

EDUCATIONAL USES OF DIGITAL STORYTELLING: THE CHALLENGES OF DESIGNING AN ONLINE DIGITAL STORYTELLING CONTEST FOR K-12 STUDENTS AND TEACHERS

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Abstract: This paper describes the challenges of designing a series of online Digital Storytelling Contests (DISTCO) and the experience of building a website for the project. These contests are open to all K-12 students and teachers in San Antonio, Texas and surrounding areas. The project is designed so that students and teachers from different schools may enter digital stories to the contest. The competition will be held solely online, and digital stories are required to be submitted using the official contest website (<http://www.distco.org>). Based on the experiences of the first in a series of Digital Storytelling Contests, DISTCO 2008, the design of the DISTCO 2009 contest has been developed and improved.

Introduction

Digital storytelling is one of the new and exciting educational technology tools available for use in the classroom. It is a multimedia product consisting of images and segments of video containing background music or audio and a voice-over narrative (Hull & Nelson, 2005). Fundamentally, digital storytelling is a process of creating a short movie that combines a script or an original story with various multimedia components, such as images, video, music and narration, often an author's own voice. Topics for digital stories can vary from personal tales or reflections to instruction/introduction of a specific subject to an audience. The process of creating digital stories has been cited to have benefits for users. This process is noted to utilize virtually all of the skills students in K-12 are expected to have in the 21st century (Jakes, 2006). Information literacy, visual literacy, creativity and risk taking, and the utilization of technology for effective communication can all be achieved when students actively participate in the creation process of digital storytelling (Jakes & Brennan, 2005; Robin, 2008). Increases in student motivation and engagement levels have also been reported (Paull, 2002; Banaszewski, 2005; Salpeter, 2005).

Digital storytelling has been used in the classroom for various purposes, including teaching content to students, empowering students by making them active researchers and storytellers, teaching writing, meeting International Society for Technology in Education (ISTE) Technology standards, and building communities through storytelling (Banaszewski, 2002; Salpeter, 2005; Weiss, Benmayor, O'Leary & Eynon, 2002; Dogan & Robin, 2008). The potential uses of Digital Storytelling by teachers or students are numerous as it has a broad range of possible applications (Dogan & Robin, 2008).

The Study

Given the lack of current research on the effective use of digital storytelling in K-12 education, the researcher completed a study on the implementation of digital storytelling in the classroom by a group of K-12 teachers. To further explore and augment current research on the educational use of digital storytelling, a new project was developed. This project involves hosting a series of Digital Storytelling Contests (DISTCO 2008 and DISTCO 2009) in various terms at a secondary school, where the researcher currently works as the principal. The contests are open to all K-12 students and teachers in Texas and surrounding areas.

The DISTCO has two major goals: 1) to encourage students and teachers to challenge themselves in an exciting competition where they can enhance skills such as media literacy, technical skills, and writing skills; and 2) to further current research on the effectiveness of digital storytelling in K-12 education. The project is designed so that students and teachers from different schools may submit original digital stories within a specified time frame and manner for the contest. The competition is held solely online, and original digital stories are required to be

submitted using the official contest website (<http://www.distco.org>). The first contest of the DISTCO series, DISTCO 2008, was initiated in the fall of 2008, and digital story submissions were accepted through January 2009. The digital story submission period was approximately three weeks as DISTCO 2008 was designed as a pilot project to the DISTCO planned for spring 2009. Given the limited publication of the project and time frame for submission, only 36 teachers and 174 students participated in DISTCO 2008.

In DISTCO 2008, contest participants were asked to fill out an online survey along with their consent forms to participate in this research study before submitting their digital stories. The data collected from the surveys was used for research purposes. The results of this contest were presented in a conference paper in March 2009 (Dogan & Robin, 2009). In brief, the data collected from DISTCO 2008 has provided valuable information regarding how teachers incorporated digital storytelling in the classroom, what they hoped to gain by using digital stories in the classroom, what challenges and successes they faced in the implementation process, and whether digital stories helped students to prepare and teachers to teach for the standardized state assessment test (Texas Assessment of Knowledge and Skills- TAKS). In terms of the research implications for students, this paper analyzed students' perspectives on using digital stories in the classroom, the motivating factors of using digital stories, and preferred content areas for digital story use.

After the success of DISTCO 2008 and to continue the current research on the educational uses of digital storytelling, a second contest, DISTCO 2009, is under development. The experience gained from the first contest has been transferred and used for developing a better and a potentially more successful competition in DISTCO 2009. This paper will break down the design concepts for this type of online contest, list challenges faced during the implementation process and provide specific recommendations for further studies.

The design concepts

The design concept for this project can be categorized in following main headings. (Figure 1)

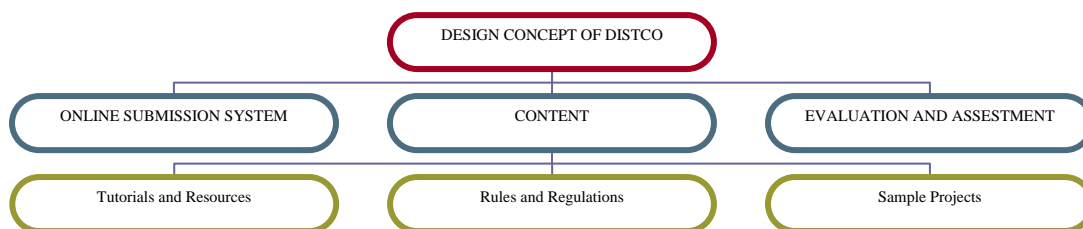


Figure 1. Break down of Design concept for DISTCO website

Online Submission System

Considering the fact that the project was conceived as a convenient medium for participants and project facilitators, the main feature of DISTCO was the online digital story submission application. The underlying rationale for utilizing the online medium was to minimize production costs and to increase the participation rate by providing participants with a convenient way of competing with other teachers and students across the state and, to a larger extent, the nation. Thus, the online submission system was the most significant function of DISTCO website. In order to collect participant demographics, such as teachers' school information, subjects and grade levels taught, and students' grade levels and the subjects for which their digital stories were created, a login system had to be designed. The system allowed participants to register for the website, provide consent for submitting original work to the contest (which was required for collecting data through surveys and also for the rights of usage by the contest), complete a survey related to educational uses of digital storytelling (one version for teachers and one for students), and to be able to submit, edit, review and resubmit digital stories or edit personal or survey input. The login system allowed the user to edit or resubmit stories to the system at a later time.

Content

The DISTCO website content included tutorials and resources, information about the contest itself such as rules and regulations, and sample projects for the users (Figure 1). The website content included important tips for creating digital stories as well as resources for digital story creation, including software, multimedia components, and effective presentation methods for users who have never created a digital story before. In addition, the website included a research page in which users could review current research on the educational uses of digital storytelling. The "Rules and Regulations" section clearly designated contest expectations including online submission format requirements. Sample digital stories from previous users were showcased as well.

Evaluation and Judging System

The assessment of submitted projects remains the most difficult and underdeveloped research area of the DISTCO project. In DISTCO 2008, a pilot system was developed as a concept but was never utilized for the project assessment. This concept was to create a rubric and allow selected judges to login to the system and evaluate each project using specified online rating tools. Instead, for the reasons of time constraint and the difficulty of implementing such an online system, a committee of judges knowledgeable about digital storytelling determined the winners of the contest. After the DISTCO 2008, a new rubric was created to better evaluate digital story submissions (Table 1). This rubric clearly laid out how the projects will be judged and evaluated for DISTCO 2009. It will be incorporated into the web site for judges to rate the projects. In addition, the DISTCO website will include a special login page for judges to enter the system. When the judges login, they will be able to see projects by subject and rate them based on the criteria listed in Table 1. Based on the experiences of the DISTCO 2008 judging process, another dimension will be added for the evaluation of the projects. A “popular vote” system open to public will be developed to increase the motivation and excitement factor for the participants. This system will be separately designed and have its own separate reward for the winners.

Challenges

Timing

The timing for the implementation remains the most important factor when designing a contest. It starts with selecting an acceptable time frame, whether in the fall or spring semester for K-12 settings. One difficulty faced in this project was that the timing for both contest, DISTCO 2008 and DISTCO 2009, was affected by holidays, the implementation of standardized state test, and individual school agendas. The DISTCO 2008 was held in December 2008 and lasted until the January 2009. The DISTCO 2009 began to accept submissions in mid April 2009 and will be accepting submissions until the end of May 2009.

Secondly, the length of the digital story submission period is also another important factor that needs to be considered when designing an online contest. The submission deadline for the DISTCO 2008 had to be extended a couple of days due to technical problems in the submission system, such as submitted stories not being accepted. In addition, students may take weeks to complete and successfully submit their projects when guided by their teachers. Teachers are generally quicker than students in submitting their projects by the provided deadline; however, one of the biggest barriers to using digital storytelling in the classroom, as reported by the teachers, remains the time factor (Dogan & Robin, 2008).

Technology

The technology has been a challenge for the DISTCO project. Mainly, programming the website for the desired purposes caused a delay in the submission. Additionally, since digital stories are required to be submitted in a certain format (such as size, and video format), some participants experienced an unresponsive system or system errors when uploading their projects to the website. However, most of the participants were able to successfully complete the survey and submit their projects through the system. The experienced gained from the technical problems occurred in DISTCO 2008 will enable the researcher to better prepare for such difficulties in the next contest, DISTCO 2009.

Advertisement of the contest

Another important challenge is contest promotion. There is a trade off between how much time needs to be devoted to advertising versus how much time is needed for submission when deciding the time frame for the contests. The final decision would depend on the given conditions and goals of the project. Ideally, a long time of period, possibly at least two months of advertising for such a contest would promote more participation. However, given time or financial limitations, this might not happen. Trying many different advertising methods might increase the participation in the contests as mentioned more in detail in the recommendation section.

Digital Storytelling : DISTCO Evaluation Rubric

Evaluator's Name:					
Student Name:					
CATEGORY	4	3	2	1	Score
Point of View - Awareness of Audience	Strong awareness of audience in the design. Students can clearly explain why they felt the vocabulary, audio and graphics chosen fit the target audience.	Some awareness of audience in the design. Students can partially explain why they felt the vocabulary, audio and graphics chosen fit the target audience.	Some awareness of audience in the design. Students find it difficult to explain how the vocabulary, audio and graphics chosen fit the target audience.	Limited awareness of the needs and interests of the target audience.	
Economy	The story is told with exactly the right amount of detail throughout. It does not seem too short nor does it seem too long.	The story composition is typically good, though it seems to drag somewhat OR need slightly more detail in one or two sections.	The story seems to need more editing. It is noticeably too long or too short in more than one section.	The story needs extensive editing. It is too long or too short to be interesting.	
Dramatic Question	Realization is dramatically different from expectation.	Realization differs noticeably from expectation.	Realization barely differs from the expectation.	Realization and expectation do not differ.	
Voice - Consistency	Voice quality is clear and consistently audible throughout the presentation.	Voice quality is clear and consistently audible throughout the majority (70-95%) of the presentation.	Voice quality needs more attention.	No Voice is included	
Voice - Pacing	The pace (rhythm and voice punctuation) fits the story line and helps the audience really "get into" the story.	Occasionally speaks too fast or too slowly for the story line. The pacing (rhythm and voice punctuation) is relatively engaging for the audience.	Tries to use pacing (rhythm and voice punctuation), but it is often noticeable that the pacing does not fit the story line. Audience is not consistently engaged.	No Voice is included	
Soundtrack - Originality	All of the music is original.	Most (over half) of the music is original.	Some of the music is original.	No music is original OR is not used.	
Soundtrack - Emotion	Music stirs a rich emotional response that matches the story line well.	Music stirs a rich emotional response that somewhat matches the story line.	Music is ok, and not distracting, but it does not add much to the story.	Music is distracting, inappropriate, OR is not used.	
Images	Images create a distinct atmosphere or tone that matches different parts of the story. The images may communicate symbolism and/or metaphors.	Images create an atmosphere or tone that matches some parts of the story. The images may communicate symbolism and/or metaphors.	An attempt was made to use images to create an atmosphere/ tone but it needed more work. Image choice is logical.	Little or no attempt to use images to create an appropriate atmosphere/ tone.	
Duration of Presentation	Length of presentation was 5 minutes.	Length of presentation was 4 minutes.	Length of presentation was 3 minutes.	Presentation was less than 2 minutes long OR more than 6 minutes.	
Grammar	Grammar and usage were correct (for the dialect chosen) and contributed to clarity, style and character development.	Grammar and usage were typically correct (for the dialect chosen) and errors did not detract from the story.	Grammar and usage were typically correct but errors detracted from story.	Repeated errors in grammar and usage distracted greatly from the story.	
Point of View - Purpose	Establishes a purpose early on and maintains a clear focus throughout.	Establishes a purpose early on and maintains focus for most of the presentation.	There are a few lapses in focus, but the purpose is fairly clear.	It is difficult to figure out the purpose of the presentation.	
				TOTAL	

Recommendations

- When designing the time frame for a digital storytelling contest, the time period of the submission should be decided carefully by considering the school calendars and the agendas. It would be recommended holding a contest at the beginning of the semester, possibly the second month if held in the fall semester. For the spring semester, the ideal times are either the very beginning of the semester, the second month of the semester or the last month of the semester.
- Among possible methods of advertising the digital storytelling contest are contacting school districts, especially the technology departments, sending out flyers and brochures about the contests, holding workshops in school districts and universities, and publishing advertisements in educational websites and magazines.
- At least two months of advertisement should be allowed for a successful participant turn-out. The longer the advertisement period is, the more participants can be expected for the project.
- There must be a reward system in the contest to increase the motivation factor for participation. In addition, increasing the variety of reward categories would contribute to this factor. DISTCO 2008 awarded 33 rewards in different categories. Additional categories are planned for DISTCO 2009.
- Ideally, the online submission period for digital stories should be no less than three weeks and no more than six weeks. Four to five weeks seem reasonable if there will have enough preparation time for the targeted audience. In K-12, this time frame can be extended depending on the familiarity of teachers and students with the digital storytelling concept.

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