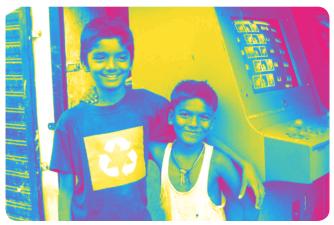# DIGITAL MEDIA AND LEARNING
COMPETITION

The Digital Media and Learning Competition, now in its second year, is an annual effort designed to find—and to inspire—the most novel uses of new media in support of learning. In April 2009, the Competition awarded $2 million to individuals, for-profit companies, universities, and community organizations for projects that employ games, mobile phone applications, virtual worlds, social networks, wikis, and video blogs to explore how digital technologies are changing the way that people learn and participate in daily life.

To broaden the search for innovative ideas, this year's Competition was expanded to include international submissions and proposals from young people aged 18-25. The 19 winning projects are those that best engaged the theme of "participatory learning," or the ways in which new technologies enable learners to contribute in diverse ways to individual and shared learning experiences. The Competition is supported by the John D. and Catherine T. MacArthur Foundation and administered by the Humanities, Arts, Science, and Technology Advanced Collaboratory (HASTAC).

Winners of the Competition were drawn from two categories: Innovation in Participatory Learning ($30,000 to $250,000) and Young Innovators ($5,000 to $30,000). Innovation awards support projects that demonstrate new modes of participatory learning, in which people take part in virtual communities, share ideas, comment on one another's projects, and advance goals together. Young Innovator awards—designed to encourage

Playpower is helping people create educational 8-bit games.
Photo credit: Derek Lomas. Artist: Daniel Rehn

young people aged 18-25 to think boldly about "what comes next" in participatory learning and to contribute to making it happen—will aid recipients in bringing their most visionary ideas from the "garage" stage to implementation.

For videos of the winners, profiles of the projects, and interviews with the judges, visit the Competition's website at **www.dmlcompetition.net**.

INNOVATION IN PARTICIPATORY LEARNING AWARDS*

DevInfo GameWorks: Changing the World One Game at a Time

Jeff Kupperman, Community Systems Foundation, Ann Arbor, MI
$118,000

Over one billion people on our planet live on less than $1.00 a day. More than 115 million children are denied the right to go to school. 30,000 children die each day from preventable diseases. Through the development of a software gaming engine that supports the creation, exchange, and play of games based on robust UN development data, DevInfo GameWorks brings wide-ranging information on the condition of humanity to young people in an engaging, social way. DevInfo GameWorks puts learners in the position of game creators, blurring the line between teacher and learner to provide opportunities for higher-order thinking and creative collaboration that expand the ways in which young people learn and engage with this global information.

DigitalOcean: Sampling the Sea

Constance Penley, University of California, Santa Barbara,
Santa Barbara, CA
$211,000

DigitalOcean engages middle and high school students in 200 classrooms around the world in monitoring, analyzing, and sharing information about the declining global fish population that, in its implications for humans and the ecosystem, dwarfs other food issues in our time. DigitalOcean uses multi-disciplinary teams of students, scientists, and new media experts, partnering with Google Ocean, NASA GLOBE, and ePals, to engage the next generation of consumers in a global dialogue on the interrelationships among local human customs, regulatory laws, fishing practices, wildlife management, and the future of the sea.

Global Challenge

David Gibson, Global Challenge Award, Stowe, VT
$183,000

Global Challenge is an online collaborative problem-solving competition that engages underrepresented pre-college students throughout the world. Using a wide variety of digital media and social networking tools, K-12 students develop and propose solutions to complex global problems from global warming to the future of energy. Peers, project staff, and outside experts judge solutions, providing feedback, award certificates, travel stipends, and scholarships to students who are enhancing their science, technology, engineering and mathematical skills while learning collaboration and project management from a transnational perspective.

History Game Canada

Thomas Axworthy, Centre for the Study of Democracy, Queen's University,
Kingston, Ontario, Canada
$147,000

Built on the popular "Civilization" strategy game platform, History Game Canada enhances the history learning experience of 12-18 year olds by putting them in control of early Canadian civilizations—from the French and English to the Huron and Ojibwe. Players are invited to imagine historical events from different perspectives or to fantasize alternative outcomes to consider not only the "what was" of history, but also to envision what might have been. History Game Canada fosters critical thinking, creative problem-solving, and what it means to make or remake national history. An in-game encyclopedia provides detailed historical accounts, while dedicated online discussion forums allow players to share their game experiences and discuss potential implications for present day Canada with peers and experts.

*Awards for both categories were based on the amounts requested. This was also true of 2008 awards.

Canada

United States

Mexico

lic

The countries in color were eligible for the Competition.

● **Location of 2009 Digital Media and Learning Competition Winners.**

Participatory Chinatown

Jeremy Liu, Asian Community Development Corporation, Boston, MA
$170,000

Participatory Chinatown seeks to transform the planning practices shaping Boston's Chinatown from disjointed transactions between developers and communities to a persistent conversation shaped by participatory learning. Marrying physical deliberation, virtual interaction and web-input, Participatory Chinatown encourages residents of all ages to participate in the collaborative design and development of their own public spaces. Participants sit side-by-side in physical space and simultaneously co-inhabit a 3D virtual space where they engage in rapid prototyping and testing of urban design proposals. Participatory Chinatown enables communities to articulate their vision and strengthen their internal and external bonds to produce better neighborhoods. Participatory Chinatown is a collaborative effort of the Asian Community Development Corporation, Emerson College New Media faculty, and the Boston Metropolitan Area Planning Council.

Playpower: Radically Affordable Computer-Aided Learning

Jeremy Douglass, University of California, San Diego, San Diego, CA
$180,000

Playpower uses a $12 TV-computer (TVC) as a platform for open-source participatory design of 8-bit learning games that will improve educational access for millions of children in the developing world and create real economic opportunities for adults. The TVC uses an existing TV as a display and is based on an 8-bit video game processor technology that is now in the public domain due to expired patents. Playpower is working with partners in Brazil, Ghana, India and the United States to build an open-source Software Development Kit from which local organizations can create their own learning games.

M-Ubuntu: Teachers Building an M-Literacy Collaboratory

Naomi Tempies, Learning Academy Worldwide,
Johannesburg, South Africa
$68,000

Applying the Zulu community-based problem-solving concept of *Ubuntu*—best translated as "I am because we are"—M-Ubuntu uses inexpensive, low-threshold mobile phone technologies to promote mobile literacy (m-literacy) by empowering local teachers to connect to each other and to literacy coaches in the United States. M-Ubuntu focuses on two reform-minded schools and their enthusiastic teachers and learners—Spectrum, near Johannesburg, which contends with crime and other social dislocations accompanying urbanization, and Ramosadi, located near Botswana, which struggles to serve orphans—and links teachers in primary schools across South Africa.

M-Ubuntu uses inexpensive, low-threshold mobile phone technologies to promote mobile literacy. *Photo credit: Naomi Tempies*

Student Journalism 2.0

Ahrash Bissell, ccLearn, Creative Commons, San Francisco, CA
$39,000

For journalism students, the digital age requires more than hands-on reporting, writing, and publication of stories. Students must also embrace the capabilities of the Internet for virtual collaboration, viral dissemination, and feedback loops that inform and deepen original stories. All of these web-based opportunities depend on knowledge and proactive application of open content licensing, such as with Creative Commons, and appropriate metatags and technical formats. Student Journalism 2.0 engages high school students in understanding legal and technical issues intrinsic to new journalistic practices. The lessons learned during this pilot project will be documented in anticipation of a national-scale, follow-up project.

Talkers and Doers

Alan Gershenfeld, E-Line Ventures, Montclair, NJ
$166,000

Talkers and Doers is a platform through which at-risk teens and young adults learn about entrepreneurship via games that integrate real world learning, mentors, opportunities, and services. Focusing on areas of interest to youth (e.g., fashion, music, games and comics), the first release, Talkers and Doers: Gear, will feature gameplay that seeds ideas and inspires players to design and sell personalized apparel and gear. Kids will work together across their social networks to develop real world money-making opportunities. Players will get feedback from successful entrepreneurs, be connected to local mentors and engage in peer-to-peer learning to bring their visions to fruition.

Tecno.Tzotzil: Participatory Learning Among Indigenous Children in Chiapas

Yolanda Heredia, Virtual University, Tecnológico de Monterrey, Monterrey, Nuevo León, Mexico
$97,000

To promote participatory learning among the indigenous Tzotzil children of Chiapas, one of Mexico's poorest communities, Tecno.Tzotzil will produce culturally-sensitive teaching aids that advance problem-based and project-oriented learning in which students both produce and share relevant materials and learning outcomes. The Mexican government has created the Consejo Nacional de Fomento Educativeo (CONAFE), a special commission to address educationally disadvantaged communities. Leveraging low-cost laptops to work with two rural schools in Chiapas, Tecno.Tzotzil will create materials and exercises for use with CONAFE's math and science curriculum.

Voces Móviles (Mobile Voices)

Francois Bar, Annenberg School of Communication, University of Southern California, Los Angeles, CA
$135,000

Voces Móviles is a university-community partnership between the University of Southern California and IDEPSCA (Instituto de Educación Popular del Sur de California) that connects low-wage immigrant day laborers in Los Angeles with popular communication practitioners, university researchers, and open source software developers. Together, they design, deploy and use a low-cost, mobile multimedia platform that promotes everyday sharing and dialogue. Through Voces Móviles, immigrant workers become citizen journalists, sharing, creating, and publishing multimedia stories directly from their mobile phones. These stories represent their own experiences, perspectives, and ideas. Voces Móviles allows other communities to create their own storytelling networks so that future uses of the platform may expand the possibilities of collaboration, dialogue and cultural understanding.

WildLab

Jared Lamenzo, Mediated Spaces, Inc., Brooklyn, NY
$195,000

By applying the latest mobile phone technology to K-12 participatory science, WildLab engages students in collaborative citizen science and encourages local environmental stewardship. Using GPS-enabled, internet-connected iPhones as data collection devices, WildLab allows students to report their scientific observations to each other and to the larger scientific community. In the classroom, students can send their data to sponsoring institutions for analysis, posit their own questions, and develop their own line of inquiry based on their field experiences.

WAVE uses videoblogging to help young women tell their stories.
Photo credit: Video Volunteers India

Women Aloud: Videoblogging for Empowerment (WAVE)

Sapna Shahani, Video Volunteers India, Mumbai, India
$107,000

Offering an unprecedented online presence for low-income women from across India, WAVE is a unique digital platform for Indian women aged 18-25. Through videoblogging, women who otherwise do not have a voice online are given an avenue for self-expression and a podium from which they can address such key issues as health, the environment, employment, access to basic necessities, education, democracy, and gender equality. Participants will attend an intensive video training camp, where experienced media professionals will provide the required technical and documentary journalistic skills necessary for empowering these young women to tell their stories and those of their communities.

Wiki Templates Transforming Instructional Environments (WITTIE)

Jennifer Kidd, Old Dominion University, Norfolk, VA
$88,000

Through a wiki application and a suite of teacher-friendly template tools that help teachers and students work together to create and assess original Wiki-based texts, WITTIE helps teachers move to a student-centric approach to learning. Using WITTIE, students choose the content, write the text, and serve as the primary evaluators of the texts they create, becoming designers of their own educational environments. WITTIE will be piloted via two different case examples: the creation of a student-authored textbook in a higher education course; and the building of a multi-media collaborative text on communities written by K-12 students across the globe.

YOUNG INNOVATORS AWARDS

Cellcraft: Exploring the Cell Through Computer Games

Anthony Pecorella, 25 years old, Durham, NC
$25,000

Addressing a decreasing interest and proficiency in the biological sciences among American teenagers, Cellcraft seeks to engage kids in ways that make biological principles personally meaningful and relevant. Cellcraft will put middle and high school students in control of a cell, tasked with the job of coordinating all of the organelles in order to process food, create new parts, fight off viruses, and grow. During game play, students learn valuable biological information, while also developing organizational, planning, coordination, delegation, and logistical skills.

CivicsLab.com

Laura Staniland, 22 years old, Pittsburgh, PA
$30,000

Focusing on the Southwestern Pennsylvania region, CivicsLab puts elementary and middle school students in virtual control of decision-making in their communities to encourage civic participation, critical thinking, and sense of place. In CivicsLab, players will assume positions of power in the community from an urban, suburban or rural perspective and explore how decisions—based on social need and demand, proper planning (as defined by our civic experts), political pressure, and most importantly, their imaginations—might impact the community. Through manipulation of real mapping information and current data sets, students navigate social and political pressures to explore the cause and effect of civic investment and public policy as they attempt to create a sustainable future for their region.

Digital Democracy Contest

Daniel Poynter, 22 years old, West Lafayette, IN
$9,000

The growing wealth of governmental data online has tremendous potential to increase civic engagement. Built on the successful Digital Literacy Contest, the Digital Democracy Contest employs existing online tools to help young people explore complex data sets and engage with them in meaningful ways. Working in teams, students will compete against each other as they navigate online government information and work together to develop future versions of the game.

Networked Newsroom

Bingxia Yu, 22 years old, Buffalo, NY
$20,000

Targeting high school and college journalism classes as well as the wider public, Networked Newsroom is an online participatory learning news platform that enables users to post story ideas, leads, photos, videos and other information directly from their computers or mobile phones. To leverage the collective intelligence of the Networked Newsroom community, the coveted "editor's desk" is extended to all in this virtual newsroom. Diverse users—each bringing unique perspectives—supplement each others' work to develop more meaningful and robust stories through collaboration, with final stories published to a public wiki.

Origami: Enfolding Real and Virtual Learning

Jonah Model, 23 years old, Long Island City, NY
$9,000

Origami is a file-sharing system you can talk with by email and text message. It promotes ad hoc learning spaces using a visual tag for linking physical spaces with existing collaborative software such as wikis, social bookmarking, and groupware systems. The Origami tag is designed for readability and can be hand-drawn or converted into sign language, Braille, or a short URL. Origami allows students to trade learning resources quickly and easily without interrupting conversation, lectures, or meetings.

The inaugural Competition awarded $2 million in funding to 17 winning projects for awards in two categories — Innovation and Knowledge Networking.

INNOVATION AWARDS

The awards for innovation supported the development of learning environments that use games, mobile phones or social networks.

Black Cloud Environmental Studies Gaming

Greg Niemeyer, University of California, Berkeley Center for New Media, Berkeley, CA
$238,000

Black Cloud is an environmental studies game that mixes the physical with the virtual to engage high school students in Los Angeles and the Clean Air Embassy. Teams role-play as either real estate developers or environmentalists using actual air quality sensors hidden through the city to monitor neighborhood pollution. Their goal is to select good sites for either additional development or conservation. Combining scientific data with human experiences, students collaborate, share and analyze their findings, including working cross-culturally.

Hypercities

Todd Presner, University of California, Los Angeles, Los Angeles, CA
$238,000

Based on digital models of real cities, "HyperCities" is a web-based learning platform that connects geographical locations with stories of the people who live there and those who have lived there in the past. Through collaboration between universities and community partners in Los Angeles, Lima, Berlin, and Rome, HyperCities develops and offers a participatory, open-ended learning environment grounded in space and time, place and history, memory and social interaction, oral history and digital media.

MILLEE: Mobile and Immersive Learning for Literacy in Emerging Economies

John Canny, University of California, Berkeley, Berkeley, CA
$238,000

Mobile and Immersive Learning for Literacy in Emerging Economies, a project conducted in rural India, promotes literacy through language-learning games on mobile phones—the "PCs of the developing world." MILLEE's mobile phone games are designed to create rich storytelling environments that enable language learning.

PLOrk: Princeton Laptop Orchestra

Daniel Trueman, Princeton University, Princeton, NJ
$238,000

PLOrk is an expressive mobile musical laboratory for exploring new ways of making music with laptops and local-area-networks. Students collaborate in designing these technologies. In the process, they learn about a variety of subjects, including musical acoustics, networking, instrument design, human-computer interfacing, procedural programming, signal processing, and musical aesthetics.

Sustainable South Bronx GreenFab

Miquela Craytor, Sustainable South Bronx, Bronx, NY
$100,000

The Sustainable South Bronx GreenFab project is a laboratory that allows people to turn digital models into real world constructions of plastic, metal, wood and more. Part of a broader MIT-led initiative, this particular project applies the principles of personal fabrication to learning about urban sustainability. The project examines connections between virtual and physical spaces, collaborative design, and the potential for impact within the South Bronx.

Virtual Peace

Timothy Lenoir, Duke University, Durham, NC
$238,000

Virtual Peace is a digital humanitarian assistance game that creates a learning environment for young people studying public policy and international relations. The game was developed by repurposing an existing military simulation into a tool for humanitarian training. Learning within the game focuses on leadership skills, cultural awareness, problem solving, and adaptive thinking—all of which are necessary to coordinate international humanitarian assistance for natural disaster relief.

YouthActionNet Marketplace

Ashok Regmi, International Youth Foundation, Baltimore, MD
$100,000

The YouthActionNet Marketplace is a dynamic digital networking platform for young leaders to engage in social entrepreneurship and address critical social problems. Young social entrepreneurs can link to a global community of innovators to share, collaborate, customize, and evaluate information and ideas, and showcase them to a general public searching for new ways to address old issues.

KNOWLEDGE NETWORKING AWARDS

The awards for knowledge networking supported projects that circulated best practices and ideas in digital media and learning.

Critical Commons

Steve Anderson, University of Southern California, Los Angeles, CA
$61,000

Critical Commons is a blogging, social networking and tagging platform specially designed to promote the 'fair use' of copyrighted material in support of learning. The project engages and organizes academic communities to articulate their needs, models and ethical principles of fair use. The project aims to promote a strong, legally viable and expanding conception of fair use, especially in support of learning.

FollowTheMoney.org: Networking Civic Engagement

Edwin Bender, FollowTheMoney.org, Helena, MT
$30,000

FollowTheMoney.org, a project of the Institute on Money in State Politics, is an online interactive site and users' guide that supports civics research by young people and promotes their understanding of—and engagement with—electoral politics and legislative activities. Teacher and student collaborators guide development and testing of this interactive site for networking youth civic engagement.

Fractor: Act on Facts

Benjamin Robison, Fractor Corporation, Long Island City, NY
$72,000

Fractor is a web application that matches news stories with opportunities for social activism and community service. 'Facts' and 'Acts' are organized on a single, intuitive page where every news story is linked to real-world actions that users can pursue. Fractor gives news readers the tools to 'act on facts,' connecting them to a world of dynamic social involvement and activism.

Let the Games Begin: A 101 Workshop for Social Issue Games

Suzanne Seggerman, Games for Change, New York, NY
$58,000

The Let the Games Begin workshop was a soup-to-nuts tutorial on the fundamentals of social issue games. Appealing to those who are new to designing learning games but passionate about social issues, the workshop featured leading experts on topics including game design, fundraising, evaluation, youth participation, distribution, and press strategies. The workshop was held in conjunction with the 2008 Games for Change Festival, and will be extended for the rest of 2008 through an online community dedicated to learning about social games.

Mobile Movement

Leba Haber Rubinoff, Interactive Filmmaking, Brooklyn, CA
$72,000

Mobile Movement connects young African social entrepreneurs with young North American professionals. Using mobile phone technology, which is now widespread, this network facilitates both micro-funding and the exchange of professional advice to projects in Africa that promote public benefit. A website shares the project's successes, lessons learned, and new ideas for scaling toward future collaborative and transnational youth partnerships.

Networking Grassroots Knowledge Globally

Victoria Dunning, The Global Fund for Children, Washington, DC
$72,000

Networking Grassroots Knowledge Globally, a project of the Global Fund for Children, is a new community and "information commons" that includes blogs, video clips, sound slides, podcasts, and photographs to help share innovative practices for helping marginalized and vulnerable children. The commons allows grassroots practitioners and marginalized young people to harness and share new models for learning, organizing, and communicating around the world.

Ohmwork: Networking Homebrew Science

Laura Allen/Vision Ed. Inc., New York, NY
$40,000

Ohmwork is a new social network and podcast site where young people can become inventive and passionate about science by sharing their do-it-yourself (DIY) science projects. They can also contribute to one another's projects, customize the site, and collaborate as part of their collective digital learning. Developed by Vision Education, Ohmwork aspires to become an online network for DIY science.

RezEd: The Hub for Learning and Virtual Worlds

Barry Joseph, Global Kids, Inc., New York, NY
$25,000

RezEd was developed to serve as an online hub to promote the use of virtual worlds as rich learning environments. The participating community shares best practices, encourages dialogue, provides access to the leading research, hosts podcast interviews with community leaders, and features the latest news on learning in virtual worlds.

Self-Advocacy Online

Jerry Smith, University of Minnesota, Minneapolis/St. Paul, MN
$72,000

Self-Advocacy Online is an educational and networking website for teens and adults with intellectual and cognitive disabilities, targeted at those who participate in organized self-advocacy groups. In supporting greater networking, peer exchange, collaboration, and communication to a general public, Self Advocacy Online will extend the reach of and interaction among people with disabilities so that they can more effectively speak up for themselves and make their own decisions.

Social Media Classroom

Howard Rheingold, Stanford University, Mill Valley, CA
$61,000

The Social Media Virtual Classroom is an online community for teachers and students to collaborate and contribute ideas for teaching and learning about the psychological, interpersonal, and social issues related to participatory media. This digital learning space features and analyzes the use of blogs, wikis, chat, instant messaging, microblogging, forums, social bookmarking and instructional screencasts for teachers and students.

ABOUT THE DIGITAL MEDIA AND LEARNING INITIATIVE AND THE COMPETITION

Launched in 2006, the John D. and Catherine T. MacArthur Foundation's $50 million digital media and learning initiative seeks to determine how digital technologies are changing the way young people learn, play, socialize, and participate in civic life. Answers are critical to developing educational and other social institutions that can meet the needs of this and future generations.
The initiative is marshaling what is already known and seeding innovation for continued growth. Grants have supported research projects, design studies, pilot programs, and other efforts to build a new interdisciplinary field. More information about the initiative can be found at **www.digitallearning.macfound.org** or visit the Spotlight blog at **www.spotlight.macfound.org**.

The Digital Media and Learning Competition provides $2 million a year in awards to innovators shaping the field of digital media and learning. Supported by The John D. and Catherine T. MacArthur Foundation as part of the Foundation's digital media and learning initiative, the Competition made its first awards in 2008 and is now in its second year. Applications are judged by an expert panel of scholars, educators, entrepreneurs, journalists, and other digital media specialists.

ABOUT THE MACARTHUR FOUNDATION

The John D. and Catherine T. MacArthur Foundation supports creative people and effective institutions committed to building a more just, verdant, and peaceful world. In addition to selecting the MacArthur Fellows, the Foundation works to defend human rights, advance global conservation and security, make cities better places, and understand how technology is affecting children and society. For more information, visit **www.macfound.org**.

ABOUT HASTAC

A consortium of humanists, artists, scientists, social scientists and engineers from universities and other civic institutions across the U.S. and internationally, HASTAC (Humanities, Arts, Science, and Technology Advanced Collaboratory) is committed to new forms of collaboration for thinking, teaching, and research across communities and disciplines fostered by creative uses of technology. The infrastructure for HASTAC has been largely provided by the John Hope Franklin Center for Interdisciplinary and International Studies and the Franklin Humanities Institute at Duke University and the University of California Humanities Research Institute. More information is available at **www.hastac.org**.

For videos of the winners, profiles of the projects, and interviews with the judges,
visit the Competition's website at **www.dmlcompetition.net**.