Using Machinima as a Method for Digital Color Practice and Narrative Creation

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The Asian Conference on Society, Education and Technology 2013

Official Conference Proceedings 2013

Abstract

Combining visual game scenes, actions and narrative, Machinima, a by-product of the digital game, has been seen as a storytelling form of artistic expression and creation. Machinima means animated films made by machines. Specifically, Machinima is an art form involving videos created by using cinematic production techniques within computer software, usually games. Machinima differs from conventional computer graphic techniques because it allows creating films in real-time. Thus Machinima can be understood as either the method of making animation through 3D game technology or the animations made through the method.In this research project, we planned and conducted a course called “Game Arts” at the University of Taipei. Eighteen non-arts majors were recruited and encouraged to use the video game *The Sims 3 (TS3)* to tell a story. At the end of the class, they were asked to present their animated story and then discuss it with classmates. Through class observation, a class survey, group discussions, and collection of students’ personal artifacts (including their story script, sketches, charters, and animations), we gathered both qualitative and quantitative data. Most students enjoyed using *TS3* to visualize and present their ideas, and indicated a desire to create more Machinima in the future for telling and sharing stories. Moreover, making Machinima not only provided non-arts majors with a convenient tool through which to express and visualize their stories, but the Machinima process itself offered them a distinctive opportunity to discover and rethink meanings revealed in their stories.

Keywords: Machinima, digital games, digital narrtive, the Sims3

1. Introduction

With growing popularity of digital games, the age range of players is not limited to teenagers. More and more seniors and female players have been engaged in digital game playing (Siwek, 2010). Given that what digital games represent is more than a virtual world carried by a physical system, the phenomenon and influence it has on the society plays an important part in our culture. As computer technology develops, various digital games come in the market, more and more appealing game are designed and game visual quality are getting more delicate and vivid (Schulz, 2008). Some games even offer players the recording functions so players can share interesting clips of their gaming processes with others after playing. More and more games, such as “Doom”, “Quake”, “Halo 3”, “StarWars”, “the Movie”, and “The Sims 3”, offer players, as explorers and recorders in the virtual worlds, built-in recording functions and playing functions to record and share their unique gaming experiences.

Instead of in-built recorders, some of games also offer players plug-ins and game editing programs to make video game animations. The operating mode of these programs is similar to those of traditional 3D animation production software, but it shortens the time of the process of modeling, lighting, and setting. Thus, it allows less-experienced players to operate shots in various game settings (Lowood, 2007; Gladstone, 2006). Playing and recording games at the same time, players can make animations easily while gaming (Hsiao, 2011).

These recording functions, plug-ins, lighting functions and updated rendering systems turn game engines into movie shooting tools. These advanced techniques have even impacted film shooting process in Hollywood. Directors, such as Steven Spielberg, George Lucas, and James Cameron, used Machnima to assist their film shooting (Marino, 2004). They first set up settings with game engines to calculate their shooting angles, movements, lighting, and other arrangements. Later, based on the update rendering, they discussed and edited their scripts and then officially shot the films. It is clear that such process can effectively save time and cost (Kelland et al., 2005).

There are a growing number of people interested in making Machnima in Taiwan. For example, AFK Pl@yers, which consists of three graduates from Graduate School of Radio, Television and Film at Shih-Hsin University. Their popular Machnima, based on the latest documentary “WOW”, was widely forwarded on the Internet. After its success on the Internet, their Machnima was awarded in a foreign Machnima film festival.

Game scenes nowadays have integrated visual effects, gaming, and storytelling. The byproduct of Machinima has been viewed as a way to create and tell a story (Lowood, 2006; Tavinor, 2009; Nitsche, 2005). With the advance of computer technology, Machnima will be an important new media in the future. Meanwhile, low production requirements mean the liberation of the mass media (Hsiao, 2011). Without having any expensive 3D animation software or following the standard process of animation shooing such as modeling, setting, and lighting, those who do not have experiences of animation production can easily make their own animations through video games and express their ideas and experiences in the society via this new media.

Over these years, the government has listed digital games and computer animations as important promotion items whether it is in digital content industry or cultural and creative industry. However, as mentioned above, it takes highly-professional skills to enter the digital game industry and animation industry (Hancock & Ingram, 2007). Thus, students need to receive a series of professional and intensive training to acquire basic skills in order to enter these fields. Even for art students who are well-trained in aesthetics and art creation, it is hard for them to create 3D animations if they lack related professional training courses to apply their skills to this new media. However, Machnima is the tool which can help students to break limitations of computer animation software and create 3D animation.

2. Course Design

College students who have not received training in the arts may find it comparatively difficult to engage in story-telling and related narrative development using visual media. This is especially true for those who turn to animation, which requires capabilities in art creation and mastering digital technologies. Yet in today's higher education environment, true reflective learning among non-arts majors necessitates the use of a broad range of visual media tools and resources. In a Taiwan Ministry of Education-funded project on animation-making and -sharing as effective media for promoting student reflection, we planned and conducted a course called "Game Arts" at the Taipei Municipal University of Education. Eighteen non-arts majors were recruited and encouraged to use the video game *The Sims 3 (TS3)* to tell a story.

"Game Art" set out from basic introduction of digital game industry to cultivate students' interest in digital games. After students were familiar with this new media, they were encouraged to create their own animation stories with visual literacy and later create their own Machnima. Then, students were encouraged to upload their works onto the Internet, share them with their classmates, and have further discussions about social or cultural issues related in terms of their story content, perspectives, expressive forms. Through this course, students were expected to review digital media production and create their own digital works in integration with motion images, audip effects, and editing.

3. Teaching Materials

1.1. Teaching Design

With a lack of teaching materials of Machnima production in Taiwan and abroad, the teacher decided to make her own teaching materials for a 16-week course, including theoretical courses such as digital game theories, history of Machnima, and related visual communication theories, visual communication design as well as practicum courses such as demonstration of digital game operation, comparison of setting and pictures, demonstration of visual software, editing skills.

Table 1. Course Syllabus

Week 1	Introduction of cultural and creative industries
Week 2	Introduction of animation and game animations
Week 3	Demonstration and practice of digital game the Sims 3
Week 4	Appreciation and discussion of AFK's Machinima works
Week 5	Story, script, characters, and plots design
Week 6	Story discussion
Week 7	Storyboarding
Week 8	International Machinima films appreciation
Week 9	Cheat and modification codes of the Sims 3
Week 10	Mid-term presentaion and discussion
Week 11	Digital editing
Week 12	Audio and visual effects & post-production II
Week 13	File formats
Week 14	Machinima film production practices and problem solving
Week 15	Final adjustments
Week 16	Final presentation

3.2 Class Activities

The teacher first classified various Machnima, home and abroad, in the order of year, theme, genre, classic, style, and so on. Some were played and discussed in class while the rest were put online for students' references. As for inclass activities, three directors were invited to give speeches and five film production professionals were invited to give students suggestions on their works. The activities were as follows: an invited speech of AFK@PlayersMachnima, an invited speech of film editors, a speech of Machnima professionals, a speech on storyboard, and a discussion of students' final works in the end of the semester.

1.3.Game Software

As for the game software, "The Sims 3" by EA Games in 2009 was used in "Game Art". "The Sims 3" is a strategic life simulation video game, featuring high-quality visual effects, interesting stories, and imaginative game settings. To be more precise, "The Sims 3" is a life simulation game, in which players create and take care of everything about their Sims, such as their family and living condition. This game is more like a house of dolls, where the Sims live their life while the players, as God, protect, guide, assist, and take care of the Sims to achieve their goals. Generally speaking, each Sim has his or her own personality. In addition to their players'

settings, their subconsciousness and free will are controlled by artificial intelligence. The Sims' needs are based on Maslow's hierarchy of needs (1968), including biological needs, safety needs, social needs, esteem needs, and self-actualization needs. Personality traits of the Sims are based on the 16 personality types of the Myers-Briggs Type Indicator. The growth experiences and memories of the Sims are based on Freud's psychoanalytic theory.

As a strategic life simulation video game, "The Sims 3" offers players a virtual environment simulating real life without any specific goals and rules. Such game falls into the category "sandbox game" in ludology. Because there are no set rules in this kind of game, players can explore this game with more imagination and creativity. Thus, how to play and what they experience may vary. Moreover, as a strategic life simulation video game, this kind of game is suitable for shooting stories about family and human relationship. What's more, the built-in recording functions of this game allow students to record process of gaming without any other video capture software or third party programs.

Meanwhile, students could use "Create a Pattern" (Fig.1), a free official program by the game company, to practice coloring by drawing patterns to decorate the interior environment or change the Sims' clothes patterns. In class, students could even use pictures of the built-in "sticker bank" of this program or add their self-made patterns to create their own visual styles for further Machnima production.

Fig 1. Create A Pattern. Source: http://www.thesims3.com

In this course, Microsoft's "Movie Maker" or Apple's "iMovie" were used to edit the videos. Moreover, "Create a Movie", an online editing program offered by Sims3 official website, was used to edit the after effects (See Fig 2). It gives not only detailed illustrations of Machnima production as well as eyecatch and subtitle functions as what we have in common editing software. There are many built-in data bases such as themed pictures, themed scenes, and various background music and sound effects for students to choose from. Students just had to upload their recorded chips from the game and then they could use the online editing program offered by the website to edit and have music and subtitles in their Machnima.

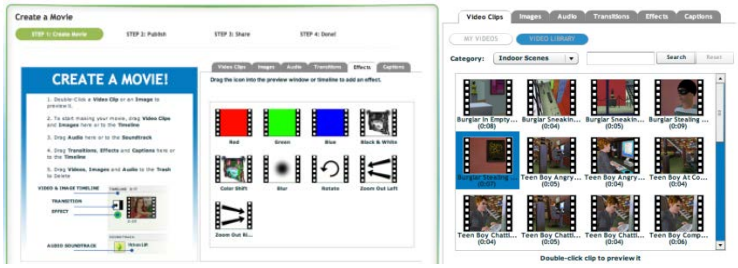

Fig 2. Create A Movie. Source: http://www.thesims3.com

4. Production Process of Machnima

In the story planning stage, students were first asked to give written explanations of "who", "when" and "where" of their stories. Later, students were asked to design and arrange their plats. Based on their written description, they arranged their plot and drew their scripts and storyboards. Then, after discussions and revisions, students were asked to make their video game animation presentations by collecting pictures and scenes they needed in the game and adding them with sound effects, subtitles, and after effects. Since students taking this course were non-art students, they were withdrawn when asked to draw pictures. However, with the teacher's encouragement, they managed hard to complete their works.

After students were familiar with the interface of the game and the control characters and shots in their first creation process, they were asked to do their final Machnima works. They were grouped to do their final Machnima works.
Each group had to present it proposal, including story, plot, characters, settings, storyboard, and so on. After invited speeches given by film shooting professionals, they started to set their characters and scenes, shoot their Machnima, edit and give after effects.

The research was conducted in the teaching environment of 16-week "Game Art" course and classroom observation. Data were collected from students' midterm and final works, questionnaires conducted in the end of the semester, and two focus group interviews. Focus group interview is an often-used research method in sociology. Compared with traditional interviews, its advantage is that real and reliable research data can be easily collected in an open and relaxed discussion where interviewees can express their ideas, experiences, and opinions (Gillham, 2000). Moreover, deeper and various data could be collected through discussions and interactions in the focus group interview (Vaughn, Schumm, & Sinagub, 1996).

Two focus group interviews were conducted in the middle of the semester and after the final presentation in the end of the semester, each of which lasted for one and half hour. The research purposefully created an easy atmosphere in these two focus group interviews so students could freely express their ideas about Machnima making and about others' works. With students' signed informed consent, the researcher recorded the interviews and analyzed the transcripts. Regarding students' works, each student was required to finish one video game animation presentation on their own in the middle of the semester while they could complete a 3-minute-long Machnima as their final works either by individual work or by group work of two. All their works were collected and later analyzed.

Concerning data analysis, this study involved not only descriptive quantitative data from questionnaires but also qualitative data for narrative learning and reflective learning.

5. Evaluation

"Game Art" was the first-ever course of Machnima production. It aimed not only to deepen students' understanding of the current domestic and international situations of digital game industry and of cultural and creative industry but also stirred students' unlimited creativity of the digital content through experiencing digital game playing.

In addition to its efficacy in boosting students' motivation, Machnima can trigger more discussions between teachers and students, topics of which can be extended to the trend of digital games, game culture, cyber communities, and related issues about contemporary visual culture. Meanwhile, since most students are digital natives, who grow up with digital media, they are familiar with how to use this new media. It is a great opportunity for them to integrate digital skills, cultural thoughts, and various issues.

In this study, there were 18 animations scripts, 18 video game animation presentations, and 11 Machnima works in total. Three groups' final works were complete of their own styles. Thus, teachers encouraged them to participate in foreign Machnima contests and assisted them with the application procedures, hoping that they would be more confident about their own works. Moreover, the teacher encouraged them to engage in jobs related to digital games or animations in the future, helping them prepare for the future engagement in the cultural and creative industry.

Fig. 3 The students' works form their stroyboard, still plots, to amination

Although game operation was difficult and most time-consuming to students, it was the part that most students liked and felt confident about. Many students were proud of completing their own works, with 89% (16 out of 18 students) wishing to share their Machnima works with their friends and 88% (15 out of 17 students) expressing their willingness to create their future works with Machnima. Furthermore, in students' feedback, it is mentioned that it was beneficial to them to reflect the connotation of this new media in the society by analyzing Machnima in Taiwan in class since they were seldom encouraged to reflect the meanings and connotations of the media in a way of critical thinking.

Although Machnima still has a lot to be desired, it has great potential in the field of art creation and digital narration. Its unsatisfactory image quality can be improved by the advanced game engines in the future. Furthermore, it is not fair to directly compare Machnima works, 3D animations, and movies since they are from different media. Although they can used to tell stories, they set out from different fields and present stories from different scenes. In addition, more delicate facial and emotional expressions can be greatly improved by different camera movements, angles, and shots, and hearing description with various vocal expressions. As for copyright of Machnima, it will soon regulated by laws. Gradually-growing and ever-developing, Machnima is more a creative media of culture than a film production tool or a genre of animation. It is an art movement which turns consumers into producers.

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