

Digital Storytelling in the Content Area
Newfound Schools

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Project Name: **Digital Storytelling in the Content Area**

Project Contacts: **Christine Hunewell, Kristin Paterson, Pam Plankey, and Melisa Scott**

This project spanned four elementary schools in the Newfound Area School District and was carried out in the winter and spring of 2008. Each classroom teacher chose a different research/writing/presentation project to support an area of New Hampshire studies. At Bristol Elementary School, students worked on biographies of famous people from the time of the American Revolution. Danbury Elementary School fourth graders researched native NH animals and natural resources, then used this information as a starting point to write an original New Hampshire legend. Bridgewater-Hebron Village School students teamed to depict common occupations during colonial times. At New Hampton Community School, students staged mock television interviews with famous people born in New Hampshire. The common elements to all projects were student research of subject matter, student writing using the Six Traits method to edit and revise, student artwork to design a filming background, student presentation filmed in front of a "green screen" background, and the technical experience of transforming a videotaped presentation into a digital film, complete with original artwork digitally inserted into each presentation to serve as the background of the movie.

Read and Research

Topics and subtopics were chosen and researched using print resources such as books, encyclopedias and periodicals as well as online resources including websites and videos. As part of the research process, students were reminded of issues of credibility, particularly with regard to material found online.

Write, Edit and Revise

After the research was completed, students began their writing. They wrote, revised and edited using the Six Traits Writing Process as a guide. These six traits of writing refer to ideas, organization, voice, sentence fluency, word choice and conventions. In one classroom, the trait voice was stressed for inflection and feeling in addition to sentence fluency to vary script narration. In other classrooms, organization and word choice were highlighted. Conventions (grammar, punctuation, spelling, and capitalization) applied to all projects. After a rough draft was completed, students worked on editing and revising

their work, seeking input from both peers and teachers and using the Six Traits Writing rubrics to guide them. When editing was finished students finalized their scripts and stories and readied them for oral presentation.

Practice, practice, practice

Students were given the Presentation Rubric Sheet so they could see what expectations were for their performances. They each performed their piece a number of times, getting feedback from their teacher and their peers. Some even videotaped themselves using a still camera or recorded their voices using Audacity so they could step back and view their work more critically. This is also where we brought in a more experienced third party. Originally, we thought we would hire storytellers to work with the classes on storytelling skills. In the end, though, we hired adults from the community who had acting experience. They worked with whole classes and with individual students or teams, teaching the presentation skills (eye contact, voice inflection, body movements, etc) that would bring the students' written works to life for the camera.

The "Scenery"

The background art project was completed with the assistance of the art teacher at each school. Students participated in the Picturing Writing or Image Making process for their artwork pieces. The Picturing Writing process uses both watercolor paint and crayons, while Image Making is a collage technique using cut and torn student-painted papers. Children planned and sketched their artwork beforehand, then transformed their sketches into final pieces. The result was between one and three finished piece of artwork, each of which will be shown as part of the individual's story or project.

From artwork to .jpg

Once each piece of artwork was completed, students scanned their pieces to convert them to a digital format (a .jpg file). One class had students photograph their artwork rather than scan. Both techniques worked! Each image was then imported into the student's iPhoto library and rotated and resized to approximately 800 x 600 pixels. Images were now ready for the video editing process.

Costuming and dressing for success

As the filming date approached, there were discussions about choice of clothing for the

presentations. Costumes to show the time period enhanced some of the performances. For interviewers, professional dress was encouraged and interviewees dressed as the sports figures or celebrities they portrayed. Students were warned not to wear green as this is the color that is edited out in the "chroma-editing" portion of the movie production. So backgrounds could potentially show up on green clothing! Also, one class saw firsthand what happens when a filmed subject wears horizontal strips, with rolling movement of the shirt dominating the presentation!

Lights, camera, action!

Once all of the final drafts were written and students were well versed in their scripts, final filming in front of the green screen began. Lights were set up on either side of the green screen (with much trial and error each time) and students were positioned in front the green screen, either sitting or standing. The final filming was a culmination of all the practice that students had done in the previous weeks. All of the skills that they had learned - speaking loudly and clearly with intonation, using both expression and expressive language to tell their stories, standing or sitting up straight and making eye contact with the camera - were put into practice. Each presentation was filmed once resulting in a video clip of approximately two minutes in length.

Downloading

One by one, video clips were downloaded to each student computer and imported directly into iMovie. They were saved on the computer to a special "Multimedia Storage" folder with increased storage capabilities. We were unsure how the use of chroma-editing technique would affect file size of the finished movie and wanted to be sure that students had enough room to store their work!

Presentation rubric

Before any editing took place, students watched their full "green screen" clip to evaluate presentation and speaking skills using the Presentation Rubric. In the cases of projects with multiple pieces of artwork, students then determined where to split their one clip to several sections to accommodate the changes in background that were to come in the next step.

Note: We really wanted the clips to authentically depict the child's presentation, so we let

student errors and false starts stand. In a few instances, however, it was necessary to do some slight editing, which was done by teachers, not by students. If any editing of the original footage is to take place, this is the point in the process where that should happen.

It's not magic, it's technology - the editing process

Once the video clips had been split students were ready to insert their artwork behind each clip. Students located their images in iPhoto and for each image disabled the default "Ken Burns Effect" so that their backgrounds would stay motionless and would not "zoom" in their movies. Students dragged and dropped each image into the iMovie timeline where it continues to appear as a .jpg file. Because this particular chroma editing (green screen) software needed the "background" image to be in .dv format, students were instructed to drag their .jpg file to the desktop, where it automatically was converted to a .dv file. Not sure how or why this works - all we know is that Gee Three Tech Support said to do it! To avoid confusion, we also had students delete the .jpg image so they wouldn't import the wrong file into their movies. Students then accessed the GeeThree plug-in through the VideoFX menu, editing out the green of the background and replacing it by choosing the appropriate .dv file (artwork) on their desktops.

Music

Some classes chose to use short repeating audio clips from GarageBand to serve as accompanying music to their videos. Additionally, students could select longer pieces from freeplaymusic.com

Title & copyright

To give students a practical application of the concept of copyright, we had them create not only a title slide for their work, but also a copyright one as well. Students were urged to keep the nature of their presentation in mind as they chose title slide options like color and font.

Compression

To save each student's iMovie files to our district servers would be impractical due to their size. As students compress their video to a smaller Quicktime format, we talked about how the file size changed and what aspects of the video were compromised so that

that might happen.

Reflect & Save

Our final step is to have students write a reflection about the writing/presenting/movie-making process and what they learned from it. This document, along with the presentation rubric and the Quicktime video, will serve as a digital artifact in the student's digital portfolio.

Questions?

We'd be happy to guide you in recreating this project or any part of it. Please contact one of us at the email address above if you have questions.

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What we know now that we didn't know then...

This was a true learning process for us all, adults as well as students!. Here's a brief summary of things we learned along the way that may help to save others time.

To paint or not to paint?

Our original plan included seeking out wall space(s) in each building to paint green to serve as our backdrop. This was going to mean low cost supplies in paint and brushes, but would require more time, the issue of whether bright green patches would be esthetically pleasing or not after filming was over, and limitations to where filming could occur. Ultimately we found Tube Tape (www.tubetape.com) to be a vendor (that by the way took purchase orders and gave us an educational discount) that sells green screen gear. Instead of the painting walls route we decided to purchase a green screen combo kit. The kit includes a 10'X12' muslin green screen, an aluminum support stand, and carrying case. We used a combination of grant and district funds to purchase three kits, one each for the larger elementary schools. We determined that the kit will allow for filming to occur in any number of locations throughout the building, whereas the option of painting would have had significant limitations.

We also purchased a smaller green screen 54" x 108", particularly for use in our smallest school and for more close-up filming. This particular screen was only \$15, but as we found, it is really nothing more than a vinyl table cloth that could be picked up at Wal*Mart for less money.

Shedding a little light on the subject

As relatively inexperienced studio photographers/videographers we really had not thought about lighting in our initial planning. As we continued research on filming, particularly using the chroma-editing concept, we learned that lighting was to play an

important role. We researched studio lighting solutions including soft boxes, but determined that many of the products available were going to exceed our budget. We found examples of people using halogen work/utility lights, which was a lower cost alternative, and decided to go with them. Our local Lowe's was able to provide the lights ([Worklight 1000-Watt Deluxe Dual Tripod Work Light](#)), also at a discount. So we ultimately purchased two sets of lights to go along with each screen kit. We now wonder if the quality of our videos might have been better still had we had a third light to shine directly on the subject being filmed.

We did find that the even though there are high and low settings on the lights, they still threw off a lot of heat so we not only cautioned students to be careful near them, we turned them off when the cameras weren't rolling. The purpose of having the lights is to uniformly illuminate the green background eliminating shadows that will affect the chroma-editing process. We removed the "cages" that surrounded the face of the lights so they wouldn't throw shadows, either.

Can you hear me now?

Again as we started this process we had in mind a concept for audio that didn't exactly end up the way we thought it might. We envisioned using wireless lapel microphones so we could record high quality even when students were in full action in front of the screen. We also reasoned that the wireless system could allow the video camcorder to be at a distance from the screen, if need be or desired. Further investigation showed that the components needed for multiple wireless lapel microphones, transmitters, and the receiver were quickly becoming more complicated and costly than we bargained for. We were also trying to make sure that our audio and video were recorded as one track and never quite figured out whether we would be able to sync the audio from the wireless receiver back into the camcorder. Ultimately we decided to purchase wired directional Azden Shotgun [Microphones](#) that could be mounted on the camcorder's hot shoe.

Rolling...

The hot shoes on some of the District's camcorders also meant that the cameras had the

necessary audio line-in. Fortunately the same camcorders also had audio line-out so that the student filming could hear the audio being recorded via the microphone. We were able to use existing camcorders for this project, but in researching current camcorders on the market (in the \$250-\$400 range) it is interesting that most manufacturers do not have all three features that were key for us; hot shoe, audio in and audio out. Many camcorders now have only built-in microphones. Some camcorders have the hot shoe while others don't, but most do seem to have the audio out. As we continue to expand this and similar projects we will need to test the built-in microphones of some of our other camcorders.

"Green" doesn't always mean green

The concept of chroma or green screening also works with other colors. Blue screens also work. So, if for example Oscar the Grouch was the main character and needed to be green, a blue screen might work better for that filming. Using the green screen, we learned that the actual chroma-editing worked better with video where the students wore light-colored clothing. The sharper the line of contrast between the subject and the green of the screen, the smoother the final product appeared.

The Chroma-editing plug in

We used a plug in to iMovie called Slick Transitions & Effects Volume 4, manufactured by the company [Gee Three](#). They too gave us an educational discount. Their tech support folks were very patient as we tried to work through the many steps involved with the "VidMix" portion of editing out the green background and editing in the student's artwork. When we began editing with students, we demonstrated the process as one child recorded on the whiteboard the steps involved. Students used this list to refer to when editing their own footage and, in the end, were quite comfortable with the "many steps" that had so stymied us. There was a good deal of student's support for each other.

Other tools of the trade

- Sturdy tripods for steady filming
- Rooms with adequate electricity
- External hard drives for easy storage and transfer of movie files

- Digital cameras for classrooms so students and teachers could shoot short practice videos as well as help visually document the grant process
- Headphones for student use when practicing presentation by recording with Audacity or when composing music

Questions: Chris Hunewell: chunewell@newfound.k12.nh.us

Kristin Paterson: kpaterson@newfound.k12.nh.us

Pam Plankey: pplankey@newfound.k12.nh.us

Melisa Scott: mScott@newfound.k12.nh.us

Presentation Rubric for Green Screen Productions

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CLARITY	Speaks clearly and distinctly all (100-95%) the time. Mispronounces no words. Can clearly hear the speaker.	Speaks clearly and distinctly most of the time (95-71%) Mispronounces a few words. Can hear the speaker.	Speaks clearly and distinctly some of the time (70-40%). Mispronounces several words. At times, can not hear the speaker.	Often mumbles or cannot be understood. Hard to hear and understand.
"STAGE" PRESENCE	Stands or sits up straight, looks relaxed and confident. Establishes eye contact with the camera. Facial expression and body language show a strong interest and enthusiasm about the	Stands or sits up straight. Establishes eye contact with the camera. Facial expressions and body language sometimes show a strong interest and enthusiasm about the story.	Sometimes stands or sits up straight. Loses eye contact with the camera. Facial expressions and body language are used to try to show enthusiasm, but seem somewhat faked.	Slouches. Does not look at camera. Very little use of facial expressions or body language. Did not show much interest in telling the story.
CREATIVE EXPRESSION	Shows strong feeling for the story. Uses a strong voice.	Shows some feelings for the story. Sometimes uses a strong voice.	Tries to express feeling. Tries to use voice but it is not effective.	Shows very little or no feeling for the story. Uses little or no voice.

DEGREE OF DIFFICULTY	A challenging story that stretches the student as a performer.	The story is somewhat difficult and challenging.	The story is short and does not stretch the student as a performer.	No difficulty or challenge
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