Digital Storytelling Approach in a Multimedia Feature Writing Course

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Abstract—With the rapid development of multimedia technology, digital storytelling has been widely applied in education. This article argues that digital storytelling is a multimedia narrative form which involves critical thinking and creative abilities. These two elements are very important in multimedia feature writing. This article analyzes the application of digital storytelling approach in a multimedia feature writing course through a literature review and a case study. It concludes that the process of completing a digital storytelling project develops students’ creativity and critical thinking. Thus, the digital storytelling approach can be seen as a positive applicable approach in a multimedia feature writing course.

Index Terms—digital storytelling, multimedia feature writing, creativity, critical thinking

I. INTRODUCTION

Storytelling is a powerful way to express ideas and communicate experiences. Writing is a written form of storytelling. Storytelling has been part of teaching since the defining of subjects, as far back as Aristotle’s tutoring experiences (Alexander, 2011). With the rapid development of information technology, “students live in a world that has been transformed by technology, and they are often referred to as ‘digital natives’ because their exposure to digital resources begins at birth” (Morgan, 2014, p.20). According to a Pew Research Center report, in 2015, 92% of teens report going online daily — including 24% who say they go online “almost constantly.”1 Alexander (2011) indicated a “disconnect as the result of poor communication between ‘digital natives,’ today’s students and ‘digital immigrants,’ many adults.” (p.214). Because while many adults are using mail or phones for communication, the Net generation is skillfully using Facebook, Twitter, WeChat or other social media to write their multimedia blogs. Why are digital communication and multimedia writing appealing to the Net generation? How is digital storytelling applied in multimedia feature writing? In this article, we first analyze digital storytelling and multimedia feature writing. Next, we provide a literature review that explores some of the applications of digital storytelling in different areas. We then analyze the application of the digital storytelling approach in a multimedia feature writing course through a case study. Finally, we draw a conclusion that the process of completing a digital storytelling project develops students’ creativity and critical thinking.

II. CONCEPTS

Digital storytelling is an integrated application of multimedia resources within learning environments for the production by students of multimedia narrative (Barrett, 2006; Bull and Kajder, 2005; Clarke and Adam, 2010; Hung, Hwang and Huang, 2012; Mellon, 1999; Robin, 2008). Narrative is a linguistic way of representing real or imagined past experiences (Traugott and Pratt, 1980). Multimedia narrative involves constructing narratives using a range of technologies or media including voice, words, moving or still images, music, and other source. Digital storytelling is “a dynamic and beautiful marriage of narrative and technology that is proving to be a potent force in educational practice” (Rossiter and Garcia, 2010, p.37).

Feature writing is a type of “creative, subjective writing that is designed to inform and entertain readers” (Garrison, 2010, p.7). Feature writing is more often creative than nonfiction and less objective than news writing, and differs from fiction because feature writing deals with reality. Multimedia feature writing engages using multiple media and software that combines the art of feature writing and modern technologies, contributing to helping readers to better understand the author’s purpose and content. Multimedia feature writing is sometimes adopted in journalism, personal storytelling and other narrative form.

III. LITERATURE REVIEW

Within the past decades, digital storytelling has been widely researched. The roots of digital storytelling reach back to 1980s, when Dana Atchley first used the term as he experimented with the use of multimedia elements in storytelling performances (Rossiter and Garcia, 2010). In the late 1980s, Joe Lambert and Dana Atchley cofounded the Center for Digital Storytelling (CDS) in Berkeley, California. The CDS is known for training people in creating and sharing their

personal narratives and developing the Seven Elements of Digital Storytelling. After the CDS was founded, a great deal of research on digital storytelling emerged. Some studies focus on the theoretical foundations or framework of digital storytelling. Other studies focus on the applications of digital storytelling in different fields. Some even focus on the relationship between digital storytelling and technology. The following is a literature review of the aforementioned research.

A. Theoretical Foundations

1. Technological Pedagogical Content Knowledge (TPCK) Theory

The term Technological Pedagogical Content Knowledge (TPCK) “focuses on the relationship between knowledge about content, pedagogy, and technology” (Robin, 2008, p.226). Mishra and Koehler (2006) declared that TPCK is the basis of skilled teaching through technology. It is mainly focused on how technology can be used to develop new knowledge and strengthen existing skills. TPCK theory is helpful for guiding teachers’ teaching by providing “the ability to use technology in critical, creative and responsible ways” (Hicks, 2006, p.50). Digital storytelling is an educational approach that can motivate students to learn more content with the help of multimedia technology. Teachers should have deep knowledge of the teaching content, teaching methods and multimedia technology, and know how to combine the convergence of these three types of knowledge in teaching. Teachers can then motivate students to learn new content more effectively.

2. Constructivism

Constructivism is a view of learning based on the belief that knowledge is constructed by learners themselves through an active mental process. It emphasizes the learners’ activeness and creativeness. Piaget (1977) stated that learning occurs by an active construction of meaning, rather than by passive acceptance. Similarly, Duffy and Jonassen (1992) indicated that learners were not just responding to stimuli passively, but engaging grappling and seeking to make sense of things. Therefore, a teacher’s task is not to impart knowledge to students, but to “find ways of enriching, balancing and clarifying the students’ experience, to guide them to seek new experiences when needed, and to find ways of connecting the students’ experiences with the diverse ways of life in their culture” (Huttunen, 1986, p.19). The digital storytelling approach sharply embodies the constructivist theory of initiative, social and situational characteristics. By using this approach, teachers are guiding students to connect their own experiences and social life actively and creatively.

3. Transformative Learning

Transformative learning is an educational theory that aims to foster “a critical dimension of learning…that enables us to recognize, reassess, and modify the structures of assumptions and expectations that frame our tacit points of view and influence of our thinking, beliefs, attitudes, and actions” (Mezirow, 2009, p.18). It encourages students to actively immerse themselves in exploring new knowledge, generating new ideas for new conditions and endure big differences. The differences we perceive in others are largely “differences we create by viewing the other according to the rightness of our own preferences” (Kegan, 1994, p.232). The digital storytelling approach is a means of assessing students’ transformative learning in and out of the classroom. Students’ process of finishing a digital storytelling project helps to develop a new understanding of the world around each student by means of critical self-reflection.

B. The Application of Digital Storytelling in Different Fields

In recent years, research about the applications of digital storytelling in different fields has gained growing attention. A large amount of literature has explored the ways in which digital storytelling is being employed in various areas including K-12 education, higher education, health care, aging, community action, and more (Rossiter and Garcia, 2010).

In terms of the application of digital storytelling in K-12 education, Mullen and Wedwick (2008) reported a rural middle school teacher’s use of YouTube, digital stories, and blogs in a language arts curriculum. They found that the digital storytelling project encouraged students to critically think and express creativity. Vasudevan, Schultz and Bateman (2010) conducted a multimodal storytelling project in a fifth-grade urban classroom, and they found that extending the composing process to multimodal storytelling increased students’ modes of participation and engagement within the classroom curriculum. Hung, Hwang and Huang (2012) created an experiment involving 117 Grade 5 students in an elementary school in Taiwan. Their experimental results show that “the project-based learning with digital storytelling could effectively enhance the student’s science learning motivation, problem-solving competence, and learning achievement” (p.368).

Salman Khan, founder of Khan Academy created a free online education platform in 2006 that has produced over 6,500 video lessons; mainly focusing on mathematics and sciences. These videos involve digital storytelling. Each video is about 6 to 10 minutes, and focuses on one knowledge point. It is not a long video, so it won’t distract students’ attention. After the video, students may choose to continue to practice the concept or check the answers. If they get stuck, they can click the button “I’d like a hint.” The academy will even record students’ progress and motivate students with badges. Students like this way of learning as they are playing digital games. In around 20,000 K-12 schools, math teachers no longer need to instruct. Instead, students will watch Khan Academy’s videos and do some practice problems

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online. Teachers only need to answer students’ questions. As of today, the Khan Academy channel on YouTube has about 2,285,000 subscribers and the Khan Academy videos have been viewed more than 658 million times.

In terms of the application of digital storytelling in higher education, academics have reported using digital storytelling in courses on literary studies, creative writing, American Studies, social and cultural history, teacher training, ESL and gender studies (Ganley and Vila, 2006; Klaebe and Bolland, 2007; Oppermann, 2008, p.178-9). Clarke and Adam (2010) explored the experiences of Australian academics with the use of digital storytelling as a pedagogical tool in higher education contexts. They asserted that “digital storytelling offered great potential for higher education, especially in the arts and humanities.” (p.173). Chung (2006) also did some research on digital storytelling in integrated arts education, and found that students tend to make better sense of complex ideas, concepts, or information when it occurs via storytelling.

C. The Application of Digital Storytelling in Writing Field

Scholars have documented the development in writing through multimedia and modalities (Vasudevan and others 2010). Gakhar and Thompson (2007) demonstrated that digital storytelling can improve students’ writing skills, critical thinking skills, and media literacy. Bulent Dogan and Bernard Robin (2008) reported in their research, findings that the students in classrooms where teachers implemented digital storytelling approach displayed improved technical, presentational, research and organizational skills, and writing skills.

In a program held in the University of Houston’s College of Education, the students’ digital stories “demonstrated creativity, thoughtful writing, organizational skill and powerful incidences of self-expression, even by students who were often reluctant to speak out in class.” (Rudnicki, Anne and others, 2006, p.2) Digital storytelling has also been claimed to facilitate the learning of students who are new to academic writing and who have problems with conventions of academic writing to engage intellectually (Clarke and Adam, 2010).

In Sylvester and Greenidge’s study with struggling writers (2014), they found that creating digital stories help students gain more awareness of purpose, structure and form of the story, and the use of the photographs and videos help students express themselves more easily and competently.

Although a vast body of research on digital storytelling has been reviewed, little research has been found about the application of the digital storytelling approach in a multimedia feature writing course. This paper will investigate why digital storytelling and multimedia writing are appealing to the Net generation and how the digital storytelling approach is applied in a multimedia feature writing course through a case study.

IV. Why Are Digital Storytelling and Multimedia Writing Appealing to the Net Generation?

Digital storytelling attracts the Net generation for the following reasons. According to Pavio’s (1986) dual-coding theory, learners can strengthen the impression and recognition of the information through both the visual and verbal cognitive systems. Given digital storytelling’s reliance on visual (images) and verbal (words and audios) information, the Net generation can often memorize and recall the information released from digital storytelling easily and impressively.

The Net generation was born with the prosperity of digital resources. They have become accustomed to receiving information from all sorts of digital media, including television, Internet, radio, etc. They have easily learned to use a lot of digital devices including digital cameras, microphones, cell phones, iPads and computers. Their technical competence often enhances their ability to become digital storytellers.

The digital storytelling approach encourages student-centered learning. Students are not following teachers’ instruction passively in class, but instead actively presenting their own stories through digital projects. While they are creating a digital story, they are experiencing “learning by doing” in something of an entertainment-based learning environment. In this process, they have to develop their creativity, learner autonomy (self-study) and critical thinking abilities. Making a digital story involves investigation, discovery, and creation, and students must therefore act as researchers, designers, writers, directors and media producers. They are the owners and masters in their learning process.

Multimedia writing also attracts the Net generation for a multiple reasons. First, almost everyone has stories to tell, no matter whether they are their own stories or stories heard from others. However, not everyone has the ability to tell the story in written forms. Multimedia writing may encourage people who have no interest or confidence in writing because multimedia writers may write a story through a lot of multimedia tools, such as pictures, music, animation, video, etc. According to Mayer’s (2001) cognitive theory of multimedia learning, presenting both with the images and words is superior to presenting only with words. He defines words as “printed (e.g., on-screen text) or spoken (e.g., narration)” and the pictures as “static (e.g., illustrations, graphs, charts, photos, or maps) or dynamic (e.g., animation, video, or interactive illustrations)” (Mayer, 2003, p.43).

Another appealing characteristic of multimedia writing is flexibility. In multimedia writing, writers may decide when to use words, when to use photos, graphs or maps, and when to use animation or video. The creator has the flexibility

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and ability to control the usage of multiple media. Blogs may provide an opportunity for those who want to share a wide range of multimedia sources from documents to pictures or videos. In particular, shy students who dare not talk in public can express themselves freely through words, images and videos in their blogs and enjoy sharing their stories online.

V. Case Study: Application of the Digital Storytelling Approach in a Multimedia Feature Writing Course

From March until May 2015, I had an opportunity to audit an English Professor’s Multimedia Feature Writing class in a college in Pennsylvania, USA. A project-based digital storytelling approach was applied in the class. In the first half of the course, the teacher introduced some background knowledge of digital storytelling and multimedia feature writing. In the second half of the course, the teacher assigned each student a digital storytelling project about any topic on or off campus. Students were able to borrow the digital devices from the college library, including a digital camera, microphone etc. Most of the students’ digital storytelling projects involved the following six steps.

1. Brainstorming to select a topic
2. Researching on the selected topic
3. Writing a script
4. Shooting a video
5. Recording the narration or voice-over
6. Editing the audio and video

When it came to the class of presenting students’ first draft of their digital storytelling project, the professor chose a qualified student to be a teaching assistant and help to present all of the students’ digital stories one by one. And the students were asked to write a review of each classmate’s digital story according to a list of standards delivered to them by the teacher. The list of standard included four categories: story/narrative; adherence to guidelines and creative dimensions; technical; title, credits, and byline. After presenting all of the digital stories, students were asked to face each other and share their comments with the class. Thanks to the professor’s permission, I had the opportunity to join their discussion and share my comments with them. Most of the students made a crafted digital story. It was hard to believe it was their first time participating in a digital storytelling project. Though overall their projects were strong, some students’ videos had some minor flaws due to the imperfection of the camera or the lacking of skills in shooting a video. For example, the background music was louder than the human voice in the video, or the content in the video was not rich enough.

Students were asked to watch for the following requirements: 1) The interviewee should look at the negative space when he is being videoed. 2) The questions for the interviewees should not be too difficult for them. 3) There should not be too much motion in the video, and the scenes should not be sequenced too fast etc. A senior student’s video about the sports center in the College was quite professional, including all kinds of different sports center locations and variety interviews. While the students were sharing comments, the professor gave her own timely and insightful comments. This type of class was a truly student-centered class. Students took total control over their learning by tackling a realistic situation through a creative digital story. The teacher served as a coach and facilitator.

As in a traditional writing class, some students fear multimedia writing or feel distress. But when students are using digital stories to record those valuable experiences in their life, they change their perception of writing. It seems they are not writing to finish the teacher’s assignment, but to present their stories to other people or even to the world if they post the story on the social media. I felt that the students in this course had positive and active attitudes towards the digital storytelling project and they felt proud to share their stories in public. The digital storytelling approach applied in this course also helped the students to gain confidence in study, especially in writing.

When it came to the final draft of the digital storytelling project, the professor assigned groups to help the students to polish their projects from the original draft. Each group had three to four students. Each student had an independent role. Studies have proven that “students who work together on long-term projects are less likely to be absent. They also develop cooperation and communication skills, practice problem-solving and critical-thinking skills and improve their test scores.” This model of project-based digital storytelling approach can be described in Figure 1.

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In this model, digital storytelling is a team project-based approach; it helps students to practice cooperative learning. Students in a group cooperate with each other to finish a digital storytelling project. Students have diverse skills. Some are good at writing skills, so they take the role of writing the script. Some are good at operating hardware, so they take the role of video shooting. Some are good at operating software, so they take the role of editing the video by some software. Some are good at narrating, so they take the role of narrators. In a group, students are not competitors, they are teammates. Students cooperate and discuss the project and responsibilities with each other in order to achieve the tasks without the professor’s controlling the class. Students are the center of the activities while the professor is the organizer, guide, facilitator and helper. Students can learn from each other and meanwhile they feel no pressure, thus their enthusiasm, confidence and critical thinking abilities are built, which undoubtedly will motivate their autonomous learning.

When the final digital stories of students’ group project were presented in class, we could see that their final products were much better than their first products. The professor gave high praise to each group of students. The professor also showed the students an excellent example of multimedia feature writing. It’s an article titled with Norway the Slow Way on the website New York Times. In this article, the author used multiple media to present the content to the readers: words, charts, pictures, moving images/pictures, videos, animated maps, moving words and so on. Students were encouraged to learn and apply those advanced skills such as animation, moving words in their own multimedia feature writing.

VI. CONCLUSION

This article has traced the concept of digital storytelling and multimedia feature writing, the theoretical foundations of digital storytelling, and the application fields of digital storytelling. This study contributes to the literature on application in the field of digital storytelling in the multimedia feature writing in three particular ways. First, it has analyzed the reasons why digital storytelling and multimedia writing are appealing to the Net generation. Second, it has provided a practical application of the digital storytelling approach in a multimedia feature writing course through a project-based storytelling model. This article argues that a team project-based approach can foster students’ abilities to search for and compile the information, analyze and solve the problem, communicate and cooperate with others. In the process of searching for the right information to suit the topic of their digital storytelling project, students have to critically assess the information they have found, rather than trust it without question. This process has transformed students to become critical thinkers and creative problem solvers.

The Net generation in the new digital age is telling their own stories in their own way by using digital cameras, pictures, music, words, and other new technologies. Thanks to Web 2.0, the Net generation can use Facebook, Twitter, Wechat to write multimedia stories and have interaction with the readers. Now professors can assign students multimedia homework, such as digital storytelling, blogs, or even web pages. In recent years, International Society for Technology in Education (ISTE) standards have been widely adopted for teaching, learning and leading in the increasingly global and digital society. The ISTE standards for students include “creativity and innovation”,

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“communication and collaboration”, “research and information fluency”, and “critical thinking, problem solving and decision making”. These standards emphasize the importance of training students' creativity and multimedia narrative ability. To meet these standards, cultivating students’ “creational thinking” ability is very important. “Creational thinking” is a way to “blend creativity and critical thinking” (Ohler, 2013, p. xiii). This study has asserted that the digital storytelling approach is a positive applicable approach in transforming students to become creative and critical multimedia narrators. This has great implications on establishing a new curriculum core and carrying out research-based learning.

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