The Case for the Globaloria Network in West Virginia:

Empowering West Virginia youth to create and collaborate online with a 21st-century game-making curriculum

Year 1 Executive Report
December 2008

"To help our children compete in a 21st-century economy, we need to send them to 21st-century schools."

-- President-Elect Barack Obama"
Many of us West Virginians grow up thinking we are not smart in math and science. Globaloria can build confidence and address the achievement gap by engaging students with fun, constructive, and supportive academic interactions. It also puts students in teams, which contributes to success and to students’ transformation of thinking about themselves as “smart” and “creative.” That’s the most important goal for an educational innovation—to create confident and capable learners and citizens, as well as a terrific workforce for our state and the world.

-- Gaston Caperton, Former West Virginia Governor (1989-97), and President, College Board
The Globaloria network and programs use open source social media and Web2.0 technology and resources for learning to empower youth, educators, and education professionals to create, collaborate, contribute, learn and lead in today's digital and globalized world that is driven by the knowledge economy.

Participants create original interactive web-games with social and educational purpose. In this process, they gain knowledge and skills: content, technology, innovation, software design, engineering, entrepreneurship, and livelihood.

Globaloria can be integrated into any school subject—traditional (math, science, social studies, writing) or new (health, environment, civic engagement).

The Globaloria network is always on. It is up and running and available for students to work on their projects anytime from anywhere.

Games are a bright light for today's youth. Imagine if we could turn the power of compelling, engaging game content into an effective learning and teaching tool. Well, that's what Globaloria has done.

-- B. Keith Fulton, President, Verizon West Virginia, Verizon Communications
The Globaloria Learning Formula:
Project-Based, Student Centered, Social Learning

Self-Led Learning:
Students and educators learn by doing. They learn through game design and manage their own creative learning process. Learning by design.

Peer-to-Peer Learning:
Students learn from other students, and educators learn from other educators (online and offline). Learning by teaching.

Expert-Guided Learning:
Collaboration with experts happens on the Globaloria network. Professionals from around the country/world help inspire learning and help solve problems on demand. Learning just-in-time.

Co-Learning:
Students and educators learn together (online and offline). Educators are co-learners, instead of traditional didactic instructors. Learning at the same time.

Globaloria reinvents and demonstrates how networked computers can be used for transforming education through construction, collaboration, creativity, reflection, and discovery. These are the very skills every child (and adult) needs to become a critical thinker, a successful problem-solver, a leader of change and an architect of collaboration across cultures and borders.

-- Idit Harel Caperton, World Wide Workshop Foundation Founder and President
Since launching MyGLife.org in beta version in West Virginia, we have been asking everyone to give us comments on what could use improvement. It’s a good example of working together with our community, being open and receptive, and leveraging feedback to improve the user experience.

-- Shannon Sullivan, Director of Programs and Executive Producer, World Wide Workshop Foundation
I started the World Wide Workshop a few years ago to match the needs of young people with the educational and economic opportunities for this new century. I believe that contemporary education—that is, learning to learn, think, create and lead with technology—is going to be an essential contribution to society, maybe the most essential contribution. By opening opportunities to the youth we serve, we help them master the technology and the tools—and content—needed to actively and smartly participate in the new global knowledge economy.

-- Idit Harel Caperton, World Wide Workshop Foundation Founder and President

My husband the Governor talks all the time about how we must educate our students in West Virginia to be competitive in the global economy. It’s an urgent goal for us. Unless we transform public education in a major way, we are not going to compete. That’s why I’m so proud that we have Globaloria in West Virginia. This type of creative, interactive, team building, project-based learning is creating the work skills that will make them competitive.

-- West Virginia First Lady Gayle C. Manchin

What really moved me more than anything else was that these kids were creating as a group, as a self-created group. It was artistic. It was scientific. They were applying math. It was both inspiring and recreational. Gaming and game creation inspires kids to do what they really want to do. It’s Stealth Learning!

-- James V. Denova, PhD, Vice President, Benedum Foundation

The “learning by doing” aspect of Globaloria is profound in its impact. Students not only become absorbed in learning, but they develop skills through fun and rewarding activities. They also develop a sense of self-confidence and expanded horizons that is palpable and apparent. Globaloria is a story of lives transformed.

-- Tom Heywood, Managing Director, Bowles Rice LLP, and Former Chief of Staff and Counsel to WV Governor (1989-93)

Globaloria proves that students in West Virginia—be they in rural or urban areas—are capable of performing sophisticated technology work and are just as stimulated by this work as their peers around the country.

-- Lloyd Jackson, Former West Virginia State Senator (1947-70), and Chair of the Senate Education Committee (1995-2003)
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"Ten years ago, our students were geographically isolated. Now, thanks to programs like Globaloria, our kids can be connected and successful from any location in West Virginia. It doesn’t matter if they are from Clay, WV or NY, NY.

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"I really appreciated the connection made to metacognition, as this appears to be the new idea for teachers in the classroom. It seems computer learning promotes this “process learning” more. I think Globaloria is a very valuable intellectual activity to engage students with."

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"-- Educator Feedback"
Today, rural and poor communities throughout the nation face tough challenges in education and economic development. Compounding these challenges is limited access to technological innovations and advances. As the world rockets forward into a so-called “knowledge economy,” poor and underserved communities encounter two digital divides.

The first divide is defined by access, or lack of access, to high-speed internet. The second divide is defined by digital literacy—that is, the ability to create, not just consume, digital media. Digital literacy enables true participation in the power and potential of the new internet.

In 2006, the World Wide Workshop Foundation established the Globaloria network and program to help close the digital literacy gaps that exist in the United States and worldwide.

“I am very excited about Globaloria’s potential to help West Virginia leapfrog to the front of the pack in terms of economic development and growth. The skills students of all ages and backgrounds acquire in the program give them an enormous opportunity in the global knowledge economy.

-- Tom Heywood, Managing Director, Bowles Rice LLP, and Former Chief of Staff and Counsel to WV Governor (1989-93)
Globaloria empowers young people in economically-disadvantaged and technologically-underserved communities to learn and create complex web content—games focused on social change. Globaloria’s unique educational approach embodies the following characteristics:

- Newest technologies
- An innovative learning formula
- Participatory learning
- Open and transparent learning
- Hands-on experiences and opportunities to develop knowledge and to learn-by-doing
- Hands-on experiences and opportunities to learn by collaborating on a network
- Positive and productive social networking for learning and social responsibility

Moreover, participation in Globaloria leads to proficiency in the “new writing”—the new form of narrative expression promoted by digital content creation.

The World Wide Workshop Foundation is the first organization to create a platform and a program that provides opportunities for young learners to engage in social and collaborative game construction using a network of open-source Web2.0 tools and resources.²

By enabling the acquisition of skills required by 21ˢᵗ-century jobs, Globaloria prepares youth for the new knowledge economy.

"Globaloria increases the likelihood of schools graduating motivated, lifelong learners with 21ˢᵗ-century skills."

-- B. Keith Fulton, President, Verizon West Virginia, Verizon Communications
Over the past five years, we have seen the development of new internet tools that enable anyone to create and edit information—in the form of words, photos, videos, animations, games, and more. These tools allow all people to share experiences with one another on the Web, thus creating a community of shared meaning. These new internet tools are called social media technology.

Social media can take many different forms. Some examples include:

- The collectively editable reference site Wikipedia.org
- Popular social networks like Facebook.com and MySpace.com
- Video- or photo-sharing sites like YouTube.com and Flickr.com
- Online personal organizers like Plaxo.com
- Professional networking and job search sites like LinkedIn.com
- Social change communities like Idealist.org
- News, politics, and culture sites like Slate.com, WallStreetJournal.com, HuffingtonPost.com
- Digital asset sharing sites like FriendFeed.com
- Sites for citizen participation in government agenda and policy making like Change.gov
- E-learning content and communities like MIT OpenCourseWare at ocw.mit.edu

In the Web1.0 environment of the 1990s, most people were *consumers* of internet content. With Web2.0 tools, we can all become *active creators* of content and experiences and collaborate with others in real-time. In the Web2.0 environment, we become part of a new kind of society—one that is community-related, open source, and driven by peers, not experts.³

Social media platforms are open to everyone; users simply create a personal account and participate individually and collaboratively. When you are posting your own videos, and not just watching other people’s, or when you are publishing your own Wikipedia article, and not just reading existing articles, or when you are creating your own videogames and not just playing other people’s games, you are utilizing social media for knowledge development. In so doing, you are becoming digitally literate.
Globaloria is effectively a game-making network. It provides a virtual design studio with a curriculum that directs students to learn-by-doing. What they are “doing” is collaborating with others to build original web-games and simulations; in order to work, they must master social media technology. So they do.

In actuality, students are gaining the abilities to play with and originate digital content. They learn how to write and read digitally, to express themselves systematically and creatively in a networked community, and to innovate and collaborate for a positive social purpose using social networks and social media technology. These are sophisticated and complex skills, which are required in order for students to be productive, successful, 21st-century citizens.

Welcome Web2.0!

Globaloria teaches digital literacy through construction, interaction, and play.
Interactive digital communication increasingly defines the way our world works. It is the way businesses operate, the way we access services, the way we are entertained, and the way we participate as citizens locally, nationally, and globally. Understanding digital communication tools and putting them to work effectively—achieving digital literacy—is essential for success in the 21st century.

We must teach young learners to read and to construct their own interactive digital media systems: textual and graphical media, photography and video media, animation and game media, and more. Blogs, wikis, and social network platforms, utilized in a new educational paradigm, encourage young people to imagine, create, process, and share ideas and expertise as they create artifacts and tell stories.

Social media technology is an essential learning tool. Researchers have found that a critical factor of student educational success is the ability to study in groups. Students learn more, are more engaged in their studies, and are better prepared for class when they can question, answer, and discuss their ideas with others. Social learning enables children to acquire new knowledge by constructing it, just as you learn your native tongue by speaking it while growing up.

Participating with others—peers and experts alike—is like becoming an apprentice. Students observe, emulate, and eventually contribute. They construct original ideas and projects and share them with others who construct their own. These exchanges are crucial for learning.

Watching the Globaloria students’ game presentations, I heard how they were engaged, they were empowered, they were excited. It wasn’t about a 50-minute lecture class. It was about participating in an exciting project with a team that worked together… and I realized -- this is what 21st-century learning is all about. It’s about team work, critical thinking, analyzing and building, revamping, going back. These young people didn’t just get information for themselves, they shared it with their team members and with other teams. Globaloria gives us a real and visible picture of what education can and should be for the 21st century.

-- West Virginia First Lady Gayle C. Manchin
Students work together in a common space—on the Globaloria network—to create their own games. Whether alone or in a team, they share ideas, resources, and game files, and they participate in each other’s design process. As a result, Globaloria fosters essential contemporary learning abilities inherent in digital literacy. Globaloria is unique in cultivating and intertwining six specific competencies:

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<th>Globaloria’s Six Contemporary Learning Abilities (6CLAs) with Technology</th>
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<td>1. Invention, progression, and completion of an original digital project idea (for an educational web-game or interactive simulation)</td>
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<td>2. Project-based learning through online project management in a wiki-based networked environment</td>
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<td>3. Publishing and distribution of self-created digital media artifacts (using wikis, blogs, websites)</td>
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<td>4. Social-based learning, participation and exchange in a networked environment (cross age, cross expertise)</td>
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<td>5. Information-based learning, purposeful search, exploration</td>
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<td>6. Surfing websites and experimenting with web applications and tools</td>
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Globaloria is unique among educational digital literacy initiatives in that it is the first program to delineate and prioritize the most complex Constructionist activities.

These 6CLAs are based on the Constructionist educational philosophy, which is grounded in decades of research by MIT social cognitive scientists Seymour Papert and World Wide Workshop Founder Idit Harel Caperton, and their colleagues. Unlike top-down teaching styles requiring memorization of facts, Constructionism has been calling for the creation of public digital entities. Through publicly shared, long-term projects that are complex, computational, immersive, and innovative, children learn how to learn, and they learn how to think about thinking. Online open workshop settings facilitate syntonic learning—or learning-by-doing. Twenty years of research have shown that Constructionist programs result in deeper forms of learning, cognitive integration, and improved approaches to learning.4

"West Virginia is the second state in the U.S. to join the Partnership for 21st Century Skills. Globaloria is the perfect partner in this effort, as the platform directly addresses 21st-century learning standards, such as problem solving, creativity, innovation, and technology literacy."

-- James V. Denova, PhD, Vice President, Benedum Foundation
Here is how the meta-game of Globaloria works: Globaloria is both the network and the platform. On the platform are multiple social networks across which students learn to build games in collaborative virtual communities. An individual class or after-school group can form its own small community within a network and can connect with other communities in that network. In the school version of Globaloria we are carefully selecting and launching communities one by one. Each community receives:

1. A **starter-kit website** with four learning channels. The channels include learning resources, such as sample games with downloadable code and custom tutorials. These resources are growing and changing over time with contributions from the community of users.

2. A **community wiki** that serves as a virtual classroom, clubhouse, or design studio. The wiki is a project and design space in which participants create and share their own work—they doodle, sketch, post graphics and photos, and post notes on their Flash applets—and view the work of the design community. It is where the community leader or teacher guides, coaches, and provides schedules, assignments, or support materials.
3. A **community blog**, which is similar to a journal an artist uses for reflection. Each community creates a blog for sharing their game-making experience, personal insights and accomplishments.

4. A **year-long curriculum** consisting of three units:
   - “Getting Started”
   - “Game Prototyping”
   - “Bringing Your Game to Life”

The self-paced curriculum is designed for everyday execution throughout the academic year, providing 150-250 learning hours. The curriculum is open-ended, dynamic, engaging and meant to be repeated from semester to semester and year to year (“practicum” strategy). It is also customizable and can be improved over time by the community of users.

These four components are customized for the specific needs and learning objectives of each school.

1. Starter-kit website
2. Community wiki plus student wikis
3. Community blog plus student blogs
4. A comprehensive game-making curriculum
The Globaloria Experience: Students

Through Globaloria’s immersive design and creation process, students originate digital content, write and read digitally, express themselves in a networked community, and innovate and collaborate using social networks and social media technology.

Globaloria students:

- Participate in open-source communities on a wiki where they read/write information, and pull/push, surf/post, receive/contribute ideas
- Participate in constructive knowledge-sharing networks online
- Design and produce educational, socially-conscious, interactive games and simulations
- Engage in positive virtual communications within diverse communities (age, level, interest)
- Acquire cross-cultural understanding, self determination, and self reliance
- Practice such 21st-century skills as digital creativity and innovation, virtual collaboration and teamwork, media literacy, and computer fluency
- Experience leadership with technology, and receive training in the values of democracy and globalization through the application of social media technology
- Develop presentation and communication skills
- Take what they already love to do and are doing—using social media technology and playing web-games—and turn it into an opportunity for 21st-century teaching and learning
- Build and raise awareness about issues of importance to their local, national, and global communities through choice of game themes and narratives and by using digital media to express those choices
In Year 1, we engaged educators in experimenting in **Constructionist project leadership**, using contemporary activities of game design and Web2.0 engagement. Most of the educators had never participated in developing their own game design projects, using Web2.0 tools with students, or leading students in game design learning. Most had never used a wiki or posted to a blog, and none had ever used social networks or a wiki in pedagogy for project management purposes to carry out a design project with students.\(^5\)

The professional development of educators involved a number of components:

- Ten training workshops, three multi-day in-person and seven virtual, which enhanced the capacity of teachers to implement Globaloria effectively and independently
- Collaboration and community building, with educators acting as informal mentors
- An educators’ blog and private wiki for sharing resources and learning together
- Activities focused on using web-games, social media technology, and social networks for their own learning and development
- Self-learning and independent development (doing what they ask their students to do)
- Self-reporting to reflect on learning and teaching progress

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"Teachers who are not necessarily early technology adopters or tech savvy can be extremely successful in Globaloria and can gain confidence in their ability to use digital media in their teaching."

-- Pam Whitehouse, Professor of Technology, Learning and Culture, West Virginia University
Globaloria-WV is a three-year pilot program (2007-2010) commissioned by the West Virginia Office of the Governor. Pilot schools apply to participate (in Year 1, the Office of the Governor selected the schools), and more schools—and more classes within each school—are added each year to expand dissemination and collect more data.

Globaloria researchers are conducting evaluation on the network, curriculum, and tools in an effort to improve the program in real-time from year to year. Everything—from the curriculum to the assessment itself—is considered experimental and open to evaluation.

The vision was to start by modeling an educational innovation from the bottom-up, seeded by the Governor and a few foundations, and then to create demand by principals and educators to demonstrate Globaloria’s scalability potential. Then, the goal was for the WV Department of Education to adopt the program and scale it statewide.

**Snapshot of the bottom-up three-year pilot:**
- Year 1: 2007-2008 school year (7 schools, 8 groups, 89 students)
- Year 2: 2008-2009 school year (14 schools, 24 groups, 332 students)
- Year 3: 2009-2010 school year (20 schools, 60 groups, 1,000 students)

The plan was to begin, mid-Year 2, brainstorming with the WV Department of Education about how they could become the central administrator of the program and scale it across the state. Globaloria is designed to fit with WV’s 21st-century Learning Strategy, “Route 21.”

"The First Lady is my partner. We both want all public schools and communities to offer Globaloria to their students. The project will not be sustainable for the long term unless the WVDE buys into it. It has been our goal from Day 1 to build a model, a research-based model, and provide a detailed manual for statewide implementation by the Department of Education. This is innovation from the bottom-up.

-- Idit Harel Caperton, World Wide Workshop Foundation Founder and President"

"Globaloria provided an innovative opportunity for West Virginia students and teachers to build 21st-century skills through game creation. In watching students present their games, I observed a high level of engagement; and, in creating their games, students displayed problem solving, critical thinking, teamwork, and communication skills.

-- Dixie Billheimer, Program Director (and acting CEO), West Virginia Center for Professional Development"
West Virginia’s legendary and longstanding commitment to educational and economic improvement, along with its household income statistics, makes it a perfect pilot state. With significantly lower median household income and per capita income than the rest of the country, West Virginia represents an urgency and an opportunity to close the digital divide. West Virginia, a rural state, is not yet widely wired; most citizens are not yet using high-speed internet at home and therefore cannot develop critical 21st-century skills. They are lagging behind and need help.

In 2007, the West Virginia Office of the Governor partnered with the World Wide Workshop Foundation to ensure that West Virginians will not fall on the wrong side of the digital divide.

With funding from the Claude Worthington Benedum Foundation, the West Virginia Office of the Governor, Verizon West Virginia, and The Caperton Fund, the World Wide Workshop Foundation launched the Year 1 pilot of Globaloria-WV, the first-of-its-kind, state-level implementation of a social network for learning.

The West Virginia Department of Education is known for its technology integration into schools in the past 20 years. In recent years however, it has become slower in responding to rapid changes and new demands. As time is of the essence, the decision was to be entrepreneurial and raise just enough money to start-up the Globaloria model—and, in parallel, do what it takes to turn it into a WVDE statewide initiative after a couple of years of successful operations.

In assessing West Virginia’s prospects for economic, social, and education development, the Governor and First Lady looked to Globaloria as a means to arm students with critical skills needed to participate and lead in the new knowledge economy.
The Globaloria Year 1 pilot ran concurrently with the 2007-2008 academic year. Eight groups in seven schools participated, consisting of 18 educators and 89 students, representing middle school, high school, community college and alternative educational communities.

Each group received a starter-kit website, wiki, blog, and year-long curriculum. On the wiki, Foundation program directors posted the curriculum, educators posted assignments, students posted their game projects, and all participants chatted and collaborated with one another. The wiki also provided useful content for participants on how to plan, create, and present their games. See http://www.MyGlobalLife.org/usa/wv to explore the community wikis. Each class created a blog to discuss the course and game design topics.

The Globaloria-WV: Year 1 Snapshot

Year 1 demonstrated one of Globaloria’s most powerful features: its versatility. The platform can be used in many different school settings with teachers and students of varying skill levels. Additionally, the platform can be integrated into traditional curriculum disciplines.

-- James V. Denova, PhD, Vice President, Benedum Foundation
Globaloria-WV: Year 1 Participating Groups (7 schools, 8 groups, 18 educators, 89 students)

Representing diverse age, gender, level, implementation contexts, and socio-economic status

<table>
<thead>
<tr>
<th>Pilot Location</th>
<th>Total # of Educators Trained</th>
<th>Student Grade Level</th>
<th>Total # of Unique Student Participants</th>
<th>School Type</th>
<th>Type of Program Offered</th>
<th>Individual or Team Work</th>
<th>Type of Program Offered</th>
<th>Individual or Team Work</th>
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<td>Man High School, Man, Logan Co.</td>
<td>2</td>
<td>High School</td>
<td>7</td>
<td>Standard Public High School</td>
<td>After School (HSTA) 2 mtgs/wk 2hrs/mtg</td>
<td>Individual projects</td>
<td>After School (HSTA) 2 mtgs/wk 2hrs/mtg</td>
<td>Team projects</td>
</tr>
<tr>
<td>Capital High School, Charleston, Kanawha Co.</td>
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<td>High School</td>
<td>11</td>
<td>Standard Public High School</td>
<td>After School (HSTA) 2 mtgs/wk 2hrs/mtg</td>
<td>Individual projects</td>
<td>After School (HSTA) 2 mtgs/wk 2hrs/mtg</td>
<td>Team projects</td>
</tr>
<tr>
<td>Randolph Technical Center, Elkins, Randolph Co.</td>
<td>2</td>
<td>High School</td>
<td>20</td>
<td>Technical Vocational Education</td>
<td>For credit (Business Curriculum) 5 mtgs/wk 90 mins/mtg</td>
<td>Individual and Team projects</td>
<td>For credit (Business Curriculum) Virtual class with MCTC 5 mtgs/wk 90 mins/mtg</td>
<td>Team projects</td>
</tr>
<tr>
<td>Clay County Schools, Clay, Clay Co.</td>
<td>3</td>
<td>Middle School and High School</td>
<td>9</td>
<td>Standard Public Middle School</td>
<td>After School 2 mtgs/wk 2 hrs/mtg</td>
<td>Individual projects</td>
<td>After School 2 mtgs/wk 2 hrs/mtg</td>
<td>Individual projects</td>
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<td>High School</td>
<td>11</td>
<td>Standard Public High School</td>
<td>For credit (Business Curriculum)</td>
<td>Individual projects</td>
<td>-</td>
<td>Individual projects</td>
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<td>Community College</td>
<td>12</td>
<td>Technical Jr. College Education</td>
<td>For credit (IT Program) 4 mtgs/wk 2 hrs/mtg</td>
<td>Individual projects</td>
<td>For credit (IT Program) 4 mtgs/wk 2 hrs/mtg</td>
<td>Team projects</td>
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<tr>
<td>Kasson Middle School, Moatsville, Barbour Co.</td>
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<td>Middle School</td>
<td>12</td>
<td>Standard Public Middle School</td>
<td>-</td>
<td>-</td>
<td>Integrated into computer skills class, 5 mtgs/wk 40 mins/mtg</td>
<td>Team projects</td>
</tr>
<tr>
<td>Florence Crittenton Center for Girls, Wheeling, Ohio Co.</td>
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<td>Middle School and High School</td>
<td>7</td>
<td>Alternative Education (at-risk girls)</td>
<td>After School (Special Reward) 2 mtgs/wk 2 hrs/mtg</td>
<td>Individual projects</td>
<td>After School (Special Reward) 2 mtgs/wk 2 hrs/mtg</td>
<td>Team projects</td>
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To be able to demonstrate the customization and scalability potential, the Year 1 pilot included a large range of school types that are considered typical in West Virginia.
Year 1: By the Numbers

- Reached and transformed 7 schools, 18 educators, and 89 students
- 67 students graduated (75%)
- 14 educators applied to continue participating in Year 2 (78%)

- 12 students participated in 240 hours of Globaloria experience
- 5 students participated in 225 hours of Globaloria experience
- 36 students participated in 120 hours of Globaloria experience
- 24 students participated in 112.5 hours of Globaloria experience
- 12 students participated in 49.5 hours of Globaloria experience

As compared to 135 hours for 1 core curriculum class, such as math or science

- Customized and launched a network of 7 wiki platforms, starter-kit websites and blogs
- Launched a network of 7 communities with customized wikis, websites and blogs
- Managed the installation of over 100 Flash software licenses for students and educators on a variety of school computer systems
- Started and maintained 9 blogs, 1 per group and 1 for the Program Manager

- Developed and delivered 10 educator training workshops, 3 multi-day in-person and 7 virtual, using web conferencing
- Experimented with 5 Expert Live web video conferencing sessions connecting game design professionals with students on-demand
- 42 progress reports submitted (3 reports per year from each educator)
- Educator progress reports totaling more than 130 pages received and analyzed
- Delivered $30,000 in stipends to educators in three phases

- Conducted 30 in-person school visits
- Conducted 100 phone meetings with educators (bi-weekly)
- Conducted 5 school visits for video data collection

- Uploaded 74 video clips as part of private and public video collections on YouTube for research purposes
- Collected 2 pre-program surveys (1 for students and 1 for educators), 1 mid-program feedback survey, and 2 post-program surveys
- Analyzed 3,560 student responses and 720 educator responses to 40 pre-program survey questions and then again to post-program survey questions

2007

March: Developed relationship with Governor’s Office

August-September: Developed customized Globaloria-WV program

August: Developed and delivered Kick-Off workshop for prospective educators

September: Developed and delivered 1st Educator Training Workshop

October: Funding from Gaston and Idit Caperton

September: Developed and launched Year 1 program

November: Initiated bi-weekly check-in phone calls and site visits; Inaugural Advisory Board Meeting

December: Collapsed with educators to complete first progress reports; disbursed stipends; collected curriculum feedback surveys

December: Hired and trained Program Manager

July: Funding from the Office of the Governor

September: Funding from the Benedum Foundation
Year 1: By the Numbers

- 12 formal student presentation sessions (at least 1 per pilot location)
- 30 games and game prototypes created by students (by both individuals and teams)
- 7,735 wiki edits made by students
- 1,799 files uploaded by students

- Recruited 1 local Program Manager
- Created an internship program and 2 virtual interns’ offices on the networks with 3 WV college interns and 7 high school interns from NYC and Boston

- Established a distinguished Advisory Board with 10 leaders from WV government, business, policy, research, technology, and educational organizations
- Facilitated 2 half-day Advisory Board meetings

- Received 30 school applications for Pilot Year 2, mainly through word-of-mouth
- Accepted 7 new pilot locations and renewed 7 existing for Year 2
- Increased school participation for Year 2 by 100% (7 → 14)
- Increased educator participation for Year 2 by 100% (14 → 30)
- Increased student participation for Year 2 by 400% (89 → 332)

- 6 articles about Globaloria-WV published in West Virginia newspapers
- Conceptualized 8 research reports and submitted 7 academic research proposals to the 2009 American Educational Research Association and other conferences
- Filmed, edited and uploaded 8 video case studies
- Gave 15 presentations and speeches at major US and international conferences and forums

- Integrated Globaloria into the regular school day as a formal course for grades and credit in 4 schools
- Secured $50K in start-up funding in July ’07 and raised $263K more by December ’07 (in addition to $533K cash and in-kind contributions by the Foundation)
- Received formal commitments for $450K for Year 2 in June ’08 from the same funders as Year 1

---

2008

January:
- Collected additional surveys; conducted additional site visits; RTC and MCTC presented games

March:
- Collaborated to complete second progress reports; disbursed stipends; launched Year 2 application process

April:
- MCTC presented games; Man and Capital presented games at HSTA Symposium (attended by First Lady)

June:
- Collaborated to complete third progress reports; disbursed stipends; Crittenton presented games

February:
- Developed and delivered second Educator Training Workshop; presented Globaloria to statewide WV-CPD Showcase Conference

March-June:
- Conducted 7 virtual educator training support workshops

May:
- Hosted second Advisory Board Meeting; Clay and Kasson presented games

May-June:
- Prepared for Year 2 roll-out; evaluated Year 1; developed relationships with new schools and educators

January:
- Funding from Verizon

April:
- Foundation contribution (cash and in-kind)
Innovative educational programs (or, as they are sometimes called, “educational interventions”) require evaluation to measure impact. Accordingly, rigorous, research-based assessment is a significant component of Globaloria. During this pilot program, World Wide Workshop producers and researchers are using a variety of methods to evaluate the impact of Globaloria and refine and improve the program from month-to-month and year-to-year.

In Year 1, under the constraints of almost no budget for research (the limited use of a part-time doctoral student, along with the extremely part-time capacity of the Foundation President), researchers implemented a complex and eclectic methodology, which they considered to be a pilot in and of itself. Data regarding the assessment methods will inform how to move forward with evaluation in future years.

**Assessment Methodologies**

Researchers used a variety of methodologies to assess the cognitive, behavioral, and affective impact of Globaloria:

- Pre- and post-program surveys (distributed online)
- Mid-program reflections survey
- Real-time statistical and empirical tracking of specific activities and behaviors of learners
- Evaluations of work product, in progress and at the end
- Evaluations of wiki and blog participation, in progress and at the end
- Notes from interviews, conference calls, and email exchanges with educators
- Evaluation of educators’ learning and teaching as expressed in their progress reports
- In-person visits and observations
- Videos and transcriptions from visits and student presentations
- Construction of case studies
### Year 1: Assessment

#### Assessment of Cognitive, Behavioral, and Affective Impact

<table>
<thead>
<tr>
<th>Students</th>
<th>Educators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cognitive Impact (Knowledge)</strong></td>
<td></td>
</tr>
<tr>
<td>▶ Reviewed and evaluated artifacts</td>
<td>▶ Reviewed and evaluated artifacts</td>
</tr>
<tr>
<td>▶ Implemented pre- and post-program surveys to assess experience and skill</td>
<td>▶ Implemented pre- and post-program surveys to assess experience and skill</td>
</tr>
<tr>
<td>▶ Observed and archived written and spoken expressions about work across time</td>
<td>▶ Observed and archived written and spoken expressions about work</td>
</tr>
<tr>
<td>▶ Measured knowledge attained through participation in activities</td>
<td>▶ Measured knowledge attained through participation in activities</td>
</tr>
<tr>
<td><strong>Behavioral Impact (Frequency)</strong></td>
<td></td>
</tr>
<tr>
<td>▶ Measured traffic on the wikis and the blogs by students who posted and shared digital artifacts (wikis, blogs, and games)</td>
<td>▶ Measured traffic on the wikis and the blogs by educators who posted and shared digital artifacts (wikis, blogs, and games)</td>
</tr>
<tr>
<td>▶ Conducted pre- and post-program surveys on the change in usage of technology</td>
<td>▶ Evaluated how they comment on their own work and the work of other educators</td>
</tr>
<tr>
<td>▶ Evaluated their own comments on their own work and the work of other students</td>
<td>▶ Evaluated how they use social networking tools</td>
</tr>
<tr>
<td>▶ Evaluated their use of social networking tools</td>
<td></td>
</tr>
<tr>
<td><strong>Affective Impact (Feelings and Motivation)</strong></td>
<td></td>
</tr>
<tr>
<td>▶ Pre-, mid-, and post-program surveys on participant self-perceptions, motivation levels, and degrees of engagement in Globaloria-type activities</td>
<td>▶ Conducted pre- and post-program surveys on participant self-perceptions, motivation levels, and degrees of engagement in Globaloria-type activities</td>
</tr>
<tr>
<td>▶ Observed emotional expressions regarding activities</td>
<td>▶ Discussed changes in their self-confidence and engagement</td>
</tr>
</tbody>
</table>

#### Sample of Preliminary Results

**Changes in RTC Students' Contemporary Learning Abilities, from Pre- to Post-Program (Frequency)**

<table>
<thead>
<tr>
<th>Ability</th>
<th>Pre-Program</th>
<th>Post-Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfing</td>
<td>7.00</td>
<td>5.25</td>
</tr>
<tr>
<td>Social-based learning</td>
<td>3.50</td>
<td>2.50</td>
</tr>
<tr>
<td>Teamwork***</td>
<td>1.75</td>
<td>0.50</td>
</tr>
<tr>
<td>Information-based learning*</td>
<td>3.00</td>
<td>2.25</td>
</tr>
<tr>
<td>Publishing digital media</td>
<td>1.50</td>
<td>0.75</td>
</tr>
<tr>
<td>Creation of digital media*</td>
<td>0.75</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Average Game Evaluation Scores, By Pilot Location, Year 1**

<table>
<thead>
<tr>
<th>Location</th>
<th>Pre-</th>
<th>Post-</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCTC Sem 1 (7 indiv.)</td>
<td>25.0</td>
<td>37.5</td>
</tr>
<tr>
<td>RTC Sem 1 (8 Teams)</td>
<td>32.5</td>
<td>40.0</td>
</tr>
<tr>
<td>Crittenton Sem 2 (1 Team)</td>
<td>25.0</td>
<td>32.5</td>
</tr>
<tr>
<td>Capital Sem 2 (2 Teams)</td>
<td>22.5</td>
<td>30.0</td>
</tr>
<tr>
<td>Clay Sem 2 (5 Indiv.)</td>
<td>17.5</td>
<td>25.0</td>
</tr>
<tr>
<td>Man Sem 2 (1 Team)</td>
<td>12.5</td>
<td>20.0</td>
</tr>
<tr>
<td>MCTC Sem 2 (1 Team)</td>
<td>22.5</td>
<td>30.0</td>
</tr>
<tr>
<td>RTC Sem 2 (1 Team)</td>
<td>27.5</td>
<td>35.0</td>
</tr>
</tbody>
</table>

After participating in the Globaloria Program, students reported an increase in frequency of engagement in technology activities.

Students’ daily participation over two semesters resulted in higher quality games and game concepts.

---

1 7-point scale
* p<.05
*** p<.001
At the launch of Globaloria, World Wide Workshop researchers held several hypotheses regarding its eventual impact. Based on outcomes in Year 1, researchers believe these hypotheses have been relevant with a trend toward being proven to be true. Formal evidence for these hypotheses—and the establishment of implications for statewide and national dissemination—will occur at the end of this three-year pilot program.

- **Hypothesis 1.** The Globaloria program can enable mastery of complex computational skills that are not currently taught in most standard public schools, especially in economically-disadvantaged communities.
- **Hypothesis 2.** The Globaloria program and platform can be easily customized to meet the needs of diverse schools.
- **Hypothesis 3.** The Globaloria program is gender, age, and ability neutral.
- **Hypothesis 4.** Globaloria activities promote Constructionist Digital Literacy and, more specifically, they cultivate the abilities highlighted in the Six Contemporary Learning Abilities framework (6CLAs).
- **Hypothesis 5.** The Globaloria program can serve as a transformational intervention, guiding educators and administrators through the reform of classrooms and school systems.
- **Hypothesis 6.** Achievement of the 6CLAs will lead to greater opportunities to participate in the global knowledge economy.
- **Hypothesis 7.** The Globaloria program can lead to enhanced life and livelihood possibilities for participants.

### Data Sample from a Pre-Program Survey Question

<table>
<thead>
<tr>
<th>10. Before Globaloria, have you ever?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used a wiki?</td>
<td>31.6% (6)</td>
<td>68.4% (13)</td>
</tr>
<tr>
<td>Designed graphics on a computer?</td>
<td>31.8% (6)</td>
<td>68.4% (13)</td>
</tr>
<tr>
<td>Developed an interactive game from beginning to end?</td>
<td>5.3% (1)</td>
<td>94.7% (18)</td>
</tr>
<tr>
<td>Put together a team to make it happen?</td>
<td>15.8% (3)</td>
<td>84.2% (16)</td>
</tr>
<tr>
<td>Done any computer programming?</td>
<td>31.6% (6)</td>
<td>68.4% (13)</td>
</tr>
<tr>
<td>Posted creative files like graphics, animations or games, to the internet?</td>
<td>47.4% (9)</td>
<td>52.6% (10)</td>
</tr>
<tr>
<td>Worked in a team on a digital design project, online?</td>
<td>10.5% (2)</td>
<td>89.5% (17)</td>
</tr>
</tbody>
</table>

Prior to participating in Globaloria, these RTC students had little experience with Constructionist activities.

Participants across pilot locations reported 107,046 total wiki page views for the 2007-08 year.
### Targeted Outcomes and Performance Measures

<table>
<thead>
<tr>
<th>Targeted Outcome #1</th>
<th>Performance Measures</th>
</tr>
</thead>
</table>
| Globaloria-WV platform, tools, and networks developed, launched, and continually updated and refined | ▶ Developed and launched customized platform, tools, and network  
▶ Updated and refined platform and tools continually to ensure achievement |

<table>
<thead>
<tr>
<th>Targeted Outcome #2</th>
<th>Performance Measures</th>
</tr>
</thead>
</table>
| Globaloria program launched across the state in a variety of schools and settings | ▶ Selected pilot locations and educators, emphasizing diverse types of contexts  
▶ Identified individual groups and classes  
▶ Recruited students and maintained their interest over time  
▶ Tested a variety of program integration methods |

<table>
<thead>
<tr>
<th>Targeted Outcome #3</th>
<th>Performance Measures</th>
</tr>
</thead>
</table>
| Formal year-long intensive educator training and professional development program implemented | ▶ Held in-person and virtual educator training and support workshops  
▶ Encouraged educators to engage in self-led learning  
▶ Encouraged educators to mentor other educators  
▶ Created an educator community for sharing and learning  
▶ Requested that educators report on progress and learning |

<table>
<thead>
<tr>
<th>Targeted Outcome #4</th>
<th>Performance Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time 24/7 support provided to educators and students, in-person or virtual</td>
<td>▶ Managed consistent and responsive communication between educators and NY and WV Foundation staff (in-person visits, telephone calls, e-mail communication, blog updates, and comments on community, educator, and student wiki pages)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Targeted Outcome #5</th>
<th>Performance Measures</th>
</tr>
</thead>
</table>
| Research protocol developed and implemented | ▶ Collected qualitative and quantitative data  
▶ Developed theoretical model and rationale for the Globaloria learning formula  
▶ Developed a framework for student and educator outcomes  
▶ Developed a theoretical model for interactions among Globaloria participants  
▶ Established partnerships with local research institutions |

<table>
<thead>
<tr>
<th>Targeted Outcome #6</th>
<th>Performance Measures</th>
</tr>
</thead>
</table>
| 21st-century learning skills of students and educators advanced | ▶ Cognitive Development  
▶ New knowledge attained through participation  
▶ Behavioral Development  
▶ Increased participation frequency  
▶ Affective Development  
▶ Change in motivation towards Globaloria-type of activities  
▶ Overall increases in Six Contemporary Learning Abilities (6CLAs) |

<table>
<thead>
<tr>
<th>Targeted Outcome #7</th>
<th>Performance Measures</th>
</tr>
</thead>
</table>
| A local team of operators and advisors established and activated | ▶ Recruited and trained local Globaloria-WV management team  
▶ Enabled Globaloria-WV team to manage program independently  
▶ Identified and invited Globaloria-WV Advisory Board members  
▶ Convened and leveraged Globaloria-WV Advisory Board  
▶ Implemented internship program for Globaloria students |

<table>
<thead>
<tr>
<th>Targeted Outcome #8</th>
<th>Performance Measures</th>
</tr>
</thead>
</table>
| Sustainable scaling and expansion of the Globaloria-WV program successfully initiated, with a clear strategy for growth | ▶ Sustained commitment from educators and pilot locations for Pilot Year 2  
▶ Received commitment from new participants for Pilot Years 2 and 3  
▶ Established strategic partnerships with WV institutions and leaders  
▶ Conducted site visits with current and potential funders and partners |

<table>
<thead>
<tr>
<th>Targeted Outcome #9</th>
<th>Performance Measures</th>
</tr>
</thead>
</table>
| Learning and results documented and communicated to encourage awareness, interest, and improvements in the digital learning field | ▶ Made all program-related learning open-source and available on Foundation wiki  
▶ Completed and circulated draft research reports  
▶ Issued press releases  
▶ Filmed, edited, and published videos  
▶ Worked with state media to encourage coverage of Globaloria-WV  
▶ Presented the program nationally and internationally (Dr. Idit Caperton and staff) |

<table>
<thead>
<tr>
<th>Targeted Outcome #10</th>
<th>Performance Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding for launch and expansion secured</td>
<td>▶ Identified and secured funding for Year 1, 2, and beyond</td>
</tr>
</tbody>
</table>
Curriculum Reform and Integration

- Refined program curriculum to focus on game-design assignments, resulting in increased learning and technology use
- Developed model and rationale for learning game design through Web2.0 collaboration as the “new writing”—a fundamental 21st-century skill
- Developed a Learning Theory framework: “The Six Contemporary Learning Abilities” (6CLAs)
- Developed a Learning Network model for facilitating a range of interactions: Self-Led Learning, Peer-to-Peer Learning, Co-Learning, and Expert-Guided Learning
- Connected program activities to core academic skills and content areas

Educator Professional Development

- Developed and refined the curriculum for:
  - Three in-person educator training courses in West Virginia
  - Seven virtual educator training courses on specific program-related tools and concepts
  - Ongoing on-demand sessions, as needed, for problem solving and troubleshooting in real-time

Community Building

- Connected students and educators with one another through the Globaloria network
- Created a private wiki to facilitate educators' collaborations and knowledge sharing
- Connected schools, educators, and students across the state to run joint programs

Evaluation

- Developed and distributed pre-program surveys, curriculum feedback rubrics, and post-program surveys
- Conducted several school visits for video and data collection throughout the year (coding and evaluation underway)
- Coded and evaluated the learning process and digital artifacts of learners

Academic Achievement

- Research shows a trend toward:
  - Students increased ability level in all of the six 6CLAs
  - Educators increased ability in all of the six 6CLAs (not as dramatically as students)
  - Academic improvement among at-risk girls and low-performing students

Partnerships and Funding

- Established strong partnerships with the West Virginia Center for Professional Development, WV Governor’s Office and First Lady
- Secured funds from Benedum Foundation, The Caperton Fund, and Verizon West Virginia
Year 1 Assessment: Progress

Administration and Leadership

- Recruited and trained Globaloria-WV Program Manager, Dr. Lee Kraus
- Reduced in-person phone calls with educators in favor of virtual group training
- Reduced staff hours from NYC team during second half of program
- Recruited leaders from WV government, business, policy, research, technology, and education communities to Globaloria-WV Advisory Board

Open Communication

- Received three teaching and learning progress reports from each educator
- Conducted in-person visits on a rolling basis; facilitated regular email communication
- Established a WV Program Manager’s blog with updates on program and skill-related topics, cultivating educators’ participation in posting comments

Publications and Presentations

- Prepared the first set of research reports (in progress, including this one)\(^9\)
- Presented to WV Board of Education, at WV conferences, and at WVU (Idit Caperton and Lee Kraus)
- Delivered speeches and gave presentations to large national and international audiences (Idit Caperton)
- Issued press releases
- Articles published about Globaloria in six different WV newspapers
- Submitted seven academic research papers to the American Educational Research Association
- Filmed and edited eight video case studies and uploaded them to the Foundation website

Scalability and Sustainability

- Integrated Globaloria into the regular school day as a formal course for grades in four schools
- Supported Globaloria-WV educators as they conceived and implemented a two-year associate degree in game design at Marshall Community & Technical College (MCTC)
- Celebrated as three Globaloria-WV graduates became program interns
- Retained all schools from Year 1 for participation in Year 2
- Received applications from 30 schools for participation in Pilot Year 2, mostly through word-of-mouth
- Integrated (per budget allowance) seven new pilot locations for Year 2
- Doubled school participation and tripled student participation in Year 2

---

Participating in Globaloria has opened up my mind and allowed me to see that technology has more to it than just surfing the web, e-mailing, and talking to friends. Technology is a big part of everything I do. I like that I now know more about it and I have expanded my knowledge of it with the help of Globaloria.

-- Carrie, 17, Man HS
In Year 1, Globaloria was implemented in seven schools. These were diverse settings, with varying economic, vocational, and educational demographics. World Wide Workshop researchers selected two schools from this pilot group and conducted formal case studies. These case studies highlight key indicators of success and key findings from Year 1. Data can be extrapolated, analyzed, and applied in subsequent implementation years. In fact, findings are already impacting Year 2. More rigorous assessment and impact research—the model for which is now in progress—is occurring in Year 2 and will continue into Year 3 and beyond. Excerpts from a few cases are presented here as examples. More information is available upon request: info@worldwideworkshop.org.

Case Study 1: Marshall Community & Technical College

From September 2007 through June 2008, Globaloria was implemented at the Marshall Community & Technical College (MCTC) in Huntington. A class of twelve community college students (male and female) used the MyGLife.org suite of resources to design and create interactive games. The MCTC students (ages 20-33) had all taken previous classes in the IT department, but all had different levels of digital competence and approaches to learning. All were novices in the invention, creation, and completion of an educational web-game. The class met for 90 minutes four times per week. Students completed individual and team assignments, emphasizing collaboration through online tutorials, wikis, and blogs.

[Through Globaloria I have had]…the realization that my dream is possible.

-- Steward, 28, MCTC
Case Study 1: Summary of Findings From Marshall Community & Technical College

- **Key indicators** of successful implementation at Marshall Community & Technical College:
  - Students acquired new skills and gained insight into how social media technology enables collaborative working and learning
  - Students engaged in activities representing the entire range of the Contemporary Learning Abilities (CLAs)
  - Students increased abilities in several CLA categories
  - Students experienced important shifts in the ways in which they used Web2.0 technologies to solve problems and create digital designs
  - Students developed a broad range of CLAs in parallel, thus supporting the value of the integrated nature of Globaloria
  - All student games reflected themes bearing an educational and social mission
  - MCTC educators and administrators initiated a new undergraduate program (Year 2) of study in game design at Marshall University, also in Huntington, WV, thus indicating strong administrative support for the Globaloria formula

> I had the opportunity to upgrade my skills in the areas of global management, e-commerce, and e-business. It was good to see that the skills being taught in the Globaloria program will assist the student in developing relevant skills in the 21st-century global business environment.

-- Randy, Educator, MCTC

- **Key factors** contributing to the successful implementation at Marshall Community & Technical College:
  - The computer lab and technology equipment at Marshall Community & Technical College were highly reliable
  - Integration into the IT department for credit and a grade
  - The strong participation and enthusiasm of the lead educator
Case Study 2: Randolph Technical Center

Randolph Technical Center (RTC) is a regional vocational high school, offering programs to students from Elkins, Harman, and Tygarts Valley. Since opening its doors in 1976, thousands of students have received training, developed leadership skills, and grown into productive citizens. Graduates have been employed in a number of professional, non-professional, technical, and skilled careers. Approximately 56% of its graduates continue their education; another 42% gain employment within the first three years after graduation.

RTC was the first pilot location in West Virginia to launch Globaloria. Globaloria was implemented at RTC as an elective course called “Game Design,” offered for credit during school hours to students in grades 10 through 12 and integrated with the Business Education curriculum. Game Design was offered in the fall semester, and offered as an independent study course in the spring. No high school classes about game design, Web2.0 activities or social networking had previously been offered at RTC. Class met for a 90-minute session five days a week.

Twenty students enrolled in Game Design at RTC: fifteen boys and five girls (7 sophomores, 5 juniors, and 8 seniors). Students represented the full range of school performance levels. All students were white.

Students completed a pre-program survey. All but two respondents had used either a desktop computer or a laptop connected to the internet at home, and a majority used a computer several times a day. Most students had never engaged in the type of activities included in Globaloria, such as use of a wiki, Flash design of a game, computer programming, and project-based work. They also never worked in a team on a digital project.
Case Study 2: Summary of Findings From Randolph Technical Center

Key indicators of successful implementation at Randolph Technical Center:
- Students used the Globaloria Wiki and Starter-Kit Website on the MyGLife.org learning platform, and hands-on help, to complete individual and team assignments.
- Students created wiki profiles, projects, and team pages and commented on each other’s work.
- Students used live expert resources provided by the Foundation.
- By the end of the semester, class teams had created eight games.
- Students acquired new skills and gained insight into how social media technology enables collaborative working and learning.
- Students significantly increased the frequency of engagement in certain CLA activities, specifically online team collaboration, creating with digital media, and surfing for information.
- Students experienced increased enjoyment, confidence, motivation, and knowledge.
- RTC teachers and administrators contemplated the introduction of a high school major in digital game design.

Key factors contributing to successful implementation at Randolph Technical Center:
- RTC infrastructure was functional and compatible with Globaloria. The RTC computer lab and technology equipment were highly reliable, and there were few technical interruptions.
- Daily integration of the program.
- Strong participation and enthusiasm of the lead educator.

Other Notes:
- Globaloria appears particularly well-suited to respond to individualistic learning styles and to aid achievement of students identified as learning disabled.
- Globaloria highlights the need for new methods of teaching and support for students requiring alternative approaches to schoolwork.
- It is important for the Foundation team to provide educators with unconventional evaluation tools that will accurately reflect student effort and performance.
- Game design creates unique opportunities for students to explore talents and interests.
- Globaloria immerses young people in an environment of original thinking to enhance their entry into the real world of project-based work.
Educators and students participated in self-reporting throughout the year, which provided progress updates from a personal, rather than a clinical, perspective. Below is a featured profile of one educator, who self-reported her thoughts and progress in a variety of ways in Year 1.

**Featured Profile:**
Denise Stalnaker, Business Educator, Randolph Technical Center

In a pre-program survey, Denise reported that prior to Globaloria she had never before used a wiki, engaged in game design, or worked in a design team online.

Throughout the year, Denise did a significant amount of self-learning of Flash and Web2.0 technologies. She created her own game and took an active role in the educator trainings we ran. She created her own wiki profile page and posted game files that she and her students created.

Her Flash game was a basic text quiz with buttons advancing the player to subsequent screens. The quiz focused on digital knowledge. Her game featured a few simple static graphics and a few instances of layered objects and text flying in across the screen.

"In this program, I’ve seen big changes in terms of how teachers are thinking about teaching and learning. I see teachers making significant connections between being a reflective practitioner and being a lifelong learner."
-- Pam Whitehouse, Professor of Technology, Learning and Culture, West Virginia University
Excerpts from Denise’s Personal Progress Report, December 2007

My skills in Flash have more than doubled/tripled. I can add sound, shape tweening, and have a better understanding of actionscript. I have learned more from my students than they have learned from me.

One of the major technical challenges for us has been receiving and installing the software. I have been a computer teacher for a number of years now, so this just comes with the job. Learning to be flexible and not so structured has to be part of working in a computer lab.

The major accomplishment is that we were able to offer this course for high school credit. Adding this course is just another step in an ongoing process for us to keep our students “ahead of the game” when going into the workforce or post-graduate training.

When I see the products the students have produced, I see success. Several groups have a good, solid start to an educational game. Several students have indicated a desire to continue next semester and are willing to change their schedules to continue.

It is challenging being a MyGLife educator because I cannot keep up with the tutorials as fast as the students. In addition to my regular teaching position I am teaching two additional nights per week and taking a class another night. My two kids are involved in band, clubs, cross country and swimming.

Excerpts from Denise’s Personal Progress Report, March 2008

I had to change my game idea because of time constraints, but I used questions from a practice test that I use to review for end-of-course tests with my students. I was able to add coding for scoring, animation and buttons that linked to other frames. I learned that it is extremely time-consuming. Since this semester has started I have not been able to set aside enough time to learn it on my own.

These are the tutorials that I have completed:

- Working with Text in Flash
- Prepare your own photos for the Jigsaw puzzle
- Flash: Drawing Tools
- Symbols, Buttons
- Frame-by-Frame Animation
- Motion Tweening

As my students work and ask me to help them solve problems I have learned a great deal. I know how to do some different coding by copying from sites then editing.

Excerpts from Denise’s Personal Progress Report, June 2008

I worked less on a game this time and became the motivator for the Game Design II class. I tried to keep them focused and on a schedule to reach their goal of finishing a game. I learned more about behaviors and music. Watching and helping Kris convert his music into files that were small enough for the game was a learning experience for me.
Featured Profile:
Leah, 20 years old, Marshall Community & Technical College

Prior to Globaloria, Leah reports no experience using a wiki or engaging in game design. Regarding her participation goals, she states, “I would like to get a good job once I graduate from Marshall University. I’m coming into this program with an open mind and am hoping to learn all that I can.”

Leah created two projects in Semester 1: a Hangman game (for teaching kids spelling and reading skills) and an interactive map (a travel game) with several scenes and design assets. During a December site visit, Leah presented her initial game file. The game was meant to help build a player’s reading skills. The game featured dimensionality in the graphics portrayed in the scene, and an animated tumbleweed crossed the screen in a motion path. One can see an educational potential behind the hangman game idea, but this project was incomplete, and contained no interactivity. Educators gave Leah the feedback to continue developing the game so that a teacher could load words and make it into an educational exercise.

At the end of Semester 1, to complete her final course requirements, Leah created another animation with a map that presented four scenes when users selected North, South, East and West. Her travel game reflected plane voyages to different locations in the North, South, East and West. Each of the other screens flashed quickly, so when the user clicked the compass it was impossible to get a screenshot. This was her second game project in Semester 1, and while both were incomplete, they reflect the development of beginning Flash design and programming expertise.
Leah discussed continued work on game design projects, “Later on, I wanted to be able to put bits of information about each place but I didn’t get to that yet, so now it’s general directions, North, South, East, West.” Reflecting upon her experience, Leah said, “ActionScript was new to me, I’m still trying to learn it. I used the timeline approach more often. This is my first time with Flash.” She said, “I wish they had offered this class earlier. I’ll take it again next semester.” In her mid-program survey, she states that the two most important things she learned this semester were “working with a group and working on a timeline.” She states “I think [my experience] will help me when working on a project and setting deadlines.” Leah continued on with her Flash learning in Semester Two.

Leah was a member of the team that designed the *Adventure West Virginia* game, and volunteered to present it to the Board in May. She joined the internship program and found it very exciting to teach other students on the network. Unfortunately, she was unable to continue her studies and internship; because of unexpected pregnancy, she took time off. In a personal conversation with the Foundation President, she expressed her joy about her baby and hoped to eventually go back to school and continue her internship work with the Globaloria Team and “maybe become a teacher.”

*Perspectives from the Field: Students*

By Tom Heywood, Managing Director, Bowles Rice LLP, and Former Chief of Staff and Counsel to WV Governor (1989-93)

> Until you see the kids engaged with Flash programming and other activities, it is hard to grasp their enthusiasm, and the self-confidence they are gaining. Kids light up, become the “teacher” in the classroom, and develop good presentation skills.

> In their games, students illustrated their commitment to social responsibility and to sharing and collaborating for the growth of the larger community.

> As we enter 2009, we must re-visit powerful ideas about learning and teaching that we’ve already established in the past, and transport them into the world of social media technology for learning in the present and the future.

-- Idit Harel Caperton, World Wide Workshop Foundation Founder and President

-- Dixie Billheimer, Program Director (and acting CEO), West Virginia Center for Professional Development
Featured Profile: Kris, Brandon and Toby, High School Seniors, Randolph Technical Center

Kris and Toby, who have learning disabilities, teamed up with Brandon to form *The Serial Experimenters* and to create a game for Globaloria.

**Kris**
In the pre-program survey, Kris expressed a high level of confidence and interest in all activities except for game creation. He states, “I hope to learn how to design a good game and gain proficiencies in the different programs and coding languages needed to do so. I wanted to participate because game design is something I’ve wanted to do all my life.” As for his career interests, Kris states, “I’m thinking of going to college and having a major in Game Design and a minor in International Business.”

**Brandon**
In the pre-program survey, Brandon indicated medium to high levels of confidence and enjoyment for all technology activities and explained his motivation to take the class. He stated, “I wanted to get a wider knowledge of everything tech so that I could make sure I can find something I enjoy for a job.” Regarding career, Brandon said, “I’m fairly sure that I want to go into computers, probably software engineering, and I really want to go to Rochester Institute of Technology.”

**Toby**
In the pre-program survey, Toby indicated prior experience in designing graphics, thinking up an idea for an interactive game, and posting creative files to the internet, but no experience with any of the other Globaloria activities. He had a low level of confidence and enjoyment for socializing online using internet tools, thinking up ideas for interactive games, creating a game from beginning to end, and posting multimedia files to the internet. Toby wanted to create a game with an educational purpose and explained why he chose to take the Game Design class: “I want to work together with my friends and create a simple web-game that is interactive and still educational to help people learn. I would like to know if the games that we create are actually helping and who it is helping.” Toby’s career goals are ambitious: “I want to go to college and get a PhD majoring in Mathematics.”

**Kris, Brandon and Toby’s Team Game**
*The Serial Experimenters* created *Infinity Quest*, “an adventure game where you solve problems to defeat the evil teacher.” The player can choose to be either a boy or a girl, and the character serves as an avatar for the user, glowing when the user answers a question correctly. The quizzes are simple math questions targeted towards elementary school students.
Perspectives from the Field: Students

Post-Program Survey: Kris
Kris says he now engages in all of the activities he learned in Globaloria, except those requiring Flash. In the future he plans to participate in all of the activities regularly on his own, except for programming in ActionScript. Kris answers sometimes true to questions relating to programming confidence and enjoyment. For his future aspirations, Kris has expanded his plans for higher education to include a Game Design major with an International Business minor and an International Studies minor.

Post-Program Survey: Brandon
Brandon’s survey responses reflect a lesser degree of confidence in programming. His career aspirations remain the same, and the project seems to have reinforced his motivation to attend college and get a software-related job. Brandon reported that outside of school, he now regularly engages in all activities associated with Globaloria, except developing an interactive game and working with a team online to design a project. Brandon reports spending more free time “on creative sites and sharing stuff I’ve done.” Regarding Globaloria’s impact on him, Brandon says, “it gave me a lot more options to explore. The sense of accomplishment is awesome.”

Post-Program Survey: Toby
Through Globaloria, Toby discovered a talent for programming, and he emerged as the programmer for the group. Toby’s confidence and enjoyment in thinking up ideas and creating interactive games from beginning to end has increased dramatically from pre- to post-program. He now engages in most of the activities promoted by Globaloria in his free time. He is “learning how to use Flash better” and has plans for a new game. He will continue to use the MyGLife.org tutorials. He designs graphics and uses social networking sites such as MySpace and Facebook. He is not as interested in blogging, using Photoshop, designing graphics, posting graphics and using social network sites.

“I enjoyed being able to find my own strength of skill and then being able to utilize it to help our game.”

-- Toby, 17, RTC
Year 1 Reflections

In reflecting on Year 1, Globaloria researchers, producers, and managers have assessed their intended outcomes for the program according to practices that worked well and other practices that need improvement. Details are provided in the following pages. In summary, the Year 1 pilot has shown that successful school implementation is connected to:

- Institutional support from school administrators and principals
- Reliable technology infrastructure (high speed internet, 1:1 computer/student ratio, up-to-date computers)
- Consistent technology usage with a 1:1 computer/student ratio available daily
- Dedicated educators with a strong interest in their own professional development
- Educators willing to commit 8-10 hours per week above and beyond their regular workload
- Educators willing to learn and teach something complex and new
- An active educators’ learning network
- Integration of the program into the regular school schedule and into the core curriculum
- Classes offered for credit
- Grading Globaloria projects, learning accomplishments and assignments
- Significant time spent on task, daily, through the academic year
- A strong local program management team
- A 24/7 virtual support team responding to both educator and student needs

Moving forward, I would like to see students engage in content disciplines more rigorously as they create their games. I would like to see teachers coaching students to increase understanding of core subjects and to improve 21st-century skills—information gathering, communicating, thinking and reasoning, and more.

-- Dixie Billheimer, Program Director (and acting CEO), West Virginia Center for Professional Development

In Year 1, I learned many things about Globaloria: it’s ambitious, it’s predicated on well-established epistemological premises, it resonates well with students, commitment to program goals plays a central role in school success, and stakeholders understand the importance of research.

-- Bobbi Nicholson, Professor, Graduate School of Education, Marshall University
**Year 1 Reflections: Digging Deeper**

**Intended Outcome #1**: Globaloria-WV platform and related tools and networks developed, launched, and continually updated and refined

**What worked?**
- **Ongoing customizations** ensured the program’s producers and developers took advantage of real-time learning and feedback and responded to specific community needs, fast.
- An educators’ wiki was useful for sharing learning and furthering the community development as a whole.

**What needs improvement?**
- Producing the school platforms after the initial training workshop (back in September) caused some confusion among educators.

**Intended Outcome #2**: Globaloria program launched in several middle schools, high schools, one vocational school, one community college, and an alternative education program for at-risk youth (girls)

**What worked?**
- **Diverse** pilot locations demonstrated the flexibility of the program, created linkages between multiple levels of learning institutions, and demonstrated the potential for statewide expansion.
- A strong technology infrastructure in participating schools was absolutely critical to the program’s success.
- Integrating the program into the regular school day and teaching Globaloria as a course for credit and grading resulted in greater learning and achievement.

**What needs improvement?**
- The application and selection process of educators and pilot locations for Year 1 was not thorough, in the sense that some educators were not informed about the large time commitment required, and some schools did not have an appropriate technology infrastructure. As such, some of our groups underperformed, started the program late, or required exponentially more support than anticipated.
- Installment of Flash software was inefficient and delayed the program start for several educators.
- After-school implementations lacked the necessary time commitment, and conflicted with student sports activities. This resulted in less sophisticated games and less impactful learning.

> Based on our experience in Year 1, I believe Globaloria may have a greater chance for success if it's integrated into the formal curriculum. Stakeholders should explore the feasibility and rationale for this integration as they scale the program.

-- Dixie Billheimer, Program Director (and acting CEO), West Virginia Center for Professional Development
Intended Outcome #3: Formal year-long educator training and professional development program implemented

What worked?

► The three in-person workshops were critical for gelling the Globaloria-WV community, establishing a relationship between educators and the Foundation team, and ensuring dedicated time to hone skills and develop necessary knowledge and understanding.
► The seven virtual training sessions (using WebEx technology) in the spring provided a cost-effective method for continuing to develop technology and the Constructionist teaching skills of educators. Sessions also motivated educators to continue their self-learning.
► Training, in conjunction with program participation, prepared educators to build knowledge and contribute to West Virginia education more broadly.
► The educator progress reports were an effective tool:
  ► Educators reflected on their learning and challenges and better focused their time and energy.
  ► Reports gave insight into educators’ strengths and weaknesses and guided training.
  ► Reports became a professional development tool for educators, many of whom had not engaged in formal reporting previously.
► Educator stipends ($3,000 for lead educator and $1,000 for supporting educator) acted as a key incentive tool for many educators and enabled the program to demand a high level of performance and commitment.

What needs improvement?

► Most educators lacked sufficient time in their daily schedules to engage in extensive self-led learning, compromising their ability to implement the program to its fullest.
► Educators required more support than initially expected.
► Educator progress reports need to be better leveraged to focus on educators’ learning and teaching. Some educators wrote their reports quickly and saw them not as learning tools, but as one-off mechanisms for receiving their stipends.
► Community-building and co-teaching among educators was not as extensive as we had hoped.
► Requirements for educator stipends and information about stipend levels were not clear, and created confusion among some.
► The learning achieved by particularly successful educators was not well-leveraged in the form of mentorship or coaching programs on the network.
► Even our most committed educators needed to improve on integrating content learning—traditional and non-traditional—into game creation activities.
Year 1 Reflections: Digging Deeper

**Intended Outcome #4:** Full-time, 24/7 support provided to educators and students, either in-person or virtual

**What worked?**
- **24/7 support** by WV and NY staff was critical for keeping educators focused and engaged.
- This support acted as a real-time **360-degree reporting and learning** tool to guide program improvements and refinements.

**What needs improvement?**
- Despite the fact that Globaloria is first and foremost a virtual learning network, and despite our dedication to virtual tools, WV educators demanded **telephone support**, responding less promptly and positively to virtual communication, including email. This level of phone support is not sustainable or scalable.

**Intended Outcome #5:** Research protocol developed and implemented

**What worked?**
- Videotaping and transcribing proved an exceptionally useful tool to the Foundation, providing qualitative data and testimonial content.
- **Pre-, mid-, and post-program surveys** provided key data and metrics for analyzing the initial impact of the program on educators and students.
- **Inductive observation and analysis** of student games and wiki activity led to the creation of coding schemes for performance analysis.
- Twelve in-depth student **case studies** from Pilot Year 1 highlighted associations and relationships among outcomes, which underscored the potential impact of the program on development and innovation.

**What needs improvement?**
- The **process for analyzing and transcribing videotapes** and other data needs to be more efficient.
- **More funding**—which would result in more staff—**would enable an increase and improvement of data collection and analysis, and especially publishable writing.**
- **Partnerships with local research institutions** faltered somewhat during the year, because of the open and creative nature of the project. Also, one key partner moved between universities and did not contribute to the research as expected, and our other main partner did not establish a results-oriented, research-based publishable approach and methodology.
- **Research partners need more support** to become self-motivated and unleash their inventive spirits, to lead their own research and publishing in the Research2.0 spirit.

"From my perspective as a researcher, I’d like easier access to student records. The more data we have, the more we can report; the more we can report, the more Globaloria can report."

-- Bobbi Nicholson, Professor, Graduate School of Education, Marshall University
Intended Outcome #6: 21st-century learning skills of students and educators advanced

What worked?

- The curriculum’s strong focus on **hands-on learning and extensive participatory tools**, such as wikis and blogs, served to encourage participation; this participation contributed to more in-depth learning.
- **Completing and presenting games** increased the self-confidence and internal drive of the students and educators.

What needs improvement?

- Participants need more time on-task—and more consistent engagement—in order to develop and increase knowledge and skills.

Intended Outcome #7: A local team of operators and advisors established and activated

What worked?

- The commitment from the West Virginia First Lady was unique and very significant in terms of raising additional funds—as well as raising the educators’ motivation and public profile of the program among West Virginians.
- **Recruiting and training a local WV management team**, notably the Program Manager, was integral to the program’s success. The Program Manager ensured quality control, managed relationships, led communication efforts, and motivated educators and students.
- Convening the **Advisory Board** was key to orienting the program’s strategic growth and expansion, to identifying additional resources, and to supporting partnership development.

What needs improvement?

- The Program Manager was not recruited until after the start of the program and the budget only permitted a part-time position.
- **Scaling-up the program will require more staff**. The program requires a solid team with a fully committed program manager, program coordinators, interns, and researchers.
- More attention to recruiting students as interns and incentivizing their success is needed.
- Recruiting local teacher experts and game designers can help.

Intended Outcome #8: Sustainable scaling and expansion of the Globaloria-WV program successfully initiated, with a strategy for a clear growth track

What worked?

- **Strategic partnership with the Governor’s Office** ensured that Globaloria-WV was seen as a “WV program” supported by the state and ready to scale.
- **In-person site visits for current and potential funders and partners** clarified, solidified, and focused commitments effectively.
What needs improvement?

- In Pilot Year 1, we were not yet able to establish a partnership with the West Virginia Department of Education. However, it is a crucial part of our strategy to transfer ownership to the state.
- Many educators found it logistically challenging to integrate Globaloria into the existing curriculum, e.g. assigning course numbers, scheduling, etc.
- The lack of in-home high speed connectivity made it difficult for students to work at home and for graduates to continue participating for a second year.
- The vision to offer Globaloria every year and integrate in math, science, health, or social sciences at different grade levels needs further development.

Intended Outcome #9: Learning and results documented and communicated to encourage awareness, interest, and improvements in the digital media and learning field

What worked?

- The use of Web2.0 tools and methods to publish our learning encourages others in the field to learn from, and build on, our learning.
- Videos and mini-documentaries demonstrated the unique, innovative, and powerful nature of the program effectively.
- Press releases, media coverage, and presentations increased awareness and lent further credibility to the program.

What needs improvement?

- The Globaloria Research Lab wiki needs continual updating to effectively communicate and share datasets and results with our research partners, and other researchers worldwide.
- Press coverage was principally local (WV) or international; more national is needed.
- You Tube Channel needs to be developed.

Intended Outcome #10: Funding for launch and expansion secured

What worked?

- The Foundation identified additional funders for Pilot Year 1 and beyond.

What needs improvement?

- Funding for Pilot Year 1 was not sufficient, with the World Wide Workshop Foundation contributing $24,111 in cash and $508,780 of in-kind donations to the program.

Moving forward, I would like to see the continuation of professional development, as well as the continuation of rigorous research and analysis about teacher professional development.

-- Pam Whitehouse, Assistant Professor of Technology, Learning and Culture, West Virginia University
As this report is being written, Globaloria Year 2 is well underway. Lessons learned in Year 1 have been impacting Year 2 implementation. Here is a short summary of the progress of Year 2 as of December 2008.

The network can handle a much larger participation, but the Foundation received more applications than the current start-up budget could afford. While demonstrating the Globaloria expansion potential to new locations and participants, the pilot project has retained connections with all the original participant groups and is building on our first-year relationships with new game projects, internships, and mentorship opportunities.

Year 2 is even more diverse than Year 1 in terms of age, gender, levels, context, and socio-economic status.

In Year 2, an enhanced Globaloria curriculum has resulted in more students choosing to create social issue and educational games, and to do so in teams.
The move from good to great involves:

1. Encouraging long-term student development, participation, and learning.
   - Daily participation in school and home
   - Student blogging and tracking the impact on student achievement
   - Connecting students with experts via live video sessions on-demand as often as needed
   - Expanding internship opportunities and filling the network with students/interns

2. Focusing students attention on games that are complex, educational, centered around social change, and contribute to a deeper understanding of core subjects featured in their games.

3. Investing in “educators as mentors,” to position them as leaders in Pilot Year 2 and beyond.
   - Increasing intensive and comprehensive training (mostly virtual, low cost, and scalable)
   - Establishing peer-to-peer educator support systems (not Foundation team expert-led)
   - Reconfiguring teaching and learning reports to increase transparency among educators
   - Implementing differentiated compensation based on commitment and performance
   - Hosting monthly web conferences for educators to discuss learning and share feedback

4. Involving principals, as well as educators, in the development of school teams and community. Provide principals hands-on learning experiences.

5. Fostering greater community and collaboration across schools and between educators.

6. Integrating Globaloria into the regular school day and into the core curriculum.

7. Establishing formal and rigorous assessment for this new mode of learning and teaching.

8. Ensuring a strong technological infrastructure in all schools to allow more than one group within a school to participate.

9. Establishing effective and strong local research and strategic partnerships.
   - West Virginia Center for Professional Development
   - West Virginia Department of Education
   - West Virginia Board of Education
   - Leading West Virginia Universities and leading academics
   - Leading WV businesses

10. Securing additional funding from governments, foundations, corporations and individuals

“
This is my second year doing the Globaloria thing. I like using Flash because I have learned a lot through it. Because if you think about it, I am making things that video game creators make every day… like, they get paid for it. So I think that is pretty cool.

-- Alexia, 15, Capital HS
### Globaloria-WV: Year 2 Participating Groups (14 schools, 24 groups, 26 educators, 332 students)

<table>
<thead>
<tr>
<th>Pilot Location</th>
<th>Total # of Educators Trained</th>
<th>Student Grade Level</th>
<th>Total # of Unique Student Participants</th>
<th>School Type</th>
<th>Type of Program Offered</th>
<th>Individual or Team Work</th>
<th>Type of Program Offered</th>
<th>Individual or Team Work</th>
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<td>Capital HS, Charleston, Kanawha Co.</td>
<td>1</td>
<td>10-11</td>
<td>9</td>
<td>Standard Public High School</td>
<td>After School (HSTA) 2 mtgs/wk 90 mins/mtg</td>
<td>Team projects</td>
<td>After School (HSTA) 2 mtgs/wk 90 mins/mtg</td>
<td>Team projects</td>
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<td>11-12</td>
<td>9</td>
<td>Standard Public High School</td>
<td>For credit (Business Curriculum) 5 mtgs/wk 90 mins/mtg</td>
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<td>41</td>
<td>Standard Public Middle School</td>
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<td>8-GED</td>
<td>9</td>
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<td>Team projects</td>
<td>For credit (Elective) 5 mtgs/wk 42 mins/mtg</td>
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<td>For credit (Art curriculum) 5 mtgs/wk 50 mins/mtg</td>
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<td></td>
<td>1</td>
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<td>-</td>
<td>For credit (Social Studies Curriculum) 5 mtgs/wk 50 mins/mtg</td>
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<td>Pilot Location</td>
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<td>Student Grade Level</td>
<td>Total # of Unique Student Participants</td>
<td>School Type</td>
<td>Type of Program Offered</td>
<td>Individual or Team Work</td>
<td>Type of Program Offered</td>
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<td>Individual projects</td>
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<td>For credit (Elective) 5 mtgs/wk 60 mins/mtg</td>
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<td></td>
<td>9-12</td>
<td>3</td>
<td></td>
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<td></td>
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<td>11</td>
<td>Standard Public High School</td>
<td>For credit 5 mtgs/wk 45 mins/mtg</td>
<td>Team projects</td>
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Year 3 & Beyond

Planning for Year 3 is underway. The program will run during the 2009–2010 school year and will build on the research and successes of Years 1 and 2. In Year 3, we will:

**Sustainability and Scalability**

- Obtain formal commitment from the West Virginia Department of Education to adopt the program and begin handling administration; begin to train and plan for statewide expansion
- Demonstrate scalability by maintaining a similar budget but still expanding the program’s reach to more students and educators
- Stay on as advisors and consultants to the West Virginia Department of Education as it adopts the program and scales it statewide
- Expand the program within each school, so that a particular school will have multiple classes and teachers involved in Globaloria
- Expand to additional schools throughout West Virginia

*Moving forward, Globaloria should be formally integrated into the West Virginia public education system. It needs to be transitioned from a special project supported by outside partners to an institutionalized instructional tool by the Department of Education. This move will require close collaboration between all state departments responsible for curriculum development, professional development, and 21st-century skill development.*

-- James V. Denova, Vice President, Benedum Foundation

**School Partnership and Integration**

- Involve principals, particularly in the development of Globaloria Teams
- Integrate Globaloria into the regular school day (move away from after-school programming in all cases except when programs offer sufficient participation time)
- Grow the educator mentor/buddy program within schools and among neighboring schools; increase teacher collaboration
- Continue the focus on games for social change, while connecting to formal education disciplines (e.g., language arts, math, science, etc.); integrate formal education content
- Recruit and train more high school and community college interns

*In order to scale the program and attract additional funding, we must articulate the impact of Globaloria on student achievement, motivation, and attendance, as well as on teacher competency and engagement. Additionally, we must consider ways in which we can expand the program to other applications and possibly even generate revenue for participants. Equally important, we must find ways to document and distribute the Globaloria success story.*

-- B. Keith Fulton, President, Verizon West Virginia, Verizon Communications
Year 3 & Beyond

Research
- Improve research methodologies and continue exploring student and teacher impact
- Experiment with one virtual group that is open to the public
- Enable West Virginia to serve as a model for other states on 21st-century learning programs

"It is difficult to describe the success of the program, but we must be able to demonstrate the value of the program; we must create a means of validating the experience."
-- Tom Heywood, Managing Director, Bowles Rice LLP, and Former Chief of Staff and Counsel to WV Governor (1989-93)

Accessibility and Infrastructure
- Maintain a cutting-edge technology platform and find ways to make it highly scalable, even more turnkey, and customizable for new user groups
- Help find solutions to ensure students and educators have the software and internet access needed to continue their Globaloria learning at home

"Moving forward, I’d like to see Globaloria expanded so that it has a greater reach in West Virginia—particularly in rural areas. I’d also like to see a continuation and expansion of connecting our students and educators with people around the world—experts and peers alike—who can broaden horizons of West Virginians by offering different perspectives and life experiences."
-- Lloyd Jackson, Former West Virginia State Senator (1947-70), and Chair of the Senate Education Committee (1995-2003)

Strategic Planning
- Complete the five-year Globaloria strategy
- Assist Marshall Community & Technical College with the establishment and promotion of their Associate Degree program in Gaming

"Success breeds success, and we are just at the beginning in terms of program possibilities. I would like to see the program expanded to more students, teachers, and schools. I know from meeting with teachers that they want to be involved. People like being part of a cutting-edge program; they like to feel they are pioneers in learning."
-- Gaston Caperton, Former West Virginia Governor (1989-97), and President, College Board
Endnotes


2. There are two emerging and related fields of study: the educational value of playing videogames, and the beneficial roles of Web2.0 tools in learning and teaching. Globaloria intertwines these two together. We believe that playing games is the new reading, and programming wikis and web-games is the new writing. The Foundation’s work in this new arena is deeply rooted in Idit Harel Caperton’s vision and work over the past 25 years, and her commitment to promoting and researching 1:1 computer-per-student ratio in education and digital learning and media that is constructionist and programmable in nature. The small selection of articles listed below includes background resources related to our work:

- Ito, Mizuko; Horst, Heather; Bittanti, Matteo; Boyd, Danah; Herr-Stephenson, Becky; Lange, Patricia G.; Pascoe, C.J.; and Robinson, Laura (November 2008). Living and Learning with New Media: Summary of Findings from the Digital Youth Project. The John D. and Catherine T. MacArthur Foundation Reports on Digital Media and Learning.
- Lenhart, Amanda; Madden, Mary; Macgill, Alexandra Rankin; and Smith, Aaron (December 2007). Teens and Social Media: The use of social media gains a greater foothold in teen life as they embrace the conversational nature of interactive online media. Pew Internet & American Life Project.
- Lenhart, Amanda; Kahne, Joseph; Middaugh, Ellen; Macgill, Alexandra Rankin; Evans, Chris; and Vitak, Jessica. (September 2008). Teens, Video Games and Civics: Teens’ gaming experiences are diverse and include significant social interaction and civic engagement. Pew Internet & American Life Project.
- Squire, K. D. (July 2002). Rethinking the role of games in education. Game Studies, 2(1).

The notion of using the internet to establish communities for imaginative learning and content creation for kids and youth was pioneered by Dr. Idit Harel Caperton with the launch of MaMaMedia.com in 1995. See:


Background on Idit Harel and Seymour Papert on their pioneering MIT Media Lab Research and Theory in the 1980s and 1990s:


Foundation’s internal research report: Harel Caperton, Idit and Reynolds, Rebecca (August 2008). Different Locations, Different Outcomes: An Exploration into Varying Student Outcomes of Globaloria-WV, by Location in Pilot Year 1. This paper analyzes and compares statistical results from our pre- and post-program surveys of Pilot Year 1 students’ frequency, motivation, and self-reported technology knowledge.


8. Foundation’s internal research report: Harel Caperton, Idit and Reynolds, Rebecca (August 2008). The Case of Randolph Technical Center in Globaloria-WV: Innovations and Outcomes, Pilot Year 1. This preliminary research report provides an initial glimpse into findings for six case studies about students’ learning, their project teams, and their educator; it also reflects aggregate group-level results for RTC.

9. In addition, we established partnerships with WV research institutions to publish the following reports:

- Whitehouse, Pam; Reynolds, Rebecca; Harel Caperton, Idit. (December 2008). The Development of a Research Framework to Examine Teacher Professional Development and Educator Experiences in Globaloria from Pilot Year 1. A joint research project by West Virginia University and World Wide Workshop Foundation.

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The Caperton Fund

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The West Virginia Office of the Governor, and the First Lady
West Virginia Department of Education and the Arts
West Virginia Center for Professional Development
Marshall University
West Virginia University
Edvantia

Pilot Participants
Man High School, Man, Logan Co.
Capital High School, Charleston, Kanawha Co.
Randolph Technical Center, Elkins, Randolph Co.
Clay County Schools, Clay, Clay Co.
Marshall Community & Technical College, Huntington, Cabell Co.
Kasson Middle School, Moatsville, Barbour Co.
Florence Crittenton Center for Girls, Wheeling, Ohio Co.

Credits
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All other images used by permission of Globaloria Year 1 participants.

For more information, please contact info@worldwideworkshop.org.
Globaloria is teaching our youth vital skills that they need to compete in the new economy. They learn from technology experts in the field. They learn best practices. They can see that there are other ways to do things, and new kinds of jobs. What I like is that they are working on a global basis right here in West Virginia.

-- Governor Joe Manchin, III

In the summer of 2007, the World Wide Workshop Foundation partnered with the WV Governor and First Lady to customize and implement the Globaloria Network and its education technology program across the state of West Virginia. In the first experimental pilot year, the integration of Globaloria into seven schools was found helpful and successful among educators and students. The project funding grew to include 14 schools in the 2008-09 academic year.

This report marks the first publication about a visionary and innovative model for the utilization of the latest Web2.0 social media technology and a game-making curriculum for transforming public education – among middle schools, high schools, community colleges and alternative education programs. It tells the story of an entrepreneurial collaboration between a small non-profit, state government, corporate, public, and private organizations, to demonstrate through research and practice the enormous potential and benefits to students and educators of the Globaloria Network and its unique learning formula. It also provides examples, concrete ‘how-to’s,’ and inspiration to other states and departments of education, as well as to researchers in the field.

World Wide Workshop Foundation, December 2008