

# Games as Construction Zones

An interview with Dr. Idit Harel Caperton by Melanie zibit



**Dr. Idit Harel Caperton spoke with simSchool in the fall of 2005 and again in spring 2007. This article includes Part 2 of the fall 2005 interview, with excerpts from the more recent 2007 interview. NOTE: Part 1**

**of the fall 2005 article can be found in simZine Fall 2005 Volume 1 No. 2.**

Go to [www.simSchool.org/news](http://www.simSchool.org/news) for access to online URL's shown in this article.

When simSchool first talked with Dr. Idit Harel Caperton in 2005, she discussed her philosophy of how children learn through constructionism, inspired by her work with Seymour Papert, and exemplified in her programs for children on MaMaMedia ([www.MaMaMedia.com](http://www.MaMaMedia.com)). Her work continually evolves so that today Dr. Caperton is directing an exciting initiative called Globaloria, a global project to empower underserved youth throughout the world as they learn Internet technology, build games and experience elements of democracy and globalization.

## Interview Part 2 – from Fall 2005

**simSchool:** How do you think we can get the message about the value of simulations and games to teachers, faculty, and parents? They so often resist it. What should we do to get them to buy into this?

**IHC:** Getting the message about the value starts with having people buy into the theory first – the constructionist learning theory. Have teachers and educators think and reflect on their own personal learning experiences – instances of their own creativity and personal histories. They should ask themselves, “What have been my best learning experiences?” The answer is usually a teacher or a parent that made them active learners, where they created something of their own, worked on a complex project, worked on something they invented and were passionate about.

Technology empowers this kind of learning, particularly when learners take on an active role as designer. They learn because they have to think hard about their subject and think of the best ways to convey it

to others. “The best learning,” Papert says, “happens especially felicitously in a context where the learner is consciously engaged in constructing a public entity, whether it’s a sand castle on the beach or a theory of the universe.” Papert’s terminology stems from Piaget, Dewey and Montessori. Educators do know about these thinkers, so this is where we start. If you are told what to learn, you may be able to answer the test, but you will not own that knowledge. Kids can get deeply engaged in learning, even complex subjects.

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We should ask educators - Why can't we have curriculum that engages students the way artists, musicians, mathematicians get engaged? They have a personal passion that drives their interest, their curiosity. Why can't we bring children or youth through that same door, to build on their personal passion? Building on a child's curiosity and their passion, leads to deep engagement – that is the driver we want to create in all learners, both young and old.

**simSchool:** So we want to talk to adults about their own personal learning experiences and help them realize how constructionist these special learning moments were, just like artists and mathematicians working through complex problems and big projects.

**IHC:** Yes. And we also need to communicate to teachers, and parents, that millions of people master complex games everyday. It's a fact. Game designers have a better take on the nature of learning than most instructional curriculum designers or textbook publishers. They have to. Otherwise they would go out of business. Their livelihoods depend on millions of people being prepared to undertake the serious amount of learning needed to master a complex game. Papert joked about how, with textbooks, the situation is reversed. The textbook business is boosted whenever students fail to learn, and schools clamor for a new text! Games are a completely different paradigm. As educators we should play and assess the learning that goes on in games and see them as real world laboratories for new ideas about learning and economic development.

Some academics and software developers are beginning to look more seriously at the potential value of educational games, for example, Civilization. There are new movements, "Serious Games" and "Social Games," which are dedicated to facilitating education and social change through making and playing mission-filled games. Researchers are beginning to explore best practices, funding and distribution models, and partnership essentials, and a few leaders

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are emerging in social-tech game innovation as well as a community of practice for partnerships (such as the UN's surprise hit "Food Force" [www.food-force.com](http://www.food-force.com) or [www.DarfurisDying.com](http://www.DarfurisDying.com)). Top-notch founda-

tions like MacArthur, and government funders are beginning to give money to these initiatives, although, to my mind, still not enough! I believe that some of these purposeful games should be introduced to students and educators. You can read more about it on the Games for Change website ([www.gamesforchange.org](http://www.gamesforchange.org)) and on the MacArthur website (<http://digitallearning.macfound.org>).

**simSchool: Because of commercial video games, many people equate games with entertainment. Can you explain more about the value of learning through games versus learning through textbooks?**

**IHC:** Textbooks usually cut knowledge into little pieces, chapters and sections, by age and grade levels which is supposed to make learning easier, but often ends up depriving knowledge of personal meaning and makes it rather boring. "Games," kids say, "are hard fun" -- meaning it's fun because it is hard. Listening to this notion and watching kids work at mastering games confirms what I know from my own experience. Learning is essentially hard. It happens best when one is deeply engaged in hard and challenging activities. Papert was the first to say that to make learning interesting we need to make it hard. Not hard in a sense of tossing in more problems to solve for homework, or making longer assignments. Rather, focus on the fact that kids prefer things that are hard, as long as they are also interesting and personally meaningful. The education culture is very different in an environment where kids learn through textbooks and worksheets, versus one where kids use Logo or Lego or Internet to make visual objects, multimedia simulations, and exchange what they make on the Net.

Young people who grow to be fluent with computer games may not know more information, but they probably develop an ability to try again, and not give up so fast, until they get the results they desire. I assume that they are better able to take risks and cope with unforeseen blocks and challenges. Through gaming, these people who play videogames and web-based games probably develop what Papert and I call "learning fluency" -- the ability to learn how to learn.

**simSchool: What a wonderful name for your new project, Globaloria! It conjures an image of celebration and connection to people all across the globe. Can you tell us about Globaloria's mission, what it is, and how it came to be?**

**IHC:** Since the summer of 2006, we have been developing a program called Globaloria, and testing an innovative open-source Web 2.0 platform and curriculum called MyGlobalLife.org. It's a pioneering social network for teaching and learning, based on research and practice about the benefits of youth-led learning through game design and programming for social change and educational purposes.

Globaloria is based on a rich history of field building in the area of Digital Media and Learning. It is based on my earlier work with Papert at MIT Media Lab in the 1980's, where we established the value for 'children as software designers' for educational purposes, and then leveraging the work we did in the 1990's, when we launched MaMaMedia, during the 'first Internet era' (www.MaMaMedia.com), a creative award-winning website for children. In the first decade of the 21st century, we are aiming once again to establish a new sub-field in Digital Media and Learning, by creating an open-source online studio, a virtual community of practice, for having youth become designers of web-based software applications and games for social change and educational purposes -- using contemporary Web 2.0 networked media technology.

In August 2006, we partnered with Cisco to develop our first pilot platform and pilot program with a diverse high-school-aged youth in the Middle East. In January, 2007, we partnered with American University's Communication Department on developing our first college-level course based on Globaloria. In the summer of 2007 we partnered with Schlumberger Corporation's social corporate responsibility team (SEED) to develop a completely virtual Globaloria to offer employees volunteer opportunities worldwide as they work to improve science education in developing countries.

Our long-term goal is to involve several other disadvantaged, underprivileged, and third-world communities both in the United States and around the world. In the next 3-5 years we will form new partnerships and raise the necessary funding for further developments and testing of our Web 2.0 platform and social network and integrate various sets of community-sensitive, virtual learning tools (e.g., websites, wikis, blogs, games, tutorials) to support further use in WV, as well as other states and nations worldwide.

Eventually we hope to build multiple platforms that will be like starter kits and a series of discipline specific networks -- one network for kids designing global games for social change and education www.MyGLife.org; one network for science -- www.MySLife.org -- where people build simulations and games for science; and one for health -- MyHLife.org - where kids can learn health-related topics from HIV and malaria to the life cycle of the mosquito.

### Globaloria Pilot Spotlight: The Globaloria West Virginia Project

In August 2007, we partnered with the State of West Virginia (WV) and Benedum Foundation, and launched Globaloria at seven diverse locations throughout the state. Some are significantly economically disadvantaged communities, and all are underserved in the area of technology. For example, students at Randolph Technical Center in WV never thought they could learn to program or build games but are now and gaining valuable skills that will lead to employment. The WV project is a first-of-its-kind statewide implementation of Globaloria that we hope will contribute on many levels -- education reform skills, life skills, policy, innovation and entrepreneurship, and economic development.



**Go to: <http://www.youtube.com/myglifeclips>**

To view a demo of MyGLife.org, the Globaloria web platform, and how the site is customized for partners such as the State of West Virginia



To hear What West Virginia educators have to say about the launch of Globaloria, and their observations about the project

A West Virginia student's thoughts about game design, and what the Globaloria program means to him.

**simSchool: Globaloria has so much potential to connect students from all over the world. Can you talk about your purpose and plan for reaching different students?**

**IHC:** Globaloria is deigned to help young people from the 'third-world pockets' within the USA and from all over the world – from industrialized and from underdeveloped countries. They are brought into the fold of what we call 'Contemporary Learning' that involves web-based, project-based learning, interacting and forming project teams with different kinds of people, as necessary in today's 21<sup>st</sup> century world of work.

Our plan is for Globaloria to connect learners and educators in USA, India, South America, China and Africa. We are also partners in the One Laptop Per Child project (OLPC) and have been talking with OLPC founder Nicholas Negroponte and Walter Bender about collaborating on a world-wide youth-led software development project for their OLPC laptops. This software would be included in their pilot projects for remote areas in the USA and underdeveloped countries. We ourselves are professionals who already model a community of practice, and are structured to work on the OLPC software development, using the Python language and a wiki-based management tool, with developers from Portugal, South Africa, Brazil, Pennsylvania, and New York.

The importance of these technical and communication skills is increasing. I believe that most jobs in the future, and most management and leadership positions, whether non-profit, educational governmental, or technological, will require a person to know how to use these tools and methods of work. Jobs will require that people have the skills to self-learn in virtual spaces, be creative entrepreneurs, and be able to do project-based collaboration online with global teams.

**simSchool: Many in our simSchool audience are teachers, teacher educators or faculty. Can you describe your vision of how an educator could incorporate Globaloria into a course?**

**IHC:** A possible approach to using Globaloria is to have students create online games related to an educational area (mathematics, science, social studies, the arts) or to simulate a global problem (global warming, energy, water, malaria, HIV/Aids, human rights, women's rights). This is a powerful way to empower students to take on their own learning at the same time deepening their understanding of that topic, gaining important 21st Century life skills.

The Globaloria project is based on the Constructionist learning theory where students are given control of their own learning experience. The teacher's role is to guide and coach the students along this intuitive process. Using Globaloria, teachers and students explore and learn new Web 2.0 skills such as communicating and collaborating on a dedicated Wiki, using the Blog to share ideas, researching a topic online, and conceptualizing and creating an original game. Students and teachers master Flash development skills (including graphics, animations and basic ActionScript) alone and in teams. Their key goal is to build an original Flash interactive animation, simulation or game that supports a pro-social or educational topic, and publish it to the web. They also learn many life skills and work skills along the way!

Saying all that, if teachers feel that such a learning experience is something they would like to share with their students, then the Globaloria Online learning program is right for them! I always tell teachers - keep in mind that using Globaloria in your ongoing class curriculum will make your students wait for you outside the class room before it starts, and not let you leave when the bell rings!

We believe that a project of this kind can greatly contribute to the future employability of youth such as in the case of West Virginia, and therefore to the economic development of the state. Our Globaloria graduates could get jobs online as wiki-based software developers, game or simulations programmers, and technical managers -- do it virtually much like we run this network and other projects we work on as professionals these days -- and they will not need to leave WV!

We are still formulating a good research design for assessing all these claims we make. We also opened an open-source Research Lab and we share our thinking, research designs, and progress reports. The WV Governor and First Lady support us because they are truly excited about facilitating these contemporary learning skills and life skills, and are eager to lead in this area in their beloved state. What they see when they look at students' ongoing work on the wiki, makes them excited about WV's potential contribution to USA's innovation economy.

The World Wide Workshop, is a 501(c)3 educational organization dedicated to conceptualizing and developing applications of Internet media technology to enhance learning, creativity and understanding among children and youth in developing communities around the world. Globaloria is just one of the organization's educational and Internet learning projects. The World Wide Workshop team is a group of diverse and experienced professionals, committed to using their skills to empower children and youth around the world through technology. They achieve the foundation's objectives by drawing on their collective leadership and award-winning competencies in multiple fields including digital art, game design, education, media, policy, research, science and technology, and expertise in the academic, business and non-profit sectors. Members of the team are included in the accompanying photos.



Student game design, Randolph Technical Center



Globaloria-West Virginia Educators Workshop – Small Group Discussion



Brian (Flash expert) and Shannon (Executive Producer) sharing their professional knowledge



Dr. Caperton is a pioneer in the utilization of new-media technology for promoting creative learning, democracy and globalization through

Constructionist Learning theory. She founded the World Wide Workshop for Children's Media Technology & Learning in 2004 to leverage her unique blend of award-winning research, business acumen and leadership in new-media projects around the world. Throughout the 1980s and 1990s, Dr. Caperton conducted breakthrough research as a Research Scientist at the MIT Media Lab. In 1995, she implemented her research when she founded MaMaMedia Inc. and launched MaMaMedia.com, ConnectedFamily.com, and Papert.org. Dr. Caperton was honored by the Network of Educators in Science and Technology and MIT in 2002 "for devotion, innovation, and imagination in science and technology on behalf of children and youth around the world."

**The best way to get a sense of an innovative learning environment like Globaloria is to experience it.**

**Go to:** <http://simschoolresources.edreform.net/resource/18991> - to take a tour with Dr. Idit Harel Caperton.