Empowering Educators and School Leaders to Accelerate Constructionist Learning with Globaloria

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www.WorldWideWorkshop.org
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GLOBALORiA

The First Social Network for Learning
How to Make Educational Web-Games

Cultivating Web 2.0 Skills,
Computational Creativity and Inventiveness,
Academic Abilities, and Social Awareness
Among Students, Educators and School Leaders
2010 Critical Skills Survey

American Management Association, in conjunction with P21, surveyed 2,115 managers and other executives about the needs of the 21st century workforce.
How are the 4Cs recognized within organizations?

Has your organization identified these skills as priorities for employee development, talent management, and succession planning?

<table>
<thead>
<tr>
<th>Skill</th>
<th>Agree/Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical thinking</td>
<td>73.3%</td>
</tr>
<tr>
<td>Communication skills</td>
<td>79.2%</td>
</tr>
<tr>
<td>Collaboration/team building</td>
<td>72.3%</td>
</tr>
<tr>
<td>Creativity and innovation</td>
<td>66.6%</td>
</tr>
</tbody>
</table>

Source: AMA/P21 2010 Critical Skills Survey, released April 2010
How are the 4Cs recognized within organizations?

Has your organization measured these skills and competencies during annual performance reviews?

<table>
<thead>
<tr>
<th>Skill</th>
<th>Agree/ Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical thinking</td>
<td>72.4%</td>
</tr>
<tr>
<td>Communication skills</td>
<td>80.4%</td>
</tr>
<tr>
<td>Collaboration/team building</td>
<td>71.2%</td>
</tr>
<tr>
<td>Creativity and innovation</td>
<td>57.3%</td>
</tr>
</tbody>
</table>

Source: AMA/P21 2010 Critical Skills Survey, released April 2010
How are the 4Cs recognized within organizations?

Has your organization made an effort to assess these skills and competencies when hiring new employees?

<table>
<thead>
<tr>
<th>Skill</th>
<th>Agree/ Strongly Agree</th>
</tr>
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<tbody>
<tr>
<td>Critical thinking</td>
<td>75.7%</td>
</tr>
<tr>
<td>Communication skills</td>
<td>80.7%</td>
</tr>
<tr>
<td>Collaboration/team building</td>
<td>62.6%</td>
</tr>
<tr>
<td>Creativity and innovation</td>
<td>60.1%</td>
</tr>
</tbody>
</table>

Source: AMA/P21 2010 Critical Skills Survey, released April 2010
STEM skills are increasingly critical to remaining competitive in the workforce and the world. According to the U.S. Department of Labor, the U.S. will have more than 2 million job openings in STEM-related fields by 2014.

*President Obama’s State of the Union Address January 2011*
## Program Participation

<table>
<thead>
<tr>
<th>2011-212</th>
<th>Schools</th>
<th>Educators</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Virginia</td>
<td>49</td>
<td>64</td>
<td>1,304</td>
</tr>
<tr>
<td>California</td>
<td>3</td>
<td>3</td>
<td>120</td>
</tr>
<tr>
<td>New York</td>
<td>1</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Florida</td>
<td>4</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Texas</td>
<td>1</td>
<td>3</td>
<td>300</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>58</strong></td>
<td><strong>75</strong></td>
<td><strong>1,874</strong></td>
</tr>
</tbody>
</table>
An Online Social Learning Network, Course Curriculum, Open Resources, Tools and Tutorials for Playing and Making Games. Students and educators learn how to play and create their own social issue web games, produce wikis, publish blogs, and openly share and exchange ideas, game code, questions and progress using the latest digital communication technology.
Globaloria Mission

1. Engage millions of students in digital learning for mastering the knowledge and skills they need to succeed in school, college and careers in the global innovation economy.

2. Empower educators and school systems by enhancing their 21st-century capabilities and STEM learning and teaching opportunities.

3. Power up classrooms and turn them into networked design studios that motivate students to work harder and dig deeper into content and complex projects.
Learning Process

PARTICIPATE: Use the Globaloria Social Network to learn, work in teams, solve problems and share knowledge. Learn to collaborate virtually with classmates, educators, students in other schools, and professional game makers.

PLAY: Play to discover what makes a great game. Learn about game mechanics, genres, and design principles. Get inspired.

PLAN: Decide who the audience is and what your game is going to do. Research your learning topic and content. Organize your ideas in a written plan. Keep adding to the plan as your design develops.

PUBLISH: Learn how to present and publish your game online.

PROGRAM: Write the code for your game in Flash Actionscript. Learn how to program, test and get help from experts.

PROTOTYPE: Draw your game concept and test it with users. Learn to use Flash to create an interactive demo that shows how the game will look and work.

PLAY: Play to discover what makes a great game. Learn about game mechanics, genres, and design principles. Get inspired.
Deepening Content Knowledge through Game/Sim Production

Unit 1. Getting Started: Introduces the course structure, helps learners set up their own Profile and Blog, and learn rights and responsibilities as a member of this online learning community.

Unit 2. Game Design: Working as individuals or in teams, learners conceive and design an original game about a complex topic (science, math, health, civics) and a social issue that matters to them. Using Flash text, drawing and animation techniques, they create an interactive demo of their game concept.

Unit 3. Game Development: Based on their game concept and demo, learners develop a complete, playable interactive game. No two games are the same, so each learner develops a customized Development Plan based on the specific features of their game.
Platform: Editable, open source space for learning, sharing and connecting
Community: Connected classes and schools supported by experts and each other
Game Competitions

Students create and present their games on Civics and STEM topics. Expert Judges select the winners, who receive laptops with Flash.

Chaired by US Senator Jay D. Rockefeller

Chaired by Former Supreme Court Justice Sandra Day O’Connor
**Program Requirements**

- **Leadership:**
  - Educators who are passionate about new pedagogies (not technology experts) and engaging students
  - Principals and School Counselors who are able to support 90-minute block schedule for two semesters, and multiple Globaloria educators who are teaching multiple classes each day
  - Superintendents, Curriculum Directors, and Technology Directors who are supportive of everything below

- **Educator Time commitment:**
  - 8+ hours per week
  - Full attendance at 3 Globaloria Academies (8 days yearly, Jul, Aug, Jan) for educators
  - Full attendance at 2 Globaloria Hands-On Workshops for principals and superintendents (2 half days)
  - Full attendance in monthly virtual webinars; writing and reading educators progress reports (5-7 hrs quarterly)

- **Building a powerful model for a year-long program of computational creativity**
- **Motivating and engaging project-based learning**
- **Broadband learning and 1:1 Computer-Student Ratio**
Program Requirements (cont.)

- Students:
  - Middle, High School, Alternative Education, Community College, University
  - Daily, year-long class (90 minute block recommended over two semesters)

- Technology Infrastructure and Support:
  - 1:1 computers for Students: Must have daily access to a PC/laptop (no sharing)
  - 1:1 computers for Educators: Must have a laptop for use at school/home/training
  - High-Speed Broadband Internet (5 MB/s minimum, 10 MB/s recommended)
  - Flash software (CS5)
  - Multimedia PCs/Laptops that are up-to-date (Intel® Plentium® 4 or AMD Athlon® 64 processors, 2GB RAM, 5GB available hard-disk space, 1024x768 display (1280x800 recommended) with 16-bit video card, DVD-ROM drive, headphones/speakers)
  - Web Browser: IE7 or Firefox 3 (or more recent) with Adobe Flash Player 10 plugin
  - Phone line and speaker phone in classroom and webcam
  - Overhead projector or Smartboard
  - Digital video camera (i.e. FlipCam) for recording, presentations, etc.
  - Headphones recommended for video tutorials and game’s sound effects and music
  - Pen tablet recommended to aid students in drawing (1 per 5 students)
Professional Development: Educators’ Platform and Program

Constructionist Model for Creating Leaders
Educators learn by doing and grow by teaching others on the Network

“Hands On” Training Sessions
• Globaloria Academy – In-person, intensive trainings (3)
• Online Mini Webinars - Web-based workshops (7)

Globaloria Mentors Program
Experienced educators take on a leadership role by supporting other educators

“24/7” Virtual Support
• Expert Support via wikis, blogs, email, Web conferencing
• Educator Community Development – private educators community wiki, peer-to-peer mentoring, weekly educators newsletter, sharing teaching & learning reports

Rewards and Recognition
• Stipends, Graduate Credits and Certificates
Mentor educators receive additional training to check in with their mentee educators on a weekly basis and support them in:

- **Modeling** Globaloria style learning and use of tools
- **Guiding** students to develop Globaloria style learning practices
- **Fostering open communication** within class, and among other classes in the virtual community
- **Focusing student games** on educational topics from school curriculum, social issues and global knowledge
- **Following the curriculum** and providing insights and suggestions for improving it
- **Utilizing Globaloria platform** and tools, resources, tutorials, and demos, regularly and rigorously
Creating a path to help students find professional success in the 21st century workforce is a key program component.

Spirit and Goals for Internship:
• Establish a network of Globaloria graduates who stay involved and continue to learn
• Offer students leadership, economic and professional development opportunities
• Leverage graduates’ knowledge and skills to benefit the program and other students

Initiatives:
• Interns gain paid job experience plus high school or college credit.
• Teachers Aide internships where experienced students help educators at their school for credit
Dr. Idit Harel Caperton  
Founder & President

“Practicing the making of games and simulations, (not just playing them) within a virtual design studio, embedded in a social learning network and in-class activities, can help students develop connected content knowledge and the contemporary participator learning abilities they need, in order to be successful in today’s colleges and careers in the global innovation economy.”

• What is Globaloria  
• Learning Theory  
• 21st Century Capabilities  
• It’s STEMing Schools EVERYWHERE
“Globaloria helps West Virginia students - who often feel disconnected - to be creative and connected with the world. This global program inspires and prepares them for excellence in their future lives.”

-Gayle Manchin, Former First Lady of West Virginia

“Globaloria offers West Virginia students an opportunity to work in collaborative teams to produce prototypes of educational games that have a social purpose. The program nurtures the type of 21st century skills research tells us students need to master to become college and career ready.”

-Dr. Jorea M. Marple, WV Superintendent of Schools

“We join Globaloria in supporting innovative ways to prepare West Virginia students to succeed in the classroom. That preparation is critical to success in the workplace and our communities, and we believe technology is a part of a successful educational strategy.”

-Dana Waldo, Senior Vice President of Frontier West Virginia
The Globaloria Learning Formula: *Daily, year-long, 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 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**
  Professionals from around the country/world help inspire learning and help solve problems on demand on the Globaloria network. **Learning just-in-time.**

- **Co-Learning**
  Students and educators learn together (online and offline). Educators are co-learners, instead of didactic instructors. **Learning at the same time.**
**Online Learning Community Platform:**
Curriculum, Design Space, Resources, Blogosphere

**Resource Website: Library and Gallery**
- 4 channels of 100+ resources to play, critique, modify and remix games
- Play: Games produced by students and experts
- Learn: Tutorials to learn Flash, HTML, Wiki and Blogging
- Explore: Web learning resources for educational and social issue games
- Exchange: Connections to other Globaloria communities and networks

**Community Wiki: Collaborative Design Studio**
- User gallery with participant profiles, assignments and games
- Course curriculum with 3 units (Getting Started, Game Design, Game Development) and hands-on assignments
- Student progress report tools
- Course management tools for educators

**Community Blogs: Designer’s Journal**
- Student blogs
- Educator blogs
- Team blogs
- Staff blogs
Year-Long Social Media/Game Making Curriculum

Three Units:

1. **Getting Started:** Introduction to the course structure and tools. Learners set up their own Profile and Blog, and discuss rights and responsibilities as a member of this online learning community.

2. **Game Design:** Learners conceive and design an original game about a complex topic (science, math, health, civics) and a social issue that matters to them. Using Flash drawing, animation and limited AS programming, they create an interactive demo of their game concept and formally present it.

3. **Game Development:** Learners take their game concept and develop it into a playable interactive game. No two games are exactly alike, so each learner develops a customized Development Plan based on the specific features of their games (working as individuals or teams).

Each Unit contains a structured set of topics.

Each Topic contains Assignments for learners to complete. Each Assignment helps learners create a critical part for their own original game. Blogging prompts for each topic encourage learners to reflect throughout the process.

Go through the Units and Topics in order.

By the end of the course learners can complete an original game and publish it on the community wiki. They can also submit it for publishing on Globaloria site.
Using the world’s most pervasive, global, flexible, creative, fun, and widely-supported tools to prepare students for self-led learning and professional success in the knowledge economy.
Save the farms from the evil polluting business.

The question is...

Could it be you?

Score: 1

Vote [Insert your name here] 2008

50 remove glass

40 Save farms from the evil polluting businesses.
Winning Civics Game

Winning STEM Game
Partnership with school principals and county superintendents is vital for establishing a sustainable and scalable implementation model at each school.

**Spirit and Goals:**
- Program Expansion in current & new schools
- Growing teams of passionate, collaborative educators at each school
- Increased engagement and support
- Lead Program excellence
- Principal and Superintendent Colloquium
- Hands On Workshops
Partners & Funders (2011-2012)

- John S. and James L. Knight Foundation
  www.knightfoundation.org
- Claude Worthington Benedum Foundation
- Frontier Communications
- AMD
- Southwest Key Programs
- The Caperton Fund
- West Virginia Department of Education
- State of West Virginia
- West Virginia Center for Professional Development
- Marshall University
- West Virginia University
- EDVANTIA
Ingrida Barker, Educator
Sandy River Middle School

Video: http://www.worldwideworkshop.org/programs/globaloria/voices-from-the-field
Research and Evaluation Network of the Program Effectiveness and Impact

Laura Minnigerode
Researcher, TX

Rebecca Reynolds
Researcher, WV

Data We Collect and Share:
- Pre- and Post-Program Surveys
- Observations of educators and student activities online and on-location
- Feedback and testimonials on the program
- Digital media artifacts created by participants
- Video ethnographic transcripts of filmed interviews, discussions and presentations
- Analysis of peer group interactions and self-presentation observed on-location, in video footage, and on the wiki
- Ongoing feedback from bi-weekly interviews with educators and administrators
- Email communications
- Activity on the Wikis and Blogs
- Formal evaluation of games using innovative rubrics and holistic coding schemes

Research Partners Network:
- Pamela Whitehouse (WVU, WV)
- Bobbi Nicholson (Marshal U, WV)
- Doris Redfield (Edvantia, WV)
- Alex Games (MSU, MI)
- Sean Duncan (U of Miami, OH)
- Matthew Berland (UTSA, TX)
- Taylor Martin (UTA, TX)
- Catherine Ashcraft (NCWIT, CO)
- Betty Hayes (ASU, AZ)
- Uri Wilensky (Northwestern)
- Chris Dede (HGSE)
Why Me?

• Benefit to students
  – Computer/Web 2.0 Skills
  – Writing
  – Presentation/Public Speaking
  – Problem Solving
  – Team Working
  – Creativity
  – Individualized
  – Content Integration
THANK YOU