Learning to Live in a 21st Century World with Globaloria

Ingrida Barker, Teacher, Sandy River Middle School, Avondale, WV

Bringing the world's advances to my students in Avondale, West Virginia

Our world today is marked by unprecedented changes in every realm of our lives. Living in a 21st century environment requires tremendous flexibility and the ability to collaborate both face-to-face and virtually. Emerging technologies have modified the way people live and work as physical barriers are broken down by the simple possession of a computer and access to the Internet. It is evident that our students need to develop the skills to think outside the box, to collaborate within a variety of environments, and use Web 2.0 tools to create, communicate, and share. I believe that Globaloria (http://www.Globaloria.org) presents this opportunity for my middle school students and helps them develop skills that are so vital in a world where global collaboration is a key to success.

The Globaloria program (created by Dr. Idit Harel Caperton and her World Wide Workshop Foundation team) is made available to educators and students throughout the state with the support of West Virginia (WV) Governor's Office, the Center for Professional Development (CPD), the Benedum Foundation, and the Verizon-WV Foundation. This program is a great example of the power of social learning, where students engage in self-directed and peer-based learning, with support from their teachers and the Globaloria staff.

My exciting introduction to virtual teaching and learning

I have been teaching at Sandy River Middle school since 2004 with a specialization in Language Arts. Besides teaching full time language arts to 7th and 8thgrade students in my school, I have also been a

facilitator of a Spanish course offered by WV Virtual School.[1] I joined the Globaloria pilot in the summer of 2008, during the second pilot year of Globaloria in West Virginia. This was the first time I had used a virtual network and online curriculum in my regular school teaching and it has been a very rewarding 21st century teaching and learning experience for me.

Globaloria offers a year-long web-based curriculum for game design, focusing on global and social issues. The students don't have to "power down" to work in this class, in comparison to other classrooms where they often feel disengaged and bored, because with Globaloria they get a chance to use Web 2.0 tools to learn, share, and collaborate in a way that is meaningful to them. Throughout this year of implementing Globaloria in my school with 14 8th grade students every day for 90 minutes, I have seen them develop their creativity, critical and analytical thinking skills, and reading and writing skills through blogging, displaying their daily work on the wiki, and by working together on a common goal: creating educational games.

Along the way, I have grown greatly as an educator, acquired a new understanding of what it takes to meet the demands of 21st century teaching, discovered how to meet the demands of the 21st century learners through using technology creatively, and learned how to teach them through *facilitation* rather than exert "ultimate academic authority" in the classroom. I divided my students into two groups of seven and eight. Each group met officially for 90 minutes a day for two semesters, but their total hours of Globaloria far exceeded requirements as many students did not hesitate to stay after lunch or after school to work on their games or perfecting their knowledge of Flash through a variety of tutorials. Each group has shown remarkable progress with their technological fluency and collaboration skills.

The Alliance of Super Tr33 Stumps: **Creating an Original Game about Climate Change**

In the past couple of months, I have taken an interest in one team in particular. The team's name is a reflection of the students' creativity and their dedication to the issue addressed by their game. The

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[1] This course is delivered virtually for the middle school students in the areas with foreign language teacher shortage. WV Department of Education provides training for the facilitators to ensure effective delivery of this course and ensures that students across the state have equitable opportunities to learn Spanish. Besides having a facilitator for the course, students regularly communicate with their Spanish teacher and are exposed to the unique cultural aspects of Hispanic culture. The class takes place every day for 42 minutes and is taken for two years resulting in a high school credit. Students enjoy learning Spanish in a virtual environment, with their success in language acquisition being comparable to that of the students in face-to-face classrooms.

students decided to name their team, "The Alliance of Super Tr33 Stumps," after the main character "Super Toaster." Following the topic of their game, the students reflected upon its significance through the team name, allying themselves against global warming. This team's story is a worthy example of how Globaloria cultivates a complete dedication and sustained interest among students, even as young as 13 and 14 year-olds. Throughout the course, it also became evident how peer pressure became the driving force behind these students' progress and accomplishments – both individually and in teams. In addition to evaluating my students' performance in learning about Flash, blogging and updating the wiki, I also used a bi-weekly peer and self-evaluation log where students evaluated themselves and their teammates on performance and collaboration to build upon the benefits of the peer pressure so strong within the teamwork.

"The Alliance of Super Tr33 Stumps" was comprised of four students with diverse backgrounds, academic achievement level, and personalities. Tyler, Josh, Phyllis, and Kirk each had different strengths to bring to the table in terms of creativity, personality and academics. It was fascinating to see them work on creating a game concept and ultimately concentrate on the topic of global warming. Even though Josh became the creative genius behind many group activities, every member still had an input and was allowed to veto a really outlandish idea without fearing rejection. The roles assigned to the group members started to make sense after a careful observation of student interactions. On the group's project page, the roles were outlined in the following way:

> Joshua Clevenger---Idealist/Art ~~ Kirk Riffe---Grounded One/Art ~~ Tyler Evans---Animator/Art ~~ Phyllis Waldron---Team Manager/ BOSS LADY!!!!!! Josh will come up with most of the ideas. Kirk will help us keep it realistic and draws very well. Tyler will help with the animation and transitioning art. Phyllis will help with the codes and keep everyone on track and time.

The students were able to involve every member in the creation of the game and build their creative project around each other's strengths. Their character, Super Toaster (a great example of collaboration, cooperation, and thinking outside the box), is trying to save the world from global warming. The students noted that,

> [T]he players see how global warming affects the environment and how they can help stop the contributing factors in a fun cartoon-like way. The rules are simple, mostly reading game instructions because the game play changes often. To win, the players must complete all the levels and use what they know and what they learned to complete the final level. The goal is to help as many people and animals as possible to avoid the effects of global warming and to teach them how to help stop adding to the crisis.

Making a Game to Help Change the World for the Better

Even though this class was a lot of fun for the students, it also required a lot of hard work and learning to be able to create their final product. It all started in September, when students had to create their profile pages telling about themselves by using various media applications. They explored Teacher Tube (http://www.teachertube.com) for their favorite videos, created a Blogger account, and used pictures, background and font colors to show who they are. These activities inspired in students a sense of personal connection to the course and their peers within the class.

The initial process of setting up the profile pages and blogs unleashed student creativity and helped them become more comfortable with technology because the skills mastered in the months to come would grow more complex. Students were required to share their successes, challenges, and discoveries through blogging, which became increasingly sophisticated (both in content and in style) as the students

progressed. Even the most reluctant writers shared their experiences in Globaloria through the blogs in a more productive way than they would have by writing an essay on a suggested topic.
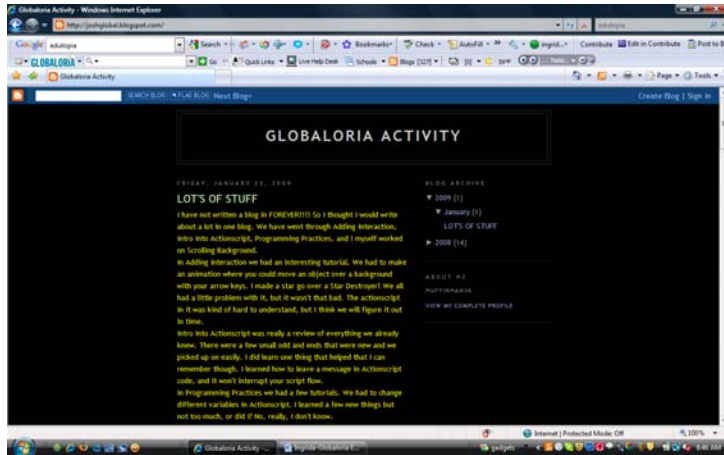
Student collaboration within teams evolved throughout the first month, encouraging students to adapt to different learning styles, to develop tolerance and acceptance of different views on the same topic, and to learn to share the responsibility. Even though this group avoided loud conflicts, the students still had to work hard on identifying their game topic and accepting the creative solutions to make the game educational and fun. I have found that assigning roles to each group member helped the students tremendously in working as a group and letting every member contribute successfully to the game ideas.

Before deciding on a game topic, the students explored various video games and evaluated their educational and entertainment value. This process helped the students develop the perspectives of not only the game players, but also of the game designers, which in turn let them assess their game development more critically and productively.

As creative as the concept of the Super Toaster was, it had to be made into a reality. The paper prototype process helped students develop a plan for their game, which provided a realistic understanding of what exactly it would take to deliver a playable game by the end of the course.
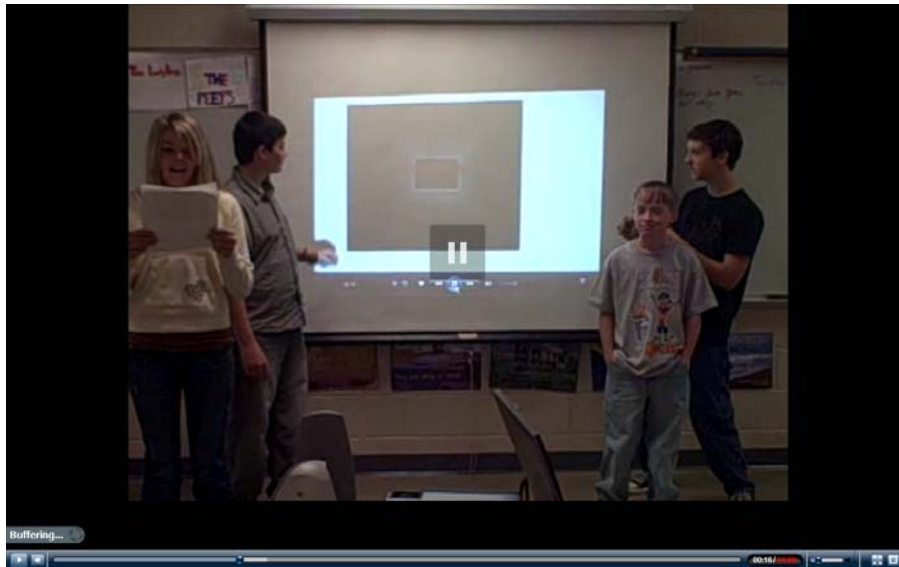
Throughout the course, The Alliance mastered many skills in Flash that were needed for accomplishing the game. At the beginning of the year, their day-to-day schedule was more traditional, as it was guided by the instructor and curriculum in order to complete the units necessary for the development of basic skills in Flash. During the first semester, the students learned as individuals even though a lot of learning took place during their interactions, because those who grasped the concept faster than others never hesitated to share their knowledge with everybody else.

The second semester was comprised of independent study units, with the groups coming together and deciding on the specifics of the skills to be acquired and, consequently, the units to be chosen to meet their goals. Therefore, during this semester the students really started working collaboratively, assigning each other units to study, game scenes to complete, and roles to assume. Their game grew to some additional characters, such as magical trees and penguins, with the students adding some trivia questions as they went along. The collaboration was evident as the scenes would be continued and added on by various team members, depending on their strengths and interests.
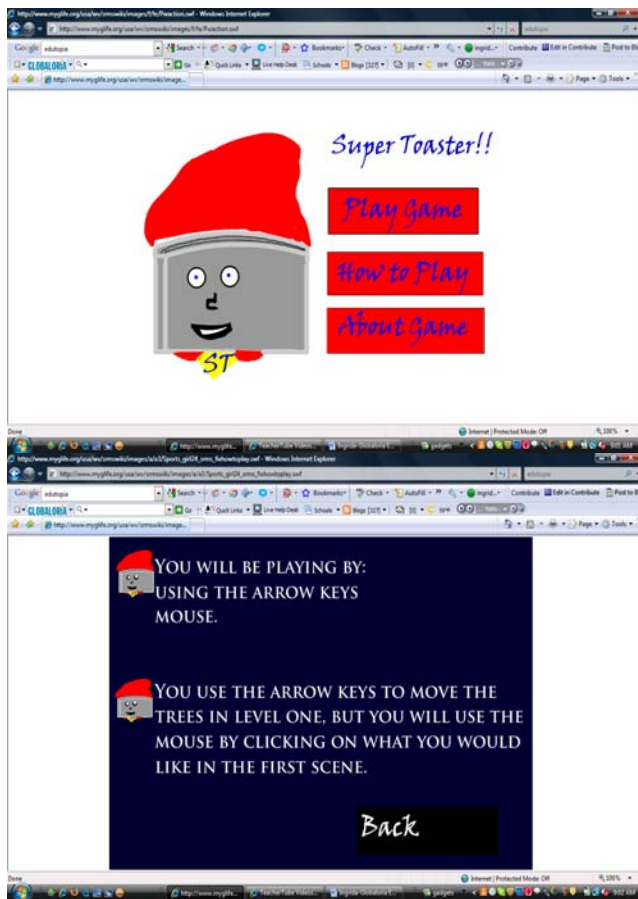
The Alliance was progressive and realistic in their game, keeping the scenes simple but engaging at the same time. Collaboration and communication was the key to their success. The students also frequently used instant messengers to talk to Flash experts to solve the problems with action script when nobody in class could figure out the specific issue. Action script was probably the hardest concept to grasp for the students because there was so much to learn depending on the specifics of the game. However, most of the group members did become comfortable enough with the action script to be able to add it to their scenes and help others to apply it to their game scenes. For example, Phyllis employed action script to move her cars, to use hit test, and keep the score, which she later shared with Josh to help him work on his game scene.
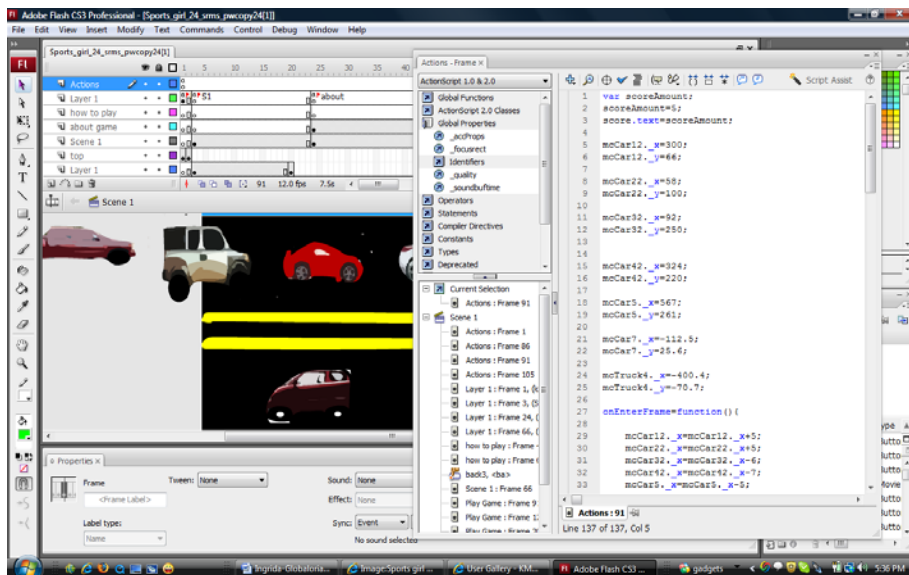
Concluding Thoughts

This diverse group was comprised of typical middle school students who never before expressed interest in graphic design or game animation. It was amazing how fast and easily the students adapted to learning online, from each other, and from the experts in Flash. They learned to use the tools of social networking that feature so prominently in their personal lives as tools for learning within the classroom. Their familiarity with Web 2.0 tools facilitated the acquisition of Flash skills in addition to honing critical thinking, collaboration and creativity skills needed for successful communication within their own groups, students in other Globaloria schools, and Flash experts. I believe that this class has made my students ready to take on challenges that require flexibility, collaboration, and tolerance for diversity of views, backgrounds, and cultures. Living in McDowell County does not mean isolation for these students who will find ways to succeed by effectively utilizing the technological and life skills they have learned throughout their journey with Globaloria.

Peer and Self-Evaluation Log

Name: _____

Date: _____

Check all the units you have covered within the last two weeks:

Unit	Covered?
Assembling the Game	
Presenting the Game	
Development Plan	
Intro into Action Script	
Programming Practices	
Learning from Others	
Finding Solutions	
Moving on a Path	
Special Effects	
Scrolling Background	
Score Keeping	
Collision Detection	
Sound Effects	
Timer	
Character Effects	
Drag and Drop	
Platforms	
Running, Jumping, etc.	
Coding "Enemies"	

How much work have you done on these units? (Have you completed ALL the tutorials? Have you created a FLASH file on the topic? Have you added any new things to your game? Have you helped others with the unit?)   _____%

How much work have your teammates done on the units? Are they contributing to the game or spending too much time playing around?

Name: _____   _____%

Name: _____   _____%

Name: _____   _____%

Your biweekly evaluation grade will be calculated as an average of your teammates' view of your work! Don't forget that your blogs, progress reports, and products (creation of files following the tutorials and adding something new to your game) will also be graded!