

# DESIGN EDUCATION AS A CHANGE AGENT:

## *Intersections of Need, Learning and Knowledge Transfer Represented in the Designmatters Initiative*

Mariana Amatullo<sup>1</sup>

---

### **Abstract**

The multiple environmental and socioeconomic challenges confronting humanity today, and a contemporary context that presents the promise of perpetual connectivity and accelerated patterns in information consumption and creation, represent powerful global forces that are shaping the way we live, work and learn. Such pressures and opportunities on an international scale are affecting design education in significant ways, creating an unprecedented need to deliver knowledge, experience and sophistication upon a global playing field. The college-wide initiative Designmatters at Art Center College of Design advocates for applied research approaches to complex humanitarian issues and provides unique methodologies for creative reform and change, empowering a new generation of designers to imagine critical solutions for society's future well-being.

### **Introduction**

For over 77 years, Art Center College of Design, located in Pasadena, California, has been one of the world's leading institutions for design education. Art Center offers undergraduate and advanced degrees in a wide variety of design and fine art disciplines, and the college's pragmatic, real-world approach provides graduates with the education and experience to become creative leaders in their chosen professions. Art Center's curricula are multidisciplinary, rigorous and dynamic in nature, responding to a fundamental belief that interchanges among disparate fields of knowledge and design disciplines have become essential to contemporary higher education in general, and to design education in particular. Today the college also maintains its top-ranked position by evolving its philosophy and practices in response to the rapid technological and socioeconomic changes of our era. The institution is a laboratory for innovation, a locus for partnerships and collaborations with industry and public sector development agencies, and a center of international public dialogue on the larger role of design. Art Center is the first design school to hold Non-Governmental Organization status with the United Nations Department of Public Information, being so designated in 2003. The College is also an NGO with the United Nations Population Fund and the Organization of American States.

---

<sup>1</sup> Art Center College of Design (Pasadena, California, USA), International Initiatives Department, Vice President of International Initiatives and Director of Designmatters, [mariana.amatullo@artcenter.edu](mailto:mariana.amatullo@artcenter.edu)

The *Changing the Change* Conference takes as a point of departure the accelerated global transformations of today's world to offer a provocative inquiry about the evolving role of design as an overall instrument for positive change in the context of the Torino World Design Capital 2008. The conference also presents a terrific platform for designers and researchers to discuss research methodologies and practices that can respond to this rather bold—but indispensable—call to action, which in turn is deeply synergetic with Art Center's institutional educational agenda as epitomized by Designmatters, a college-wide examination of social and humanitarian applications of design and responsible business practices. This initiative was co-founded by Erica Clark, Senior Vice President, International Initiatives, and Mariana Amatullo, Vice President, International Initiatives and Director of Designmatters, and includes a small contributing staff, Elisa Ruffino, Designmatters Producer and Senior Associate Director, International Initiatives, and Hannah Huang, Research Coordinator, Designmatters and International Initiatives. This paper presents two Designmatters project case studies, the Mpala Project, and a Public Awareness Campaign for Climate Change, which have been selected because of the connection they make between sustainable human development issues and design, across multidisciplinary fields including industrial, communication and narrative design. An in-depth discussion of the core methodologies and perspectives gained from these projects also aims at underlying the value of linking real-world issues with academic practices, in order to promote a deeper awareness and understanding of global context, which in turn produces more empathetic students (David Stairs, Design-Altruism-Project, comment posted April 23, 2008).

## **The Mpala Project: A Case Study for Participatory Design**

### **A Unique Partnership in the Context of a Global Competition**

In the fall of 2006, Art Center College of Design partnered with a small community-based organization in northern Kenya, Mpala Community Trust (MCT), to enter the World Bank 2007 Development Marketplace Global Competition: *Innovations in Health, Nutrition, and Population for Poor People*. With the motto "turning ideas into action," (The World Bank) and its support for social projects with high potential for impact and scalability, this prestigious World Bank competition functions as a social entrepreneurship incubator and grant-making program that rewards grassroots innovation, and has been responsible over time for highly successful development projects. One such example is the 2000 Competition winner, the PlayPump® water system, which is the core product of Roundabout Outdoor Water Solutions, a small company based in South Africa. Today, with its international partner, the U.S.-based nonprofit Playpumps International, the goal is to install 4,000 PlayPump® water systems in 10 countries in sub-Saharan Africa by 2010, bringing the benefits of clean water to up to 10 million people.

The Competition's mission of building partnerships among public, private and civil society sectors that foster dialogue, understanding and truly sustainable solutions, represented an ideal platform for Art Center's Designmatters initiative to identify critical design interventions that could benefit a strategic partner by harnessing creativity for social impact.

As the sole professional and reliable health care provider in a region roughly the size of Wales, MCT serves approximately 100,000 people scattered across remote communities far from any existing medical center. The communities that MCT serves are among the poorest in Kenya. Data collected by MCT points to a population that has been mostly untested for HIV/AIDS—leaving a gap in the data set for Kenya—and one that urgently needs basic medical services and HIV/AIDS, reproductive health and female genital mutilation (FGM) counseling. Samburu district’s population is approximately 150,000, scattered over an area of 21,000 sq. km. Laikipia’s population numbers approximately 322,190 people, over 9,000 sq. km. Over 70% of the population in Laikipia and over 90% in Samburu is nomadic or semi-nomadic, creating great challenges in providing health services. Livelihoods revolve primarily around livestock movement to a seasonal calendar. The clinic’s infrastructure consists of a couple of modest sized rooms at base camp, and an integrated outreach system that relies on specially outfitted Land Rover vehicles, a few bicycles and periodic camel convoys to deliver critically needed medicine and health education to these nomadic populations living in the vast plateaus of Laikipia and Samburu, northwest of Mount Kenya. The integrated mobile clinic system utilizes local nurses and counselors who are trained to deliver a wide range of health services, and who share knowledge about healthy lifestyle practices, HIV/AIDS prevention and family planning, among key health issues. From an operations standpoint, MCT works within a participatory framework, recruiting its health workers from the community. This model has led to MCT’s widespread acceptance in the region since its inception in 1999, and an increase in demand for services by these underserved communities.

For the Competition submission process, Designmatters at Art Center oversaw a core project team of Art Center staff, alumni and faculty that worked together with MCT staff and counselors over an eight-month period (from fall 2006 up to May 2007). The outcomes of initial fieldwork in Kenya, and joint research between the design team and MCT, were the basis of a proposal that underwent two rigorous rounds of judging by international and public policy experts. MCT identified two key areas of critical need to improve upon the health care delivery system that in turn became two main opportunities for design intervention:

- Expansion of the mobility and outreach capacity of the clinic by designing a system of transport, packaging and solar-powered refrigeration that would allow camel convoys to carry medicines, such as vaccines, that they currently cannot because they spoil under heat conditions;
- Visually-based and culturally sensitive materials to support the health education efforts of the MCT counselors, who work with a population that is 80% non-literate.

## A Breakthrough Mobility System

The project’s significance to both design research and application placed it among the top of 105 finalists selected from over 2,900 proposals worldwide. While ultimately not funded by the Bank, development has continued to date, beyond the Competition’s framework, and presents an interesting case study about what can be characterized as a certain “nimbleness” and entrepreneurial quality at the core of how the Designmatters program operates at Art Center.

While all Designmatters projects are closely tied to the college's undergraduate and graduate curricula in all design disciplines—and typically take the form of course assignments, studios or independent study projects that are selected for their educational enrichment value and real-world impact—the program also allows for “special projects.” These are loosely defined opportunities that present breakthrough design potential, but may not necessarily fit the timing and purview of a course that takes place in the college's traditional 14-week academic terms. Special projects are usually comprised by hybrid design teams and research investigators recruited from among students, faculty, alumni and expert advisors from other institutions.

The design of the first generation prototype for the mobility system proposed for MCT fits the profile of this special-project category within Designmatters. It is an ongoing effort at this writing, made possible by a small team of industrial design faculty at Art Center (which includes the lead industrial designer of the project, Kenyan alumnus Patrick Kiruki), collaborating closely with a team of engineers led by Winston O. Soboyejo, the Director of the Undergraduate Program at the Princeton Institute for the Science & Technology of Materials, Mechanical & Aerospace Engineering, Princeton University.

The system improves the efficiency of the loads carried by the camel caravans that navigate the rugged terrain where MCT operates, and the new long-range solar-powered refrigeration units proposed would eventually allow the clinic to deliver crucial vaccines and medicines that are currently inaccessible to distant recipients. The project blends relatively affordable technologies (use of flexible solar panels to power batteries for portable refrigeration units) with the application of advanced engineering and design, and an overall people-centered approach to service delivery. After several months of development that has taken place in the labs of Princeton, the prototype is now undergoing final stages of refinement for ease of assembly, stability and durability. In March and April 2008, a number of sessions and fittings of the saddle system on camels at the Bronx Zoo (Fig. 1) have in this regard provided key insight to the team (data compiled by Niyi Olubiyi from Princeton University). Currently, the prototype is nearing preparation for field-testing in Sub-Saharan Africa, which is anticipated for late 2008. The potential lasting, transformational benefits of the innovations designed, and their broad application beyond the beneficial impact recognized by MCT, have already been identified by the Art Center-Princeton team and a number of prospective partners of the project. For example, Designmatters has partnered with Project Concern International (PCI), a development agency focusing on health care delivery to explore the adaptability of the system in other regions with similar challenges. The first round of testing will take place in partnership with the PCI field office team in Afar, Ethiopia.

In retrospect, incubating this aspect of the Mpala Project beyond the Development Marketplace Competition has allowed the original ideas proposed to be designed in a robust way through the partnership with Princeton, with outcomes that can perhaps be replicated and adapted to other countries where similar terrain and remote communities exist. Ultimately, as Josephine Green from the Social Foresight and Innovation team of Philips points out when addressing the question of designing new health care solutions, “the goal is to see this new health delivery system be successful, not primarily because of its technology but because it redefines the access and delivery of health and well-being in a way that makes sense socially and culturally to the various users.” (Green 2007, 32)

## Shedding Preconceptions to Design a Visually Based Health Education Campaign

*“The Mpala Project’s success started and ended with the same idea: keeping an open mind. We began by asking the students to look inside themselves to try to gain an understanding of what they believed—about illustration, about semi-literate people, about people of Kenya, about nomadic tribes, and about themselves. This turned into a conversation that lasted the whole semester.”* —Esther Pearl Watson, Faculty, Department of Illustration, Art Center College of Design. (Rich and Watson 2008, 19)

This statement encapsulates the sensitive and inquisitive approach that the faculty team from the Department of Illustration at Art Center took in guiding a group of undergraduate Illustration and Photography students throughout a dedicated studio, which Designmatters facilitated for this component of the Mpala project, during the Fall 2007 academic term.

With a very complex brief calling for the design of viable and visually-based health education tools for non-literate nomadic communities in Kenya, this project presents a good case study of the applied research methodologies that the Designmatters program advocates for in these “wall-less classroom” initiatives, which, in the words of Watson, require students to be “thinkers first, designers second.” In the case of Mpala, as Ann Field, Art Center’s Department Chairman of Illustration has remarked, the brief called for students to let go of their personal drawing styles to focus on what messages their images needed to communicate. In order to reach their target audience, students had to operate outside their own frame of reference, and go through the difficult process of “unlearning so much of what they knew.” (Rich and Watson 2008, 89) Grounding this process of opening intercultural doors in a rigorous research framework was key to the success of this educational journey for the students, but also paramount to constructing media that was sensitive to the values and cultural framings of the communities at hand.

As point of departure for the research, field and user-centered data brought back by the lead designers of the Competition team became a backbone of visual references and resources. The data was complemented by several sessions with the original Competition team, and expert advisors in communication and media. Key among them, Professor Doe Mayer from the Annenberg School for Communication and School of Cinematic Arts, University of Southern California, qualified the Mpala Project as “an ambitious idea, in which students rose to the design brief and the research challenge.” (Rich and Watson 2008, 26)

Specifically, the brief for the Mpala project called for culturally appropriate HIV/AIDS awareness and family planning messages and media. Working in teams, students developed six distinct health education pieces that ranged from chalkboard schoolbooks, with simple illustrations meant to show the benefits of family planning, to a canvas flipbook for MCT counselors to use in the field when instructing about safe sex practices (Fig.2). All solutions had to be designed at the finished level of a solid first prototype. Considerations of affordability, durability and sustainability dictated the materials and techniques that were ultimately selected to bring concepts to life. Students were asked to synthesize research and feedback from the advisors that supported the

Illustration faculty team at Art Center, but also from MCT staff and counselors who participated remotely throughout the progression of the studio at several key junctures. From a pedagogical standpoint, all Designmatters studios have these strategic sessions throughout the conceptual exploration and development stages of every project; they serve as critical moments for students (and faculty) to run creative directions through a sieve of questioning, self-examination and true listening. Wendy MacNaughton, the creative director of the Competition phase of the project and a guest faculty in the Mpala studio, stresses the transformative importance of this listening aspect of the process, and sums it up nicely when stating, “The biggest challenge for creatives working in social design is to approach each project with fresh eyes and open ears.” (Rich and Watson 2008, 30)

Ultimately, beyond complex content, the collaborative framework of the Mpala project is characteristic of the increasingly multifaceted nature of projects in the Designmatters portfolio, each of which are profiled on the Designmatters Web site at <http://www.artcenter.edu/designmatters/projects>. As attested by MacNaughton, it forces the experience of a certain openness, an element of surprise and vulnerability in the design process (Rich and Watson 2008, 30), what anthropologist Genevieve Bell, Director of User Experience within Intel’s Digital Home Group, qualifies as “humility [that] brings with it grace.” (Bell 2008) Suddenly, the fundamental criterion for successful outcomes relies in answering the question: “But does it work?”

By the same token, as students become progressively connected with the issues and people they are to design for, a sense of real purpose and empathy develops. Sara Hofmann, a student in the Mpala studio, speaks to this sentiment very eloquently: “I was most challenged by coming up with a concept that works not only in a California classroom, but one that really helps people in Kenya. It was not about being concerned about style or personal artistic voice, but rather in finding a way to tell a story that is understood by another.”

Whether the story that Sara and her teammates conceived achieves its desired impact is a question that will be answered shortly, as all six of the health education prototypes produced by the studio are in the hands of MCT counselors and will undergo field-testing through fall.

There are many valuable insights to be gained from the Mpala project as a case study for the typology of projects that Designmatters at Art Center undertakes. From a pedagogical perspective, pushing students outside their comfort zones to experience the challenges and rewards of real-world constraints brings an unequivocal sense of empowerment and responsibility—a sense of “awakening,” as described by student Rawn Trinidad. From a broader perspective, such projects also allow students to establish connections and bridges between global and local concerns that ultimately make for better design outcomes.

## **Public Awareness Campaign on Climate Change**

In collaboration with the Department of Film at Art Center, Designmatters facilitates ongoing studios that produce public service announcements (PSAs) and

integrated media campaigns on critical social and humanitarian issues. The campaign for climate change awareness, produced in summer 2007 for premiere in September of that same year at the United Nations Department of Public Information (DPI), represents an interesting counterpoint to the Mpala Project case study, and illustrates yet another dimension of the methodologies of the program.

“The potency of combining media-savvy young minds with proficient creative and technical production talent,” says Designmatters Producer Elisa Ruffino, “is so exciting because it can yield an especially compelling message, as well as a head-turning vehicle for its delivery.” The PSA production studio allows students to research, conceptualize, develop, shoot and edit 30- to 60-second spots that are dissemination-ready by the end of the 14-week academic term. The thematic focus of the studio varies each term, and can be driven by a funded commission from an outside partner, or be the result of individual students’ personal interests. In the latter case, as they create public messaging of their own choice, Designmatters and the Film faculty typically support students with key research resources and expert advisors. The PSAs produced are subsequently matched to agencies that disseminate them. A recent example of a student-generated concept that received international recognition is Jonas Mayabb’s “Fat Lane,” which was the first place winner of the 2007 Cannes Film Festival Young Directors Award (Non-European Film School Category), as well as optioned by Participant Productions in conjunction with the social action campaign for the motion picture *Fast Food Nation*. Both the commission and student-driven scenarios have been equally successful in the distribution range and quality of the PSAs—and both are equally thrilling in presenting an opportunity for new social commentary and for immersing the students in a process of activism.

In the case of the global warming campaign, the organizers of the annual DPI/NGO conference invited Art Center to contribute to the central theme, “Climate Change: How it Affects us All,” with a commission that was intended to be somewhat edgy in tone, and to resonate with cable and network television audiences beyond the forum of the Conference and the UN (Fig.3). Students were encouraged to develop messaging that focused on a sense of personal responsibility around the issue. As Ruffino remarks, the result was “a very visceral reaction. Students were excited to imagine their personal contribution to a global dialogue on a subject that is so ubiquitous in mainstream media. They had a lot to say, and best of all, possessed the tools with which to say it.”

With comprehensive research on climate change, the students found certain threads and nuances that particularly resonated with them, both as individuals and as young members of a society flooded with multidisciplinary discourse on the issue. The approach they took was often characterized by a sense of self-effacing humor that resonated with a demographic of peers who are rather immune to “do-good” commercials. The testimonial of Alice Park, the director of a piece called “The G.G. meeting,” which depicts a group of individuals of various ages who come together in a mock alcohol anonymous meeting to wrestle with the mistakes of their daily actions, refers to a bold sense of confidence that surfaced in all the student directors. “The piece is purely to stimulate our social consciousness on the topic of climate change,” Park says. “Once in the ether, the easier and more willing people are to have an open forum on the subject, and take action. The concept lends itself to reflection and awareness on

climate change in its lighthearted, self-effacing approach to the issue, and with a sense of community.”

All four climate change PSAs produced as part of this studio represent a “best-case scenario” of an extremely proficient campaign that touched a nerve and transcended its initial outreach objectives and audiences. The campaign was selected for broadcast by multiple partners, which included Participant Productions and *An Inconvenient Truth* producer Laurie David’s nonprofit, StopGlobalWarming.org. In addition, the work has been screened as part of the 2008 “Green Screen Series” of the Film Society at Lincoln Center, New York, and has received multiple accolades. The critical acclaim of the PSA “Blowing Smoke,” by Jonas Mayabb, is also an extraordinary testament to the well-honed messages and technical prowess of the work. Since its premiere a year ago, the PSA has picked up several advertising and filmmaking honors, including the top honor in the U.S.—an Emmy from the Academy of Television Arts and Sciences.

## Conclusion

The Mpala Project and the Public Awareness Campaign for Climate Change are two distinct project case studies from the Designmatters portfolio at Art Center College of Design that demonstrate how design education can be aligned with a rigorous exploration of social transformations and global issues in order to generate tangible outcomes and real solutions that can make a difference in society.

Peter Drucker’s definition of knowledge as “information that changes something or somebody—either by becoming grounds for action, or by making an individual or an institution capable of different and more effective action” (Drucker 1990, 242) offers insight into the paradigm shift that the Designmatters initiative has generated at the college. Designmatters has enabled the DNA of the entire institution to evolve with a new emphasis on imbuing the educational experience with critical content and a sense of contemporary relevance and commitment. Indeed, “research transformed by action” could be the underlying motto of the initiative.

As an advocate for relevance in design education as the 21<sup>st</sup> century unfolds, as well as for the larger role of design in society, Art Center’s mandate is to graduate artists and designers who will “lead by design,” to use a phrase coined by Richard N. Swett, the architect and former U.S. Ambassador to Denmark. The *Changing the Change* Conference offers an ideal platform and community of practitioners and institutions among which to share this vision.

## References

Bell, Genevieve. 2008. "Be Naked As Often As Possible": Anthropological Advice. Commencement speech given at UC Berkeley School of Information.

Design-Altruism-Project blog, <http://www.design-altruism-project.org/>.

Drucker, Peter F. 1990. *The New Realities*. London: Mandarin Press.

Green, Josephine. 2007. *Democratizing the Future, Toward a New Era of Creativity and Growth*. Koninklijke Philips Electronics N.V.

Rich, Martha, and Esther Pearl Watson, eds. 2008. *Images Speak*, Designmatters at Art Center College of Design.

The World Bank. Development Marketplace.

<http://siteresources.worldbank.org/DEVMARKETPLACE/4416738-1196093766795/21583185/DM.htm>.



Fig. 1: Saddle and solar panel system tested with Princeton University Personnel and Bronx Zoo staff, March 2008.



Fig. 2: Designs for Mpala Health Education Campaign, (Left) canvas flipbook, (Right) chalkboard and notebook.



Fig. 3: Image from the award-winning Public Service Announcement, "Blowing Smoke," one of a series of four PSAs on the topic of climate change and personal responsibility, commissioned by United Nations Department of Public Information, September 2007.