 1949; and Campbell, Moyers and Flowers, 1988).

Back in 1997, Mary Axelson described digital storytelling as the 'latest treasure in new media and interactive online content', and with great prescience forecast that developers and venture capitalists would be ready to back the 'participatory aspects of storytelling' because it would have 'greater appeal in the digital world' (Axelson 1997, p. 38). Dana Atchley brought the art of digital storytelling to the limelight and to the domain of the business world. His clients included Coca-Cola, EDS, Adobe, Silicon Graphics and many others. In the words of the Atchley himself, '...digital storytelling combines the best of two worlds: the 'new world' of digitised video, photography and art, and the 'old world' of telling stories' (Reynolds 2005).

Brown *et al* (1989) suggest that stories provide a memorable, compelling format for transferring information and discoveries; for example, successful strategies for solving problems. Through story sharing, workers can 'bootstrap' on each other's experience rather than 'reinventing the wheel' each time they approach a problem. Stories are a form of 'expert system' for remembering and integrating what we learn.

Pine & Gilmore (1999) theorise that we have moved from a service economy to an experience economy. The customer's (student's) experience encompasses multiple 'realms' or types of experiences including entertainment, educational, aesthetic and escapist. Anticipating the application of this theory in an online education context, McLellan (1999) comments that the 'college experience' in its traditional form evokes a clear image of a scenic, well-kept campus where there are many experiences to choose from, in addition to the central experience of attending classes and pursuing an education. These supplemental experiences include those gained from cultural amenities such as museums, performances of musical and theatrical events, and sporting events. All aspects of education are imbued with a high potential for

remembrance and nostalgia. In McLennan's view, how this experience changes as education shifts more and more from a physical location to cyberspace is something that educators need to consider quite urgently.

To this end, there is an academic literature in the socio-psychological domain which talks about the significance of 'immediacy'. This refers to communication behaviours that reduce social and psychological distance between people (Mehrabian, 1971; Myers, Zhong, & Guan, 1998), and includes both nonverbal and verbal behaviours. In a classroom, nonverbal immediacy behaviours are those associated with physical conduct such as eye contact, smiling, movement (or lack thereof) around the classroom, and body position (Andersen, 1979; Richmond, Gorham & McCroskey, 1987). Verbal immediacy focuses on speaking behaviours such as including personal examples, using humour, providing and inviting feedback, and addressing and being addressed by students by name (Gorham, 1988). Both nonverbal and verbal immediacy behaviours are associated with student motivation and learning (Christophel, 1990; Menzel & Carrell, 1999; Myers *et al*, 1998).

In distance education, researchers are finding that students have lower expectations concerning nonverbal behaviour than in the traditional classroom (Frietas, Myers & Avtgis, 1998; Witt & Wheelless, 1999). Compressed video course delivery, which has less impact on immediacy behaviours is, indeed, positively associated with student learning and satisfaction (Comeaux, 1995; Frietas *et al* 1998; Hackman & Walker, 1990). This notwithstanding, there are others who argue that the 'new' paradigm for distance education—the online learning environment—can, in fact, reduce the traditional social distance between instructor and student (Aheam, Peck & Laycock, 1992; Berger, 1999; Brandon & Hollingshead, 1999; Chidambaram, 1996). The argument advanced here is that the online environment tends to be more dependent upon the collective effort of all class participants rather than primarily the instructor to assure a successful course (Bailey & Cotlar, 1994; Leidner & Jarvenpaa, 1995). To support this, students demonstrate more positive attitudes and higher levels of performance in online classes when they experience high levels of interaction (McCroskey & Anderson 1976; Ritchie & Newby 1989), particularly when this interaction helps bridge the physical and psychological gap that might occur in online courses (Chute, Thompson & Hancock 1999).

In summary, immediacy behaviours in the online environment certainly merit additional attention. According to Arbaugh (2001), in the near future the immediacy construct may be broadened to include nonverbal behaviours for web-based courses as full motion/streaming video becomes more technologically feasible. In this paper it is argued that this time has arrived and that the scope for digital storytelling in facilitating immediacy behaviours is considerable.

3. THE INTRICACIES OF DIGITAL STORY CREATION

General principles

There is no particular model for the creation of digital stories, nor is there any specific software that needs to be used. There are, however, some general principles that might be applied. First, the purpose of the story must be clear, and this must be

articulated from the narrator's point of view. If the story is told in the Third Person, it loses the important quality of 'personal voice' that serves to engage the consumer of the digital story. It is also more empowering for the creator of the story if they have a clear sense of ownership. This is more likely to be the case if the finished product is an embodiment of the creator, providing insights into their core values and personal philosophies.

A second key principle surrounds the choice of content. One of the biggest challenges facing the novice digital storyteller is to become less reliant on text. Text has, of course, been the main vehicle for business communication for several centuries, and while digital storytelling is not antithetical to this, in the digital age—perhaps more than at any other time in history—a picture speaks a thousand words. Having persuaded a storyteller of the merits of parting company with the 'security blanket' of text, the next challenge is to focus their attention on the quality of the images they select to tell their story, and where text is used, to ensure it is used appropriately. Good grammar and language use is important in any presentation, and a digital story is no exception, but there is another dimension to the appropriate choice of content in a digital story that is crucial to its success, and that is economy of the story detail. Put simply, more is not necessarily better. Screens crammed full of images and/or text can lead to information overload and the rhythm of the story is lost.

A third key principle relates to speech. Not all digital stories will have a recorded narration (some will have music, and some just animation), but in the event they do, clarity of voice is critical, as is the pacing of the narrative. Speaking too fast or too slow, or in a monotone voice will not command the attention of an audience for very long.

A fourth and final principle is to do with humour. A much under-researched aspect of education (Powell & Andresen, 1985)—and even less researched aspect of online education—the selective use of humour has the capacity to promote understanding through holding the attention of the learner, reducing stress and anxiety, and creating a positive attitude towards the subject matter. In the online environment, humour also has the added advantage of communicating 'humanness' in an otherwise technologically mediated environment. The beauty of digital storytelling is that there are so many freely available 'digital assets' (e.g. video, audio and imagery) that can be harnessed to reveal one's sense of humour.

The mechanics

There are a number of applications and web services to choose from for the purposes of digital story creation. Among the more well known proprietary applications, there is Apple's *iMovie*, while Microsoft has *Windows Movie Maker* and the ubiquitous *PowerPoint*. Then there is a growing number of web services which are either freely available (e.g. *BubbleShare* at www.bubbleshare.com) or available at an affordable price (e.g. *Hipcast* at www.audioblog.com). The practicalities of digital story creation are described here in the context of Microsoft's *PowerPoint*, not because the authors necessarily believe it to be the best tool available, but because of its high visibility and the fact prospective digital storytellers are likely to have some extant *PowerPoint* skills.

The potential of *PowerPoint* is rarely harnessed to its full extent in face-to-face presentations. For example, the 'Record Narration' option in the 'Slide Show' menu is seldom used in conventional presentation situations given there is likely to be a 'live' voice to accompany the slide show. A drawback of this feature is the heavy file size on account of the audio together with image files. This challenge can be overcome through the use of an application that compresses file size such as *PointeCast* (www.pointecast.com) or *Impatica* (www.impatica.com). This type of file compression software allows the file to be easily transmitted to its intended audience as email attachments or discussion board postings.

The ease with which digital stories can be used in online education has been considerably enhanced by the increasingly widespread use of the digital cameras and mobile telephones with multi-media capabilities. Photographs provide a strongly personalised visual appeal to the story, connecting the storyteller to his or her audience. The 'My Pictures' folder on one's computer hard drive may therefore constitute the primary source of images for a digital story. Other key sources are the major search engines like *Google* and *Yahoo!* which have dedicated links to search for images and video by keyword. The advantage of these 'photo banks' is that file size has invariably already been reduced for ease of display on the web, and the storyteller often has the option of the same images in different sizes, textures and colours. It is necessary, of course, to observe international copyrights laws while using these images downloaded from websites using the search engines. To this end, it is advisable to cite the image source on the slides where these images are used in the digital story.

A useful way to start a digital story using *PowerPoint* is to produce a 'storyboard' by creating slides and inserting only the titles. While the storyteller may have a fairly clear idea about the content of the story, the sequencing of events within it may not be so clear at first. By inserting only the titles of slides, the author can then revise the sequence of the story by 'dragging-and-dropping' slides using the 'Slide Sorter' option in the 'View' menu. Once the storyteller is content with the overall structure of the story, they can then set to work on the 'canvas' inserting text, images and the narration to 'flesh out' this structure.

The 'Custom Animation' option in the 'Slide Show' menu is perhaps the most valuable tool within *PowerPoint* in terms of assisting with the pacing of the story. Text and images can be animated using a variety of formats, using various speeds, allowing the author to remain in full control of the progress of their story. This ensures that their audience stay engaged by not having too much information to consume too quickly in some slides, and too little for too long in others.

Adding a narration is perhaps the most challenging element of the digital story composition process. Including 'theme' music is another option if the digital story is to be shown live, but music copyright laws invariably prevent the digital storage of such files if they are to be made available for public consumption. A personal narration by the creator of the story does not run into this problem. According to personal preference, it may be useful to write a script of the narration to be recorded before undertaking this task. Alternatively, it may feel more 'natural' to speak to a series of bullet points, even including the odd 'stumble' over pronunciation. Whatever option is taken in this respect, the 'Record Narration' option in the 'Slide Show' menu provides the

opportunity to save the narration after each slide, so there is no need to go back to the beginning if you are unhappy with the narration associated with a slide in the middle.

Recording the narration is a skill, which may require a number of ‘rehearsals’ before the storyteller is satisfied with their work. Apart from experimenting with pace and tone, the creator of a digital story-teller will also need to be comfortable with various technical issues. It is advisable, for example, to use a microphone head-set rather than the computer’s inbuilt microphone in the computer for better recording results. The ‘Record Narration’ option also requires that one choose the level of audio recording quality and the desired microphone volume. The ‘CD Quality’ option being the best but producing the largest file size, and the ‘Telephone Quality’ producing the lowest quality but the smallest file size. For obvious reasons, it is a good idea to do a few test slides for the purposes of comparison. It is also necessary to check the ‘Link narration in’ checkbox in the ‘Record Narration’ dialog box to ensure that the recorded narration is saved along with the *PowerPoint* file containing the digital story.

4. EARLY EXPERIENCES WITH DIGITAL STORIES AT U21GLOBAL

One of the authors of this paper took the initial lead at U21Global to evolve and propagate the concept of digital story-telling. The first step in this direction was to familiarise potential authors with the various intricacies of digital story creation. The audience targeted initially was the full-time faculty of U21Global.

Training the faculty to create and use digital stories

The first step in the experiment was to train faculty in the art of digital story creation. An *Interwise* ‘webinar’ was organised to explain the various facets of this process and, simultaneously, to give ‘hands-on’ experience to the full-time faculty, some of whom are located in different parts of the globe. The hands-on element of the workshop assisted the faculty in creating their own digital story prototype. This workshop helped in creating initial interest about the digital storytelling concept and some of the faculty members came up with their final versions of digital stories soon afterwards. The authors of this paper used their digital stories (compressed using *Impatica*) as their personal introductions the online classes commencing in May, 2006. Prior to this, the “Introduce Yourself” discussion board activity at U21Global was a static, text-based introduction with a small passport-sized photograph of the professor. There has been no formal evaluation of the digital storytelling concept at this stage, but unsolicited feedback from students has been extremely encouraging, including:

Thank you for including the slideshow with your voice over and pictures. Truly, it is the first time I have "heard" my U21Global professor and I appreciate it very much.

A unique way of Introduction, much liked and appreciated by me.

By the way, this is a great way of introducing yourself; I feel I really know a lot about you now.

Your photographs / ppt introduction is very helpful and I believe this is something we wish all other professors would emulate. This gives the human face to this interactive learning process.

That was a fantastic story. I never knew that one can present one's profile in such a way. Great learning.

You have captured your life so beautifully! I had always made an effort to tell my gems (daughters) how beautiful was my early part of life. I was only building a story because I have always believed that story telling is the best way to communicate. Would be making a sincere effort to capture the last 40 years of mine in your method.

Your digital story was a revelation and helped immensely - especially the easy, candid, straight from the heart style.

Really it was totally unique and innovative way of introducing.

The success of this experiment motivated the entire faculty at U21Global (including many adjuncts) to create and use their digital stories to introduce themselves in their online classes, and this has laid the foundation for encouraging the students to create their own digital stories.

Training the students to create their digital stories

After sharing these stories with students as part of the standard “Introduce Yourself” discussion board activity, the next step was to encourage students to reciprocate by producing their own stories. One of the authors of this paper created a special digital story covering all the details of digital story creation to guide the students in this exercise. Thus, this digital story was used as a vehicle for training the students in the art of digital story creation. The students were motivated to create their stories voluntarily and, intentionally, the authors chose not to make this exercise mandatory at the outset due to the work and study pressures faced by most students in their classes.

The whole effort paid off when some of the students came up with their own digital stories to share with fellow participants in the class and their professor. One observation, however, is that, by and large, the students created stories with little or no narration – perhaps as a result of the time factor. The authors intend to survey the students in the near future to better understand the reasons for this.

Encouraging the student teams to use digital stories for assignments

The third and final step in the experiment was to use digital storytelling as the vehicle for the submission of team assignments. This step is currently still in its infancy and being trialled in a customised corporate program before being introduced in the MBA. However, preliminary feedback suggests that this is a vehicle that the students are comfortable with, not least because using multimedia provides them with an engaging medium for demonstrating their understanding. Working in teams to present content in an easy-to-absorb and compelling fashion, also allows them to develop generic skills that will be of immediate use to them in the normal course of their jobs in the corporate sector.

5. FINDINGS AND FUTURE DIRECTIONS

While the results of the experiment are only preliminary at this stage, early feedback from students suggest that listening to and telling ‘true stories’ was a compelling and emotionally-engaging experience, providing an opportunity for transformative reflection (Lambert 2000). By including multimedia, learners were able to build upon the fundamentals, presenting content in an easy-to-absorb and compelling way. In terms of team assignments students learned, through digital storytelling, to become more effective actors in collaborative work environments, and felt encouraged to communicate meaning on multiple levels. This approach offers an entertaining way to provide team awareness and to support team coherence in virtual teams. It also allowed individuals to look at work with a fresh perspective.

Spurred on by this, the authors plan further work on research design to collect data about digital storytelling in order to better understand its impact on student learning, motivation and engagement, and the implications for pedagogical strategy.

A personal attitude toward learning is also completely consistent and perfectly aligned with the constructivist pedagogical approach at U21Global. Digital stories by and about the individual faculty member removes them from the proverbial pedestal upon which the classic “sage on the stage” was placed and meant to be held in reverence, and squarely situates the professor as a human being and, indeed, a partner in learning. For students, digital storytelling grounds their learning in their personal history and broadens and deepens the learning as a result. In both instances, the personalising of the learning context reinforces learning and knowledge creation as subjective experiences and processes, helping to move both from their traditional and often sterile objective analytic realm into a more grounded and meaningful inductive and integrative form. This is in keeping with the changing focus in both the social and physical sciences from the Victorian myth of the quest for purely objective realities toward the post modernist view that situates the observer (learner) squarely in the knowledge system being studied (Bohm 1980; Capra 1980; Roszak 1969).

6. SUMMARY AND CONCLUSIONS

To summarise and conclude, we find something of a paradox at work. Storytelling, one of the oldest media for transmitting and creating human knowledge, has paradoxically come full circle, returning to prominence and credibility as a mode of deep learning in the digital era through the ability of “stories” to link, history, context, culture, myth and contemporary reality and experiential learning in the information age.

Traditional knowledge transmission was verbal and done through storytelling: witness Homer, the Bible, and other great epic Middle Eastern and Eastern pre-literate cultural treasures. For example, North American and Australian Aboriginal knowledge was both transmitted and created through stories in combination with parental-grandparental experiential applications of myth to create first hand deep knowledge with the learner.

Even that most vaunted of business education tools, the case, and its entire method of discourse, analysis and synthesis, are really stylised stories meant to be

synthesised and used in other story (case) and work settings. More fundamentally, it should be recalled that before writing was broadly available—really only before Gutenberg in the 15th century—knowledge was oral in nature and highly embroidered and added to over time in an open-ended way (Homer and other epics grew this way over time), much like a modern wiki or blog. Thus, stories were the means by which cultures transmitted cultural and other knowledge as well as the means by which they created and added new knowledge.

The authors conclude that as—in the majority of societies—people are ‘hard wired’ both to tell and to listen to stories from a very young age and, more importantly, to *remember* stories, the scope for deep learning using this particular pedagogical tool is considerable. The more conservative forces within business schools may not accept this idea, but the fact remains that in the knowledge economy, digital technologies have become the *modus operandi* for business communication and, in this sense, a business school curriculum with a heavy bias towards typed essay-style assignments might be adjudged out-of-step with the times.

REFERENCES

- Aheam, T. C., Peck, K. and Laycock, M. (1992). The effects of teacher disclosure on computer-mediated discussion. *Journal of Educational Computing Research*, 8, 291-309.
- Andersen, J. F. (1979). Teacher immediacy as a predictor of teaching effectiveness. *Communication Yearbook*, 3, 543-559.
- Arbaugh, J. B. (2001). How instructor immediacy behaviors affect student satisfaction and learning in web-based courses. *Business Communication Quarterly*, 64(4), 42-54.
- Axelson, M. (1997). The new storytellers: interactive media producers mine the narrative. *New Media*, 7(12), 38-44.
- Bailey, E. K. and Koltar, M. (1994). Teaching via the Internet. *Communication Education*, 43(2), 184-193.
- Berger, N. S. (1999). Pioneering experiences in distance learning: lessons learned. *Journal of Management Education*, 23, 684-690.
- Brandon, D. P. and Hollingshead, A. B. (1999). Collaborative learning and computer-supported groups. *Communication Education*, 48(2), 109-126.
- Brown, J.S., Collins, A. and Duguid, S. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32-42.
- Campbell, J. (1949). *The Hero with a Thousand Faces*. Princeton: Princeton University Press.
- Campbell, J., Moyers, B. and Flowers, B.S. (eds). (1988). *The Power of Myth*. New York: Doubleday.
- Chidambaram, L. (1996). Relational development in computer-supported groups. *MIS Quarterly*, 20(2), 143-163.

- Chinen, A.B. (1989). *In the Ever After: Fairy Tales and the Second Half of Life*. San Francisco: Chiron Publications.
- Chinen, A.B., and Keding, D. (1998). *Beyond the Hero (American Storytelling)*, Audio Cassette, San Francisco: August House Publishers
- Christophel, D. M. (1990). The relationships among teacher immediacy behaviors, student motivation, and learning. *Communication Education*, 39, 323-340.
- Chute, A., Thompson, M., and Hancock, B. (1999). *McGraw-Hill Handbook of Distance Learning: An Implementation Guide for Trainers and Human Resource Professionals*. New York: McGraw-Hill.
- Freitas, F. A., Myers, S. A. and Avtgis, T. A. (1998). Student perceptions of instructor immediacy in conventional and distributed learning classrooms. *Communication Education*, 42(4), 366-372.
- Gorham, J. (1988). The relationship between verbal teacher immediacy behaviors and student learning. *Communication Education*, 37(1), 40-53.
- Hackman, M. Z. and Walker, K. B. (1990). Instructional communication in the televised classroom: The effects of system design and teacher immediacy on student learning and satisfaction. *Communication Education*, 39, 196-206.
- Lambert, J. (2000). Has digital storytelling succeeded as a movement? Some thoughts. *dStory News*, Issue 2, September 20. Available online: http://www.dstory.com/dsf6/newsletter_02.html (29 July 2006).
- Leidner, D. E. and Jarvenpaa, S. L. (1995). The use of information technology to enhance management school education: a theoretical view. *MIS Quarterly*, 9, 265-291.
- McCroskey, J. and Anderson, J. (1976). The relationship between communication apprehension and academic achievement among college students. *Human Communication Research*, 3, 73-81.
- McLellan, H. (1999). Online education as interactive experience: some guiding models. *Educational Technology*, September-October, 36-42.
- Mehrabian, A. (1971). *Silent Messages*. Belmont, CA: Wadsworth Publishing Co.
- Mellon, C.A. (1999). Digital storytelling: effective learning through the internet. *Educational Technology*, March-April, 46-50.
- Menzel, K. E. and Carrell, L. J. (1999). The impact of gender and immediacy of willingness to talk and perceived learning. *Communication Education*, 48, 31-40.
- Myers, S. A., Zhong, M. and Guan, S. (1998). Instructor immediacy in the Chinese college classroom. *Communication Studies*, 49, 240-253.
- Paull, Caleb (2002). *Self-Perceptions and Social Connections: Empowerment through Digital Storytelling in Adult Education*, University of California, Berkeley, Dissertation Abstracts International.
- Pine B. J. III and Gilmore J. H. (1999). *The experience economy: Work is theatre and every business is a stage*. Cambridge, MA: Harvard Business School Press.

Powell, J.P. and Andresen, L.W. (1985). Humour and teaching in higher education *Studies in Higher Education*, 10(1), 79-90

Price, R. (1978) *A Palpable God*, Akkadine Press, cited in Wikipedia (2006). Available online: <http://en.wikipedia.org/wiki/Storytelling> (27 August 2006).

Reynolds, G. (2005). Dana Atchley (1941-2000): a digital storytelling pioneer. Available online: http://presentationzen.blogspot.com/presentationzen/2005/07/dana_atchley_19.html (27 August 2006).

Ritchie, H. and Newby, T.J. (1989). Classroom lecture/discussion vs live televised instruction: a comparison of effects on student performance, attitude. *American Journal of Distance Education*, 3(3), 8-17.

Richmond, V. P., Gorham, J. S. and McCroskey, J. C. (1987). The relationship between selected immediacy behaviors and cognitive learning. *Communication Yearbook*, 10, 574-590.

Wikipedia (2006). Storytelling. Available online: <http://en.wikipedia.org/wiki/Storytelling> (27 August 2006).

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