VOLUME 1 . 2009 – 2011

IRIDESCENT

RUSSELL KENNEDY
Icograda President 2009–2011

eduNews newsletter, the Icograda archives at the University of Brighton, the Icograda Design Education Manifesto, the biennial Icograda Education Award, our ongoing partnership with Adobe to deliver the Adobe Design Achievement Awards and various event aligned academic symposiums and conferences.

Icograda is committed to playing its role in developing design research globally and we strongly believe Iridescent has an important role to play.

The quality of this publication certainly sets the tone for Iridescent's future success.

Thank you to all who contributed.

Russell Kennedy

Russell is an adjunct Research Fellow at Swinburne University of Technology in Melbourne, Australia. He is an academic and practitioner of graphic design and filmmaking. Prior to joining Swinburne, he was a senior lecturer at Monash University. He has also been the principal of Russell Kennedy Design, a corporate identity consultancy, and co-director of Onset Productions, a motion picture and documentary company.
Russell is a Fellow of the Royal Society for the encouragement of Arts, Manufacture and Commerce (RSA) and a member of both the Australian Graphic Design Association (AGDA) and the Design Institute of Australia (DIA). Russell often assists education institutions within the Oceania/Asian region and has conducted workshops with the University of Hartford (Connecticut), Hongik University (Seoul) and the International Design Center (Nagoya). In June 2002, Russell was invited to speak on design education at the inaugural Icograda Education Network (IEN) Symposium in Brno. Since joining the Icograda Board in 2003, he has been active in the development of the IEN and the deployment and promotion of worldwide educational exchange initiatives. In 2007, Russell initiated INDIGO, Icograda's International Indigenous Design Network.

THE ESSENTIALS

In my daily living, designing and teaching I concentrate on *the essentials*. I find it impossible to conceive anything contextually meaningful without extreme focus on the subject's central players, their concerns, their culture, environment and times. University students, and designers at the office hear these same statements from me when they present something built only on the form of marginal factors of the research and design frame.

This is probably why I like the editorial nature of *lists* and have an obsession for *keywords*. For example, directories of keywords preceding or following journal articles make my day because they help me select what to read and what meme to enter or not. They also help recap and retain more of the essentials of the article after its reading.

Lists are also at the inception of most research and design efforts. I'm referring to those precious thought maps and concept lists we elaborate before any project.

Lists of keywords are actually so useful for knowledge transferals that research papers conventionally start with one.

Along these lines, to give the readers of this volume a concise but vivid picture of Iridescent's first two-year journey, I thought it would be helpful to compile a keyword list from its papers: ancient China, blended learning, Centre on Sustainable Consumption and Production, Chinese design education, the Chinese way, co-design, cognitive integration, collaboration, collaborative learning, combinations of languages, communication design, community, community of practice, confrontation, connections of scripts, cross-cultural, cultural identity, cultural understanding, culture, design education, design internships, design philosophy, design research, designers' role, design thinking, development, diversity, driving force, economic, environment, ethics, fading traditions, global communications, holistic design culture, human-centered design, human rights, industry, innovation, integrated learning, interdisciplinary, international multi-cultural students' network, intersubjective, labour, learning space, lightness, memory reliance, MIAD, multi-disciplinary, online, online teaching tools, the other, participatory action research, pedagogy, place-making, practice-led, practice of education, re-directive design, regional traits, responsibility, service learning, Singapore, social advocacy, social and environmental awareness, social design, socially relevant, society, start of design education in contemporary China, studio-in-the-studio, sustainable livelihoods approach, Thailand, trans-modern, visual conversion.

This multitude of issues reminds me of how design research, similarly to the meaning of the word Iridescent, is very polychromatic not only in its topics of exploration, but also in its approaches.

OMAR VULPINARI
Icograda Vice President / Iridescent Editorial Director 2009–2011

In these two years in fact we've witnessed research on/for/by/through/before/and after design. We've featured design research that is historical/futuristic/comparative/ qualitative/quantitative/ethnographic/ ethics-based/practice-led... oops, there I go again, another list...

Regarding my personal experience, acting as Editorial Director for the first two-years of Iridescent has meant for me determining the editorial strategy and team, identifying and inviting editors and peer reviewers, establishing procedures, directing designers, and also monitoring, integrating and correcting the course when necessary. It also meant peer reviewing myself many abstracts to be on the field and able to closely follow the birth of the papers. In this journey we all learned very much about design research and its journalism, of course making many mistakes on the way. Fortunately, the team was very professional and passionate. My deepest gratitude goes to Icograda President Russell Kennedy for his support and faith, Supervising Editor Max Bruinsma, Icograda Managing Director Brenda Sanderson, Project Manager Diala Lada, our peer review committee and mostly, to our authors and readers.

Omar Vulpinari

Omar Vulpinari is Vice President Icograda and Co-chair Icograda Design Education Manifesto 2011.
He is Director of Expanded Media and Head of Visual Communication at Fabrica, the Benetton Group research centre.
Vulpinari's work focuses on practice research in expanded media for social impact. Creative Director on projects for UNWHO, UNICEF, UNESCO, The World Bank, Lawyers Committee for Human Rights, Witness, Amnesty International, Reporters Without Borders, The New Yorker Magazine, Walrus Magazine, Design Issues - MIT Press Journal, Cult TV - Fox International. Fabrica's work under his creative direction has been featured by international media and in exhibitions at the Centre Pompidou Paris, La Triennale Milan, Red October Moscow, the Shanghai Art Museum, the GGG Gallery Tokyo, the DDD Gallery Osaka, and the MAK Vienna. Vulpinari teaches Communication Design at the IUAV University of Venice in San Marino.
Co-editor for Phaidon's first edition of *Area: 100 Graphic Designers* and contributor to Steven Heller's *Becoming a Graphic Designer* for Wiley and *The Education of a Graphic Designer* for Allworth Press. Vulpinari studied Visual Communication at the Albe Steiner Center in Ravenna and the University of Bologna.
Born in San Marino and raised in the United States. Living in Treviso, Italy.

IRIDESCENT – A PRISM ON DESIGN RESEARCH

The nicest synonym, I think, for 'iridescent' is 'prismatic.' It's what a research journal should do: filter the luster and see what it is composed of. This is all the more useful in the field of design research, for all too often design is seen as a prettifying profession. Design's iridescence may distract from the serious nature of its mission, which is to provide the world and its inhabitants with sensible, well made, sustainable and culturally meaningful products. Research is needed to examine and define the parameters of each of those aspects, to analyse and test the value of realised projects, to consider paths for future development and to educate young designers for a dynamic craft.

Such research results in a different kind of kaleidoscopic brilliance, the mosaic of all the intellectual efforts made by practitioners and scholars worldwide who investigate the myriad contexts in which design operates. Iridescent's mission is to filter out the gems from this multifarious productivity and present them to a world of design professionals who care for deepening their understanding of what they do. Although for the sake of overview and comparison we try and find themes to sort the vast expanse of possible entries, we know that all design research is serving one underlying end: to collectively build a sound theoretical foundation for design's cultural, social, political, economical and educational practices.

In this first printed volume, Iridescent presents a first selection of the papers we have published online so far. Within the themes chosen for this volume a wide range of entry points and outlooks testify to the breadth of the field, and to its international scope.

Local design practices are inextricably connected to the global contexts of trade, culture and politics. And localised research can give as enticing incentives for globalised procedures of design and education as research on global conditions for design

MAX BRUINSMA
Iridescent Supervising Editor 2009–2011

can inspire local practices. This is mirrored by Iridescent's mission to connect research endeavours from all continents to a globally spread audience of fellow researchers and design practitioners.

All of this to stimulate thought and inquiry. As any craft, that of design will become stale with routine if not fueled by fresh knowledge of its practices and paradigms. Iridescent's prism is intended for this purpose: a resource and a tool for enlivening design's discourses.

Max Bruinsma

Max Bruinsma is editor-in-chief and co-publisher of Items, the Dutch review of design. Based in Amsterdam, the Netherlands, his critical writings have been featured in major Dutch and international art and design journals (a.o. AIGA Journal, Blueprint, Eye, Étapes, Form, ID, Idea) since 1985. In 1997, he succeeded founding editor Rick Poynor as editor-in-chief of Eye, the international review of graphic design, in London. Prior to this, Bruinsma published and edited several books on (graphic and new media) design and taught at the Gerrit Rietveld Academy and the Sandberg Institute in Amsterdam. In 2003 his book 'Deep Sites, intelligent innovation in contemporary webdesign' was published by Thames & Hudson, in English and French editions. In 2005, Max Bruinsma curated a major exhibition on the cultural significance of communication design, 'Catalysts!', for the ExperimentaDesign biennale in Lisbon, for which he is currently curatorial and editorial consultant. He was a music editor and program maker for VPRO, a Dutch radio and television broadcasting organisation and an advisor for various Dutch cultural institutions. In 2005, Max Bruinsma received the Pierre Bayle Prize for Design Criticism.

Collaboration
Confrontation
Diversity
Ethics
Global communications

BRIDGING DIVERSITY: ETHICAL CONSIDERATIONS IN DESIGN EDUCATION
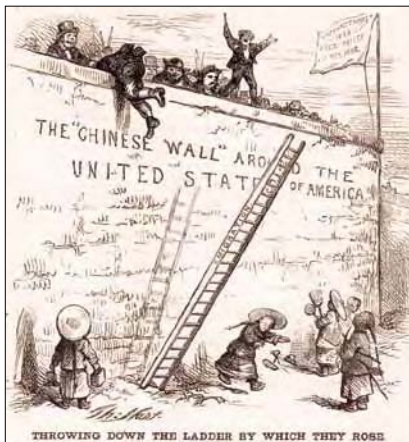AUDRA BUCK-COLEMAN, ANN MCDONALD, MARK BIDDLE

ABSTRACT

At its most fundamental level, design is about intention and action towards a desirable end. Design graduates are entering a professional world where street-savvy audience profiling is required daily. For these future architects of our communication environment, the challenge of preparing effective, ethical messages grows as the ethnic complexities of global culture continue to emerge. To this end, design education should emphasize intention and reception towards ends that are responsible in a societal context.

Sticks + Stones, a multi-university collaboration curriculum project, emphasizes that designers occupy positions of power in our global culture, that this power must be used responsibly, and that designers should assume proactive roles in support of community and society. In addition, the project explores interpersonal and intercultural issues among students diverse in ethnicity, religious practice, heritage, gender, and sexual orientation. Sticks + Stones' innovative course structure and curriculum expands students' knowledge of regional and global subcultures, forces a reconsideration of existing pre-conceptions, and exposes some of the fallacies embedded in the common act of stereotyping groups and individuals.

The 2010 Sticks + Stones iteration will gather design students from China, Turkey, Germany, and the United States to follow a collaborative curriculum that sometimes requires risk-taking and confrontation on the way to understanding between individuals and groups. The curriculum will include traditional studio work, participation in online forums, and an international symposium in Berlin. This vibrant yet historically conflict-ridden city provides an appropriate backdrop for a curriculum addressing individual identity, propaganda, and the potential perpetuation of stereotypes by communication designers. Through design projects and forthright discussions about image perceptions, faculty will challenge students to (re)evaluate the stereotypes they hold of others, analyze the potentially unethical and stereotypical messages in contemporary design works, and then create small group and collective pieces in response to issues of stereotyping as they impact views of immigration. Visits to the Holocaust Memorial, the Berlin Wall, and the Jewish Museum will enrich the students' work and discussions. Online interaction will play a significant role in facilitating group participation and extending the project to a wider audience. Project followers will be able to track the progress and observations of students as well as add their voice to the dialogue.

Presenters will discuss the challenges and opportunities of multi-university collaboration curricula that integrate ethics into traditional, profession-oriented design education. Producing such a project includes bridging language gaps, overcoming institutional, governmental and political obstacles, and coordinating diverse international pedagogical practices.

THE "CHINESE WALL" AROUND THE UNITED STATES OF AMERICA.

THROWING DOWN THE LADDER BY WHICH THEY ROSE

1.
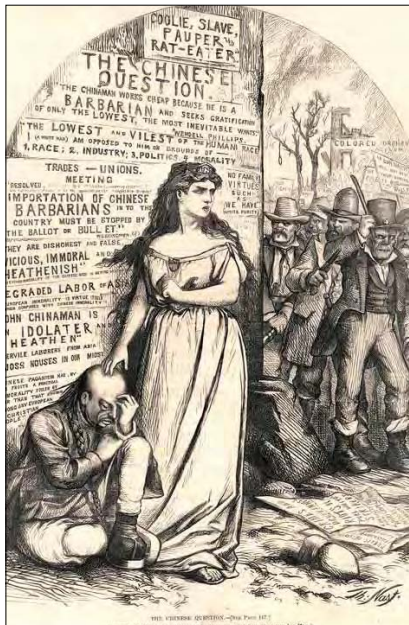
2.

1. Throwing down the ladder by which they rose. "The 'Chinese wall' around the United States of America." Harper's Weekly, July 23, 1870.

2. "The Chinese Question: Coolie, slave, pauper and rat-eater" Harper's Weekly, February 18, 1871.

Figures 1 and 2 exemplify the United States' treatment of the Chinese during the Gold Rush of the 1800s. Once welcomed to build the transcontinental railroad, Chinese immigrants were banned in 1882 out of fear that they were taking jobs away from native workers.

> **"Designers and what they do have never been as valued as they are today, and that gives us the opportunity (as well as the duty) to responsibly use design to make a difference."** – *David Berman, Do Good ~~Design~~: How Designers Can Change the World.*

It is an understatement to say our world is substantially changing with access to affordable digital technologies that allow instant global communication. Technology encourages the rapid flow of information and opinion across international borders, facilitating a worldwide exchange. As Thomas Friedman describes in *The World is Flat*, recent technological and social shifts, including digital online collaboration and the fall of the Berlin Wall, among other forces, have allowed us to view the world as a seamless whole. (Friedman 2005) Yet despite this outlook of potential for increased cohesiveness, we often remained focused — potentially with adverse effect — on disparities rather than common ground. We instinctively order our worlds by categorizing and grouping people according to common characteristics. Unfortunately these generalizations often lead to false assumptions and unhealthy relations. Ethnic diversity can be a source of clarification or obfuscation. As populations migrate across national boundaries, each country confronts the social discord spawned by immigration.

Whether it is the push of contrary political forces or the pull of a promise for a better life, migration today affects every region of the world with unprecedented force. Since 1970 global migration numbers have more than doubled. Today international migrants makeup three percent of the Earth's population — an estimated 214,000,000 people (United Nations 2009) — which is enough to comprise one of the five largest countries in the world (U.S. Census Bureau 2009). In 2000 75% of the international migrants were living in just 12% of the world's countries. During this time the top three immigrant-receiving countries were, respectively: the United States with 35% of the immigrant population, Russia with 13.3% and Germany with 7.3%, according to the International Organization for Migration (Bailey 2008: 5). This increased migration combined with a declining global economy has refueled the waves of anti-immigration sentiments and divisive propaganda; historically anti-immigration opinions rise when the economy declines (Shah 2008).

As explained in the *Harvard International Review*: "Immigration has always generated ambivalence during the best of times and hysteria during the worst. Historically immigrants in the United States are loved but only looking backwards: celebrating their proud achievements after the fact, while remaining deeply anxious about any further migration in the here and now, has been the constant pattern from the end of the 19th century to the end of the 20th century" (Bailey 2008: 21). Recent global events confirm this outlook on immigrants:

- In 2005 Paris suffered violent riots led by groups of unemployed or underemployed youths, primarily children of North African immigrants, protesting the unemployment and negative treatment of immigrants.
- In 2006 the United States saw protests, boycotts and other demonstrations opposing tighter restrictions on immigration.
- Last summer more than 140 people died and 800 were injured during

riots in Urumqi, China. The riots reportedly spawned over the discrimination and treatment of minority group Muslim Uyghurs by the majority Han nationalists.

- France continues its debate regarding limiting the traditional religious dress of immigrant Muslims.
- Tensions persist over Turks' immigration status and assimilation in Germany.
- In November 2009 the Swiss, out of a growing anxiety about increased Muslim immigration and the spread of Islam, elected to ban construction of minarets on mosques.

3.

3. "If you think I'm illegal because I am Mexican, learn the true history because I'm in my homeland" Immigrant rights march for amnesty in downtown Los Angeles, California on May Day, 2006.

4. Stopp Minarettverbot, Propaganda posters such as this one helped convince the Swiss to vote in favor of banning the construction of minarets.

4.

The heightened emotions combined with a declining economy help establish a climate where residents believe exaggerated and false claims about immigrants' detrimental or even dangerous status. It is in this climate that stereotyping and xenophobia flourish. Visual depictions have been used to express the current majority's anxiety of potentially losing power and being outnumbered by the "other" or foreigner. Graphic designers can easily become complicit in these detrimental graphics if they are unaware of their own biases or the false propaganda in the media stream. Sticks + Stones, an iterative multi-university collaboration, emphasizes the positions of power designers occupy within our global culture, that this power must be used responsibly, and that designers should assume proactive roles in support of community and society. In addition, the project explores interpersonal and intercultural issues among students diverse in ethnicity, religious practice, heritage, gender, and sexual orientation. Sticks + Stones' innovative course structure and curriculum expands students' knowledge of regional and global subcultures, forces a reconsideration of existing pre-conceptions, exposes some of the fallacies embedded in the common act of stereotyping groups and individuals and raises awareness about the historical and contemporary propaganda forces.

Design graduates will soon enter a professional world where street-savvy audience profiling is a daily requirement that grows more important as the ethnic complexities of our global culture continue to evolve. If false stereotypes seep into graphic communication, the malignancy can negatively influence its mass audience. The principle axiom driving Sticks + Stones is that the more communication designers know about each other, the better we can shape responsible expressions for increasingly

diverse populations. Project curricula are challenging and unorthodox, sometimes encouraging students to label and confront one another on the road to self-awareness and more informed perspectives. Through studio projects, readings, writings, discussions, online forums and an international symposium, participants will penetrate the subtle texts of other cultures to discover where our real and imagined similarities and differences truly reside. Sticks + Stones intends to propagate tolerant, socially minded designers through innovative, collaborative curriculum that takes a responsible worldview.

Universities have consistently sought to expand students' horizons and to increase the exchange of ideas in order to foster critical discussion and encourage innovation. Syliva Hurtado, an education scholar at the University of Michigan who specializes in diversity issues, confirms this need: "Students who interact with diverse peers also report more frequent discussion of complex social issues, including such things as the economy and major social issues such as peace, human rights, equality, and justice. These studies indicate that students who interact with diverse peers demonstrate more complex thinking that is linked with both cognitive and social development" (1999). In addition to diversity among peers, the design classroom is being expanded to foster increased awareness of design's role in identifying and addressing social needs through projects that engage a community or tackle a civic process. Design education has recently begun to address the need to bridge cultures and disciplines, reaching over to anthropology and sociology for curricular support.

In a recent initiative, the American design organization AIGA has defined trends and identified essential competencies that designers will need by the year 2015—if not today. In addition to traditional formal visual communication skills, these requirements include: the ability to work in interdisciplinary teams, the "ability to construct verbal arguments for solutions that address diverse users/audiences" and the "ability to work in a global environment with understanding of cultural preservation." AIGA's noted projections suggest that designers will increasingly need to rely on expertise from the social sciences and humanities in order to solve problems in a global market where there is a need to "understand both differences and likenesses in audiences" and to navigate a "reconciliation of tension between globalization and cultural identity" (AIGA 2009).

Many design programs have initiated projects that encouraged student groups to work with non-profit organizations in the design of communication materials, but the work of identifying need and then creating work that engages a specific issue or community represents a further expansion of the design studio. Early student work as part of the U.S. Design for Democracy project and more recently Project M in their focus on "act locally" (inspired by Sam Mockbee's Rural Studio which built structures for communities for more than a decade) challenge students to realize that their work can have "a positive and significant impact on the world" (Project M 2009). By creating work that engages a world beyond the classroom, design education and visual communicators can begin to respond to global and local community pressures and foster an increased understanding of others.

Social experimentation in the classroom

From the beginning in 2005, Sticks + Stones deliberately gathered diverse design students to explore how their places of study influenced their visual communication messages. Students are encouraged to talk openly about stereotypes and to shed political correctness and engage candidly on the touchy issues of race, religion, and socioeconomic class. The first iteration of the project in 2005 brought together U.S. design students from Odgen, Utah, located outside Salt Lake City, and Birmingham, Alabama. Inherent in this pairing was the common intensity of each region's religious devotion — Southern Baptists in Alabama and Church of Jesus Christ of Latter-day Saints in Utah — and contrasting racial makeup and related historical strife: Ogden, Utah's population is 88% white and only 1% black and did not play a role in the Civil Rights Movement in the United States whereas Birmingham, with a population that is 58% white and 39% black, was a primary location for pivotal Civil Rights events, including Martin Luther King Junior's letter from a Birmingham Jail and the nearby march at Selma, Alabama.

The 2006 project expanded to include students from Massachusetts and California to further diversify the demographics representative of the continental United States. Specifically, the 49 participating students embodied 16 ethnic backgrounds, 13 religious affiliations, and eight countries including Iran, El Salvador, Spain, the Philippines, Japan and Columbia, and this diversity provided the framework for their discussions of stereotypes, labeling and racism.

On their home campuses students tackled assignments that challenged their perception of their fellow Americans and met mid-semester in Los Angeles for a three-day workshop. Students toured the Museum of Tolerance and J. Paul Getty Museum in Los Angeles; both offered exhibits on Nazi propaganda. These works gave students added perspective on the potential negative effects of their chosen profession. Students engaged in awareness-raising exercises, discussed prior assignments including the labels and terms they had used to describe others' works, and generated poster designs that confronted stereotypes addressed in those discussions. Once students returned home, they created stereotype-awareness raising works for their respective communities. Works from the overall iteration were curated into an exhibition that opened at the Birmingham Civil Rights Institute in Alabama and subsequently traveled to Utah. (See the Sticks+Stones website at www.sticksandstonesproject.org for images of student work.)

Faculty collaborators found the three-day symposium, travel component — for 2006 to Los Angeles — and the increased diversity of the group were three of that iteration's most successful aspects, and decided to expand for the 2010 iteration. This year's iteration will reach across the globe to include 60 design students from China, Turkey, Germany, and the United States. The collaborating students' countries represent an even greater diverse political culture, ranges of expressive freedom, socio-economic class, and religious devotion with likely disparate views on a multitude of issues including stereotyping, racism and immigration, which will serve as the framework for the 2010 Sticks + Stones curriculum.

5.

5. Poster for Mass Distribution: "I've Changed!" U.S. President Obama with Hitler-like mustache offered on LaRouche Political Action Committee's website as pdf "mass distribution" poster.

This curriculum will begin with each body of students again meeting on their respective campuses, reading and discussing assigned texts on stereotyping and propaganda design. Students will complete projects that challenge their ideas of propaganda and initiate research into immigration. The 2010 Sticks + Stones iteration delves deeper into multiple complex issues, and thus requires a more extensive travel component. Students will then gather for a two-week symposium in Berlin, Germany, an appropriate backdrop for addressing individual identity, race, history and propaganda. It is a key European city for higher education and research and has been recognized by UNESCO through the "Creative Cities Network under the framework of Global Alliance for Cultural Diversity" as a City of Design. Discussion and project work will be enriched by visits to the Berlin Wall, the Holocaust Memorial, the Reichstag, and the Jewish Museum as well as other local art and design venues. The historical relevance of the Nazi propaganda will be compared to today's rhetoric, including the images likening U.S. President Obama to Hitler.

In Berlin students will introduce themselves to the group through visual presentations and will chronicle the stereotypical, racial, and immigrant issues in their country. By having students step into the role of "teacher," in addition to serving as "pupil", these participants will learn first-hand about global stereotypes and their consequences. Forthright discussions about beliefs, ideologies and their ramifications will be combined with intimate experiences in a foreign land. Although the Berlin students will be in familiar territory, they will have the opportunity to gain a new perspective on their home country through the eyes of the foreign students. These "teachable moments" provided by the Berlin symposium are essential to the goal of the project: to understand the "other" on a personal level.

As a frequent destination for immigrants, Germany struggles with national and European immigration policies. While it has made progress toward an inclusive state, it still struggles with national and European immigration policies (Stritzky 2009). Turkey is another country highly influenced by a large flow of immigrants, primarily those fleeing violent conflicts in Iran, Georgia and Iraq. Turks also influence Germany as they comprise the second largest group of immigrants in Germany yet have difficulty assimilating into that culture (Deutsche Welle 2009). Political tensions in the Middle East stifle Turkey's economy whereas China's is burgeoning into a dominant global force. The Chinese are proud of their technological innovations although last year's conflicts in Western China burden the country with the associations of repression and ethnic strife; in 2004 China also claimed the largest peacetime migration in human history as more than 10 percent of the country's residents moved from rural areas into the cities (Roberts 2004). The United States reputation for being an inclusive "melting pot" has most recently been tarnished by the frequent protest and unrest associated with Latino immigrants, racial profiling of Middle Easterners associated with 9/11 and racist treatment of persons of color. The collective histories of these countries successes, downfalls and migrant-related strife will provide essential context for the overall group activity in Berlin.

This body of students, diverse in custom, life experience, and closely held

beliefs, will gather in one location for debate and collaboration on the issues of stereotyping, racism, xenophobia, and migration—all through the lens of visual communication. And as the weakened global economy demonstrates, we are all closely connected and interdependent, no matter what physical distance might lay between our communities and countries.

The role of technology

Today's education communities are calling for greater emphasis on collaboration and on bridging international cultures, and technology is an integral component to contemporary collaborative endeavors. The Open Education movement's key tenet is that "education can be improved by making educational assets visible and accessible and by harnessing the collective wisdom of practice and reflection" (Iiyoshi and Kumar 2008). Web 2.0 social networking tools have fostered a culture of sharing that promotes contribution and distribution by many as opposed to a few experts. Design educators taking advantage Web 2.0 open source tools for class use can foster transparency in dialogues with students and between peers and encourage responsibility and increase the visibility of design process.

John Seely Brown and Richard Adler in "Minds on Fire" a call for "Learning 2.0," look at how participatory media shifts the focus of attention from content of a subject to the learning activities and human interactions around which that content is situated "from access to information to access to other people" (Brown and Adler 2008). They examine ways in which "open participatory learning ecosystems" support active, passion-based learning. In making their argument they cite the design studio system as an example of social learning with guidance by a practitioner, where students work together in a common space and peripherally participate in each other's design process by listening to instructors' critiques of other students' projects. Through small group and collaborative projects the relationship of instructor to student is shifted to a peer-to-peer model. The implementation of social networking software as part of course exchange has the potential to shift the role of instructor as expert even further afield.

Sticks + Stones 2010 will use a project website to form a common project community and exchange process virtually before students have met face-to-face in Berlin. Faculty will design the framework, but it is only through student uploads and posting that the online class commons will be fully realized as a space of exchange. Through peer-to-peer exchanges, both teaching and learning can occur without faculty as a necessary conduit. Potentially volatile topics in non-monitored exchange can lead to misunderstandings and heated debate, but the faculty will strive to minimize these occurrences by establishing a clear framework for and expectations of the project and through ongoing monitoring of the site's content. The project website will allow increased visibility of the design process as each step is documented and uploaded. Work is then viewed in comparison to work of peers in students' home classrooms, globally by the Berlin 2010 group, and ultimately by the larger Sticks + Stones audience.

Raising the stakes

The lessons learned from exercises, design assignments, discussions of stereotypes, racism and immigration as well as field trips to Berlin destinations will culminate in a project addressing the truths and myths about immigration. By tackling a topic lacking a knee-jerk solution and firmly established facts, students will be challenged to sift through the information regarding immigration and find the productive facts around which to build their design project. As an installation in a public space with a companion website, the collaborative exhibit will have a higher profile than most design studio assignments. Students will be asked to consider both a physical audience in Berlin and a potentially larger global audience that can participate through the project website and possible global reinstallation exhibition. After installing and reflecting upon the exhibit's reception and returning to their home campuses, students will be asked to further populate the online exhibit component by soliciting stories and information from people diverse in generations, ethnic backgrounds, and migration-related experiences. Simply working through the task of graphically representing issues of such complexity calls up the principles of responsibility and truth to message in addition to compromise. Students will be challenged to balance the constraints of specific cultural values against an objective ethic that portends we all exist in an ultimate melting pot.

Asking students to expand their creative work beyond what is possible in their home environments entails certain risks. Politics, religion, censorship or simply social discomfort may cloud the horizon of unlimited possibility, but this also increases the stakes and challenges each individual to scrutinize country, community, religion, and family on the influences they hold. This body of students, diverse in custom, life experience, and closely held beliefs, will gather in one location for debate and collaboration on the issues of stereotyping, racism, xenophobia, and migration—all through the lens of visual communication. Will students freely push for an objective, comprehensive report on the social complexities of immigration in their countries? As an installation in a public space with a companion website, potentially with international viewers, the capstone project will have a higher profile than most design assignments. Students must carefully consider the installation's diverse audience—an effective dose of reality for pre-emergent professionals.

Conclusion

Students will bridge native languages, global time zones, and cultural norms to create an important learning experience. What endures in the student's mind is that design is power, and that power is best used to celebrate our individuality even as we revel in our new sense of cultural unity across the planet. Sticks + Stones faculty collaborators create new curriculum by recording its processes and regarding itself as an ongoing research project that probes vital new questions and invites other faculty and institutions to sprout new curricular shoots in similar directions.

Sticks + Stones 2010 asks an international network of faculty to participate in developing curriculum and calls upon students to make visible their missteps and preconceptions about the image-related issues of stereotyping and immigration. Sticks + Stones faculty collaborators

create new curriculum by recording its processes and regarding itself as an ongoing research project that probes vital new questions and invites other faculty and institutions to create curriculum in similar directions. Perhaps if today's design students can appreciate the value of making a difference then the next generation of design professionals might realize a measurable, positive effect on our world.

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This paper was submitted for the Icograda Education Network (IEN) Conference that took place during the Icograda World Design Congress 2009 in Beijing, China, which was planned in collaboration with the Central Academy of Fine Arts (CAFA). The broader theme of the congress, Xin, literally signifies human speaking and hence message/letter in Chinese, Xin-信 which represents a primitive means of communication. The IEN conference invited papers under the following themes: Design Education and Innovation; Design Education and Diversity; Design Education and Cross-Disciplinary Collaboration and Design Education and Regional Development.

Blended learning
Collaboration
Cross-cultural
Online
Pedagogy

TRUST AND RELATIONSHIP BUILDING: CRITICAL SKILLS FOR THE FUTURE OF DESIGN EDUCATION IN ONLINE CONTEXTS

KARIN WATSON, SIMON MCINTYRE, IAN MCARTHUR

ABSTRACT

Could you trust someone you had never physically met to successfully collaborate with you on a design project?

As online communication technologies rapidly evolve, the creative industries continue to move towards globally networked and interdisciplinary modalities of practice. These inescapable shifts in the ways designers work have challenged many long held assumptions about the nature of individual design processes.

Such revolutionary changes mean that designers must increasingly master new skills to effectively communicate and collaborate in online environments with colleagues from different cultures, disciplines and locations world-wide. Since they may never meet face-to-face, the success of this new working methodology relies on high levels of trust between practitioners, both personally and professionally in order to achieve effective design outcomes.

In turn the need for design educators to equip students with skills to thrive in the face of this new industrial paradigm is highlighted. Trust is integral to developing the personal and professional relationship building and collaborative skills necessary for contemporary digital working practices. By being sensitive to, and cognisant of these issues, educators can initiate and implement strategies that help create the right conditions for trust to emerge between participants in online learning scenarios.

In reality however, the relative suddenness of this shift has seen some educationalists engage in unconsidered responses to this challenge. In the rush to embrace online technologies, the social and cultural dimensions of online pedagogies are often neglected while the relative functionality of digital tools and spaces is given prominence.

Drawing upon three specific case studies of very different applications of online learning in a design context, this paper aims to highlight the impact that fostering positive, interpersonal, interdisciplinary and transcultural relationships between students in online design education can have upon their levels of trust and the effectiveness and outcomes of their online collaborative processes.

The projects examined were conducted by COFA Online and The Omnium Research Group at The College of Fine Arts (COFA), University of New South Wales, Sydney, Australia. Each case study examines particular dynamics associated with global, local and cross-cultural contexts. They include:

- Global – Fully online Masters of Cross Disciplinary Art and Design
- Local – Blended Learning at The College of Fine Arts
- Cross-Cultural (Australia and China) – The Collabor8 Project, East-West online design collaboration

By triangulating data that examines student/teacher experiences through online surveys, interviews, responses to targeted online discussions and peer reviews, this paper outlines online pedagogical approaches that have successfully engaged students in active,

collaborative and trust building online learning environments. It also pinpoints problems that can occur in online teamwork related to trust, communication and interpersonal relationships, and investigates several potential solutions.

If strong human-to-human relationships are seen as the foundation for effective collaborative design practice online, educators will be helping emerging generations of designers maximise their creative potential in a globally competitive market where online collaborative, cross-cultural, interdisciplinary creative skill-sets are demanded as the 'norm'.

Introduction

COFA Online (COL) is responsible for the development and management of a wide range of fully online and blended undergraduate and postgraduate courses in art and design disciplines at the College of Fine Arts, The University of New South Wales, Sydney. COL develops and disseminates online pedagogy and training and in 2007 expanded its offerings to include a fully online Master of Cross-Disciplinary Art and Design program, with students and lecturers participating from around the globe. It has since assisted in adapting existing face-to-face classes for blended learning and has instigated further research in projects such as The Collabor8 Project (C8), which investigated the challenges faced by online learning in cross-cultural online contexts.

Through ongoing research, evaluation and refinement COL has developed insights into the different pedagogical approaches required for online learning, especially within collaborative art and design processes. Through three separate case studies, this paper highlights problems and issues, and suggests strategies that can be adopted when working with fully online, blended and cross-cultural scenarios.

Defining trust

The New Oxford American Dictionary, 2nd Edition defines trust as the "…firm belief in the reliability, truth, ability, or strength of someone or something…"[1]. Anyone working in an effective team understands the importance of trust in achieving goals through collaboration. Conversely many have experienced a breach of trust and the consequent poor outcome or bad feeling that arises. As in the 'real' world, trust is essential to successful transactions online, and online learning is no exception.

Three case studies

(1) Global – Fully online master of Cross-Disciplinary Art and Design
Meeting educational demands in an online creative world
Creative professionals are more connected than ever before via electronic networks that impact on collaborative processes and challenge traditional boundaries of time and space. COL responded to this paradigm by embracing a collaborative pedagogy in its global, fully online Masters Degree in Cross-Disciplinary Art and Design. Students cooperate on art and design projects, engage in online discussions, and offer peer feedback in the form of constructive criticism and support. Students and lecturers from around the world work together to develop trust within the online learning environment, and ultimately in each other to collaborate

1. 'New Oxford American Dictionary, 2nd Edition', ed. Erin McKean 2nd Edition ed. (New York: Oxford University Press, Inc, 2005).

effectively, mirroring the reality of contemporary practice within networked digital industries.

Encouraging trust through pedagogy

Never meeting face-to-face can initially be daunting for some students. Differences in disciplinary background, levels and types of experience, and the characteristics of online communication are all potential barriers to forming effective collaborative relationships.

Strong interpersonal skills and a sense of trust are critical facilitators for effective and rewarding learning experiences. Careful consideration has been given to designing the online learning activities that students undertake to establish the optimum basis for trust building. One such example occurs in the online orientation program that all new students complete at the commencement of their study. Students are asked to create a detailed online profile of themselves, along with a 'visual essay' encapsulating personal history, current location, creative works and inspirations. By allowing students to express themselves in this way, the online environment in which they will study is unobtrusively introduced, and the students' own personality is invested into the learning community, which in turn increases their sense of intrinsic motivation[2].

Students begin to engage with each other by reviewing one another's visual essays, discussing the effectiveness of stories being told, and identifying common interests or goals. By completing this task, students gain confidence in the technological environment they are using, and importantly, they also make personal connections that create friendships and establish a level of trust that often intensifies throughout their study.

"...this has been a very enriching experience for me... all of a sudden names are now people and faces are now human... everyone seeking something, flawed and imperfect and even more precious for that... thanks for this - I mean it..." Student, Orientation Program 2008

What issues can occur?

Two predominant, interrelated issues that have the potential to erode trust amongst students are the communicative limitations of online technology, and their effect upon collaborative teamwork.

Asynchronous message boards can be effective for meaningful dialogue across several time zones; yet can also create their own unique issues. Devoid of the facial expressions and body language we are accustomed to interpreting in face-to-face discourse, the tone of written communiqués can sometimes be misinterpreted in a high-pressure discussion or teamwork situation[3].

This may generate mistrust or resentment - particularly in tasks where students are collaborating on a single project. Such misunderstandings can intensify if students don't define an agreed frequency of online communication within their team. Trust may be further eroded within a team when students fail to communicate regularly, leaving peers feeling unsure about each member's participation and commitment to the group.

How were these issues addressed?

Regular communication is essential for online collaborative work. Students should be encouraged to define roles, responsibilities, timelines and

2. Marios Miltiadou and Wilhelmina C. Savenye, 'Applying Social Cognitive Constructs of Motivation to Enhance Student Success in Online Distance Education', AACE Journal 11, no. 1 (2003): 78-95.

3. Michalinos Zembylas and Charalambos Vrasidas, 'Listening for Silence in Text-Based, Online Encounters', Distance Education 28, no. 1 (2007): 5 - 24, http://www.informaworld.com/10.1080/01587910701305285.

frequency of communication early in any collaborative situation. This groundwork to avoid conflict heightens levels of trust in the context of collaboration amongst students[4].

An example of pedagogy designed to enhance and cement students' trust in their peers is a project where individuals research real-world examples of cross-disciplinary art and design collaborative processes, and then analyse the similarities and differences in approach as a team. This task highlights that collaboration, while beneficial, can also be problematic. Being able to identify communicative and collaborative problems in their case studies enables students to reflect upon their own practice and can strategically facilitate smoother collaboration and responsibility sharing amongst team members.

Students are asked to respond honestly to their experiences of collaboration in a personal reflection at the conclusion of each course. This allows them to identify issues they encountered, reflect on how they relate to others, contemplate areas for improvement, determine what processes work best for them and how they might approach future collaborations. This reflective process is important in giving students time to analyse how their personality and preferences for collaboration affect the way they work with others. It also provides an opportunity to modify their approaches and apply them in the future, continually improving and adapting their collaborative techniques.

(2) Local – Blended learning at The College of Fine Arts
A problematic context

Introducing new teaching models to address the changing landscape of design education brings with it its own set of challenges and notions of trust.

When the School of Design Studies and School of Media Arts introduced a Blended Learning (BL) component to some of their existing face-to-face programs it was met with mixed emotions from the students and staff involved. Some regarded it as an opportunity to develop new learning and teaching skills, and deemed new technology relevant to emerging global design practices, and compatible with engaging the new digital-savvy student generation.

Others, however, were reluctant to move beyond well-established models of traditional practice, and were distrustful of new technologies and the methodologies introduced to support it.

"*Its my personal belief that certain things that work fine as they are, are being computerised for the sake of being modern. I make a conscious decision to use the mobile phone hardly ever, to never drive and stay off the computer as much as possible.*" – Student BL pilot study

Face-to-face studio contact hours are typically regarded as integral to the success of design education[5] and some feared the 'hands on' and supportive nature of the traditional studio model would be lost.

This distrust extended to the motives for this change. Initial discussions and observations revealed that many students regarded it as a cost-cutting exercise by the University - one that would *decrease* their number of studio contact hours and impact negatively on the relationship of trust between teacher and student that the traditional studio environment fosters. They feared the online component would be alienating.

4. Xiaojing Liu, Richard J. Magjuka, and Seung-hee Lee, 'The Effects of Cognitive Thinking Styles, Trust, Conflict Management on Online Students' Learning and Virtual Team Performance', British Journal of Educational Technology 39, no. 5 (2008): 829-46, http://dx.doi.org/10.1111/j.1467-8535.2007.00775.x.

5. Yousri Eldin DeVries, 'The Interactivity Component of Distance Learning Implemented in an Art Studio Course', Education 117, no. 2 (1996): 180-4, http://www.questia.com/googleScholar.qst?docId=5000456126.

In contrast to this, many staff believed that their student contact hours would now be *increased*, as an online environment implied they should be available 24/7 for their students and that these hours were beyond the scope of their employment.

How were these issues addressed?

It was acknowledged that regular face-to-face contact hours in a studio setting are considered extremely important and that wherever possible this time should be maximised. This could be achieved by transferring all administrative issues, resource material and lectures online.

Presenting lectures online had several other pedagogical benefits. Students were able to view lectures at their own pace and replay sections for further clarification. This aided students that were less fluent in English, as well as those less confident students that feared they might 'lose face' by asking questions in a lecture theatre environment.

External guest lecturers were also invited to present material that increased the students' exposure to national and international experts and institutions. Online discussion threads based on lecture topics enabled students to further debate, reflect and expand their knowledge beyond their traditional classroom setting.

Collaboration, peer review and the sense of community were also considered crucial components of art and design education. Online galleries were set up and students were required to upload their work at nominated stages of the design process for peer-review. This provided additional opportunities for students to receive feedback on their own work, and to further develop their critical analysis and written communication skills through provision of meaningful feedback to others. Other valuable skills including learning to record, photograph, edit and present their work in an online context with accompanying well-considered written statements.

Outcomes

When data collected at the end of BL pilot study was compared with that collected before its introduction, it was evident that in many instances the initial feelings of mistrust and apprehension were overcome.

Transferring administration, resources and lectures online proved successful with 79% of students at the end of semester agreeing that 'admin and resources did not take up valuable studio time' compared to 34% of students agreeing with this statement before the BL model was adopted.

Statistics also indicated that despite initial reservations, 83% of staff responded that they would like to continue teaching in a BL environment. Student responses to questions on collaboration, peer review and sense of community revealed that the BL model maintained the same levels as those before its introduction.

This study highlights that introducing new teaching models to address the changes in design education can challenge existing levels of trust amongst staff and students. This mistrust needs to be acknowledged, by clearly explaining the reasons for change and the benefits of new pedagogical strategies to all participants *before* the transition begins, possibly through a series of orientation sessions. While participants become more comfortable with the BL model as the semester progressed

and the personal benefits become more evident, it is essential that support mechanisms, motives and information are clearly explained and accessible before and during such a transition phase.

(3) The Collabor8 project
Trust in cross-cultural collaboration

Culturally biased assumptions about the nature of trust in online contexts and the methodologies of building it can have significant impacts. In cross-cultural collaborative online learning trust is a crucial yet elusive factor. Collabor8 (C8) challenges design students in Australia and China to collaborate online in ways that reflect contemporary networked practice. Online interactions between ninety-four graphic design and visual communications students over eight weeks revealed a complexity of pedagogical and communication issues.

What issues can occur – culture, language, teaching styles, student expectations

Confucian Heritage Culture (CHC) students aren't used to posting a profile about themselves[6], however the opportunity to share their culture through image and text proved to be successful. Within a designated timeframe of one hour on a specific day, participants were invited to create a sequence of photographs illustrative of their location and culture. A positive outcome of this story-telling methodology was that trust was built between students through sharing real experiences. This proved to be an effective pedagogical strategy in cross-cultural exchanges.

C8 was conducted largely in English. Chinese teachers and students initially saw this as an opportunity to practice written communication in English within a relevant professional context. Students were encouraged to express themselves in Chinese rather than not communicate, as translation assistance was available.

Responses from students in Australia indicated that outside the C8 online interface, levels of informal communication with Chinese students in instant messaging software was higher and more frequent than inside C8. A participating Chinese academic noted that language presented a significant challenge to teachers who found the level of English difficult, which impacted on the kind of support they could offer students.

The holistic and student-centered pedagogy of C8 is not typical of Chinese educational traditions.

"In China, students have most of their classes in the form of lectures rather than discussions... Most of them are afraid of making mistakes in public...They may participate quite actively mentally, but not with their mouths. Most Western teachers expect students to show their participation with their mouths, or at least with body language... This is one of the cultural differences"[7].

Data gathered indicated that students in China continued to 'lurk' but not actively participate, which suggests this translates into online contexts and corresponds with assertions by Li that *"...the discourse of participation is typically resisted by Chinese students"*[8].

Australian students experienced confusion based upon their perception that Chinese students were not responding to their communications. This 'active silence' was difficult for them to assimilate

6. T Doctoroff, 'Young Digital Mavens', (Beijing IAC-JWT Worldwide, 2007).

7. Sun Yunzhong, 'How to Be an Effective Teacher in China, a Chinese Teacher's Insight', in Amity Foundation Teachers Project - Teaching Resources, vol. 1996, Amity Foundation, (Nanjing: The Amity Teacher Project Handbook IV, 1996).

8. Mingsheng Li, 'Discourse and Culture of Learning - Communication Challenges' (paper presented at the Joint AARE-NZARE Conference, Melbourne, 28 August 2007, 1999).

and impacted on their openness to collaboration, resulting in a number of self-generated responses to the design brief.

How can these issues be addressed?

Where *cooperative* 'East-West' outcomes are desired, a long-term view is essential[9]. Trust within genuine ongoing relationships (*guanxi*) is vital for successful transactions with China at both an interpersonal and institutional level. Few westerners assign the appropriate level of importance to understanding *guanxi*, which in turn generates the potential for *bao* (reciprocity). Kwang-Kuo Hwang states, "*... A review of recent research shows that Chinese and other similar societies follow rules that deviate from those of the West. In such societies norms of reciprocity (bao) are intense, but these norms are heavily shaped by the hierarchically structured network of social relations (guanxi) in which people are embedded, by the public nature of obligations, and by the long time period over which obligations are incurred through a self conscious manipulation of face and related symbols...*"[9].

In CHC interpersonal norms emphasise trust and hold an especially significant status as a foundation on which relationships are built. In this context trust development requires an investment of time not familiar to most westerners with many unwilling to engage in this activity[10].

Institutions are now recognising the need for a global approach to collaborative online learning[11]. However they must continue to invest resources, time and effort into developing relationships that will ultimately become the basis for cross-cultural online design education if they are to be successful.

C8 highlighted numerous issues related to trust development including:

- Sharing culture and experience through image and text helps builds trust online.
- Language skills impacted on the ability of Chinese lecturers to support their students resulting in Mainland students listening to the information but not participating with their 'voices'.
- Research into developing *bi-lingual* culturally adaptive collaborative pedagogies is needed.

'East-West' online collaborative and cross-cultural initiatives must offer students clearly defined opportunities to express cultural identity in online environments where deeply embedded cultural norms are given due consideration. This can only be achieved through ongoing cross-cultural collaboration at teacher, faculty and institutional levels.

Conclusion

These three case studies highlight the integral role that trust plays in developing the personal and professional relationship building and collaborative skills required by design students and educators while interacting in online contexts.

Problems that occur in online teamwork, cross-cultural collaborations and the implementation of new teaching methodologies can challenge the existing notions of trust, communication and interpersonal relationships amongst both students and staff. Design educators must ensure that pedagogical strategies which successfully engage students in active, collaborative and trust-building online learning environments are adopted,

9. Kwang-kuo Hwang, 'Face and Favor: The Chinese Power Game', The American Journal of Sociology 92, no. 4 (1987): 944-74, http://www.jstor.org/stable/2780044.

10. Felix T. Mavondo and Elaine M. Rodrigo, 'The Effect of Relationship Dimensions on Interpersonal and Interorganizational Commitment in Organizations Conducting Business between Australia and China', Journal of Business Research 52, no. 2 (2001): 111-21, http://www.sciencedirect.com/science/article/B6V7S-42VM8WJ-3/2/617741527372a4dfc1af43964fd399b0.

11. Ian McArthur, Simon McIntyre, and Karin Watson, 'Preparing Students for the Global Workplace: An Examination of Collaborative Online Learning Approaches' (paper presented at ConnectED: International Conference on Design Education 2007, Sydney, Australia, 12 July 2007).

and that adequate support and orientation sessions are provided during transition phases. Where cross-cultural collaborations occur, careful consideration must also be given to including culturally adaptive pedagogies.

By creating the right conditions for trust to emerge between participants in online learning scenarios, educators can prepare students with the necessary skills required for contemporary digital working practices beyond the classroom.

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Over the last six years, Simon McIntyre has drawn together educators, researchers, and creative professionals to focus on researching the development and design of sustainable and effective online art and design learning programs through the development the COFA Online Course Author Fellowship Programs. Simon is a PhD candidate at the University of Sydney, developing and measuring the impact of advanced pedagogical training for online environments upon teaching practice. His continuing research into online education in art and design has culminated in the co-development and supervision of the world's first fully online international postgraduate art and design degree for COFA - the Master of Cross-Disciplinary Art & Design.

In 2003/2004 Ian McArthur initiated the COLLABOR8 Project to foster multidisciplinary projects online between design education programs in different institutions, and specifically across different cultures. Having over 25 years experience as designer and design educationalist, Ian McArthur has held leadership roles in vocational and higher education in Australia and South East Asia. He is a Phd candidate within the School of Digital Media at COFA, holds a Master of Design(Middlesex University, UK) and two education degrees (UTS, Sydney). Ian currently coordinates COFA Online's undergraduate online program and lectures in the School of Design studies at The College of Fine Art (UNSW).

Collaboration
Design education
Integrated learning
MIAD
Service learning

TO UNVEIL AND MOTIVATE: CURRICULUM PRINCIPLES AND CASE STUDIES INSPIRED BY THE ASPEN DESIGN CHALLENGE

ANNE GHORY-GOODMAN

ABSTRACT

The INDEX:|AIGA Aspen Design Challenge, Designing Water's Future, grew out of discussions held during the January 2007 World Economic Forum in Davos, Switzerland. At the Forum, global thought leaders noted that the global water crisis needed a visual identity. Undergraduate and graduate students were challenged to communicate the urgent complexities of the global water crisis to audiences separated by demographics, education, and immediate need. In February 2009, seven Finalist and ten Honorable Mention projects were selected from the submissions of 225 project teams from 28 countries and six continents.

Students at the Milwaukee Institute of Art and Design took ownership of their learning through the Aspen Design Challenge and moved naturally into constructivist learning modes (problem-based, collaborative, interdisciplinary, and self-directed) that are not always favored in traditional design education approaches. Students needed first to identify, define, and research their specific water issues; and then to create, test, and communicate their solutions. This paper presents three case studies that show how an external design competition can become a curriculum unit that meshes with a School's overall design curriculum and demonstrates the best practices in design education.

We prepare curricula that are integrated, interdisciplinary, globally focused, and collaborative. These emerging aims require design educators to rethink the problems we pose, the motivations we offer, the ways we teach students to collaborate, the role of outside resources, the value we place on service, and our methods of evaluation. Today's globally connected youth will respond enthusiastically when we do so.

The best education doesn't end on the last day of class. It is part of the holistic personal development of students we teach. Our classes can encourage young people to feel empowered to make a difference in our world.

FULL PAPER

Introduction

I almost didn't take on the Aspen Design Challenge, an international competition for design students to propose solutions to global water problems. My junior students weren't ready to transition all-at-once from sophomore, teacher-led learning to the greater independence and abstraction this competition required. I had too many students to manage. This wasn't the kind of project we usually assigned in the Information Design class. No, the Aspen Challenge was too big and too hard.

But then I thought, "If I ask them to take risks, I need to take risks." This paper describes how my students and I expanded pre-conceived curriculum notions: about the appropriate form of a design problem, about student motivation, about independent vs. collaborative work, about the organization of assignments, about the use of outside resources, about the power of service learning, and about the role of evaluation. After introducing these themes, I will explore them in three case studies.

1.

2.

3.

4.

1. The red circle indicates the location of the Great Lakes in North America.

2. Milwaukee Institute of Art and Design on the Milwaukee River.

3. Milwaukee, Wisconsin, U.S.A. on the shores of Lake Michigan.

4. Communication Design students on research trip to Discovery World aquarium.

Posing the problem

Did students realize their privileged position in Milwaukee next to one of the Great Lakes, the largest body of fresh water in the world?

Would students surrounded by fresh water relate to the needs of those without a reliable water supply and appreciate the enormity of the global water crisis? The Milwaukee Institute of Art and Design (MIAD) overlooks the Milwaukee River. We joke that you can dive out a window and swim to Lake Michigan after a bad critique!

Design curricula rarely broach such geo-political questions. While I could reliably predict the entry-level design skills of my students, I had no useful sense of their knowledge base related to global issues. My Information Design course needed to re-balance its emphasis from "design" toward "information." To participate in the Aspen Design Challenge, students had to research complex problems before visualizing clear design solutions.

One of my objectives became to help students develop data collection and analysis skills related to a fundamental global problem that had been largely invisible to them. To clarify and reveal: that's what designers do all the time. The drive to unveil reality and motivate others makes our work fulfilling and interesting.

On the first day of class, the heads surreptitiously text-messaging snapped up when I said, "This semester, I will not teach you everything you learn. You will learn from books, movies, web sites, newspapers atnd magazines. You will leave the classroom and learn on-site from experts, exhibits, your audience, and each other."

To prepare for a world we can barely envision, students must take ownership of the learning process. Design education's emphasis on research and discovery is essential for both their personal and professional futures.

Motivation: the personal connection

Early in my class, consulting Professor of Limnology Maurizio Murru asked the students what they knew about global water problems. This framed what they didn't know so they could start asking the right questions. Students need to want to learn.

Through their research, students found a personal connection to the issues. Designer Paul Sahre has said, "Design is supposed to be about something else, and not about you; but I think the only way it's actually any good–and to get people to care about it–is if it's also about you at the same time." (How to Think Like a Great Graphic Designer, Debbie Millman, Allworth Press, 2007, p. 129.)

The first challenge for students was to identify their topics and share their personal identification with their subjects. One student brought her classmates to tears with a description of the horrible effects of the water-borne guinea worm on young children.

Guinea worm is a parasite which lives in the mud and water around water holes in certain African countries. There is no other water source for these people and when they drink the infected water they ingest the parasite. After an 18-month gestation period the worm emerges as an infected cyst, cripplingly painful and can incapacitate its victim for months. The worm is removed slowly, often over a period of days.

31
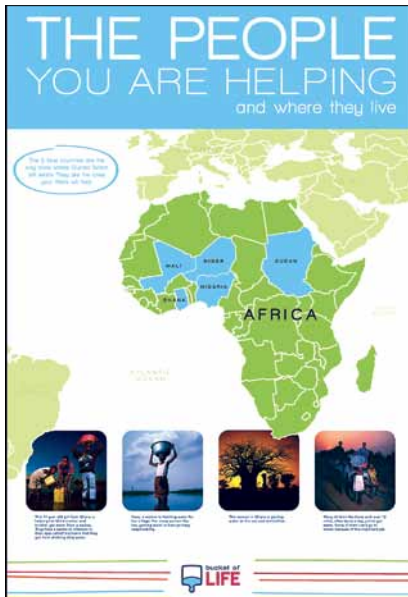
5.

6.

5. Poster for fifth grade classroom to teach children about the guinea worm and how water filtration can prevent it. Designed by the Bucket of Life Team.

6. Logo for awareness campaign about bottled water with text in multiple languages.

7. Glass bottles filled with water and labeled with information about African water issues.

The body of the worm is wrapped around a stick and drawn slowly out so as not to snap the creature in half, leaving the dying parasite inside the person. The people in these regions have no other water source and so are forced to go through this process many times.
– The Aspen Design Challenge to Students Africa PG 09

Her team went on to develop educational materials for American ten-year-olds who connected to the story of these children and packaged a cloth based water filtration system for distribution in four African countries.

Collaboration: working in teams

Adjunct Instructor Brian Pelsoh and I had over 30 students, initially divided into teams of four based on their preliminary research interests. As can be expected, not all of the teams were made in heaven. To facilitate learning, teachers need multiple strategies for addressing dysfunctional teams.

Being collaborative needs to be taught as part of the design curriculum. The principles we employed were basic ones. Designate a leader/coordinator. Listen actively to every idea when brainstorming. Divide up the work. Assign tasks based on skills. Make sure everybody knows how much his/her work counts. Value opinions that differ from your own. Provide suggestions rather than criticism. Compromise. Reach consensus. Internalize the deadlines. Be pro-active in problem solving. Seek help when you need it. Share. And, be sensitive to other cultures.

The "Why Bottled?" team wanted to speak (literally) to diverse global audiences. Their logo was in Polish, German, Swahili Japanese, English, Spanish, Portuguese, Greek, Arabic, Russian, Norwegian, Chinese, Italian and Czech.

The "Adroa" team developed glass bottles for a water product whose profits would be channeled to water purification projects. Adroa is named for an African god who lives in river beds.

There were significant differences in approach, audience, medium, and purpose that informed the teams' responses to the design brief. This happens most frequently when a teacher lets go and shares or

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surrenders control to the student. It is a shift in focus from teacher-directed to learning-centered education.

Organizing student work

The teacher needs to stretch students with high expectations, but support them in organizing their work. To adapt the Challenge to our

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8. Map of a proposed "Running Water" fundraising marathon on the lakefront.

9. Commemorative eco friendly shoe.

10. Web page with avatars running across the bottom of the screen.

11. Discovery World: "dedicated to helping people positively impact their communities by developing a better understanding of technology and the environment while fostering both innovation and creativity".

12. Discovery World Great Lakes exhibit.

design curriculum, we added components not specifically called for by the Challenge. In addition to writing a comprehensive design brief accompanied by a schematic of related components, every team had to design and include a relevant map, produce at least one 20x30 poster, and include a multimedia component.

This map was part of the "Running Water" team proposal for fundraising marathons along lakefronts and rivers with the intention that elite African runners would be spokespeople for the events.

In our field there are many opportunities to engage students in projects outside the classroom, but teachers have to balance the value of real-world problems with the necessity of choosing assignments that are meaningful and appropriate within the sequence of the curriculum. We also need to support the notion that interdisciplinary collaboration enriches the search for solutions with new ideas.

The "Running Water" team sought a footwear designer and developer from the Weyco group to help create a vintage styled, eco-friendly, athletic shoe to appeal to counter-culture, sneaker aficionados. Every team sought collaborators in other disciplines to create a better proposal. This project compelled them to seek more advanced skills, bringing questions to multimedia teachers and experts and adapting assignments in other classes to their needs. The students helped create an interdisciplinary, integrated, learning experience.

Young people addressing global problems should bring untraditional approaches and new media to the discussion. Our students profiled potential users and strategized how to maximize the potential for new media to aid their cause. The "Running Water" website provided an opportunity for a global audience, the elderly, and handicapped to create avatars who participated in the event by running in a virtual marathon along the bottom of the web pages.

Explore outside resources

Soon after we began this project, MIAD established a partnership with Discovery World, a lakefront museum and research facility that includes interactive science, technology and freshwater exhibits; learning labs; theaters; television and audio studios; and fresh and saltwater aquariums. Students could walk there from school. There was no excuse for relying on Google for research.

Students pursued scientific information at Discovery World where the process of purifying water from Lake Michigan water is made visible.

The museum's director, Paul Krajniak, became a resource, critic, and advocate for our students' work, and eventually commissioned two MIAD projects to become permanent installations there.

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13. This I Believe by Carrie Vander Pas.

14. This I elieve by Jackie Berndt.

15. Editorial collaboration between communication design and illustration students.

16. Publication designed to highlight service to the community by artists and designers.

Finding meaning through service learning

Interest in water issues rippled through MIAD. Students not enrolled in our course asked to become involved. Teachers in other courses started reporting impassioned papers and speeches about global water issues in response to their assignments. It was not surprising. At MIAD there is an institutional commitment to service learning. Students are required to work in the community for at least 90 hours in the junior year in order to graduate. This hands-on service is expanded with readings and guided writings including a major paper called, "This I Believe."

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Designers must be articulate and learn to organize their thinking on paper with words as well as with pictures. Students write, design, photograph, and illustrate their responses to their service work.

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17. The Aqua Independence Team. Juan Hernandez, Xavier Ruffin, Desiree May, and Scott Bednar.

18. Tzintzingareo, Mexico: Field Site for the Aqua Independence Team.

At a crucial stage of identity development, our students want to live a meaningful life. Most are motivated more by ideals than by financial gain. Over 70% of the students at MIAD are the first in their families to attend college. Virtually all of them receive financial aid and combine schoolwork with demanding jobs to help offset their costs. They need to believe that their education matters.

Evaluation that supports learning

As this project migrated beyond the design skills curriculum it became clear I should not be the sole person to evaluate student work. Including external sources for criticism and feedback always helps to objectify the quality of design results in the eyes of students. Multiple authentic evaluation sources immediately take assessment from, "What does the teacher want?" to "How does the work exhibit professionally recognizable design excellence?" The MIAD Aspen Design Challenge teams were anxious to win the competition. Facing external evaluation was a powerful motivating force during the Challenge.

Case study 1. The "Aqua Independence Project"

Juan Hernandez was the leader of the "Aqua Independence Project" team. He had grown up in Tzintzingareo, a town without running water, two hours northwest from Mexico City.

His story resonated with Xavier Ruffin, an African American student who had lived in rough neighborhoods as a child and had never traveled by plane. The problem caught the imagination of Desiree May, a girl from Green Bay who had never applied for a passport. The challenge also bothered Scott Bednar, the father of a three-year-old son, who commuted over an hour to Milwaukee for school and the opportunity to change careers.

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This team did not want to sit in Wisconsin with third-hand information about a situation that existed thousands of miles away. They were adamant about the need to conduct primary field research to find local solutions to local problems. They took a Chinese proverb as their frame of reference:

Give a man a fish and you feed him for a day.
Teach a man to fish and you feed him for a lifetime.

So the "Aqua Independence Project" team sold cupcakes and hotdogs on the front steps of MIAD to raise funds to purchase plane tickets to Tzintzingareo, Mexico. I'd never taught a class where students had gone to such lengths for an assignment. In fact, all of the teams began to function with similar independence. When I'd arrive for class at 8 am, teams working together, already clustered in their favorite corners of the studio, would barely glance up. I had been reduced, or rather elevated, to a resource—one among many.
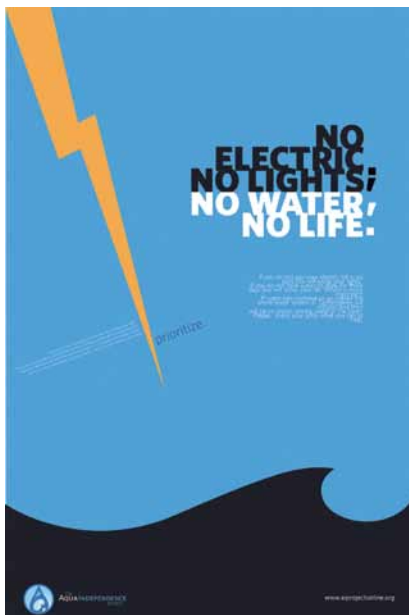
To document their process of listening, observing, and reflecting, the

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19. Aqua Indipendence Project video.

20. Names posted of people who had not paid their water bills.

21. No Electric, No Lights. No Water, No Life.

22. This Poster Is Free. Pumping Water Is Not.

23. We Can't Do It Without Your Support. Do Your Part.

Aqua Independence Project team filmed their experience. http://www.youtube.com/watch?v=yICvXW4APsM&feature=channel_page
One can witness their process of internalizing an important design lesson, "Never make assumptions about your audience or base a design on your limited personal frame of reference." This understanding is vital in the work of all designers sensitive to a global audience.

The "Aqua Independence Project" team members found that one of the reasons for limited access to water in Tzintzingareo was that too many people thought water should be free. This viewpoint had huge implications for the viability of their water pumping system and for the commitment of the volunteers who tried to keep it running. Without funds for frequent repairs to a fragile pumping system, water was intermittently available.

What could four U.S. design students do? First, they needed to address the biggest problem: convincing people who paid their bills for electricity and satellite TVs or cell phones that they also needed to pay for water.

They learned that raising awareness about the need to pay water bills was crucial. They focus-tested whether posters on walls in public places could communicate a compelling message to the community.

In addition, they found that installing water meters in homes could identify delinquent payers. Those people would then suffer the consequences of non-payment—the water turned off in their homes.

With adequate funds, the pumps could be repaired and water provided reliably to the entire town. Without funds, the two men who volunteered to repair breakdowns were on the verge of quitting.

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At the end of their patience, the men became so encouraged by the MIAD students' interest in their work that they re-committed to maintaining the infrastructure while new strategies for fundraising were put in place.

The team also considered the needs of a town dependent on water harvesting by developing a water harvesting module that integrates a sand filtration system to purify the water collected. The World Health Organization says that slow sand filtration "makes the best use of the local skills and materials available in developing countries" (http://www.who.int/water_sanitation_health/publications/ssf/en/index.html).

This aligned with their commitment to discovering local solutions to local problems. (The "Osmoto" team also pursued a water purification and carrier device in collaboration with industrial design classmates.)

The Aqua Independence Project did not win recognition from the competition. Yet, in the nine months since my Information Design class ended they have: added students from Film and Industrial Design to their team, developed an interactive educational kiosk with a touch sensitive

24.

screen, been commissioned to create an exhibit at Discovery World, enlarged their website, prepared a funding request for Badger Meter Company (one of the largest water meter companies in the world, serendipitously based in Milwaukee), designed a poster campaign, obtained donated printing, installed the posters in public places in Tsintsingareo, and presented a proposal to the local chapter of the Rotary International for their return trip to Mexico to continue their work this fall. They have recently learned that the World Services Committee of the Rotary Club of Milwaukee has granted MIAD $1,000 to support their efforts and will assist in their request to Badger Meter. Today they are researching the most appropriate meters for use in Tsintsingareo and outlining how to use and measure the effectiveness of their Rotary grant. They took ownership of their learning to fulfill their commitment to service and in the process began to create personal futures molded by their social conscience.

Case study 2. The "Restore Our Great Lakes" team

As U.S. Presidential candidates John McCain and Barack Obama were making campaign promises about funding varying Great Lakes initiatives, MIAD's "Restore Our Great Lakes" team grappled with the issues around protection and restoration of the Great Lakes Ecosystems. Toxic pollutants, climate change, misuse, and invasive species are rapidly diminishing the quality of water in the Great Lakes. Over 33 million people live in the Great Lakes Basin. It accounts for 95% of all fresh surface water in the United States and it is in danger. Here was another previously invisible global problem for my design students to understand and clarify. It was literally in their backyard.

Once again students researched and confirmed the relevant facts. Great Lakes water issues are complicated by conflicting national points of view (U.S., Canada, and countries who ship or supply goods). Access to water is limited by national, state, and local regulations. What fishermen desire may conflict with the preferences of recreational boat owners or homeowners. The team had to consider multiple audiences before identifying a way to educate the public about these critical issues.

Reaching beyond the classroom, this team met with experts at the

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25. Touch screen and educational exhibit.

26. Web design.
http://www.aiprojectonline.org

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University of Wisconsin/Milwaukee's Fresh Water Institute. As part of a regional strategic plan to help the local economy recover from the recession, Milwaukee has been seeking to position itself as "The Fresh Water Capital of the World." As a result, many city planners and local businesses are especially attuned to water issues, so students were working on the cutting edge of a vital regional priority.

For their design solution, they determined that an interactive, web-based vehicle would reach the largest target audience. They developed an educational site including simple information graphics and downloadable posters to get their message across.

27. Restore Our Great Lakes posters.

28. Temporary public toilets with messages about water conservation.

29. Short showers installed in public places combined with floor graphics about conserving water while bathing or showering.

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As an extension, team members used their research as the basis for persuasive arguments presented in English classes. They became knowledgeable about how to be politically effective and, in the process, developed expertise leading to "green" careers. Their work demonstrated the integrated learning that sees education as a holistic pursuit.

Case study 3. The "Blue Side" team

In the United States, people use water indiscriminately because it is inexpensive and of relatively good quality. Cultural norms favor leaving the water running for dishwashing and showers. Water-intensive lawns are the standard for landscaping. Cars and driveways are rinsed with copious amounts of water. Most Americans don't think twice about turning the water on.

The "Blue Side" team took on the challenge of raising consciousness about indiscriminate water use. They adopted a multi-pronged media concept to deliver their message about water conservation, including environmental sculpture, advertising, print, and animation. They opted for a "guerilla" (unconventional) campaign focus to inspire people to conserve water and to create indelible educational messages reinforcing conservation. Combining the complementary skills of Thai and American students Punyaruk Baingern, Panchalee Phungsoondara, Emery Ullenberg and Maxx Valenti, this team successfully collaborated by asking each person to design the pieces s/he could do best. That tactic made the collaboration work.

Their focus was on changing behavior. Because the Blue Side team wanted people to look at water conservation in new ways in new places, they selected orange, not blue, as the color of their campaign. Keeping an irreverent attitude, they chose the long lines for temporary bathrooms
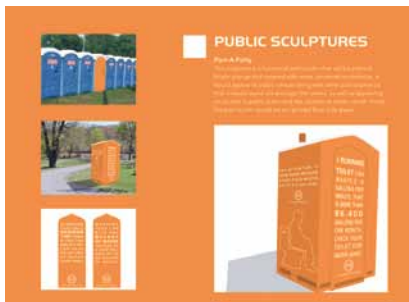
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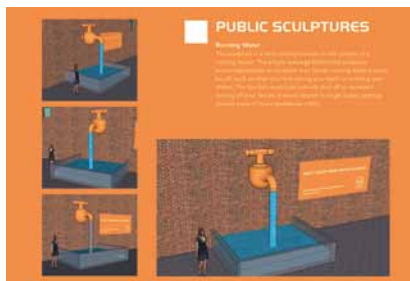
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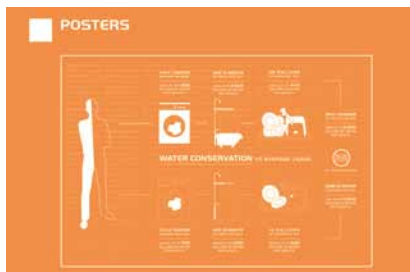
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30. Large-scale public sculpture of a dripping faucet highlights the issue of water conservation.

31. Educational posters about water conservation.

at large public events as places to meet a captive audience with their message about limiting the use of water in toilets.

Using humor, always effective in drawing attention to a message, they created "short showers" (half the usual size) to communicate the importance of limiting the water used while bathing. And, they proposed to install a large dripping faucet in public venues.

These messages were delivered through door tags, web sites, animation, web banners, and print-based pieces to reach many audiences through many media. Their broad view of engaging and educating the public was selected for Honorable Mention by Aspen Design Challenge judges. The entire MIAD community celebrated this outcome.

Conclusion

The best education doesn't end on the last day of class. It is part of the holistic personal development of students we teach. Our classes can encourage young people to feel empowered to make a difference in our world. We needn't teach design skills in isolation. We can prepare curricula that are integrated, interdisciplinary, globally focused, and collaborative. These emerging aims require design educators to rethink the problems we pose, the motivations we offer, the ways we teach students to collaborate, the role of outside resources, the value we place on service, and our methods of evaluation. Today's globally connected youth will respond enthusiastically when we do so.

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About the author
Anne Ghory-Goodman is a Professor at the Milwaukee Institute of Art and Design. She has participated in exhibitions, been included in publications, won awards, and lectured on design and photography in the U.S. and abroad. Last year, her posters were exhibited in Havana, Cuba and Lima, Peru. She was awarded Fellowships for both Photography and Design Arts, by the National Endowment for the Arts. She has notably won awards for the NYU Child Study Center website and from the Society of Environmental Graphic Design for the exhibit "Thinking and Making: An April Greiman Retrospective".

Xin: Icograda World Design Congress 2009
This paper was submitted for the Icograda Education Network (IEN) Conference that took place during the Icograda World Design Congress 2009 in Beijing, China, which was planned in collaboration with the Central Academy of Fine Arts (CAFA). The broader theme of the congress, Xin, literally signifies human speaking and hence message/letter in Chinese, Xin-信 which represents a primitive means of communication. The IEN conference invited papers under the following themes: Design Education and Innovation; Design Education and Diversity; Design Education and Cross-Disciplinary Collaboration and Design Education and Regional Development.

Collaboration
Design research
Design thinking
Innovation
Interdisciplinary

TRANSFORMING DESIGN THINKING INTO COLLABORATIVE INNOVATION: MEETING THE EMERGING NEEDS AND DEMANDS OF A COMPLEX WORLD THROUGH DESIGN THINKING AND COLLABORATIVE INNOVATION

ERIC LIGON, MICHELE WONG KUNG FONG

ABSTRACT

This paper/presentation will provide a description of the newly developed MFA/MA in Design with a concentration in Innovation Studies in the College of Visual Arts at the University of North Texas and the ways in which creates opportunities for faculty members from varying disciplines (Communication Design, Anthropology, Marketing and Logistics, Information Technology and Decision Sciences) to teach linked classes to cohorts of interdisciplinary graduate students—enabling the program to more effectively meet the demands of an increasingly complex world within which design is practised.

Design's increasing contribution to corporate competitiveness, its growing user inclusiveness and a marked reliance by those outside the discipline on its methodologies pose unique challenges to graduate design programs seeking to meet these emerging demands. Success in the market place and market of ideas now requires innovative thinking and collaborative interdisciplinarity. No longer is it possible for corporations to apply time-tested metrics to create innovative products that meet consumer needs. Nor can socially conscious designers and the organizations they support rely on conventional means to respond to challenging global socio-economic conditions.

In response to these fundamental shifts, the new MFA/MA in Design seeks to empower students from disciplines across the university to collaboratively explore and redefine what it means to be innovative. The program will achieve this goal by placing its students in interdisciplinary teams to master core theoretical and problem-solving competencies rooted in collaborative innovation. These include: imaginative and adaptive thinking, visual argumentation supported by logical reasoning, iterative prototyping, project based workflow development and ethical empathy for others. Students gaining proficiency in these competencies will be able to create:

- New methods for teaching people vital knowledge and skills;
- New means to create jobs
- New ways to increase business market share and revenues
- New processes for creating products and services that meet emerging needs
- New methods for using economic, social and environmental resources more efficiently and ethically.

Ultimately, graduates of the program will leave with the knowledge, conceptual tools and skills necessary to transform 'design thinking' into a powerful means to identify, broadly examine and resolve pure and applied research opportunities that can positively catalyze a wide variety of social, technological, economic, environmental and political initiatives.

> **"Unless we make America the country most able to innovate, compete and win in the age of globalization, our leverage in the world will continue to slowly erode.[1]"** – *Thomas Friedman*

In 2008, a national poll of 1,000 voters revealed that 89% of American voters say that using the imagination is important to innovation and one's success in a global, knowledge-based economy, and is essential to success in the 21st Century; 91% believe education in and through the arts helps to substantiate imaginative learning and should be considered part of the basics; and 69% of voters believe that, when compared to other nations, America devotes less attention to developing the imaginative thinking that fuels innovation[2].

Large and small corporations, governmental and non-governmental organizations and community groups that aspire to either gain market advantage, sustain it, or who strive to effectively upgrade their existing work processes and outcomes can no longer seek to merely improve the quality of what they already do as a means to remain viable, relevant and competitive. In order to sustain financial and cultural viability in the contemporary inter-global marketplace, companies small and large must learn to harness and channel the power of creativity and of innovation, or risk quickly becoming noncompetitive in local, regional, national and international economic sectors.

This realization is supported by a report released by the Association of American Colleges and Universities stating that out of the 305 employers they interviewed whose companies employ at least 25 people, 63% reported that "[contemporary] college graduates lack essential skills to succeed in today's global economy"[3]. The report also states that "college graduates will need much more crossdisciplinary knowledge and an advanced set of communication and analytical skills to apply their knowledge to real-world problems." This statement is supported by the fact that 76% of the business leaders interviewed by the authors of this report felt that colleges "need to be placing more emphasis" on teaching students at the undergraduate and graduate levels of study to effectively contribute to the working of diversely populated teams. 70% of these business leaders indicated that contemporary college students at all levels of study should gain experiential knowledge that "emphasizes critical and analytical reasoning, as well as creativity and innovation."

Further, Wayne C. Johnson, Hewlett Packard's vice president of university relations worldwide, was quoted in the report's summary as saying that too often college graduates come into HP with the necessary technical knowledge, "but [that] what is missing is the ability to use the right side of the brain... where communication and creativity take place." Design's increasing contribution to corporate competitiveness, its growing user inclusiveness and a marked reliance by those outside the discipline on its methodologies pose unique challenges to graduate design programs.

Innovation studies

To meet these new demands of the business and professional communities, the Communication Design program in the Design department in College of Visual Arts and Design (CVAD) at the University of North Texas (UNT) is implementing a new Masters of Art and Master of Fine Art in Design

1. Thomas L. Friedman, "Making America Stupid," 13 September 2008, New York Times.

2. Lake Research Partners, national poll, 24 January 2008, available online at: www.aeparts.org/files/related/012308AEP%20ressReleasefinal.doc

3. Peter D. Hart Research Associates, Inc. for the Association of American Colleges and Universities,"How Should Colleges Prepare Students to Succeed in Today's Global Economy?," December2008, available online at: www.aacu.org/leap/documents/Re8097abcombined.pdf

with a concentration in Innovation Studies (IS) in Fall 2010, where interdisciplinary students solve problems through design thinking and collaborative innovation.

The principal goal of the concentration in Innovation Studies is to teach students from diverse disciplinary backgrounds how to use design-driven knowledge and skills to identify, theorize about and solve complex economic, social and environmental issues. The program will achieve this goal by placing its students in interdisciplinary teams to master core theoretical and problem-solving competencies rooted in collaboration and innovation. These include: imaginative and adaptive thinking, visual argumentation supported by logical reasoning, iterative prototyping, project based workflow development and ethical empathy for others.

At its most basic, innovation studies is operationalized creativity: a means to harness imaginative thinking to solve problems resistant to traditional deductive or inductive modes of discovery and analysis. Innovation is achieved by employing abductive reasoning, visual argumentation supported by logical analysis, iterative prototyping, project based workflow and active empathy for others.

The student body of this program will consist of three groups of students: students with a design background seeking an MFA, current and new students from non-design backgrounds seeking a broader educational experience, and professionals who are returning to school to seek a competitive advantage in the market place.

Proposed learning outcomes

To attain its goals, the IS program will strive to situate design-driven collaborative innovation within a widely extended socioethical context. It will value and seek to integrate specialized disciplinary knowledge and worldviews. And it will attempt to instill in its students a range of meta- and applied cognitive, interdisciplinary and experiential skills. UNT faculty believes the following high-level learning outcomes will support those ends: *Students engaged in design-driven innovation will be able to:*

- employ abductive reasoning as a means to envision new possibilities and as a heuristic methodology for acquiring knowledge and for broadly framing analysis;
- understand that collaborative, interdisciplinary engagement enriches design theory and improves design practice;
- grapple with intractable or ill-defined problems while accepting that their solutions will remain illusive or indeterminate;
- detect heretofore unrealized or unexpected patterns, systems or constructs and synthesise them into novel, responsible solutions;
- use active empathy tempered with reflexivity to gain insight into and respect for human subjectivity and sociocultural diversity;
- recognize that design solutions are always matters of choice rather than truth – designers, and their actions, are subject to public and ethical scrutiny from diverse constituencies;
- grasp the ways in which design-driven innovation can affect change for good or ill.

Organizing principles

With its goals and proposed learning outcomes as their foundation,

the IS program's three organizing principles — abductive reasoning, collaboration and interdisciplinarity — will create collectively the scaffolding that supports design-driven innovation research, scholarship and learning.

Abductive reasoning, or inference to the best explanation, is a heuristic model well suited to tackling ill-defined problems thrown up by a constantly changing and rapidly evolving culture — variations of Rittel and Webber's *wicked problems*[4]. To cope with the difficulties these problems present, the program will focus on methods informed by this thinking: using human-scale information, encouraging iterative prototyping methods, valuing group interaction within visual solution spaces and concentrating on possibilities rather than probabilities[5]. Guided by 'the logic of discovery', faculty and students will consistently focus on what might be grounded in what should be or is.

As a conceptual metaphor, collaboration embodies the ontological reality of the program's students and faculty in their ubiquitous connectivity facilitated through corresponding social and interpersonal networks. Both groups are immersed in technologically mediated constructs where identity, validity and discovery are all collectively negotiated, and sometimes even collectively actualized. Epistemologically, collaboration will help faculty and students build authentic contexts, foster synergistic reasoning, encourage active understanding and allow for socially constructed learning.

Recognizing that different models of interdisciplinarity exist, that the term has been plagued in recent years by its commonly imprecise usage, the program will rely and expand on three approaches outlined by J. Klein[6] in her review and analysis of interdisciplinary taxonomies, research and scholarship:

- *Multidisciplinary approaches*: disciplines will function as separate, additive voices in order to add scholarly breadth and knowledge. Project level coordination will occur but disciplinary boundaries will remain largely intact within this mélange.
- *Interdisciplinary approaches*: disciplinary world views, methods and skills will be blended in order to study applied themes, problems, ideas or questions. Disciplinary integration will be encouraged at the pedagogical and curricular levels.
- *Transdisciplinary approaches*: disciplinary synthesis will become the purpose of a particular problem, course or body of research. Concerted efforts will be made to transcend the (often) narrow scope of disciplinary focus in order to create new holistic understandings and theoretical syntheses.

The course of study

The IS program at UNT CVAD consists of seven required courses, a selection of three interdisciplinary electives, and a year-long practicum. Those courses and their descriptions are:

Required courses

ADES 5510 — Process and Methodology for Innovation

Students will explore and utilize a variety of processes and visual techniques that inform and guide ideation as a means to create a common language that

4. H. Rittel & M. Webber, 'Dilemmas in a general theory of planning', 1973, Policy Sciences, 4 (2),155–169.

5. J. Rosenhead, 'What's the problem? An introduction to problem structuring methods', 1996,Interfaces, 26 (6), 117–131.

6. J.T. Klein (2006), 'A platform for a shared discourse of interdisciplinary education', Journal of Social Science Education, 2, 13–14, available online at: http://www.jsse.org/2006-2/klein_platform.htm

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TRANSFORMING DESIGN THINKING INTO COLLABORATIVE INNOVATION:MEETING THE EMERGING NEEDS AND DEMANDS OF A COMPLEX WORLDTHROUGH DESIGN THINKING AND COLLABORATIVE INNOVATION

will allow them to communicate effectively across disciplinary backgrounds.

ADES 5520 — Design Research Methods I

Students enrolled in this course will be immersed in learning experiences that challenge them to develop and then expand knowledge about how design research processes and methods can be utilized to effectively connect design theory with practice as a means to advance their ability to make sound critical judgments and formulate effective and appropriate strategies to resolve problems in their communities.

ADES 5530 — Design Research Methods II

In this studio-based course, students will learn how to use interactive design tools, social media and select methods of networking to create and facilitate design processes that allow select groups of people to contribute to the building of shared experiences and, hopefully, shared understandings.

ADES 5540 — Brand and Brand Experience

In this seminar-based course, the nature of brands and brand experiences will be analysed through a variety of economic, social and cultural lenses. Students will be expected to comprehend and articulate knowledge they gain regarding the essential nature of brands as they influence and are influenced by business and marketing trends, globalisation, modern social psychology and cultural dynamics.

ADES 5550 — Design and Its Social Ramifications

In this seminar-based course, the design process, its artifacts and their agency will be examined from a broad array of socio-cultural perspectives.

ADES 5560 — Collaborative Design Studio

In this studio-based course collaborative, interdisciplinary teams will apply the processes and methodologies introduced in ADES 5510 and ADES 5520 to identify, reframe and develop problems suitable for further theoretical and applied exploration.

Required interdisciplinary courses

Courses may be taken in the following academic areas: Anthropology, Behaviour Analysis, Decisions Sciences, Library and Information Sciences, Marketing, Merchandising and Hospitality Management, Philosophy, Psychology, Radio, Television and Film, or Sociology.

Practicum in Collaborative Innovation Studies

ADES 5590 and 5595 — Practicum in Collaborative Innovation Studies I & II

In a two semester-long project, interdisciplinary teams will identify a single problem and solve various social, economic, cultural or market-based issues that will ultimately manifest themselves in a visual expression of one form or another. Emphasis will be placed on conceptual problem solving, exploration of multiple hypotheses, and the development of innovative solutions. Documentation and presentation of this project will be required.

MA faculty

The heart of the MA-Des in Innovation Studies' capacity to understand, encourage, create, and teach innovation lies in the interdisciplinary collaboration among the faculty members and departments involved.

The synergies between our disciplines lead to a creative research approach that allows us to understand problems in nontraditional ways.

This collaborative approach in our program builds on international trends in business that have already brought our disciplines into dialogue with each other. As *BusinessWeek* recently noted, "the demand for innovation is soaring in the business community"; companies are looking for "the kind of design thinking that transforms cultures[7]" Similarly, in the last decade anthropologists have increasingly been hired by corporations, as well as design and marketing firms, for the insights they can provide into the roles that products play in the lives of consumers. *BusinessWeek* stated that "as more companies refocus squarely on the consumer, ethnography [the core research approach of anthropology] and its proponents have become star players."[8] Moreover, this synthesis is readily apparent in higher education: many design and human-computer interaction programs include courses in ethnography, and at a number of prominent universities, business and design thinking are being integrated in joint schools and programs.

The primary faculty comes from the Design department in the College of Visual Arts and Design with support faculty coming from Marketing and Logistics, Information Technology and Decision Sciences (College of Business Administration), and Anthropology (College of Public Affairs and Community Service). Each of these disciplines contributes an essential element to our collaborative research process:

- Anthropology contributes ethnography, a holistic, inductive approach to understanding people's practices and belief systems. Anthropologists help organizations develop user-driven innovations by conducting ethnographic research within communities of users; developing explanatory models about observed cultural patterns; and collaborating with designers and managers to implement new ideas based on those understandings.
- Marketing contributes insights regarding the nature and scope of emerging or extant unmet consumer/corporate wants and needs. Marketing also contributes actionable empirical insights regarding relevant environmental, economic or cultural trends currently emerging within domestic and global markets.
- Information technology and decision sciences contributes the technological means to link vast quantities of concepts, knowledge, and information from the design and reference disciplines with the global computer environment — and hence global economies, global knowledge systems, and global opportunities. The discipline provides methodologies for transforming conceptual designs into physical products, and interface designs into tangible controls.

In the future, the Innovation Studies program may add other disciplines to this core group, either to participate on particular projects, or as permanent members as the program expands over time.

The initial connections between the faculty of these various disciplines and the Communicationm Design faculty were built through existing professional relationships, and by reaching out and engaging in group discussion, both with the faculty and the department chairs. Content for coursework has been structured to encourage the development of academic interdisciplinary relationships. For example,

7. Bruce Nussbaum, "Innovation Predictions 2008," BusinessWeek, 14 December, 2007.

8. "The Science of Desire," BusinessWeek, 5 June 2006.

IRIDESCENT · VOLUME 1 · 2009 – 2011

TRANSFORMING DESIGN THINKING INTO COLLABORATIVE INNOVATION:MEETING THE EMERGING NEEDS AND DEMANDS OF A COMPLEX WORLD THROUGH DESIGN THINKING AND COLLABORATIVE INNOVATION

students enrolled in our *ADES 5526—Collaborative Design Studio* will also enroll in a linked course in one of the other departments/colleges (which will satisfy three of the required nine interdisciplinary credit hours). The two faculty members will work together to essentially create a six-credit hour research seminar in which students will employ the methods and tools of collaboration and design-driven innovation toward a single research problem.

Conclusion

The MA in Design with a concentration in Innovative Studies at the University of North Texas is a vital response to fundamental and rapidly accelerating social, business and educational trends. This new program will facilitate the generation of new theoretical and applied knowledge among interdisciplinary teams and create a space within which collaborative tools and strategies are invented and employed to spark and sustain innovation across multiple dimensions. By meeting its stated goals, the program will ultimately educate individuals who can not only function in but also contribute to a world where innovation has become an increasingly central focus.

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Xin: Icograda World Design Congress 2009

This paper was submitted for the Icograda Education Network (IEN) Conference that took place during the Icograda World Design Congress 2009 in Beijing, China, which was planned in collaboration with the Central Academy of Fine Arts (CAFA). The broader theme of the congress, Xin, literally signifies human speaking and hence message/letter in Chinese, Xin-信 which represents a primitive means of communication. The IEN conference invited papers under the following themes: Design Education and Innovation; Design Education and Diversity; Design Education and Cross-Disciplinary Collaboration and Design Education and Regional Development.

Design education
Design internships
Social design
Studio-in-the-Studio

WHAT USE IS DESIGN EDUCATION?
LAWRENCE ZEEGEN

ABSTRACT

What use is design education? There appears to be a constant and never-ending barrage of statistics that seemingly disprove the value of design education, dispute the relevance of studying design and disregard the impact that design educators and design graduates can have in the design profession and on society in general. The simple truth is that many working design professionals, most often the alumnae of design education themselves, are critical of a perceived over-supply of design graduates into the creative industries. They bemoan the fact that students appear to spend less-and-less time with tutors and are also critical that, in their view, most design students lack motivation and in some cases even real talent. The design profession has one chief concern, or so it would certainly seem, and that is to find graduates equipped and prepared to row the boats of industry, rather than rock the boats of change.

Despite the general tide of cynicism directed towards design education, amongst today's design educators and students there is a genuine understanding of our responsibilities – we know that making our voices heard is critical if we are to shape real change. In this time of environmental, economic and social crises - we make a simple choice, we can either equip those that choose to enter an industry that, as David B. Berman states in Do Good ~~Design~~; 'invents deceptions that encourage more consumption', or we can equip those that will help 'to repair the world'.

How can design education reeducate the disengaged, de-motivated and disfranchised design professional? If we are to succeed in changing opinions within business - it is crucial that we engage and communicate with the design industry. So, how best to achieve this? By constantly entering students into industry-focused, industry-led commercial 'student' design competitions? No. By sending out students to engage in ill-conceived design placements and internships – in effect supplying a cheap labor force of can-do/will-do Mac Monkeys? No.

The solution is in inviting the design industry back into design education. By flipping the standard work placement/internship model a full one hundred and eighty degrees and having design professionals leave the confines of the commercial world and step back into education to reinvestigate, rejuvenate and reinvigorate their practice with new thinking – engaging in both student-led and industry-initiated projects with a difference. Educators, students and designers united together in investigating the new values of today, tomorrow and thereafter. At Kingston University, London, the School of Communication Design is spearheading a new initiative – the Studio-in-the-Studio program.

FULL PAPER

What use is design education? When one considers, that in the UK, only 41% of all designers hold a degree level qualification and as many as 350,000 people working in design consultancies are actually non-designers, does design education still have a role to play?[1] What use is design education, when the competition for employment following graduation increases year on year? Between 2004 and 2007 the number

1. Higher Education Statistics Agency (HESA), 2009.

of UK-based design students rose from 56,785 to 59,345. And even with rising student numbers, merely 39% of the 17,297 new recruits into the design industry arrived directly from art school, college or university courses, equating to just 6,745 of all design graduates[2]. Given that only 29% of all art and design students currently engage in any form of professional work placements, are the creative industries and design education now so out of sync that the links between them are irretrievably damaged beyond repair?[3]

With a constant and never-ending barrage of statistics that seemingly disprove the value of design education, dispute the relevance of studying rather than simply practising design and disregard the impact that design educators and design graduates can have into the design profession and on society in general - what are we, as design educators, prepared to do to challenge and change opinion? The simple truth is that many working design professionals, most often the alumnae of design education themselves, are critical of a perceived over-supply of design graduates in the creative industries. They bemoan the fact that design schools, colleges and universities are increasing their intake, while students appear to be spending less-and-less time with tutors. They are also critical that most design students lack motivation and in some cases real talent. The design profession seems to have one chief concern: to find graduates equipped to row the boats of industry, rather than rock the boats of change.

Despite the general tide of cynicism directed towards design education, amongst today's design educators and students there is a genuine understanding of our responsibilities. We know that making our voices heard is critical if we are to shape real change. In this time of environmental, economic and social crises - we make a simple choice. We can either equip those that choose to enter an industry that, as David B. Berman states in *Do Good ~~Design~~*; 'invents deceptions that encourage more consumption', or we can equip those that will help 'to repair the world'[4].

The relationship between design industry and design education will continue to break down unless we do all we can to resolve the rift. As professional communicators and educators – communication must be at the heart of our strategy. If design education is to reeducate the disengaged, the de-motivated and the disfranchised design professional with what design has the power to communicate; we must communicate ourselves. If we are to succeed in changing opinions within the business of design - it is crucial that we communicate frankly and honestly with the creative industries.

So, how best to achieve this? By constantly entering our students into industry-focused, industry-led commercial 'student' design awards and competitions, No. And not by sending our students out to engage in ill-conceived design placements and internships – in effect supplying a cheap labor force of can-do/will-do Mac Monkeys. Perhaps internships are the real reason that such a low percentage of students are taking up placement 'opportunities'.

This can't be about one-way traffic. Of course, stepping out of the lecture hall and into the 'real' world is important to the growth of a student's experience. However the solution to the problem isn't going out, it is in coming in – inviting design industry professionals back into design education. By flipping the standard work placement/internship model

2. Design a New Design Industry, Design Council and Creative and Cultural Skills, 2006.

3. The Business of Design, Design Council, 2005.

4. Do Good Design (AIGA / New Riders) - David B. Berman, 2009.

a full one hundred and eighty degrees and having design professionals leave the confines of the commercial world and step back into education to reinvestigate, rejuvenate and reinvigorate their practice with new thinking – engaging in both student-led and industry-initiated projects with a difference. Educators, students and designers united together in investigating the new values of today, tomorrow and thereafter.

The space, time and freedom to experiment and explore truly creative and innovative solutions to communication design problems, away from the harsh realities of commercial clients and constraints, has become a rare commodity for design professionals. Real world projects come with deadlines, restrictions and reality-checks – the business of graphic design can be a hugely uninspiring place if corporate clients dictate every brief, every job and every project. And if every communication problem is set by a commercial client, with executives and shareholders to please, it is likely that the planet is being force fed yet another example of promotional design 'persuading people to buy things they don't need, with money they don't have, in order to impress others who don't care,' as Victor Papanek reasoned in *Design for the Real World*, as long ago as 1974[5].

Of course, it would be naïve to believe that all designers should immediately and completely stop creating work for clients wishing to sell, promote and persuade but if a call-to-arms, initiated by David B. Berman, for every designer and each design studio to 'donate' just 10% of their time and their output to projects that are ethically, environmentally and socially responsible, communication design could play a vital role in reversing the damage to the globe. We are currently heading along a pathway to global ruin, but it really doesn't have to be this way – the 10% call-to-arms could easily be less fantasy and more a reality. Design education can communicate this message. Education has a responsibility to lead, to inspire, to inform today's students and tomorrow's designers, but getting today's designers on board, those who remain out of the loop, is fundamental for change to happen.

A new program, Studio-in-the-Studio, within the School of Communication Design at Kingston University, London brings small design consultancies, companies, practices and studios back into the educational environment – for these practitioners stepping back into education can bring about real debate regarding the roles and responsibilities of the graphic designer. Closing the gap between educator and educated, Studio-in-the-Studio can alter the behavioral approach of a company by determining that 10% of each working week is given over to projects that make a difference to society rather than solely making a difference to bank balance.

The Studio-in-the-Studio program runs for between four and eight weeks and enables a varied timetable of projects, commercial and not-for-profit, to be run jointly by the professional practitioners, design educators and students. The visiting design company is housed in a professional studio environment, equipped with flat-screen monitors to plug laptops into, access to wi-fi, phone lines and use of a meeting room, all located within the educational institution, ideally within a student design studio.

The participating design company brings into the institution a range of live and very real commercial communication design problems to solve for real world clients with real budgets and real deadlines. The company moves lock, stock and barrel from their own commercial studio premises an educational studio. Design students then work alongside the company's staff as art directors,

5. Design for the Real World (Thames and Hudson) - Victor Papanek, 1974.

6. The Age of Unreason (Harvard Business Press) - Charles Handy, 1989.

graphic designers, design assistants and art workers while members of the team of design educators deliver associated contextual lectures, presentations and workshops that explore creative thinking methodology and the role of the designer in contemporary society.

Alongside working with students on commercial projects and engaging in forums with educators, the only other requirement for the design company participating in the Studio-in-the-Studio program is that they dedicate a minimum of 10% of their working week, just four hours, to contributing to not-for-profit projects. With design professionals and students working as equal partners, rather than students acting solely as interns, they approach a range of diverse projects. Working with local charities, community groups, hospitals and schools to participate in bringing strong visual and aesthetic design awareness to issues and concerns outside of mainstream commercial requirements, the design professionals are introduced to projects that combine design and social awareness.

Recent projects have ranged from the creation of a promotional campaign for a drug awareness center and rehabilitation program, utilizing ambient media and viral marketing techniques combined with print solutions to project work with anti-racism organizations, anti-fur charities and groups involved in raising awareness of issues such as the welfare of children, people with disabilities, the promotion of healthy living and eating and blood donor schemes.

Studio-in-the-Studio aims to bring together those that will articulate a greater understanding and commitment to driving and promoting change within the role of communication design. Charles Handy, the Irish author and philosopher, best described the part that designers, students and educators must play; 'The future is not inevitable. We can influence it, if we know what we want it to be. We can and should be in charge or our own destinies in a time of change'[6].

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Lawrence Zeegen is an illustrator, educator, writer. As Head of School, School of Communication Design, Kingston University Zeegen leads undergraduate and postgraduate courses in animation, filmmaking, graphic design, illustration and screen design for film and TV. As an illustrator, Zeegen creates images for the Comment and Debate pages of The Guardian Newspaper, as a regular fortnightly contributor. As an educator, Zeegen has lectured and spoken at conferences, institutions and design events nationally and internationally including in Australia, China, India, Israel, Japan, Korea, New Zealand, Russia, Serbia, Singapore, Turkey and the USA. As a writer, Zeegen contributes to numerous magazines and publications and is the author of four published books - Digital Illustration: A Master Class in Creative Image-Making (Rotovision, 2005), The Fundamentals of Illustration (AVA, 2005) and Secrets of Digital Illustration: A Master Class in Commercial Image-Making (Rotovision, 2007) and What is Illustration? (Rotovision, 2009).

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Collaborative learning
Online teaching tools
Working in design teams

HELPING DESIGN EDUCATORS FOSTER COLLABORATIVE LEARNING AMONGST DESIGN STUDENTS

JOYCE S R YEE, KATHRYN MCKELVEY, EMMA JEFFERIES

ABSTRACT

This paper discusses the development of online teaching resources that enable design educators to foster collaborative learning amongst students in the design disciplines. These online teaching resources will be made available through the Design Collaboration website (http://www.designcollaboration.org). This website was recently set up by Northumbria University, a UK based institution, to provide an online resource for design educators wishing to develop collaborative pedagogies in design education. It currently contains case studies of collaborative student projects but lacks practical teaching resources. As a result, a research project was set up to compliment the current case studies by creating a suite of design-specific tools and resources that will help foster team management and development. Although various institutions have addressed the subject of group work and collaborative learning, there has been no online resource dedicated to the development of practical teaching tools to help design students work and learn together.

This paper focuses on showcasing the range of teaching tools and resources developed through classroom-based trials. These resources have been developed specifically in consultation with Northumbria University's design educators and trialled with undergraduate and postgraduate students from different design disciplines. In addition, issues surrounding the translation of these tools into a practical, easy to use and accessible in an online format is discussed. The Icograda World Design Congress 2009 Education Conference is the ideal international platform to share these tools with the wider design education community. More importantly, we hope to grow the website by encouraging other design educators to submit case studies to the website, using it not only as a means of sharing good practice but also as a tool for reflection.

The research value is two-fold (a) translating implicit knowledge of collaborative learning into a practical teaching resource and, (b) helping tutors improve their teaching practice, by linking the teaching resource to real experiences through case studies and interviews.

FULL PAPER

Introduction

This paper discusses a research project conducted at Northumbria University, UK, relating to the development of online tools to foster collaboration amongst design students. The project identified common problems in different types of collaborative learning and translated this implicit knowledge into an online resource for the design education community. The project team consisted of Joyce Yee (project manager), Kathryn McKelvey (project advisor) and Emma Jefferies (research assistant).

Design education in general has always been focused on the individual, through the Apprenticeship model.[1][2] Individuality is prized

1. Katherine McCoy, "Education in an Adolescent Profession," in The Education of a Graphic Designer, ed. Steven Heller (New York: Allworth Press, 1998).

2. Nigel Cross, Designerly Ways of Knowing, Hardcover ed. (London: Springer, 2006).

in design because it is seen to be a creative and personal endeavour.

This however is not reflected in professional practice as designers often find themselves working in teams with other designers as well as non-designers. The effects of globalisation and diversification of manufacturing processes have shifted design education to what Moggridge[3] framed as a 'post-disciplinary design' era. Three reports looking at U.K.'s creative industry[4][5][6] have indicated two key factors that are representative of this change:

1. Lack of graduate jobs: Currently, 55,000 students are studying design in the UK, which suggests there are more than 11,000 graduates fighting for only 6,500 job opportunities in the industry each year.
2. Overseas production: Designers losing control over the whole production process as a larger percentage of production is being moved abroad.

These two factors suggest design education needs to provide a wider skill base to work across disciplines, placing more emphasis on developing students' ability to work in a team, communicate and share knowledge. Recognising the importance of fostering these transferable skills, this project focuses on helping design tutors to foster collaborative working and learning skills. The project recognises that instilling team-working skills provides the foundations for a student's self-development through collaborative learning.

What is collaborative learning?

Collaborative learning has been a well-supported approach in non-Design disciplines and represents a significant shift from typical teacher-centred learning environments. Theorists such as Piaget[7][8], Vygotsky[9], Fox and Karen[10] and Thomas and Funaro[11] recognise the importance of collaboration in constructive cognitive development. Collaborative learning is seen to provide more realistic social contexts in which to learn and helps sustain students' interests through a more natural learning environment, taking a variety of forms and practised in different disciplines. Smith and MacGregor[12] identify characteristics of collaborative learning as:

- An active, constructive process
- Dependent on rich contexts
- Diverse
- Inherently social

Collaborative learning according to Cohen *et al*[13] is based on the type of social interactions that occur during the learning process. It refers to a "situation in which particular forms of interaction among people are expected to occur, which would trigger learning mechanisms, but there is no guarantee that the expected interactions will actually occur."[14] Key to understanding its development is recognising the relationship between four characteristics:

Situation: What was the nature of the collaboration? Who was involved?

Interactions: What were the interactions between the people involved?

Learning Processes: What was gained by this learning process?

Effects: What were the effects and outcomes of the collaboration?

3. Bill Moggridge, Designing Interactions (Massachussetts; London: MIT Press, 2007).

4. George Cox, "The Cox Review of Creativity in Business: Building on the Uk's Strengths," (2005).

5. The Design Council and Creative and Cultural Skills, "High-Level Skills of Higher Value," (2007).

6. Jennifer Whyte and John Bessant, "Making the Most of Uk Design Excellence: Equipping Uk Designers to Succeed in the Global Economy" (2007).

7. Jean Piaget, The Language and Thought of the Child (New York: Harcourt, 1928).

8. ———, The Moral Judgement of the Child (London: Kegan Paul, Trench, Trubner and Co, 1932).

9. Lev Semyonovich Vygotsky, Mind in Society: The Development of Higher Psychological Processes. (Cambridge, MA: Harvard University Press, 1978).

10. B Fox and L Karen, "Collaborative Cognition," (Report from Linguistics Department, University of Colorado, Boulder, 1990).

11. J. W. Thomas, and Funaro, G. M. , "A Multi-Media, Computer-Based Model for Learner-Directed, Collaborative Problem-Solving.," in Working Notes of 1990 Spring Symposium Series on Knowledge-Based Environments for Learning and Teaching, ed. B. Woolf, et al (Stanford University. : 1990).

12. B. L. Smith and J. T. MacGregor, eds., What Is Collaborative Learning?, Collaborative Learning: A Sourcebook for Higher Education. National Center on Postsecondary Teaching, Learning, & Assessment (Syracuse University,1992).

13. Louis Cohen, Lawrence Mannion, and Keith Morrison, A Guide to Teaching Practice (London: Routledge, 1996).

14. Patrick Dillenbourg, "Introduction: What Do You Mean By "Collaborative Learning"," in Collaborative Learning: Cognitive and Computation Approaches, ed. Patrick Dillenbourg (Amsterdam: Pergamon, Elsevier Science, 1999). 5.

Collaborative learning can also be described as the degree to which a learning task involves a prescribed division of labour amongst participants. Engeström[15] differentiates them as:

Type 1: Co-ordination – Students are carrying out individual tasks without having a shared object. It is accomplished by the division of labour amongst the participants.

Type 2: Co-operation – Students collaborate in a shared problem and try to negotiate an equally acceptable way of solving it.

Type 3: Reflective communication – Students are not only sharing an object but also organising their collaborative efforts through a shared script of joint activities.

The type of collaborative learning depends on whether students are sharing the same objects (such as visual representations, concepts, tools, and concrete materials) when solving the design problems.

According to Engeström[16], reflective communication is the most effective kind of collaborative learning in prompting social interaction by sharing both the tasks and how they are organised.

In relation to Design, collaborative designing is described by Lahti *et al*[17], as "a process of actively communicating and working together in order to jointly establish design goals, search through design problem spaces, determine design constraints, and construct a design solution". Within a pedagogic environment, the commonest forms of collaborative learning occur during formal group projects. At Northumbria University, a majority of the collaborative learning within the School of Design occurs in live industry projects where a company or an organisation acts as the 'client' and students are asked to respond to a design brief. Generally, the brief requires a group rather than an individual response due to the scope of the design problem.

How the tools were developed

Current resources in collaborative learning for Art and Design include online teaching resources such as Clients and Users in Design Education Project,[18] StudyNet,[19] and textual resource such as Deliberations[20] and Tools for Teaching.[21] Our review reveals that these resources are limited in range and insufficient to assist design tutors to foster collaborative learning in design teams. Additionally, the resources are textual and not as engaging as using a mixture of media, as proposed in this research project. Hence, a key project objective was to produce teaching and learning resources that were practical, rich, engaging and relevant to undergraduate and postgraduate design students.

The development of these tools is divided into four stages (see Figure 1). The first seeks to identify a range of common issues and challenges faced by tutors during collaborative projects through a questionnaire. The second stage involves reviewing existing collaborative learning tools in order to evaluate and match their appropriateness with the list of issues identified in the first phase. The third stage is the development and translation of collaborative tools into a format that is communicable and usable for tutors. These resources are published on the Design Collaboration website. Finally, the issues and tools are connected back to the real experiences of design practitioners through a series of filmed interviews. These are

15. Y. Engeström, "Interactive Expertise: Studies in Distributed Working Intelligence," in Research Bulletin 83 (University of Helsinki, Department of Education, 1992).

16. Ibid.

17. H. Lahti, P. Seitamaa-Hakkarainen, and K. Hakkarainen, "Collaboration Patterns in Computer Supported Collaborative Designing," Design Studies 25, no. 4 (2004). 351

18. CEBE, "Client and Users in Design Education Project," http://cebe.cf.ac.uk/learning/collaborative/resources.php (accessed 7 June, 2008).

19. The University of Hertfordshire, "Studynet," http://www.studynet2.herts.ac.uk/lis.nsf/getpage?readform&id=studynet (accessed 7 June, 2008).

20. London Metropolitan University, "Deliberations," http://www.city.londonmet.ac.uk/deliberations/collab.learning/urls.html (accessed 7 June, 2008).

21. Barbara Gross Davis, Tools for Teaching (San Francisco: Jossey-Bass, 1993).

| 1 STAGE | **Identify** Uncover a range of common issues and challenges faced by tutors during collaborative projects | 2 STAGE | **Investigate & Develop** Used issues to guide exploration of existing collaborative tools and the development of new tools | 3 STAGE | **Implement** Translation of tools and resources into a format that is easily communicable and usable for tutors on the website | 4 STAGE | **Connect** Issues and tools are connected back to the real experiences of design practitioners through a series of filmed interviews |

1.

2.

1. Project stages.

2. Example of how project management issues were mapped to potential tools and resources.

meant to serve as a learning resource for students and to provide real-world grounding of the challenges and issues related to design teamwork.

The analysis of the questionnaires collected in Stage One identified four categories of issues, which are related to the various stages of a collaborative student project. These are planning, management, assessment and legacy. In Stage Two, we proceeded to cross-reference existing tools with the issues identified in Stage One. As a result, we formulated a matrix of issues with possible resources that could be developed into practical tools. Figure 2 illustrates an example of how the different categories of issues encountered during the management of a collaborative student

project are linked with possible tools. These matrices were used to inform the project team on which tools to trial with design students and to develop into practical resources.

The project team identified suitable collaborative projects that ran in Northumbria's Design School between January-April 2009. We worked closely with module tutors to understand the types of project and how they would like to manage the collaboration between students. This initial discussion helped identify suitable tools to trial with the respective students and plan the delivery into the project timetable. We were involved in two different collaborative projects, one with undergraduate students, and the other with postgraduate students. The varying experiences, subject specialism and cultural backgrounds found in the two groups of students provided us with challenging student environments to work with.

The classroom-based trials were usually in a workshop or seminar format. After every session, the facilitator wrote notes on how the session went and which aspects of the tool could be improve on. These sessions were not only important for testing the appropriateness of the tools, but also enabled the project to identify emergent issues overlooked in Stage One. For example, resolving conflict amongst team members emerged as an important issue during a session where students were asked to select their team members. A specific student was not accepted into any team, as he was perceived to be a 'difficult' person to work with. In that instance, the tutor had to intervene and act as a facilitator in order to resolve the conflict.

The third stage involved the refinement and translation of teaching tools into a format suitable for online delivery. This meant that each tool had to be written and structured in a set format which is available as a downloadable PDF document with pre-defined templates that tutors can use immediately. The tools are also linked to additional internal and external resources, which could be used as support material. Some of the additional support material comes in the form of short videos, which were filmed specifically for this project. We asked a range of designers from different disciplines and sectors about the challenges of working in a team and they responded with a range of interesting and useful advice for students.

Collaborative learning tools for design students
This section introduces the range of tools developed from our research and provides some detailed examples. We also introduce the structure of the Design Collaboration website in order to contextualise the roles of the tools in relation to other parts of the site.

Design Collaboration website
The Design Collaboration website is divided into seven sections (see Figure 3 for its system architecture). A main section is 'Explore Collaborations' (Figure 4) containing case studies of different types of collaborative learning which are project reflections written by design tutors. This offers a way of recording how student design teams have been facilitated and enables sharing of good practice. An equally important section is 'Teaching Resources' (Figure 5) which contains a list of specially developed teaching and learning resources for design education, which supports tutors wishing to address issues encountered during collaborative learning.
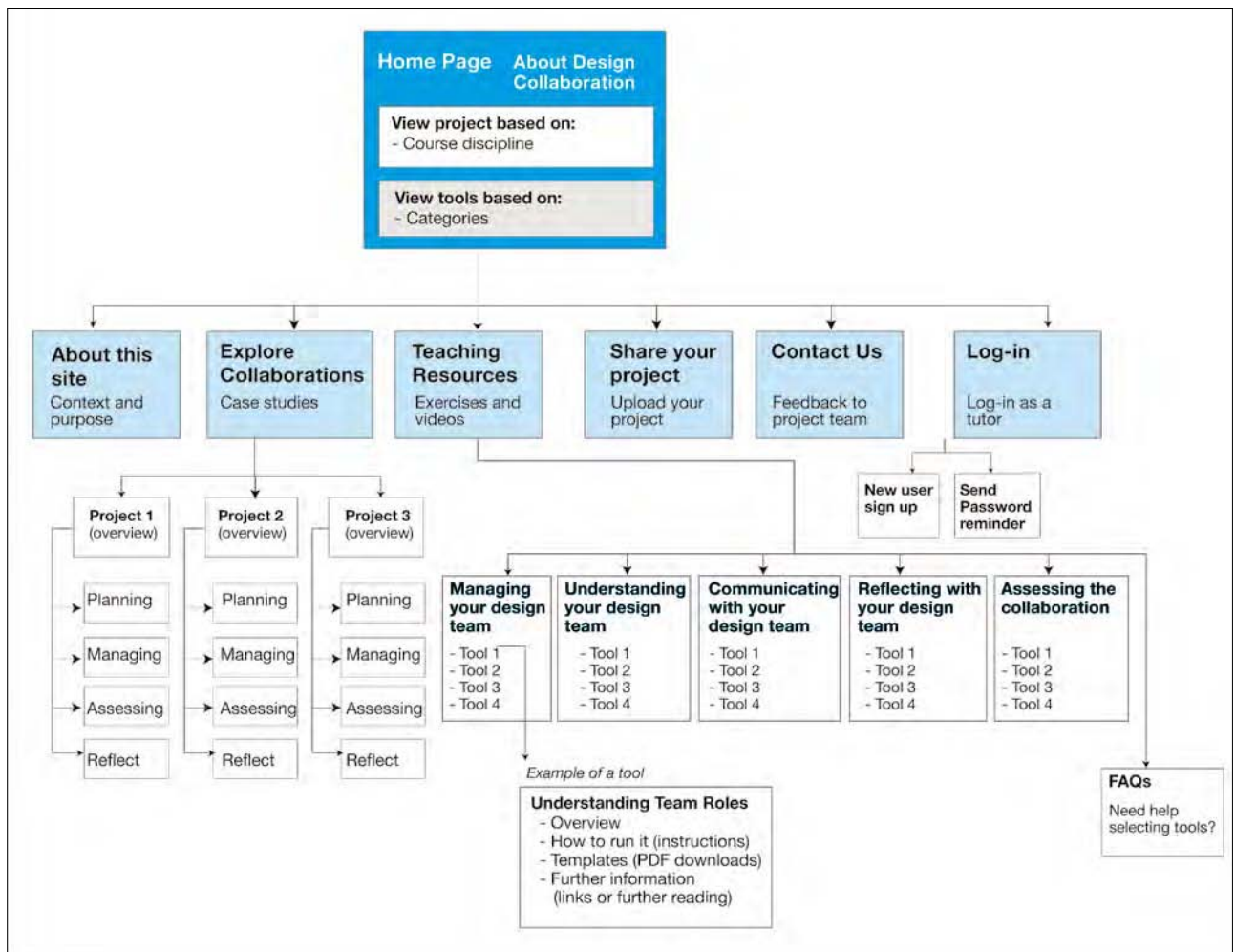
3.
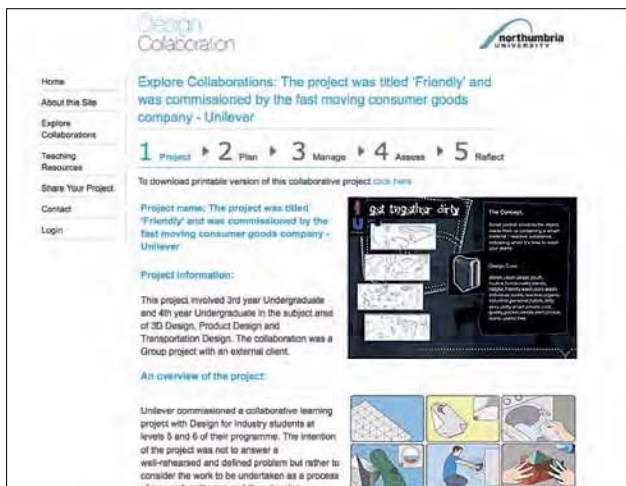
4.

5.

3. Design Collaboration web pages.

4.–5. Screen shots of the Explore Collaborations and Teaching Resources pages from the Design Collaboration website.

Learning and teaching resources

Table 1 illustrates the final list of teaching and learning resources developed for the project. Each theme is supported by either a PDF, a video or both. The resources are grouped into five main sections, which are related to the activities of managing, understanding, communicating and reflecting with a design team, as well as assessing the collaboration

itself. Not all of them have been trialled with students, as some of the themes emerged during the work with students or when interviewing professional designers about design teams. Due to the shortage of space, we will only describe one exercise from each theme which we have trialled as we are able to comment on their effectiveness.

Managing your design team	Understanding your design team	Communicating with your design team	Reflecting with your design team	Assessing the collaboration
Roles of a designer in a design team	Icebreaker: personal context exercise	Team communication guidelines	Reflective skills within a team	Teamwork assessment
Resolving conflicts	Developing a team philosophy	Communicating with others	DeBono's Six Thinking Hats [22]	Positive critique
	Collaborative enquiry metaphors	Designer and client role play		
		Aiding communication in a design team using personas		
		Mind mapping		

Table 1: list of teaching and learning resources on http://www.designcollaboration.org

Managing your design team – Roles of a designer in a design team
This is a familiarisation exercise to enable discussion and negotiation of roles within a team. It is divided into four parts – the first task involved sharing individual likes and dislikes about team work, and canvassed

6. Students participating in the Design Team Roles exercise.

6.

opinions on desirable personality traits for a team member. The second task asked the teams to consider several possible roles that a design team might need to work effectively. Examples of roles included an Investigator, a Catalyst, a Manager, a Communicator and an Artist. Once the group developed a shared understanding of what these roles were, they were asked to map each member's preferred role and to highlight an

22. Edward De Bono, Six Thinking Hats (Massachusetts Back Bay Books, 1999).

additional role in an area where they would like to improve. The team was asked to negotiate the roles between themselves in order to arrive at an agreed solution. We emphasised that these roles are not fixed and should be fluid during the duration of a project, depending on the requirements. When we ran this exercise with students, we observed that it helped them understand different team roles, share areas of weakness and relate their experiences to these roles. Introducing the roles also enabled the tutor to facilitate discussions around team dynamics and the importance of finding the right balance.

<u>Understanding your design team – Developing a team philosophy</u>
This exercise was designed to help newly formed teams develop a common philosophy of values and process. We appropriated a technique developed by one of our team members[23] used as a consultation method with stakeholders in the development of a brand identity. Our exercise consisted of a set of image cards designed to act as catalyst to discussions about the team approach. Each team was given a set of cards and asked to select a type of animal, a celebrity and a chair that best represented their team philosophy. They were also asked to brainstorm keywords that might go with the images selected and devise a team name and motto. The main objective of the exercise was to offer an opportunity for team members to share values, process and motivations. The final outcome of a team 'motto' was incidental and only served as a vehicle for the purpose of team bonding and communication. Students found the session 'fun' and 'entertaining', boosting team morale and useful in terms of setting a shared agenda.

7. Students participating in the Developing a Team Philosophy exercise.

7.

<u>Communication in a design team – Role playing designer/client relationships</u>
This resource is important for student projects involving an industry partner where students have to deal with the expectations and criticism of an external client. This theme is also supplemented by videos of experienced designers sharing their experiences of managing and

developing good client relationships. We asked the teams to select one member to act as a client. To help that student get into character, we provided blank facemasks and asked him/her to customise it. Although the students responded well to the 'fun' element of the exercise, they also took time to develop the characteristics of the client figure in order to create a believable character. We then asked each team to do a mock presentation to their 'client' in order to test how he/she might respond. This exercise enabled the students to anticipate potential responses from the client and, importantly, to understand what the client might expect from the design outcomes.

<u>Reflecting with your design team – Reflective skills within a team</u>
Students were given a framework to help them reflect as a team which took the form of 'What?', 'So what?' and 'Now what?'. This tool can be used at any time to help them reflect either on themselves, the process or team members. The students were introduced to this approach at the start of their collaboration, where the importance of using reflection was explained. The tutor encouraged them to use this tool during the project when difficulties arise. Students found that it helped them consider issues and explore possible solutions.

<u>Assessing the collaboration – Teamwork assessment</u>
This exercise was used to enable students to reflect on their experience of working in a team. They used the criteria provided, which could change dependent upon the project, to look at what they had learned, in terms of cognitive skills, technical skills and social skills. When they had done this, they applied the same criteria to each of their colleagues and gave them a mark out of five for each question. This information was then collated together, as each member of the group offered a mark for themselves and their colleagues, so that a combined mark was collected. Students could offer comments about the assessment process, the project or any other information that might be useful in the successful running of the module. This then could be used to determine the weighting of these marks, dependent upon the project and the importance of the team-working element.

Conclusions
This project has highlighted the importance of incorporating collaborative learning into design education. We found that collaborative learning enhanced and improved idea generation amongst the students. It enabled the team to take individual ideas to a much higher level by sharing ideas and challenging each other. Collaborative learning also enabled the students to learn from each other, for example technical and negotiation skills. For design education to progress and reflect professional practice, the benefits of collaborative learning need to be made explicit to the student and complimentary forms of evaluation found or explored. This would enable more effective design team-working, encourage students to learn from each other and re-balance the focus on the individual learning with learning collaboratively.
Developing a resource that was easy to use and accessible was an important project objective. This was because planning and managing

23. Joyce Yee and Louise Taylor, "Are You a Delia or a Chantelle?" Engaging Stakeholders in Branding Exercises," in Design and Semantic of Form and Movement (DeSFORM), ed. Loe Feijs, Steven Kyffin, and Bob Young (Newcastle, United Kingdom: Philips, 2007).

a collaborative project involving an external client places additional workload on a tutor. A majority of a tutor's time is spent on developing and fostering a relationship with the external client as well as ensuring that the students work to project deadlines. As a result, tutors often do not have time devoted to helping students develop ways to work and learn collaboratively. Therefore one of our key objectives was to offer tutors a ready-to-use resource in order to enable them to focus on the pedagogic issues more effectively. The responses that we have received so far, from design educators who have participated in the project, have been positive and encouraging. However, it remains to be seen how the tutors will cope with using the available resources and facilitating the exercises without the presence of the researchers. Additionally, as the tools were developed within a single education environment in a UK context, we have not been able to evaluate their effectiveness in a different learning context.

Although the resources on the website are directed at the educational community, we recognise that the resources could be equally useful for design practitioners. Design managers are especially interested in tools that can help them develop their team, especially when trying to induct new members. Further development will be required to translate these resources for professional use. These developments can then be used to improve and expand the Design Collaboration website.

And finally, in order to grow and improve the resource, we would like to invite design educators attending the Icograda World Design Congress to share their own experiences of collaborative projects on our website and to explore the tools available. As an ongoing and live resource, we welcome any feedback on ways to improve the tools and resources.

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Xin: Icograda World Design Congress 2009
This paper was submitted for the Icograda Education Network (IEN) Conference that took place during the Icograda World Design Congress 2009 in Beijing, China, which was planned in collaboration with the Central Academy of Fine Arts (CAFA). The broader theme of the congress, Xin, literally signifies human speaking and hence message/letter in Chinese, Xin-信 which represents a primitive means of communication. The IEN conference invited papers under the following themes: Design Education and Innovation; Design Education and Diversity; Design Education and Cross-Disciplinary Collaboration and Design Education and Regional Development.

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Emma Jeffries' interest lies with the investigation of strategies to foster students' visual literacy and self-knowledge, which began during her Degree in Multimedia Design at Northumbria (2003) and lead to the pursuit of the PhD which she is currently completing. Her PhD research investigated ways to facilitate and evaluate students' visual practices in design education. Emma Jefferies has been responsible for researching, as well as creating and capturing the content for the online resources on the Design Collaboration website.

A FADING TRADITION: DESIGN AS A PORTAL TO THE DISCOVERY OF ONE'S OWN CULTURAL HERITAGE
DEBORAH ALDEN

ABSTRACT

In most industrialized nations, the journey from third to first world replaces an old way of life with a new one. Throughout this transition, substantial physical, social and economic changes occur, often resulting in a disintegration of cultural traditions. This is especially true in Singapore, where this transition has taken place in a highly compressed timeframe, resulting in three generations of Singaporeans living in and perceiving three vastly different Singapores, and leaving the youngest struggling to understand their cultural heritage.

This paper presents A Fading Tradition, a project that aims to engage this youngest generation in the discovery of their cultural heritage from within by expressing it without.

In this project, students select a fading tradition (an art form, craft, way of life, food, music, celebration or anything else that is disappearing) and strive to give it relevance in today's Singaporean society by designing a way to present it to contemporary culture. After undertaking extensive research into the tradition and why it is fading, including identifying and shadowing an expert in the tradition, students define their contemporary local audience and develop a design direction.

Students are then given an additional challenge, to design a way to present this same tradition to another audience, the foreigner, to connect this local tradition to a global audience. After surveying people from their two target audiences, students must look at the tradition from both an insider's and outsider's point of view, consider the cultural differences between the two audiences, analyze their audiences' previous knowledge and exposure to the tradition, and determine distinct approaches for each design solution. The efficacy of these solutions are ultimately tested and determined by their presentation to both local and foreign critics.

This paper documents the process, results and insights gained by this project, undertaken by 74 second-year undergraduate Visual Communication students over the last two years.

FULL PAPER

Cultural identity in Singapore

"In an era of globalization, increasing numbers of designers are discovering that being from somewhere in particular and designing work that feels as if it comes from somewhere in particular—rather than everywhere and, ultimately, nowhere—has never been more important."[1]

As a design educator in Singapore, I often hear my students express their grievances about the lack of a local design identity. On one hand, this is to be expected as the design industries here are in their infancy. The school where I teach, which opened in 2005 and recently unleashed its first batch of graduates, was part of a greater national economic scheme formulated in 2002, merely seven years ago, to develop the country's creative sector. However, this modest maturation level is not the only culprit leading to this deficiency. Existing in the younger generations

1. Alice Twemlow, What is Graphic Design For? (RotoVision, 2006), 14.

of Singaporeans is an extremely fragile, and in some cases broken, sense of cultural identity.

In a survey conducted by the National University of Singapore of students aged 14 to 28, "...nearly a quarter of those who come from the country's predominant ethnic Chinese population wish they were not Chinese. Instead, virtually all of them said they preferred to be Caucasian or Japanese."[2] Young people are looking outside of Singapore to find identities to adopt, indicating a serious disconnection in need of repair.

In 2007, our school was privileged to host the The Way of Asian Design seminar, which featured some of the legends of East Asian graphic design including Professors Kohei Sugiura (Japan), Ahn Sang-Soo (South Korea) and Lu Jing Ren (China). During the question and answer period, a local design professional described this void of cultural identity and asked if anyone on the panel had advice for Singaporean designers. Professor Kohei Sugiura simply replied that he wished he were so lucky. Then, he went on to eloquently describe how Japan is a monoculture where everything is the same and after a while to find inspiration you have to look outside or make it up, whereas in Singapore you can simply reach into your pocket and pull something out. If you don't like it, reach in again, and again, and again, until something speaks to you. There is so much from which to choose at your fingertips.[3]

Singapore presents a much more complex cultural landscape (Chinese, Malay, Indian and a large international expatriate population) to navigate than a place like Japan with its strong and distinctly Japanese design identity, but as Professor Kohei implied, that is precisely Singapore's advantage. However, it must be viewed as such. Instead of looking outside, Singaporean designers should be striving to understand and reconnect with their own extraordinarily rich and vibrant cultural heritage.

"We can think of change occurring in a culture as a form of continual adaptation to its own new condition. For this change to remain continuous and balanced, however, it must never be too radical, rapid, or arbitrary. Change of this nature can create an arrangement of meanings, values, and purposes that do not follow any pattern that can be discerned, leaving a culture's members with a fragmented worldview, strained connections, and an unguided relationship with their natural habitat. Such conditions make a culture extremely vulnerable to collapse or radical transformation that essentially destroys the original culture."[4]

Peter Martin wrote this based on his observations and experience living in Qatar, a young country that has undergone rapid transformation in a short timeframe, but it just as easily could've been about Singapore. Over the last four decades (within the last two generations), Singapore has thrust itself forward, paving its way from third world to first, from wood kampong houses with thatched roofs nestled in the rural jungle to an explosion of glass skyscrapers and concrete high-rise housing estates. The disconnection caused by this brisk metamorphosis is endemic in the younger generations, as they have no memory of earlier iterations of their homeland. Furthermore, the disruptive effects that the decline of intergenerational communication (due to language policies) has had on the natural flow of cultural legacies and histories from generation to generation are causing traditions to fade away, along with their

2. Michael Richardson, "Youths Would Rather Be White or Japanese: Singapore Identity Crisis?," New York Times, 20 December 1999, NY Times.com.

3. Sugiura Kohei, speaking at The Way of Asian Design seminar during the Q&A session, 30 November 2007.

4. Peter Martin, "A Step Ahead of Praxis: The Role of Design Problem Definition in CulturalOwnership in Design," in Design Studies: Theory and Research in Graphic Design, ed. Audrey Bennett and Steven Heller (Princeton Architectural Press, 2006), 262.

1a.

1b.

1c.

1a-c. Two solutions for tikam tikam (a game of chance). Packaging for a t-shirt concept store by Han Zi Rui (top). A mix-and-match system for Singapore character figurines by Bryan Lim (center & bottom).

5. Shari Chong, written in project reflections, April 2008.

accompanying sense of belonging, which the younger generations so desperately seek.

In developing the curriculum for the Visual Communication program at our school, we've tried very hard to place it within a viable contemporary and culturally local context including a focus on multilingual typography and required history courses in both Asian and Western art and design. Our faculty is extremely diverse and international, coming from different educational and professional backgrounds. This breadth of experience is a huge asset to our program but when it comes to helping our students connect with their culture and find their identities it can serve as an impediment. Our students must understand their culture in order to understand themselves and to ultimately establish a Singaporean design identity. This project, A Fading Tradition, provides one step towards bridging that cultural chasm.

Project: A Fading Tradition

A Fading Tradition is a project that encourages students to discover their own heritage by finding a way to communicate it to others. In this project, students select a fading tradition (an art form, craft, way of life, food, music, celebration or anything else that is disappearing) and strive to give it relevance in today's Singaporean society by designing a way to present it to contemporary culture. After undertaking extensive research into the tradition and why it is fading, including identifying and shadowing an expert in the tradition, students define their contemporary local audience and develop a design direction (Part 1).

Students are then given an additional challenge, to design a way to present this same tradition to another audience, the foreigner, to connect this local tradition to a global audience (Part 2). After surveying people from their two target audiences, students must look at the tradition from both an insider's and outsider's point of view, consider the cultural differences between the two audiences, analyze their audiences' previous knowledge and exposure to the tradition, and determine distinct approaches for each design solution. The efficacy of these solutions are ultimately tested and determined by their presentation to both local and foreign critics.

This project is given during the second semester of the Visual Communication curriculum, in a studio that focuses on the relationship between message and audience, content and context, and emphasizes the role of research methodologies within the design process. Admittedly, this is a difficult and complex project to introduce in such an early studio but for many students it is timely as it shifts the way they view and approach design at the beginning of their education, setting them on a course of inquiry and discovery. As one student, Shari Chong, explains:
"It was with this project that I first discovered a love for researching. I realized I needed to know the 'WHY'S' before I could even begin making a final designed deliverable. I can assume nothing about messages and what people want or need until I've asked the right questions. It only seems fair to me that if I'm going to tell people something, I better know what I'm saying and why and whether it's valid."[5]

Process is stressed over product. Students learn that design isn't simply making pretty things but engaging in a more involved process of interpreting content and applying critical thinking to determine how best

2a.

2b.

2c.

2a-c. Do-it-yourself kits for making gubahan hantaran by May Lim (top). Multisensory Chinese tea shop collateral by Soh Jin Ping (center). Peranakan beadwork dinnerware by Loh Li Ying (bottom).

to connect with people, how to successfully craft a message relevant to their particular audience and deliver it through the most appropriate media.

Students often struggle with this project at the beginning. Few if any precedents exist for them to reference. They certainly can't turn to Japan or the West, as they usually do, to find examples on how to express Singapore's local culture. Instead, they must apply ethnographic research skills and dig deep to understand their topic and both of their audiences well enough to develop original, effective solutions.

In a society where speaking up in a public setting or when one isn't absolutely sure of the "right" answer is rare, it can be difficult to get students engaged in a critical discussion of each other's work. This project erases that reticence. Since students' peers are often the chosen local audience for Part 1, as it is their generation for which the traditions have faded the most, everyone in the class is an authority and has an opinion. The classroom becomes a place for the testing and incubation of ideas where students get immediate feedback from their intended audience, heated passionate debates ensue and peer critiques are intense and honest.

In Part 1, students face the difficulty of making a tradition relevant to an audience who is culturally attached and fairly cognizant of its existence but who have turned their back on it. In Part 2, the converse is true. Students must look at the tradition from an outsider's viewpoint. They are challenged to consider what would make the tradition relevant to these divergent audiences and how a message and therefore solution concerning the same topic changes depending on the audience to which it is directed.

Over the last two years, 74 students have undertaken this project. They have revisited their childhoods by exploring traditional *kampong* games (five stones, *chapteh, tikam tikam,* zero point), spent nights backstage mingling with *wayang* (Chinese street opera) performers, cooked with grandparents to discover the special meaning each ingredient contributes to a Chinese New Year dinner, and tracked down the last remaining expert in Singapore on *wayang kulit* (Indonesian shadow puppets). Furthermore, mothers have been translators when communication broke down between daughters and grandmothers, resulting in three-generation conversations about the meaning of gifts given during traditional Chinese weddings.

Multisensory Chinese tea shops for youths have been designed along with a modified version of Scrabble for learning Jawi (the Arabic alphabet for writing the Malay language), dinnerware with the motifs and colors of traditional Peranakan (Malay/Chinese) beadwork and an online audio journal of the unique jargon and sounds that encapsulate the experience of a *kopitiam* (traditional breakfast and coffee shop). Foreign students have uncovered links between their native cultures and their current residence, opening up chapters of history previously unbeknownst to their local classmates, and Chinese students have revived Malay traditions such as *batik* (a wax-resist dying technique for textiles) and *gubahan hantaran* (handmade wedding favors), giving them the opportunity to study and understand the breadth and richness of Singaporean culture beyond their own race.

Case study: chinese dialects

Everyday use of Chinese dialects in Singapore, other than Mandarin, has fallen drastically in the last twenty years, contributing to the decline in intergenerational communication.[6] Choosing to take on this politically charged topic, See Boon Ping interviewed his grandmother, in Hokkien, to understand a time when dialects flourished, and studied the bilingual language policies put in place since then. At first, he thought the only way to make a difference would be to incite policy change. But, then in class one day as he was saying how proud he was to be 100% Hokkien and that it was very rare, two of his classmates chimed in saying they were also 100% Hokkien. Soon all the Chinese Singaporeans in the room were boasting of their own dialect group origins. Although they had known each other for two years, no one knew who was Cantonese, Teochew, Hainanese, Hakka, etc. Boon Ping realized that his peers had a lot of pride in their dialect groups even if they were insecure about their limited command of the language. His solution was to stage dialect flash mobs around Singapore where vocabulary and pronunciation cards would be passed out so people could meet others who shared their heritage and practice speaking the language together. His intention was that by orchestrating these introductions people would find new friends with whom they could later meet up and continue chatting. For Part 2, he targeted expatriates and tourists who would witness the flash mobs and receive similar vocabulary cards with an explanation about the event and the particular culture of the dialect group to bring awareness to the foreigners with hopes they might join in the conversation and learn more.

3a.

3b.

3c.

3a-c. Grandmother interview (left), invitation (center) and dialect flash mob (right) by See Boon Ping.

Case study: burning paper offerings

In surveying her generation to find out why they aren't participating in the tradition of burning paper offerings so their ancestors can flourish in the afterlife, Jasmine Tan found that environmental issues were top on their list. Upon reading that China, Hong Kong and Taiwan are already taking stricter measures to curb the impact of this tradition, Jasmine realized how imminent the need was to develop an alternative method. She deemed that the root of the tradition wasn't the act of burning paper per se but honoring the deceased, an extension of filial piety. Stumped as to how to balance the integrity of both the tradition and her ethics, she plowed forward with the following mantra: "Don't compromise tradition for the environment. Don't compromise the environment for tradition." Digging into her research, she found examples of traditions that were changed because of ethical reasons, such as placing small representative objects in tombs instead of the live burial of human sacrifices to honor

6. Statistics Singapore, "Census of Population 2000: Education, Language and Religion," http://www.singstat.gov.sg.

recently deceased kings. With this in mind, she conceived of Compos'tin, a container for placing paper offerings, which would over time turn into compost. The compost could then be used as fertilizer to promote new growth, giving back to the environment rather than harming it and still honoring one's predecessors through paper offerings. The rest of her campaign for Compos'tin included an informational website and booklet to promote the benefits of this alternative tradition with the slogan "Remembering the past, protecting the present, saving the future."

For Part 2, to connect her foreign audience to this tradition, which at first glance may seem peculiar to an outsider, Jasmine relied on the universal theme of familial love. A small, intimate book reveals glimpses into these rituals through carefully constructed narratives paired with poignant photography.

4a-c. Honoring ancestors while saving the environment with Compos'tin (top), informational booklet (right top) and narratives of familial love (bottom) by Jasmine Tan.

4a.

4b.

4c.

Case study: Wayang

When Chen Huimin determined that her generation's entertainment alternatives were too vast and attention spans too short to sit for a four to five hour wayang (Chinese street opera) performance, she decided

to focus on the theatrical and bold traditional make-up. She believed the youth-driven burgeoning Singaporean fashion industry would be receptive to an adventurous but slightly toned down line of make-up. Thus, Ju (meaning show or drama in Mandarin) was born, a brand featuring three distinct palettes, each influenced by a different wayang character: Wu Dan (Warrior Lady), Hua Dan (Virtuous Maiden) and Qing Yi (Madam Elegance). For Part 2, Huimin's audience, foreign tourists, discover the patterns, colors and fabrics of the costumes in their wayang-themed boutique hotel rooms. The symbolism of the costume's details and how they add meaning to and define the character that particular room is based upon is revealed the more guests explore. Similar to a treasure hunt, the guests develop a greater understanding of and personal connection to this important storytelling feature of wayang over the course of their stay.

5a-b. Wayang character inspired make-up (left) and boutique hotel room (right) by Chen Huimin.

5a.

5b.

Concluding thoughts

With a greater cultural understanding, a local design identity will grow organically as the industry matures over time. The pioneers of Singaporean design, who are barely one generation older than my students, also seem to struggle with their cultural identity at times but a localized appreciation is starting to manifest within this group and a small grass roots movement is gradually emerging. A few studios, like Little Red

Dot and Asylum, tackle the issue of local cultural identity in their practice, making and supporting products with a distinctly Singaporean flavor.

I feel extraordinarily fortunate, as an outsider, to have been granted the privilege to go on this journey with these students, to have been witness to their struggles, their epiphanies and their discovery of self. I certainly have a much greater understanding and appreciation of Singapore's cultural landscape and its unique position within the phenomenal Southeast Asian region and it's evident that they do as well. This project, A Fading Tradition, isn't going to change the rapidity of progress in Singapore nor unfortunately is it likely to have much of an effect on the disappearance of many of these traditions. However, it does motivate this youngest generation of designers to take pride in and draw inspiration from their local cultural context and since they will be creating much of the visual landscape in Singapore for the foreseeable future. That is encouraging.

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Xin: Icograda World Design Congress 2009
This paper was submitted for the Icograda Education Network (IEN) Conference that took place during the Icograda World Design Congress 2009 in Beijing, China, which was planned in collaboration with the Central Academy of Fine Arts (CAFA). The broader theme of the congress, Xin, literally signifies human speaking and hence message/ letter in Chinese, Xin-信 which represents a primitive means of communication. The IEN conference invited papers under the following themes: Design Education and Innovation; Design Education and Diversity; Design Education and Cross-Disciplinary Collaboration and Design Education and Regional Development.

Responsibility
Social advocacy
with design
Social and environmental
awareness
Socially relevant

ISSUE-BASED DESIGN EDUCATION: CHANGING THE WAY FUTURE COMMUNICATION DESIGNERS ARE TAUGHT IN A GLOBAL SOCIETY

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ABSTRACT

Communication design education in the United States takes on various methodologies and teaching strategies. This paper focuses on an alternative methodology called Issue-Based Design Education (IBDE). Educational experiences in IBDE would encourage meaning making and social responsibility while learning to think critically about design solutions. A discussion on the importance and value of advocacy through design products and surfaces is addressed. The paper will propose that an "Issue Based" methodology can lead to a stronger understanding of social worth as a communication designer.

The paper draws on the discourse of design scholars who have argued that designers need to be more socially conscious and socially relevant when creating visual products. A discussion on the importance and value of advocacy through design products and surfaces is addressed.

In addition, the paper will provide a case study on IBDE strategies, processes, and final products used in a visual communication undergraduate program at an urban working class university, California State University, Northridge. The paper provides a brief narrative on how IBDE was used during a very important presidential election year, 2008, in the United States and the state of California with the various issues addressed (environmental, social, political, and global). The case study is directly related to this special population of students and cannot be generalized to other populations. This culturally diverse working-class student population found connections to citizenship and purpose in communication design.

FULL PAPER

Introduction

There is a growing movement in design; a movement toward more socially aware products with a direction towards social responsibility. Issue based design is centered on social, political, environmental, and global awareness. There have been many attempts to create communication design curricula and projects that address social issues. Although much of this dialogue comes from good intentions, substantial issues need to be addressed in design education in order to make that impact on the future dissemination of visual products. Effective communication is key to social awareness. As Cheryl Heller, of Heller Communication states "The future of our world really does depend on our ability to communicate with and understand each other. Those who are skilled at communicating stand to make a difference."[1]

Within communication design education, a shift is discernible from studying the design of the client driven projects to studying the more inclusive conceptual and research category of social and issue-based design. This article presents an Issue-Based Design Education (IBDE) perspective on communication design/ graphic design education. I do not attempt to generalize or compare what other institution are doing as far as a socially relevant design curricula. Rather, I only propose a paradigm shift

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1. Aaris Sherin, *SustainAble: A handbook of materials and application for graphic designers and their clients.* (Beverly, M.A.: Rockport Publishers, 2008), 31.

and provide an example of its application in a case study descriptor at California State University, Northridge.

Definitions

When I am referring to communication design, I am also including graphic design, graphic art and other graphic oriented areas in the field of design. I am using the terms, visual products and design surfaces, to include two-dimensional surfaces, three-dimensional surfaces, and surfaces that are not tangible like time-based and cyberspace. Communication designers use several surfaces; from two-dimensional printed products to environmental public displays as well as the web.

The Issue-Based Design Education (IBDE) objectives are to include the social role of the designer in global and local communities through, but not limited to, cultural, social, political, environmental, and global issues. Even though the results are in the process of learning about these issues, the goal is in effectiveness of the message being addressed. IBDE is categorized under a critical methodology of teaching and learning about design through research and reflection. The case study at California State University, Northridge shows the use of design process techniques, which involved problem posing, reflection, and action through writings, discussions, and design. IBDE allowed students to develop awareness on the impact design has on society and visual culture. The final design surfaces were posters, flyers, buttons, tshirts, stencil graphics on walls, and a website.

Historical and contemporary advocacy

Although art as a form of propaganda in western society dates back to the 15th century, the field of communication design and graphic design did not see recognition till the 19th and 20th centuries. The origins of social issues in graphic design are traced back to the 20th century propaganda posters from Russian Constructivists, International Typographic Style, WWI and WWII, and sixties political art. However, socially relevant graphic artworks related to culture and society has remained prevalent in every decade of the 20th century and into the 21st century as well. More contemporaries like the Center for the Study of Political Graphics[2] and Graphic Imperative: International Posters for Peace, Social Justice and the Environment[3] see the value in preserving the history of social issues in graphic art through various exhibitions of issue based works. Several other organizations around the world sponsor design exhibitions on social or environmental issues.[4]

As design students learn about the various movements in history, they are exposed to propaganda and graphic activism from various time periods. It appears that the actions of professional designers are not solely for commercial or commodity driven reasons. Professional designers want to be socially involved. As part of our human condition to feel connected, professional designers all over the world want to make a difference. Contemporary graphic artists like, Shepard Fairey, Luba Lukova, and James Victore are just three examples of graphic artists who choose to make statements through their work even though they remain professional graphic designers (See Figures 1a-c). Their work is not seen exclusively by the design or art world, but rather their work is part

2. *Center for the Study of Political Graphics* is a Los Angles Based center that collects, preserves, and exhibits graphics relating to historical and contemporary movements for social change. (www.politicalgraphics.org)

3. *The Graphic Imperative: International Posters of Peace, Social Justice and the Environment 1965-2005*, is a traveling exhibition which features four decades of influential political posters. (www.thegraphicimperative.org)

4. *United Designs International Biannual Design Exhibition* is an example of one of the many organized shows around social issues. An estimated 300 designs from 25 countries are displayed and most of these relating to environmental issues. (www.designresearchlab.com/uniteddesigns.html)

of everyday visual culture, youth culture, and even politics. Therefore, encouraging our design students to be a part of social activism is not pushing our own agendas but rather providing an obvious connection to the social world.

Design discourse

Traditionally, most communication design educators do not emphasize political or social issues in their teaching. Some may see social issues as being irrelevant to the growth of a good designer, while other educators may be afraid of awakening big moral or political questions and the sensibilities of one group or another. Although design educators often teach about the formal qualities of design, they should be more concerned with its functions, including those that are socially relevant to the issues of today. Such a concern would show the power of design and make it more relevant to young designers.

A discourse of social significance has been present over the last century. Even though there is a limited number of books and articles that discuss issues in design, some authors like Steven Heller, Veronique Vienne, Victor Margolin, and Katherine McCoy contribute to this design discourse. The journal, *Design Issues* (MIT Press), and various books edited by Steven Heller have provided valuable resources for dialogues on graphic design education.

Over 20 years ago, a 1988 article was published in *Design Issues* called "Graphic Design: Fine Art or Social Science." The author, Jorge Frascara, states: "Graphic design is the activity that organizes visual communication in society. It is concerned with the efficiency of communication... the social impact it effects, in other words, with social responsibility."[5] Frascara continues to discuss the importance of teaching about design as representing "all levels of the activity, that is, the emotional and the rational, the communicative, the technological, and the awareness of the social context."[6]

In a 2002 *Design Issues* article about the shift from formalism to social significance in communication design, the authors stated, "When designer and viewer are actively involved in a shared dialogue, both become active participants in the creation and interpretation of the visual message. As a result, the designer is empowered, shifting from a decorator of messages to an agent who has influence on the social implications of delivering a visual dialogue."[7]

Steven Heller is one of the leading scholars in writing about contemporary graphic design issues as well as historical ones. He has edited several books, which provide dialogue and further discourse for the professional field. The book, *Citizen Designer*, edited by Steven Heller and Véronique Vienne, includes essays on social responsibility. The first essay, written by Katherine McCoy, deals with design as a social and political force—active citizens "who happen to be graphic designers."[8] As a design educator herself, she advocates for the project assignments in design curriculum to have content developed by the student "independently of client assignments, where the reward is the expression of personal concerns." In addition, she states, "the challenge to develop subject matter stimulates the design student to determine what matters on a personal level."[9]

5. Jorge Frascara, "Graphic Design: Fine Art or Social Science," *Design Issues*, 5, no. 1 (Autumn, 1988): 20.

6. Frascara, "Graphic Design," 27.

7. Jodi Forlizzi and Cherie Lebbon, "From Formalism to Social Significance in Communication Design," *Design Issues*, 18, no. 4 (Autumn, 2002): 4.

8. Katherine McCoy, "Good Citizenship: Design as a Social and Political Force," In *Citizen Designer: Perspectives on Design Responsibility*, edited by Steven Heller and Véronique Vienne. (New York, N.Y.: Allworth Press, 2003), 8.

9. McCoy, "Good Citizenship," 7.

1a.

1b.

War on Abortion

A.J. Jimenez

I was born in the Philippines, which is a pre-dominantly Roman Catholic population. Roman Catholics view abortion as a serious offense to God. However, the political and social culture in the United States offers the ability for a woman to choose. In other words, I am not only presenting the conflict of Abortion within America, but within myself as well. Across cultures and nations, human life is held as valuable. The highly contested issue of abortion touches so many lives and challenges tightly held beliefs about the concept of human life. I chose this issue so as to present this contestation of beliefs to the viewer, but doing so without pressing upon them my beliefs.

1c.

1a. "War on Abortion" poster by student AJ (Aleth) Jimenez.

1b. Sketch by student AJ (Aleth) Jimenez.

1c. Description of design issue by student AJ (Aleth) Jimenez.

IBDE strategy

There are a number of strategies and methods that educators can adopt to have a more socially relevant curriculum. They range from design research, primary and secondary methods, to changing how designers conceptualize or generate design solutions. One thing is certain, the process of designing in an IBDE is similar to other techniques and strategies for designing, but bringing contemporary issues into the classroom may require a new way of thinking.

The focus of this section is to show how the students from a working class institution in a liberal arts program (Bachelor of Arts) researched, developed messages, and delivered perspectives on issues with a variety of design surfaces and products. Since the program is liberal arts oriented it was very important to deal with the "intangibles" of education—empathy, personal values, beliefs, awareness, self-esteem, self-confidence, and social responsibility—while learning about the conceptual and formal aesthetics of design. The final objective was to disseminate a group of designed materials to the local university community under the title, *Graphic Art the Vote*.

Over the course of the project, students went through a process of 1) problem posing, 2) reflection, and 3) action. The first phase had three steps; receiving the problem, researching the problem, and organizing information. The second phase included; developing visual sketches, obtaining feedback and critiques, and revising the visual and conceptual direction. The final phase of their design process involved not only rendering out the final product, but also making sure the message is being distributed to more than just the students in the classroom.

The problem posing phase was the first step in the conceptualization process. The problem was for students to conceptualize a social, political, environmental, or global issue that related to the 2008 Presidential and/or local elections. Three groups of students team together to work on an issue collaboratively. All other students chose to develop individual campaigns. This initial phase included secondary research processes through the collection of information on three issues of interest. They collected data from multiple sources (web, books, articles, and brochures) on their issues. In addition, students gathered visual resources, graphic design examples, design styles and typographic treatments. Then each student organized their research information and resources by prioritizing facts, design styles and typographic ideas. Each student or team presented his or her research in a digital slide presentation to the class. Included in the presentations were design styles and samples. After obtaining feedback from the class as a group they were required to choose only one issue to address.

Students went through an additional phase of designing, a reflection phase. Even though they were developing sketches, (See figure 1a-c) creating slogans and typographic treatments during this phase, students were always reflecting on the direction of their issues through small group critiques and reflective writing assignments. This process helped students develop the best solution to their visual and conceptual problem.

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2.

4a.

3.

4b.

2. 'Empty' poster by student Ricky Lovas.

3. 'Ego' poster by student Aya Goto.

4a-b. Gallery Exhibition, Graphic Art the Vote, 2008.

5a-c. Election Day and Gallery Reception, 2008.

6a-c. Election Day and Gallery Reception, 2008.

During the end of this phase, students were close to completion on a message, style, and visual solution.

The final phase, the action phase, included some research on materials, surfaces, media, and product development. However, this phase required the final dissemination of the issue using various surfaces. Students were able to obtain a gallery space at the university for the exhibition, *Graphic Art the Vote* (See Figures 4). All the final products were displayed and disseminated to the university community on Tuesday November 4, 2008—Election Day. As seen in figures 3 and 4, students not only developed posters, they also created postcards, stickers and buttons. The buttons, postcards, and stickers were disseminated during the gallery reception on Election Day 2008 (See Figures 5-7). In addition, some of the students created a website for the exhibition (See Figures 8-11).

Design works dealt with social issues related to the presidential candidates but also other global issues such as the war in Iraq (See Figures 12a-13b) and environmental destruction were addressed as a direct connection to the future of the United States as a global community member.

Some students, however, chose issues that were personal. One of the students did her issue on Darfur because she was born in Africa and felt

5a.

5b.

5c.

6a.

6b.

6c.

10. Propositions in the state of California are laws that are voted in by the people of California. Not all states have this system for laws. But in California, Proposition 8 was put on the ballots for 2008 to vote on a ban on gay marriage. The students in my class wanted people to vote NO so that people would have the right to marry whomever they like, heterosexual or homosexual.

a connection to the terror her country's people were experiencing (See Figure 14a-14b). Two other female students focused on an issue that was directly related to the elections; Proposition 8 (Prop. 8) (See Figure 15 a-d)[10].

7a-b. Election Day and Gallery Reception, 2008.

8-11. Website page of www.GraphicArtTheVote.org

12a. '4,162 Dead 1 vote' poster by student Jared Kennedy.

12b. Description of design issue by student Jared Kennedy.

12c. '4,162 Dead 1 vote' sticker by student Jared Kennedy.

13a. 'The Consequences of War' poster by student Steven Jul-ul.

13b. Description of design issue by student Steven Jul-ul.

14a. 'Darfur, 21st Century Genocide' poster by student Helen Yemanebrhan.

14b. Description of design issue by student Helen Yemanebrhan.

15a. 'Support Equal Rights for All' poster by students Christine Choi & Jahaira Duarte.

15b. Description of design issue by students Christine Choi & Jahaira Duarte.
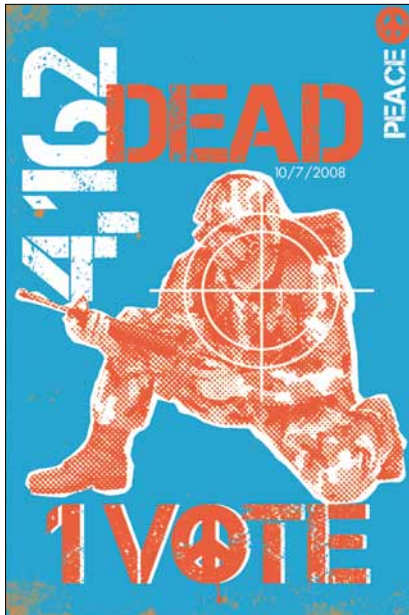

7a.

7b.

8.

9.

10.

11.

12a.

12c.

4,162 Dead 1 Vote

Jared Kennedy

My issue focuses on the number of young men and women we have sent and continue to send to the battlefield overseas. Since the war started and up until 10/7/2008 when I started this project 4,162 soldiers had died in the Iraqi war. This upcoming election is so critical because we have the chance to decide the future of the young Americans enrolled for service. I urge you to stop the bloodshed and bring an end to this war by using your power to vote.

12b.

13a.

The Consequences of War

Steven Jul-ul

My political issue poster is about the war in Iraq. Ever since the September 11th terrorists attacks that took place seven years ago, the United States has been sending more and more troops over to the Middle East, mainly Iraq. Every year the deaths of our troops keep piling up in a war that is costing taxpayers over $650 billion dollars. Not only is the Senate keeping the troops longer, but also they want to send more over to the Middle East. I was born and raised in Los Angeles and I feel that we shouldn't be funding a war that is killing more and more of our American troops. By bringing more troops home it will cost taxpayers less money and will decrease the number of deaths of our troops every year.

13b.

14a.
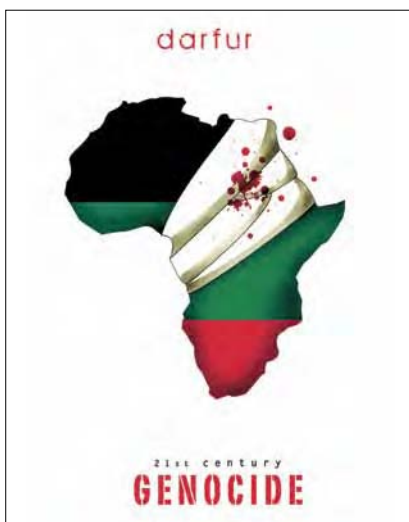
**Darfur, 21ˢᵗ Century Genocide**

Helen Yemane

Being an international student from Sweden and originally from Eritrea, I unfortunately am not able to participate in the presidential election of this year. Sadly, I have never paid so much attention nor have I been concerned in politics as much as I am concerned in this year's election. To me, that is quite interesting, because, as I remember, when I turned eighteen in 2000, Sweden had a primary election in which I was able to participate in for the first time, I then decided that my vote would not matter, so I did not vote. Remembering this, I now appreciate and recognize the importance and the significances of voting and the impact one can have by being part of a nation.

Fortunately, this project has allowed and given me the opportunity to bring awareness and knowledge in some of the issues from this election. For this assignment, I decided to give attention to issues related to wars, in particular, Sudan, Darfur. Since the crisis in Darfur, it has become a great concern and also Sudan as well. I believe that my background and the environment in which I have grown up in has led me to have more international awareness and concerns than many people I have came across in the United States. This has led in my concern of the genocide currently in action in Darfur. In my opinion, this is a global matter and should not be possible and part of history.

14b.

79

15a.
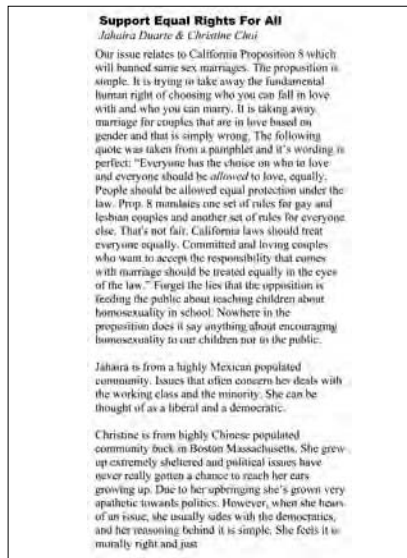
15b.

15d.

15c.

15a. 'Support Equal Rights for All' poster
by students Christine Choi & Jahaira Duarte.

15b. Description of design issue by students
Christine Choi & Jahaira Duarte.

15c. 'Support Equal Rights for All' T-shirt
by students Christine Choi & Jahaira Duarte.

15d. 'Support Equal Rights for All' sticker
by students Christine Choi & Jahaira Duarte.

Case study research on the application of IBDE

During all phases of the project, a qualitative case study process was
utilized. Data on students' activities, processes and products were
gathered through photography, written assignments and journal entries.
Rubrics and matrixes helped determine what and how students were
learning.[12] After collecting all the data, a descriptive analysis of the
findings determined themes and patterns about the IBDE classroom.[13]
Through an IBDE perspective, I looked at the meaning-making activities
of the students. In addition I looked at the designed products to
determine symbolic meaning. As Elzbieta T. Kazmierczak stated in a 2003
article in *Design Issues*, "Designs are shortcuts through and to meaning."[14]

My findings showed that the IBDE strategies used in the classroom
were effective. Not only did this process allow students to produce
meaningful design products, the community as receivers were able
to find meaning in the final exhibition of the work. Through graphic
design, issues became a driving force in convincing people to vote in
the 2008 California and United States elections. The designers learning
experiences became more relevant and meaningful as their role as a
designer became more prevalent; that otherwise might not have occurred
had the focus of the educational experiences been solely building
skills and creating mock commercial products as portfolio pieces. The
implementation of IBDE showed that the strategies used were effective
in allowing students to produce meaningful design products while
participating in collaborative and empowering experiences. Their
learning became more relevant and meaningful to the society at large.

Conclusion

Designers have the ability to influence how people act, think and react
to the world around them. Designers are the message makers and
its going to require not only the support of design educators but also
society to see the importance of supporting the graphic arts that take
on contemporary social, political, or environmental issues. And the
only way people will demand that change is if they are informed and
inspired to make that change. It's the role of the designers to shape and

12. I assessed students' progress from the following areas:
- Demonstration of graphic design skills and concepts
- Group self evaluations
- Observation of student in their teams
- Writings and reflections in assignment papers.
- Oral presentations by students about their project and experiences.

13. In addition, another level of analysis, interpretation provided more of teacher-research on what was effective and ineffective as classroom activities emerged. Narratives and descriptors were analyzed based on Issue-Based Design Education values: participation, situated knowledge, active learning, democratic process and activism. The similarities and differences between the students' choices of issues and students' responses as well as their final design product were compared. I introduced some order and structure into my analysis through a series of questions.
- How did the students participate in the design studio?
- What occurred when students presented their issue?
- How did students connect their designing experiences to culture and society?
- What other issues arose unique to the use of the IBDE process?

14. Elzbieta T. Kazmierczak, "Design as Meaning Making: From Making Things to the Design of Thinking" *Design Issues*, 19, no. 2 (Spring, 2003), 52.

15. Frascara, "Graphic Design," 28.

communicate messages. Through an Issue-Based Design Educational perspective, we can change the education of a designer as less vocational and a more about responsibility. Our future designers will be instrumental in communicating and contributing to local and worldly issues, thus demonstrating the importance of social awareness. These designers will rethink entire systems of design ideas, all the while shaping contemporary aesthetics to reflect a new set of values.

Communication is a human condition and visual communication designers are the distillers of visual culture. As Jorge Frascara wrote back in a 1988 *Design Issues* article, "Graphic design is first and foremost human communication. A graphic designer is a person who constructs a pattern in order to organize the communication link between the piece of design and the viewer."[15]

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About the author
Dr. Paula DiMarco (Ph.D. California State University, Northridge) is a design educator and researcher with an interest in social awareness and sustainability in the design of visual culture. Dr. D (as her students call her) is a professor in communication design, at California State University, Northridge, USA. Originally from the east coast of the United States, Dr. D has been a design educator for over 15 years in design education. She has worked independently as a graphic designer for Met Life, MTV, SPIN Magazine, and a variety of design studios in New York City. As a design consultant and co- principle of Roadwork Design Associates, she has won awards for her work in editorial design and non-profit branding projects from San Francisco to Los Angeles. She has been involved in strategic design solutions for start-up companies as well as worked with non-profit organisations in the development of appropriate design strategies for their needs. She has an ongoing relationship with Los Angeles Department of Cultural Affairs and is an active member of the Los Angeles Chapter of AIGA (Professional Association for Designers). Her mission is to humanise graphic art and design through didactic and reflective imagery in a visual culture society.

Xin: Icograda World Design Congress 2009
This paper was submitted for the Icograda Education Network (IEN) Conference that took place during the Icograda World Design Congress 2009 in Beijing, China, which was planned in collaboration with the Central Academy of Fine Arts (CAFA). The broader theme of the congress, Xin, literally signifies human speaking and hence message/letter in Chinese, Xin–信 which represents a primitive means of communication. The IEN conference invited papers under the following themes: Design Education and Innovation; Design Education and Diversity; Design Education and Cross-Disciplinary Collaboration and Design Education and Regional Development.

Combinations
of languages
Connections
of scripts
Visual conversion

VISUAL TRANSLITERATIONS OF ORAL COMBINATIONS OF LANGUAGES IN LEBANON

ANTOINE ABI AAD

ABSTRACT

Most Lebanese mix two or three languages in their daily life: Arabic, French and English. This fact became a characteristic of the Lebanese culture to a point that it became difficult to speak one language without mixing it with one of the two others. The purpose of the paper is to communicate this verbal situation visually: show the spoken mixture of languages through the mixture of their letters.

In opposite to Latin letters, Arabic is written from right to left. Accordingly, when combining the two scripts of the three languages, there are problems of readability. One problem is the direction of reading: when combined, should the reader start with Arabic or with Latin script? The second problem is the omission of a script: read one script (one language) and drop the other. Connecting the letters forces the reader to read the two scripts and imposes a direction of reading.

The visual solutions to the problems of connections presented in the paper are based on the works of 167 students who participated in ten workshops conducted by the author. Through a parallel between calligraphy and typography, between art and design, Arabic letters and Latin letters connections offer potential for a unique Lebanese visual communication. Latin and Arabic Typography in most of Arabic universities are taught in parallel in order to achieve the coexistence of the two lettering systems in Arabic design, which consist of bilingual communication most of the time. In this paper, the proposed approach is the mixture of the scripts rather than their cohabitation: people already mix languages verbally; consequently, they would mix their scripts visually.

Though most of the study was based on the Lebanese model, many Arabic countries are bilingual/trilingual: North African mixing Arabic/French (e.g. Morocco, Tunisia); Golf countries mixing Arabic/English (e.g. Emirates, Qatar). Connecting letters gives the Arab Visual communication a new approach to use the calligraphy heritage in a globalized 21st century communication design.

FULL PAPER

1. Introduction

Lebanon is a mixture of cultures since its recorded history. Phoenicians, the ancestors of the Lebanese, sailed and traded all around the ancient world, getting in contact with numerous civilizations. They founded colonies in the Mediterranean such as Cyprus (main trading stop between the orient and occident), Rhodes, Malta, Sardinia, Marseilles, Gades (actual Cadiz, Spain), and Carthage[1]. The purpose was to find a place close to the coast, preferably close to a water source[2], and build a trading point to store their goods and find a shelter to rest between trips. On the other hand, various occupiers had power over Lebanon throughout its 5000 years old history. As a result, Lebanese faced many languages. The steles of Nahr al Kalb, a river north of Beirut, leave the traces of *Thouthmes* and *Ramses* and more Pharaohs of Egypt anterior to Moses;

1. Qart Hadasht, Semitic appellation for
« New City », collective; *Les Phéniciens*, France,
Stock, 1997, p.186.

2. *Les Phéniciens*, p.200, p.311.

they have the inscriptions of the Assyrians as those of *Teglat-Phalasar* and *Nabuchodonosor*[3]; of Romans, Arab caliphs, French soldiers, etc. Nahr al Kalb embodies some of the languages the Lebanese knew, learned, or spoke. However, more examples might be added, such as the Mesopotamian from invaders, the old Egyptian[4] from trade, the Semitic languages as the early Phoenician or the variations and dialects of Aramaic (including Syriac), the Persian, the Greek, the Roman, the Turk, and the French. As a conclusion, Lebanese inherited a long interaction and mixture of languages from their ancestors.

In today's Lebanon the mixture of Arabic, English and French is widely spread. At least two of these three languages are fairly spoken by the Lebanese population, as a minimum, fairly understood and largely recognized. In the scholar year 2000-2001, 900 000 Lebanese students were going to 2671 different schools in Lebanon. Among them, according to the CRDP[5], the 2/3rds chose French as a second foreign language (Arabic being the first) and 1/3rd chose English.[6] In the Lebanese schools, mathematics, physics, chemistry and biology among other classes are taught either in French or in English. As a conclusion, a significant percentage of Lebanese acquire a basic level of French or English. Consequently, using three languages, moreover using their mixture, is merely natural in Lebanese culture. A common language mixture example is a common greeting in Lebanon:

<div style="text-align:center">"Hi, كيفك ca va?"</div>

"Hi" " كيفك ",("Kifak"), "ca va"; English, Lebanese-Arabic and French greeting expressions are common in their respective language (e.g. "Hi" is common in English). However, their combination is uncommon; it became a characteristic of the colloquial Lebanese. While a language reflects its origin, the mixture of these three languages reflects a unique Lebanese culture. If Lebanese naturally mix languages to speak, it should be natural to mix their respective scripts.

2. Combining letters: problems of direction, order and readability
The French and the English educational systems spread accurate pronunciations of words among the students, whom, in their turn, spread fine pronunciations in the environment they live in. Among other factors, the programs on televisions also help disperse good accents, the dubbing is rare and subtitling is commonly used. Writing English and French with Latin letters in an Arabic written sentence is natural. Combining Latin to Arabic script is on two levels: horizontal and vertical.

A horizontal combination combines words within one line. Though done before, it is avoided or misadvised for the readability problems caused by the opposite directions of the two scripts. In short sentences, the punctuation would determine the direction of reading: the Arabic punctuation is the flipped image of the Latin's as shown in Table 1.

Arabic punctuation:	معك الف ليرة، Please ؟
Latin punctuation:	Bonjour, معك الف ليرة ؟

Table 1: Arabic and Latin punctuation

A vertical combination is an alternation of the two scripts: one line with one script and the next with the opposite. The two alternated scripts

3. Briquel-Chatonnet F., Gubel E.; *Les Pheniciens aux origines du Liban*, Italy, Editoriale Lloyd, 1998, p.143.

4. Mutual trade interests tied the Pharaos to the Phoenician: chapter *"Phéniciens et Egyptiens"*, *Les Phéniciens*, p.591.

5. CRDP: Centre de Recherche et de Développement Pédagogique, or the Research Center of the Pedagogic Development of the Lebanese Ministry of Education.

6. IX sommet de la francophonie, *L'orient le Jour journal*, octobre 2002, p. 24.

would go back and forth, following the natural flow of the eye like a boustrophedon. In the third fraction of Figure 1, instead of using flipped images to come back, the idea is to go left/right with the first line/language and to return right/left with the second line/language.

1.

Combining writing systems is common, for example combining Japanese to English or Thai to French. However, when it comes to languages with opposite directions of writing, the combination becomes a handicap, the readability and understanding degrade.

For horizontal combinations, the direction of reading is the problem: should the reading start from the left or from the right? Though solved with the vertical combinations, another problem occurs when combining vertically: the same text might be read and interpreted differently; it creates an undesirable uncertainty of the correct reading. The third example of Figure 1 can be read in three ways. The first possibility is to read one script and to drop the other as in the first two examples of Figure 2; the second possible way is to read one script, finish it, and starts reading the other as shown in the last two examples of Figure 2. The third possibility is the boustrophedon as indicated in the third example of Figure 1.

1. Boustrophedon.

2. Uncertainty of accurate reading.

2.

The writer, more often than not, wants the reader to follow the accurate path of reading, thus he has to eliminate all confusions. The solution is the connection of letters.

3. The solutions: connecting letters
Discovery consists of seeing what everybody has seen and thinking what nobody has thought[7]

3.1. Factors facilitating the connections
Three major factors facilitate the connection of the Latin to the Arabic letters.

The first factor is the same origin of Arabic and Latin scripts: the Phoenician alphabet. Arabic script, Chinese and Japanese are described as drawn around a central or a vertical line. Indian hangs from an upper line while roman types march like roman soldiers along a baseline. However, similarities between Arabic and Latin scripts are evident. Equally, Latin and Arabic alphabets have their roots in the first developed alphabetic system, the Phoenicians. Around 1300 BC, a 22 consonantal alphabet was developed from earlier pictographic scripts, in the city of Byblos, north of Lebanon. According to J. G. Fevrier[8], Arabic has its origin from the Nabataean-Arabic, a script derived from the Aramaic, which itself

7. Albert Von Szent-Gyorgyi.

8. Février, J.G., Histoire de l'écriture, Paris 1948.

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derived from the Phoenician. J. Starkey[9] writes 'it will be easier for us if we abandon the theory of the Nabataean origin of Zaban and Harran and simply say that the archaic Arabic script, being relatively homogenous, derives from the Syriac as it was written in the Lahmid capital'[10]. Being from Nabataean or being from Syriac origins, the Arabic derives from Aramaic. The Roman alphabet derives from Greek, indirectly.
In fact, it developed from the classic Greek lettering of the fifth century inscriptions. The Greek learnt to write from the Phoenicians around the eighth or seventh century BC. Both people were sailors and traders who probably used to meet in the Aegean in Sicily and Asia Minor.
The Greek altered the Phoenician system in two fundamental ways, first they introduced characters representing vowels and then they embellished its visual appearance.

To sum up, it depends on the designer to show similarities or differences between two writing systems. The world of Arabic typography today is divided between two opinions: one bringing the Arabic type closer to Latin or Latinizing the Arabic letters; and one opinion showing the characteristics of Arabic letters and harmonizing it with the Latin.

The second factor facilitating the connections is the opposite directions of writing the two scripts. Semitic languages, such as Arabic, Hebrew and Aramaic, hold important characteristics in common. They consist only of consonantal signs, do not contain any capital letters and they are written from right to left. The opposite directions interestingly motivated the connections of the Latin and the Arabic letters as in Figure 3; the problem or handicap explained in the combination part becomes visual assets.

3. A handicap turned to an asset.

4. Kashida.
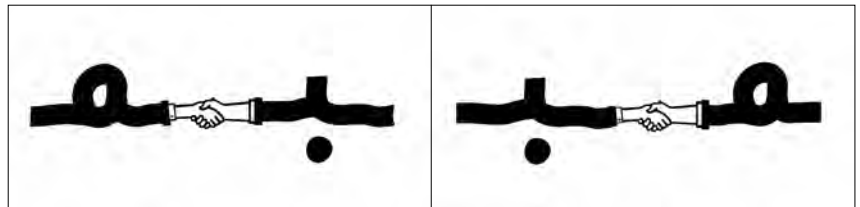
3.

The third facilitating factor is the connectivity: connecting letters in Arabic is imperative. Latin letters, Calligraphy or handwriting, are written in a connective style. Though typographers are highly misadvised to play with typography, designers are less strict concerning this matter, and would connect letters through typographic collage-style. Typographers care about legibility and readability in written texts while designers care about communication: never mistake legibility for communication.[11] The common ground for the connections is the handwritten/drawn letters, satisfying designers and not irritating typographers.

Kashida are glyphs attaching letters in connected scripts such as Arabic; they extend the horizontal joiner between two characters. In addition, Kashida is used to improve the appearance of justified text by visually lengthening words rather than increasing the letters space.

9. Starkey, J., 'Petra et Nabataea', in *dictionnaire de la bible* (supplement), paris, 1964.

10. Khatibi, A., Sijelmassi M.; *the Splendor of Islamic Calligraphy*, UK, Thames and Hudson, 1976, p.38.

11. David Carson.
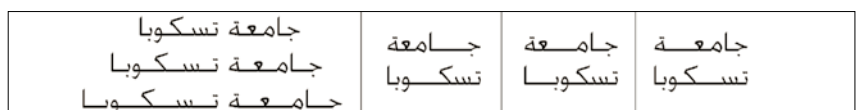
4.

5.

5. Kashida applied to Latin letters.

6a-b. Mona Abi Warde.

The first example of Figure 4 shows different justifications of the sentence "University of Tsukuba" written in Arabic with the same type size. What is even more interesting with the Kashida is that it can be stretched differently in one word with no problem of recognition, furthermore, without any aesthetic unbalance, as in the last three examples of Figure 4.

Though used for Arabic only, Kashida might be applied to Latin letters, stretching the connected space between the letters rather than the letter space, Figure 5.

3.2. The horizontal connections
The results and examples of the following sections are based on the works of 167 students who participated in 10 workshops conducted by the author from 2005 until 2009 in seven universities (ALBA, UOB, USEK, LAU, AUST in Lebanon and EAD, ISBAT in Tunisia).

Connecting words makes them one visual unit. The reader becomes guided to read either scripts or none. The meaning becomes complementary linguistically and visually. Arabic and Latin are written in opposite directions; hence, there are two ways of connection horizontally: the convergent connections when letters converge to a connection; and the divergent connections when letters start from a connection and diverge out. Table 2 shows the connection of the word "madame" to the word "كيفيك" (spelt "Kifik"), an expression commonly used in Lebanon meaning "how are you madam?". The left rows of Table 2 show the two words converging to a connection and attached by their ending letters while the left rows show the two words attached by their start and diverging from a connection.

Table 2: convergent and divergent connections

6a.

6b.

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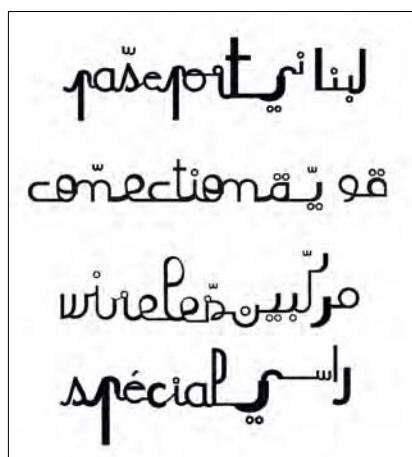
7a.

7a-b. Wissam Mazraani.
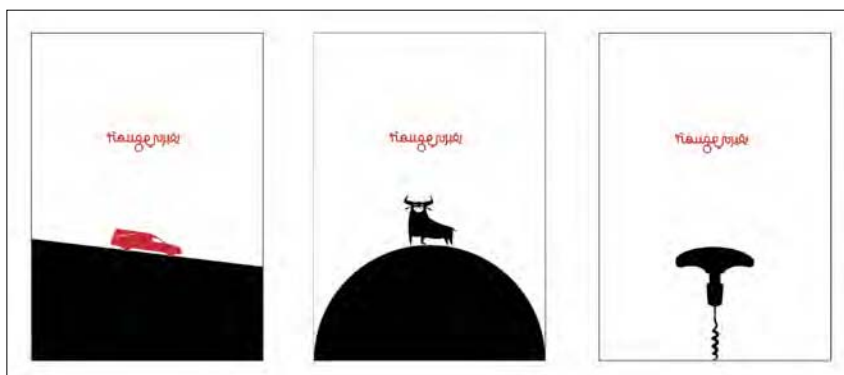
From the 26 Latin letters and the 28 Arabic letters, there are 728 (26 x 28) necessary divergent connections and the same number for converging connections making the total of horizontal connections 1456. As for the vertical connections, the number is the same, divided into two sections: the Latin/Arabic and the Arabic/Latin connections. In the series of posters in Figure 6, the titles are collages from typographic elements, they transfigure Lebanese expressions visually. Contrastingly, the title in Figure 4 is drawn by the student from scratch. Collages, traced on computer, or written by hand, it is up to the designer to choose his way of expression.

3.3. The vertical connections
Connecting words vertically is a new concept that might look daring or even readably unsafe. Arabic today is seen as a linear writing system through typography, its actual basic way of writing and communicating. However, in the golden Arab age, many calligraphers stretched the vertical elements of the Arabic letters creating a vertical composition. By admitting this heritage, the vertical connections become natural to the eyes and not completely new visually.

The vertical connections have two purposes; the first is to force the reading of either scripts or none; the second is to impose a direction of reading. Four ways of connection are possible vertically. The examples of Table 3 connect two random letters. Though four connections are possible, the rational way is to follow the flow of the eyes and connect

Latin/Arabic connection downwards	
Latin/Arabic connection upwards	
Arabic/Latin connection downwards	
Arabic/Latin connection upwards	

Table 3: four possible vertical connections

the ending of the last letter of a line to the starting of the first letter of the next line as in the first row and the third row of Table 3. In this research, selected connections are only downwards.

Techniques of connections depend on the choice of the designer: Figure 8 and Figure 9 are typographic collages, Figure 10 is a computer traced style, Figure 11 is squarish style inspired from Kufi and applied to Latin letter and Figure 12 in a typographic style inspired from the Bauhaus typeface.

The contents are Lebanese common expressions transliterated visually. Unlike Japanese, originally and traditionally written vertically, the Arabic and Latin script are linear horizontal writing systems. The eyes are used to read the Arabic and the Latin letters horizontally. The originality of Figure 13 is to alternate vertically the Latin letters "a", "t" and "n" and the Arabic letters "ن" (n), "و" (o) and "ي" (y) to form the name "Anthony".

In the same spirit, Figure 14 is an alternation of vertical Latin and Arabic connections.
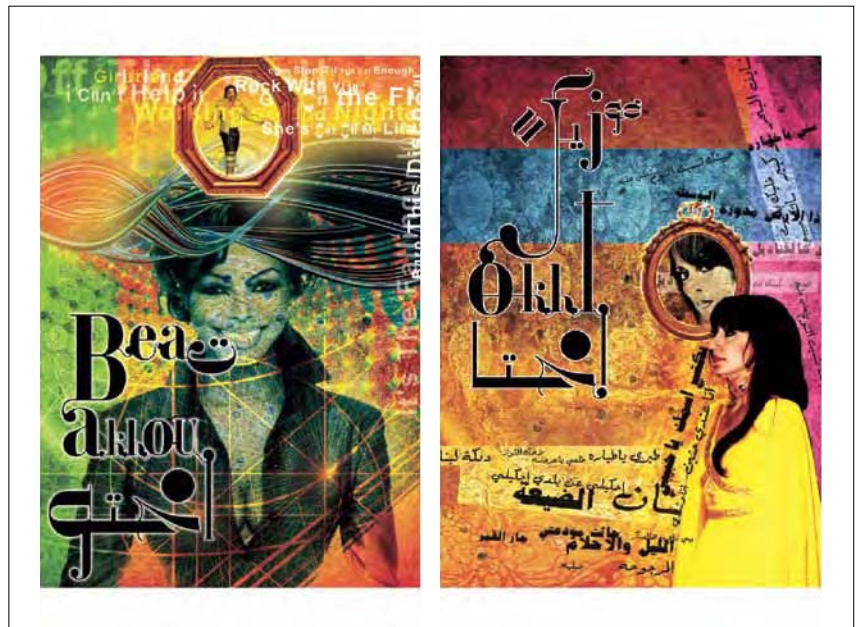

8a.

8a-b. Guy Asmar.

9a-b. Guy Asmar.

10a-b. Lama Zouein.

11a-b. Christine Ziade.

12a-b. student work: Christine Ziade.

13. a vertical composition of letters.

8b.

9a.

9b.
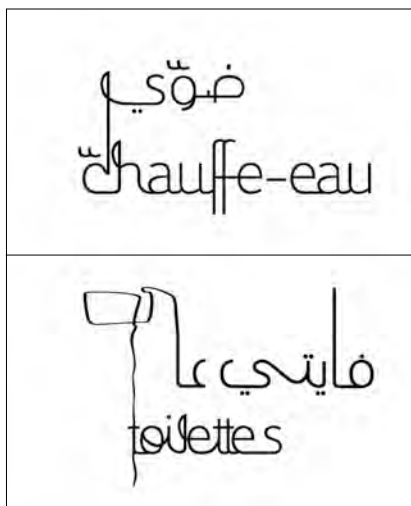
10a.

10b.
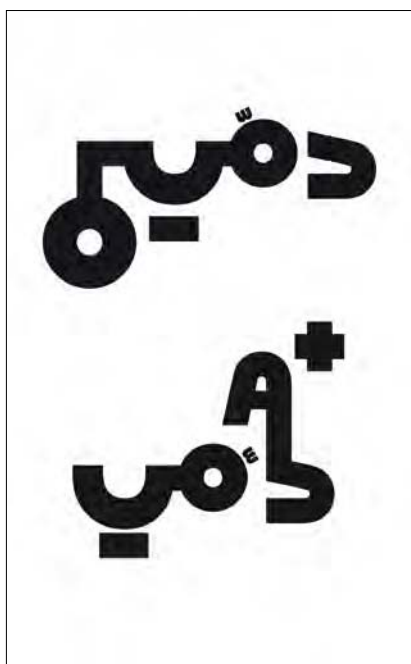
12a.

12b.
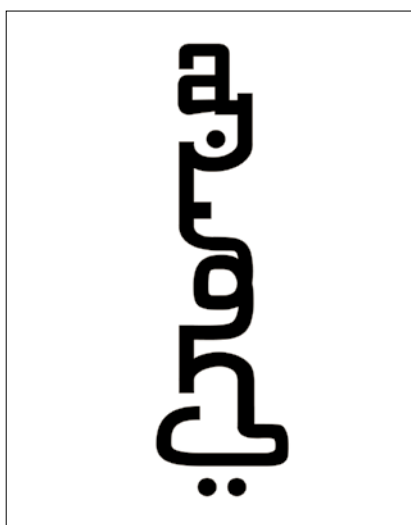
13.

11a.
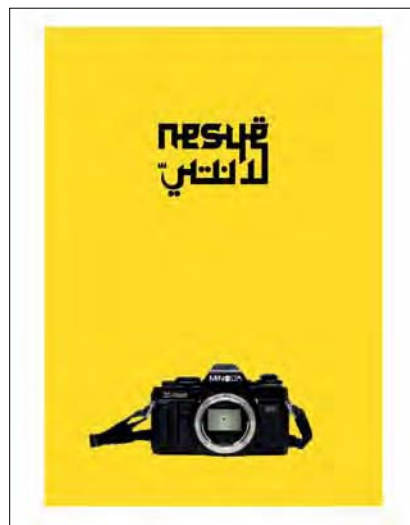
11b.

14. Guy Asmar.

15a-b. the vertical connection creating dynamism.
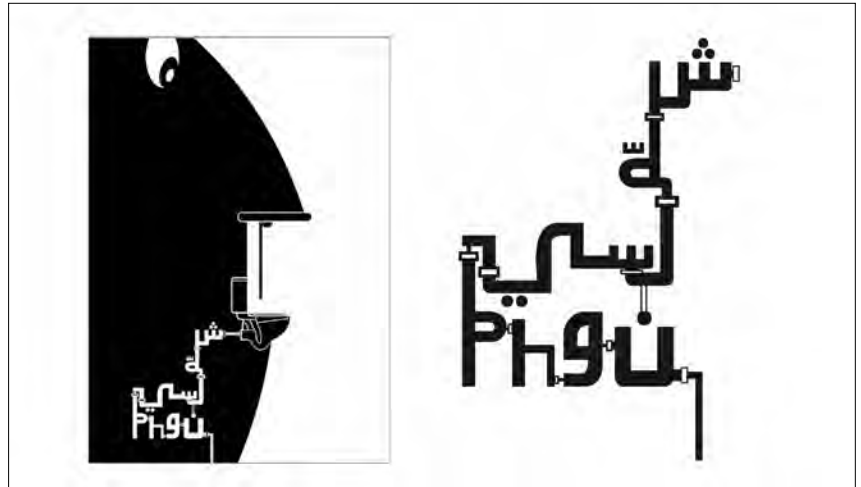
14.

4. Conclusion: effects and potential

In any language, being written from right to left or vice versa, a sentence ends at the opposite side of its start. By connecting Latin and Arabic scripts vertically, the sentence starts and ends on the same side (see Figure 15). While a centered title gives a central aspect to the composition of the page and a right or left justification of titles/texts shifts the balance right or left, the vertical connection, besides its ability to shift the composition left or right, gives a certain movement to the composition: in Figure 15, inserting the vertically connected title in a blank rectangle invites the reader to start looking to the page from the beginning of one script to go out of the rectangle with the opposite script. The full sentence means "like father like son, what a pair".
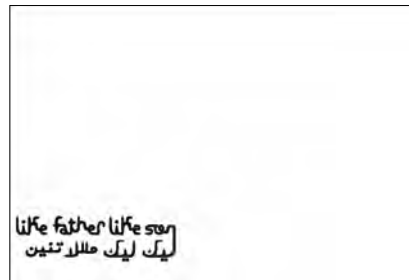
15a.
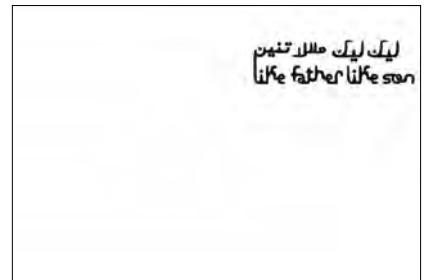
15b.

The horizontal connections start (diverging) or end (converging) with a dot/ point, the connection. As in any central symmetry a horizontal connection is a center of attraction, of magnetism. The point of connection, the dot separating the Latin from the Arabic becomes the center of the whole composition. Figure 16 is formed by two titles in a blank rectangle. The purpose is to show the attraction engendered by the connections. While a title (without connections) suggests one direction of reading like a vector, the horizontal connection concentrates the focus in one point: The linear composition becomes central. The connection point becomes the center of the composition.

Connecting Arabic to Latin script is a visual response to a situation in today's Lebanon. This visual might expand to all Arabic countries: Arabs from North Africa such as Tunisia, Algeria and Morocco, use and mix French and Arabic in their everyday life. Countries from the Arab

16a-b. the horizontal connection as a center of attraction.

like father like so**n**تنين لللم ليك ليك

16a.

lllike father like son تنين لللم ليك ليكll
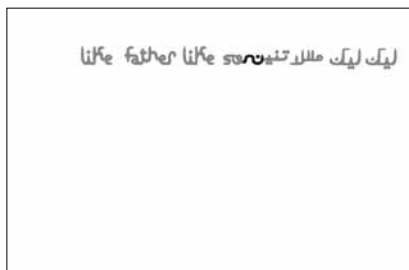
16b.

Gulf, such as the UAE and Qatar, use English extensively in parallel to the Arabic language. In these Arab countries, the connections of Latin and Arabic letters would have a greater extension: the visual of the connections would be similar to all countries. What would make the difference is the content of the messages affected by the visual cultural background.

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Antoine ABI AAD is Lebanese, described as Japanese in his country. In 2000 he completed his DES in Advertising from the Académie Libanaise des Beaux-Arts, ALBA. He went to Japan in 2001. In 2007 Antoine finished his Ph.D. in Comprehensive Human Sciences, Art and design, in the University of Tsukuba following a degree of Master of Arts in Visual Communication Design in 2004 at the same university. In 2008, after a year of post doctoral research in the University of Tsukuba, he came back to Lebanon where he is a lecturer and a coordinator in ALBA. He also teaches advertising design part time in LAU.

Xin: Icograda World Design Congress 2009
This paper was submitted for the Icograda Education Network (IEN) Conference that took place during the Icograda World Design Congress 2009 in Beijing, China, which was planned in collaboration with the Central Academy of Fine Arts (CAFA). The broader theme of the congress, Xin, literally signifies human speaking and hence message/letter in Chinese, Xin-信 which represents a primitive means of communication. The IEN conference invited papers under the following themes: Design Education and Innovation; Design Education and Diversity; Design Education and Cross-Disciplinary Collaboration and Design Education and Regional Development.

TRANS-MODERN CONSCIOUSNESS: MAPPING VALUE SYSTEMS AND MODELS FOR GRAPHIC DESIGN EDUCATION

ELIZABETH (DORI) TUNSTALL

ABSTRACT

This paper describes a three-axis model of six design philosophical orientations that map the ranges of traditional or modern approaches to graphic design education as defined by the authorship of the design brief, the tools used for designing, and valued output of design efforts. It argues that through a framework of trans-modern consciousness, institutions and individuals can select among traditional, modern, and post-modern-based design philosophical orientations to construct integrated design praxis for themselves.

FULL PAPER

Introduction

A Mexican design student focuses her research on the effectiveness of gender and ethnic visual markers in the Women for Obama and Latinos for Obama logos. An African marketing doctoral student explores how African verbal and visual metaphors expressed through Ghanian Kente cloth could be used in more culturally appropriate ways to market products to the black Diaspora. Gender, logos, and politics; race, culture, and marketing class represent the contemporary consciousness of graphic design education. What would I call this consciousness? I would call it a trans-modern consciousness. Spanish philosopher, Rosa María Rodríguez Magda, defines trans-modernity as "a type of dialectic synthesis of the modern thesis and the post-modern antithesis ... which adopts a interconnected model of self-multiplying overgrowth."[1] With its emphasis on ecological sustainability, globalism, feminism and family, altruism and self-actualisation, and social consciousness and optimism,[2] trans-modernism provides a theoretical framework for design students and faculty to engage in meaningful design knowledge and make their integrated senses of personhood, community, and praxis.

Why does this labelling matter? I argue that the trans-modern consciousness contains significant meaning for the value systems and models (i.e. design philosophies) of graphic design education. Six design philosophical orientations map the extreme ranges of traditional or modern approaches to graphic design education as defined by the authorship of the design brief, the tools used for designing, and the valued output of design efforts.[3] The approaches to authorship are expressed by a bias toward art or business. The approaches to the tools of designing range between the cultivation of analogue hand skills or high-tech digital competencies. The valued output of designing emphasises either the process or artifacts. But the focus of my paper is how, in the trans-modern consciousness, institutions and individuals select among traditional, modern, and post-modern-based design philosophical orientations to construct integrated design praxis for themselves.

A narrative of education's evolutionary consciousness

Jennifer Gidley in her essay, Educational Imperatives of the Evolution

1. Rosa María Rodríguez Magda, Trans-modernidad (Barcelona: Anthropos, 2004) via http://trans-modern-theory.blogspot.com/. Accessed: 8 May 2009.

2. Paul Ray, "The Rise of Integral Culture," Noetic Sciences Review 37 (Spring 1996) via http://www.noetic.org/publications/review/issue37/r37_Ray.html. Accessed: 8 May 2009.

3. Author and co-author, "Industrial Design Graduate Education: Identity Finding," 2006 IDSA Education Symposium Conference Proceedings in Austin, TX. (Arlington, VA: IDSA, 2006): 181–191.

of Consciousness, maps three socio-cultural and educational macro-phases in children's education:

1. Pre-history to late 18th century characterised by pre-modern socio-cultural discourses and informal educational structures,
2. Late 18th century to 20th century characterised by modern socio-cultural discourses and highly formal educational structures, and
3. The 20th and 21st century characterised by post-modern socio-cultural discourses and post-formal educational structures.[4]

These three macro-phases (pre-modern, modern, and post-modern) have become a common Western segmentation of significant changes in social thought and cultural structure. The value of Gidley's framework to graphic design education is that she links specific educational structures to these wider socio-cultural discourses. Using her framework, I will address the three macro-phases for education in general, then specifically for graphic design education.

As an anthropologist, I am steeped in descriptions of pre-modern socio-cultural discourses and their informal educational structures. Often viewed from the perspective of modernity, pre-modern discourses and structures are branded as "tradition." As described by African scholar Kwame Gyekye, the characteristics of this pre-modern consciousness includes an emphasis on social cohesion to the tribal, ethnic, or religious group; the recognition of the sacred in all things, whether based on a notion of a single supreme god or multiple deities; and the importance of the "ways of the ancestors" in maintaining social and cosmic harmony.[5] The pre-modern mode of education is through informal enculturation, whereby children learn by first watching and playing, then through guided doing by knowledgeable elders. As Gidley points out, "...only the children of the wealthy - who could afford private tutors - or who wished to become clerics, had any 'formal' education."[6]

Many scholars, including Gidley, describe pre-modern consciousness evolving into a modern consciousness following the Industrial Revolution in Europe during the late 18th and early 19th centuries. Rosa María Rodríguez Magda provides a clear synopsis of the project of modernity:

> *According to Habermas the project of modernity is originally based on the attempt to develop from reason the spheres of science, morality and art, keeping them separate from the metaphysical and religious realm. While the latter may be carried out in theory, its material manifestations include a process of modernisation, among them the industrial revolution, scientific progress, population growth, technological advances, the expansion of markets, capitalism etc., i.e., a relentless force characterised by even greater dynamism and innovation.[7]*

Compared to pre-modern consciousness, the socio-cultural changes of modernity emphasised the individual over social cohesion, divided the profane from the sacred, and a break form the past towards a progressive innovative future. The justification for these changes was the creation of freedom-granting universal principles derived from humanistic rationalism (ex. the language of human rights, worker's rights, and individual rights, including the granting of the corporation the charter of an individual). A "disciplined" population was needed to work in the industrial factories being set up in the mostly urban centers.[8] Thus, states

4. Jennifer Gidley, "Educational Imperatives of the Evolution of Consciousness," International Journal of Children's Spirituality, Vol. 12:2, (August 2007): 119.

5. Kwame Gyekye, Tradition and Modernity: Philosophical Reflections on the African Experience (New York: Oxford University Press, 1997).

6. Gidley, 119.

7. Magda, 1.

8. James Ryan, "Observing and Normalizing: Foucault, Discipline, and Inequality in School," Journal of Educational Thought / Revue de la Pensee Educative, Vol. 25:2 (August 1991): 104–19.

began to create formal, publicly funded, mass education to create these populations. These educational institutions were often modelled on the factories into which the children and adults would be fed.[9]

Paradigm shifts caused by technological advances in the development of digital technologies (ex. satellites, computers, and especially the Internet) led to the end of the industrial economic system for Europe, the United States, and many parts of East Asia in the 1980s. This heralded the emergence of a post-modern consciousness, where these technologies enabled a critical response to the underlying assumptions of modern consciousness related to the notions of Self, of Time and History, and Progressive Innovation. In contrast to Modernity's Self that subsumed the Other into a homogenous Universality, Magda argues that post-modernity saw "the rise of the Other, i.e., in different types of counter-discourse, margins, in everything that had erroneously been subsumed under a poorly differentiated homogeneity, including ethnic groups, minority cultures, women, homosexuals, etc."[10] Whereas modernity's progressive sense of Time marched optimistically into the future, post-modernity exposes the compression of time and space in which the failures and inequalities of those utopian visions are beamed via satellite globally. The control of scientific and technological innovation that defined modernity finds itself challenged by a post-modern ethos of the knowledge economy in which "information should be set free" on the Internet.[11] As pointed out by Gidley, the post-modern consciousness has significant implications for education:

> The 1970s to 1990s saw a flourishing of alternative educational modes, including home-schooling, online learning, holistic education, transformative education, futures education, and a raft of educational reforms within mainstream settings. Some approaches are based on earlier 'progressive' theories such as Jean Piaget's constructivism, John Dewey's experiential education, Paulo Friere's critical pedagogy, and more spiritually oriented approaches. All are critical of the formal, modernist 'factory-model' of mass education.[12]

Gidley goes on to describe the emergence of a "post-formal integral consciousness" captured in the educational theories of Rudolf Steiner and the integral consciousness theories of Ken Wilber:

> My research suggests that an educational integration of love and reverence, with lifegiving conceptual imagination and creative multi-modal methods, transmitted through an authentic human voice, lays a strong foundation for the emergence of post-formal, integral consciousness.[13]

While Gidley situates these educational approaches within the post-modern consciousness, they actually more closely align with Rosa María Magda's description of trans-modernity. Before turning explicitly to that argument, I want to first address how graphic design historiography recounts a similar narrative about the evolution of graphic design's consciousness and how it relates to my six design philosophical orientations.

A narrative of graphic design education's evolutionary consciousness
Gidley's framework lays out three macro-phases: the pre-modern, the modern, and the post-modern. An examination of two important graphic design history texts – Philip Megg's *History of Graphic Design*[14] and

9. Gidley, 119.

10. Madga., 1.

11. Ibid.

12. Gidley,120.

13. Gidley, 130.

14. Philip Meggs, A History of Graphic Design (New York: John Wiley & Sons, 1998)

Johanna Drucker and Emily McVarish's *Graphic Design History*[15] – reveals the same narrative framework. Both texts characterise the pre-modern period from the invention of writing circa 35,000 B.C.E. to the standardisations in printing following the Renaissance. From a socio-cultural discourse, the role of graphical representation at the time served the purpose of spiritual transcendence. As Daniel Kantor describes in *Graphic Design and Religion*, "The creators of the illuminated texts didn't see their works as ends in themselves but as objects subordinated to a divine framework..."[16] The structure of design education followed one of the master-apprentice. Richard Buchanan notes:

> *Despite immense differences between the East and West, design education in both cultures began as apprenticeship. By whatever method of selection, young people were apprenticed to masters, who oversaw their development, encouraged the most talented, and were eventually replaced by their students.*[17]

In characterising the modern macro-phase, both texts highlight the impact of the Industrial Revolution, the rise of advertising and mass mediated consumption, the old and new Bauhaus, the International Style, information and corporate identity design. The socio-cultural discourse of design shifts from a commercial art (i.e. art in service of secular commerce) to its own unique field. As Richard Thornton explains, "In the 1950s young designers were trying to change their image as commercial artists trained in studio art programs as painters and printmakers."[18] To fill the demand for advertising agencies and then in-house corporations, graphic design education institutionalises itself among fine art academies to factory-like technical programs. Its focus also changes where by it moves from "...adding decoration for printing to visual problem-solving that would create industrial and corporate identities based on the look of their publications."[19]

Meggs and Drucker and McVarish locate the shift to a post-modern macro-phase in the 1970s, which is then accelerated by the digital technology. Desktop computers and GUI software on the one hand gave an unprecedented number of untrained people access to sophisticated tools of design.[20] This directly threatened the expertise of design skill in form making and causes a shift in emphasis towards design process and methods.[21] Interaction design emerges as a dominant area of graphic design praxis that generates concerns about the teaching of software programs versus designerly skills. Master/apprentice structures were ruptured by the student's superior knowledge of the technology over that of the teacher.[22] Complexity in problems required the introduction of interdisciplinary teams to design studios, human-centered design methodologies, and blended learning environments.[23]

From pre-modern, to modern, to post-modern, this narrative of graphic design history and education is unsatisfactory. First, it does not address "non-Western" challenges to this evolution from pre-modern, to modern, and post-modern consciousness. Indian scholar, Singanapalli Balaram, confronts the distinctions among craft/art/design that underlie the narrative of modernism in design:

> *To start, the complexity of Indian design education and design practice must be clearly and appropriately recognised. This complexity is not just unity in diversity, but also the simultaneous telescopic existence*

15. Johanna Drucker and Emily McVarnish, Graphic Design History: a Critical Guide (Upper Saddle River, N.J.: Pearson Prentice Hall, 2009).

16. Daniel Kantor, Graphic Design and Religion (Chicago: Gia Publishing, 2008): 26.

17. Richard Buchanan, "Human-centered Design: Changing Perspectives on Design Education in the East and West," Design Issues: Volume 20 (Number 1 Winter 2004): 33.

18. Richard Thornton, "Graphic Design in a Box," National Forum Vol. 76 Issue 2 (Spring 1996): 30.

19. Thorton, 30.

20. Ibid.

21. Buchanan, 36.

22. Lindsey Marshall and Lester Meachem, "Direct or directed: orchestrating a more harmonious approach to teaching technology within an Art & Design Higher Education curriculum with special reference to visual communications courses," Learning, Media and Technology, Vol. 32, No. 1, (March 2007): 41–52.

23. Buchanan, 37.

of the past traditions with the contemporary: the bullock cart beside the spacecraft, the burkha1 beside Miss Universe, and illiteracy beside software supremacy.[24]

Ian Sutherland confronts the failure of design's universalising neutrality in post-colonial and post-apartheid South Africa. He asks from what cultural resources do the mostly white South African designers construct an "African" design aesthetic distinct from that of Europe and the United States.[25] Secondly, and more important to my argument, the narrative does not account for the contemporaneous existence of designers as diverse as Stefan Sagmeister, John Maeda, Jessica Helfand, Ellen Lupton, Michael Beirut, and Sylvia Harris. While representing a cohort of design luminaries, they also represent very different design philosophies, which I argue is symptomatic of a trans-modern consciousness in which people create integrated identities from various design philosophical orientations.

The six design philosophies and models of design education

My dissatisfaction with the linear modernity narrative found an outlet in a assignment to co-lead the rewrite of X University's MFA programs across graphic, industrial, and digital media design programs. I observed the student candidate evaluation meetings for all programs. I interviewed all faculty members and the majority of MFA students. I analysed the mission and structure on all the design institutions considered within the University's competitive set as well as a few benchmark institutions. Seven hundred Post-It notes later, a clear picture emerged of three sets of distinct design philosophical orientations for a total of six.[26] The first set concerned the authorship of the design brief:

1. An Art Orientation reflects a bias towards having the student's own personal expression and artistic authorship determine the majority of studio courses' design briefs.
2. A Business Orientation reflects a bias towards having external business clients, whether for-profit, non-profit, NGO, or governmental, determine the majority of studio courses' design briefs.

The second set addressed the tools used for designing:

3. A Hand Skill Orientation favours instruction in the use of paper, pen, ink, letterpress, plaka paint, and other analogue tools for designing.
4. A High Tech Orientation favours instruction in the use of mostly software, programming, and other digital tools for designing.

And the third set described the valued output of design effort:

5. An Artifact Orientation marks a focus on making designed artifacts as the primary course or program's evaluated output. A curriculum would not require students to take courses in design processes or methodologies.
6. A Process Orientation marks a focus on process documentations, as the primary course or program's evaluated output, even in lieu of designed artifacts. A curriculum would require students to take structured courses in various interdisciplinary design processes (ex. human-centered design).

The three sets of design philosophical orientations were mapped on to a 3-D matrix to visually display the multiple permutations an institution or individual can be placed: See figure 1.

How does the model work? In a city like Chicago, Illinois, there

24. Singanapalli Balaram, "Design Pedagogy in India: A Perspective," Design Issues: Volume 21, Number 4 (Autumn 2005): 12.

25. Ian Sutherland, "Paradigm Shift: The Challenge to Graphic Design Education and Professional Practice in Post-Apartheid South Africa," Design Issues: Volume 20, Number 2 (Spring 2004): 55.

26. Author, 183.

1. Three-axis model of design philosophical orientations. Created by designer Leilah Rampa.
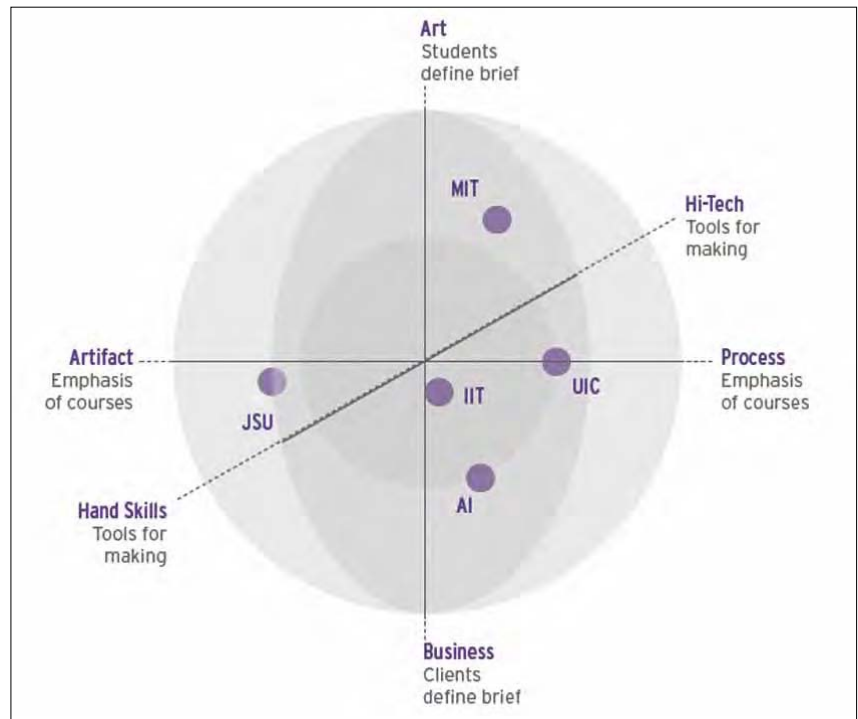
1.

might exist graphic design programs in three different institutions. The University of Illinois at Chicago might be plotted in a quadrant reflecting a slight emphasis on an Art Orientation, a strong Hand Skill Orientation, and a strong Artifact Orientation. The Institute of Design at IIT might be plotted in a different quadrant reflecting a strong Business Orientation, a slight High Tech Orientation, and a strong Process Orientation. The Art Institute of Chicago might be plotted in yet another quadrant reflecting a strong Art Orientation, balanced Hand Skill and High Tech Orientation, and a strong Artifact Orientation. At the micro-level of educational structures, the model allows design institutions and individuals to identify unique areas of focus and expand the selection criteria beyond location, ranking, and price. At the macro-level of socio-cultural discourses, the model links design philosophies to particular pre-modern to early modern and late modern to post-modern consciousnesses. Art, Hand Skill, and Artifact Orientations link to pre-modern and early modern consciousness. Business, High Tech, and Process Orientations link to late modern and post-modern consciousness: See table 1.

	Pre-modern to early modern consciousness	Late modern to post-modern consciousness
Authorship of Design Brief	Art	Business
Tools of Designing	Hand Skill	High Tech
Valued Output of Designing	Artifact	Process

Table 1: "Modern" Consciousness related to Design Philosophical Orientation

Conclusion: trans-modernity and graphic design education

By framing the design orientations within a trans-modern consciousness, instead of a postmodern one, two things are achieved. First, institutions and individuals have a theoretical discourse by which to describe their identities from places of authentic complexity and integration.

Rosa Maria Madga writes, "So, with the crisis of Modernity, we are using as a strength what constituted our weakness in Modernity, namely our lack of identity." The International Council of Graphic Design Associations's INDIGO project to create a space for indigenous design reflects the institutional necessity of having this theoretical language. Second, with identity accepted, graphic design education institutions can come closer to Gidley's idea of an "…educational integration of love and reverence, with lifegiving conceptual imagination and creative multi-modal methods, transmitted through an authentic human voice."[27]

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Elizabeth (Dori) Tunstall is Associate Professor of Design Anthropology and Associate Dean of Learning and Teaching at Swinburne University in Australia. She leads the field of Design Anthropology: a field that seeks to understand how the processes and artifacts of design help define what it means to be human. Passionate about civically-engaged design, she is organiser of the U.S. National Design Policy Initiative. She has taught at University of Illinois at Chicago and worked for Sapient Corporation and Arc Worldwide. Dori holds a Ph.D. in Anthropology from Stanford University and a BA in Anthropology from Bryn Mawr College.

Xin: Icograda World Design Congress 2009
This paper was submitted for the Icograda Education Network (IEN) Conference that took place during the Icograda World Design Congress 2009 in Beijing, China, which was planned in collaboration with the Central Academy of Fine Arts (CAFA). The broader theme of the congress, Xin, literally signifies human speaking and hence message/ letter in Chinese, Xin-信 which represents a primitive means of communication. The IEN conference invited papers under the following themes: Design Education and Innovation; Design Education and Diversity; Design Education and Cross-Disciplinary Collaboration and Design Education and Regional Development.

27. Gidley, 130.

Business
CSCP
Economic
Environment
Human rights
Labour
Society

DO SMART BUSINESS – WEEK BY WEEK
HELMUT LANGER

ABSTRACT

International multi-cultural students' network project for the Centre on Sustainable Consumption and Production (CSCP) in cooperation with 12 academies/universities from 12 countries of all five continents.
The Centre on Sustainable Consumption and Production is a sub-organisation of the United Nations Environment Programme (UNEP). The Centre was established three years ago to promote world-wide switching practice and changing life style towards sustainable consumption and production.
DO SMART BUSINESS is CSCP's first real global promotion project. It has 52 themes for sustainable actions, divided in five sections:
a) Environment, b) Society, c) Economic, d) Labour, and e) Human Rights.

FULL PAPER

The project
The 52 weekly actions are visualised as eye-catching by students of the 12 academies and universities. They will be published in a handbook together with background information and case studies. It will give small and medium-sized companies (SMEs) around the world concrete ideas to help make their businesses more environmentally friendly and socially responsible = sustainable. It is valuable to any small or not so small company that need hands-on guidance on improving and communicating its sustainability performance. It enables the company and its stakeholders to understand the relationship between good environmental and social management and good financial performance.

Sustainable development means having a different vision of the world. Sustainability is about more than just the environmental impact of consumption. It has ecological, social, economical, cultural and esthetical, political, and human rights dimensions. It relates to human choices and quality of life for all. No institution, even at a global scale, can manage to achieve the goals of sustainable development on its own. Only united together, from North to South, East to West, can we be sure to build a viable world for us and for generations to come. Therefore this project was done not in isolation but in a spirit of togetherness.

I formed a cross-cultural education network with 12 academies and universities from 12 different countries of all five continents. I have asked the selected professor colleagues to assist in the project and to invite their students to create interesting and understandable motifs which should visualise creatively, cheerfully, and powerfully the 52 themes/actions.

Each participating institution received five to ten themes with a detailed briefing text. Idea and concept was to get different perspectives and ideas with regional character of style, technic, and culture. Some difficult themes were overlapping between the academies to guarantee best results. During the developing process intercultural exchange was practised on an internet platform where all designs – some hundreds – were presented and discussed, and final designs were selected.

The high standard of the individual contributions by the students from all regions of the world turned the projct into a visible milestone

for a global students' communications project. Beside the handbook the designs will be published as a poster collection with world-wide exhibitions and a calendar.

The project is awarded by UNESCO as official project of the United Nations Decade on Education for Sustainable Development (2005 - 2014).

In the context of the Xin-Conference the project is covering all aspects:

- Xin-xi (Information) – human communication
- Xin-nian (Vision) – designing a better world
- Xin-ren (Trust) – understanding and collaboration
- Xin-yong (Creditability) – reliability and responsibility
- Xin-xin (Faith) – believing in hope

It is information for all people of the world, a vision for changing business management for a better world, trust — created in understanding and collaboration by students from all 5 continents, creditability — in reliability and responsibility to save global environment, and faith — believing in hope that sustainable development will be possible.

The participating institutions

- **Academie Libanaise des Beaux Arts (ALBA)/ Beirut, Lebanon**
  Antoine Abi Aad
- **Ecosign Akademie fuer Gestaltung, Koeln/Germany**
  Helmut Langer, Uwe Boden, Sylke Lützenkirchen
- **Fine Arts School of Hanghzou Normal University, Hanghzou/ P.R. of China**
  Lin Guosheng, Zhang Xiaofei, Zhu Jun, Fan Xiaochun, Sun Yiwen, Helmut Langer
- **High Academic School of Graphic Design Moscow/Russia**
  Serge Serov
- **Istituto Europeo di Design (IED), Milan/ Italy**
  Elena Caratti
- **Nagoya University of Arts (NUA), Nagoya/ Japan**
  Kazuo Mizoguchi, Helmut Langer
- **National Institute of Design (NID), Ahmedabad/ India**
  Tridha Gajjar, Helmut Langer
- **Pontificia Universidad Católica de Chile, Santiago de Chile**
  Julian Naranjo
- **Pratt Institute, New York/ USA**
  Luba Lukova
- **RMIT University Melbourne/Australia**
  Russell Kerr
- **School of Art at Pontificia Universidad Catolica del Peru, Lima/ Peru**
  Carmen García Rotger, Felipe Antonio Cortázar Velarde, Martin Razuri Hora, Rosa Gonzales Mendiburu de Olcese
- **Zimbabwe Institute of Vigital Arts (ZIVA), Harare/ Zimbabwe**
  Sifelani

25 Design examples of the 52 actions

<u>Environment</u>

1) Design Products for sustainability (Fu+Yibo, China)

80% of the environmental and social impacts of a product throughout its entire lifetime (production, use and disposal stages), are determined during its planning and development phase alone.

2) Pollution does not pay (Danielle Sassine, Lebanon)

Industrial wastes, air emissions and legacy pollution affect over a billion people around the world.

3) Think impacts from staff commuting (Stefan Pannes, Germany)

The world average commuting time is 40 minutes one way. Thailand has the longest commuting times in the world with a total of 37 million hours being spent travelling to work every day. The shortest journeys to work are in Malawi, taking just 2 minutes.

4) Think transportation impacts (Chrisitine Ziadé, Lebanon)

In a survey of 500 industry executivs, 73 % said that sustainable transport issues will be increasingly important over the next 3 years. Rethinking the logistics of business and planning and implementing the supplying of services more effectively can have great benefits for a business. Improvements can often be made using unique and innovative techniques. The main strategy is to reduce the amount of transport required, or switch to a more efficient way of transportation.

5) Every drop counts (Lara Hilger, Germany)

Global water use has more than tripled since 1950. Water is essential for sustainable business, because it is not just important for the direct uses we immediately think of, such as drinking or washing, but also for the production of goods. Global water consumption has increased by almost 8 times since 1900, and experts predict serious water shortages by 2020.

6) Buy eco-products (Elisade Navascues, Italy)

Over 2,000 large and small companies in Japan have already declared that they are buying green (eco) products and services for their offices and production. Eco-products are manufactured in ways that reduce natural resource consumption and environmental impacts during all stages of the product life, from resource extraction and production, to use or end-of life management. Examples of eco-products include organic foods, goods produced from sustainable forestry, energy efficient products, and goods containing recyclable or recycled materials. Eco-products also contain fewer toxic and hazardous materials.

7) Reduce carbon footprint (Zhou+Qianwen, China)

Hundreds of companies around the world are using systems of calculating greenhouse gas (GHG) emissions and tools to manage their carbon footprint and also benefit their business by developing new products, improving energy efficiency, and participating in GHG programmes and markets.

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3.

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Save water!
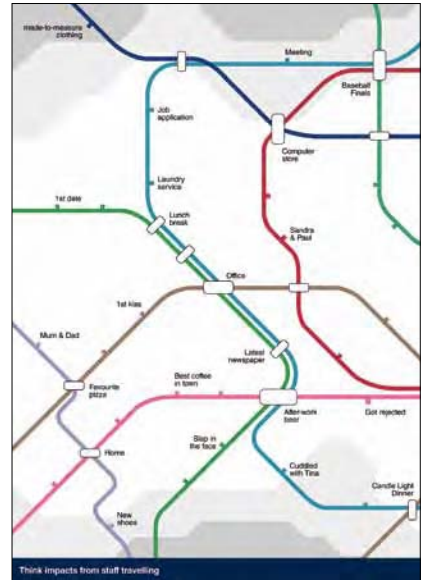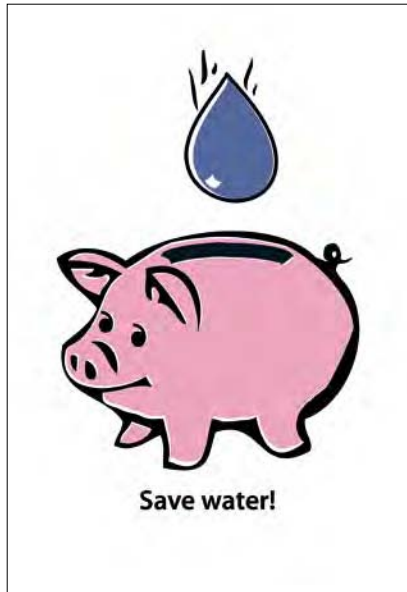
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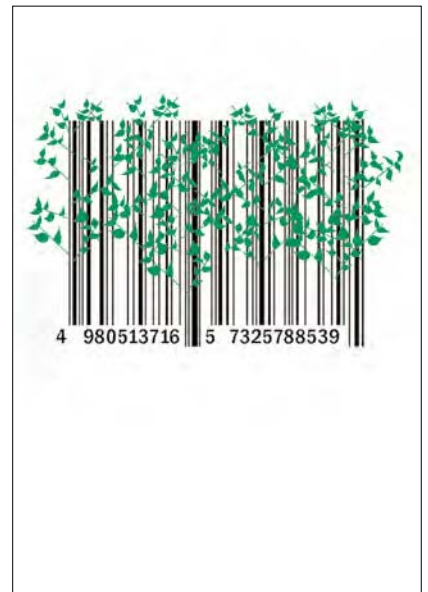
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Society

8) Lobby for good (Aitor de Azcuenaga, Chile)

Studies show that successful companies align their lobbying agenda with their business principles.

9) Compliance is the first Step (Carolina Gonzalez, USA)

"Integrity, track record and reputation" are the most important factors when assessing how ethical a company is.

10) Ensure licence to operate (Luis Molina, Peru)

Crime, litter and graffiti are disincentives for business investment. Making your trading environment as attractive for customers, employees and residents is important in your company's everyday practice. One should think about where a business is located and the people and communities living in this area? The success of a company could depend on its location and its relationship with the community living nearby. One should make sure that a business has 'Licence to operate', which doesn't just mean coordinating with legal obligations;. It also means monitoring the impact the business has on the local surrounding and community.

11) Support external initiative (Charutha Reghunath, India)

The business-driven anti-corruption initiative in Brazil, the 'Partnering Against Corruption Initiative represented a turnover of more than $500 billion (US) and 1.4 million employees. Supporting national or international external initiatives can be excellent for the reputation and image of a business, as well as increase its customer base. There are many different ways in which a business can become involved in external initiatives, a few examples include supporting conventions, agreements, national strategies, policies and plans, or through the membership of trusts, networks councils and programmes. The customers are now more aware of international programmes concerning the environment, poverty or corruption, and knowing that the business also supports well known initiatives to tackle these problems means people will choose the business over others.

8.

Compliance is the **first** step

9.

Ensure licence to operate

10.

Support external initiatives
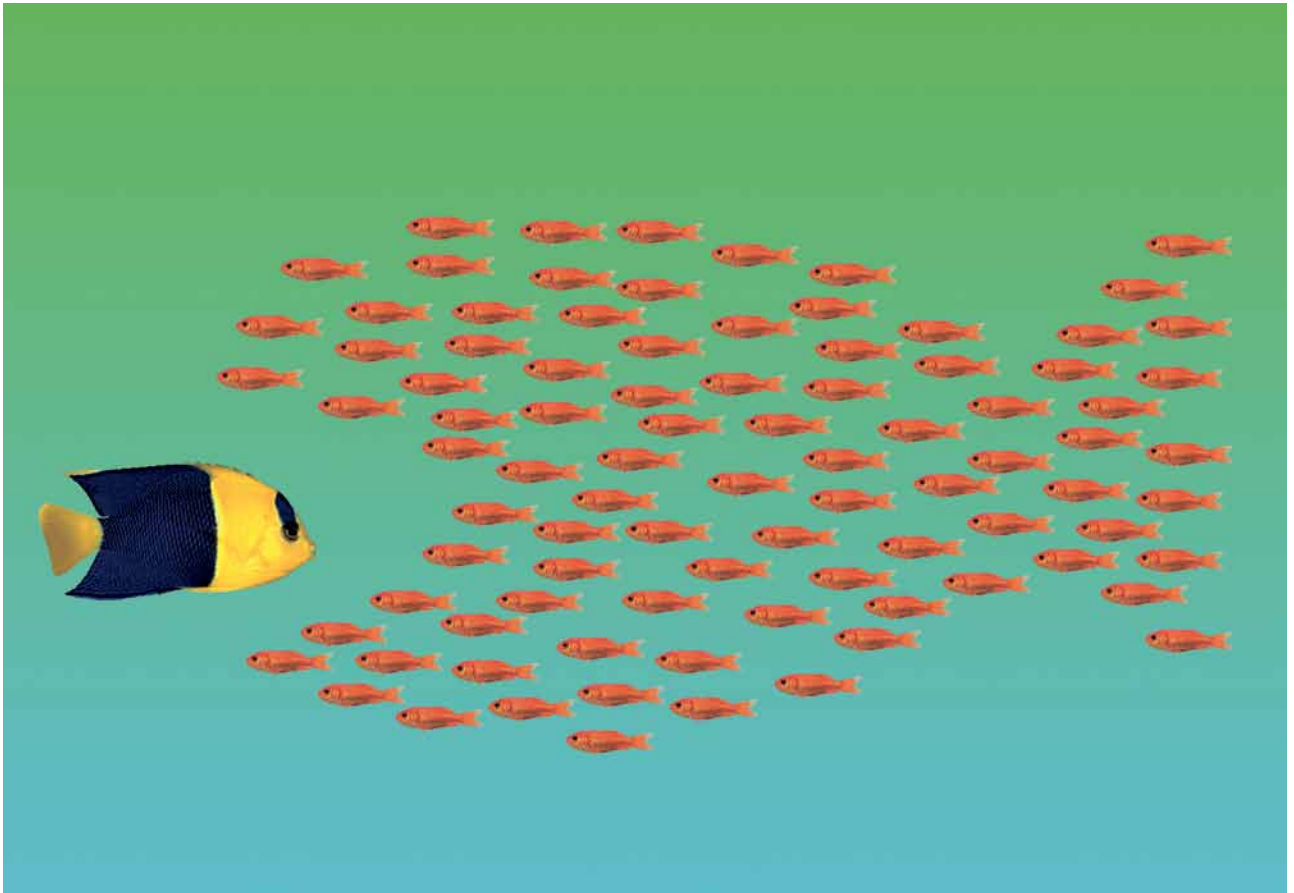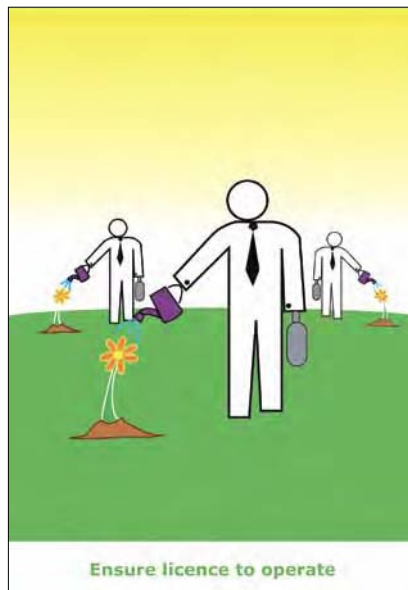
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Economic

12) Reputation can make or break (Charutha Reghunath, India)
Socially responsible investing (investing money in firms with sustainable business practices) now offers higher returns than using strategies which on simply financial performance. Once your company has made some profit, the next important question will be where to invest. Nowadays it is important to consider where the money you invest goes.

13) Invest your profits in a good cause (Clementine Swan, USA)
One may be unknowingly supporting industries, which pollute the environment, or companies involved in risky activities such as operating with a disfavourable human rights record. Responsible investing means supporting companies that have good track records in environmental and social issues, and studies have shown that this approach is actually more profitable for a company.

14) Listen to customers voice (Wishlova Tanya, Russia)
A person who has experienced bad service will tell at least nine people about it.

15) Trade fairly (Lorena De Ferrari, Chile)
Fair Trade is an innovative, market-based approach to sustainable development. It helps small producers in developing countries gain direct access to international markets and to develop the business capacity necessary to compete in the global marketplace. There are many different people involved in the sucessful running of a business. One must think about the conditions under which these people work? Are farmers or manufacturers are being paid a fair proportion for the amount of work they are doing? Ensuring that the people supplying a business are being paid a fair salary and working under good conditions is known as 'fair trade'.

16) Label information clearly (Eunice Maiguira, Zimbabwe)
In 2005, customers worldwide bought 1.1 billion worth of fair trade labelled products. Today's customers like to know about the products they are buying. Labelling products or services to show exactly where they come from, what they are made from of, and how they are manufactured, allows to show the customers that the company recognise their environmental and social concerns. Labels keep the business transparent, by providing information to consumers and helping them to make an informed decision about whether to buy a product. Labels can also show customers how to use a product, know any associated risks, take safety measures, or store it properly.

17) Assess new risks (Abhay Salve, India)
Almost 80% of the biggest companies in the world consider climate change as a commercial risk. On the other hand 82% see climate change also as a commercial opportunity for both existing and new products and services. Climate change and other global environmental problems entail different types of risk that might also affect small businesses. These risks can be classified as physical, regulatory, reputational or legal. Physical risks include, for example, increased storms, heavy floods or intense rainfall, as well as heat-related illnesses affecting the work force, or asset losses for weather-dependent businesses like skiing. The rise in regulatory risk can also be observed through, for instance, higher standards in energy-efficiency, or the implementation of emissions-trading schemes. Assessing new risks today is a matter of saving money in the future.

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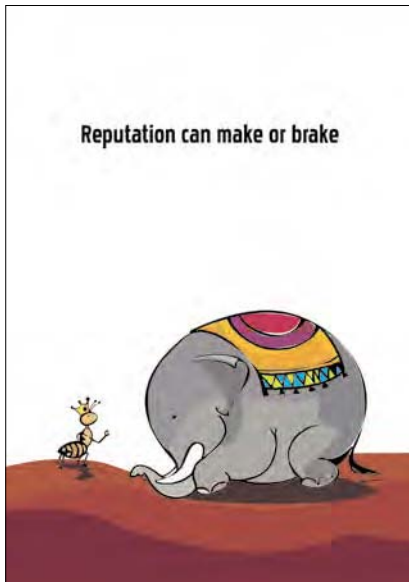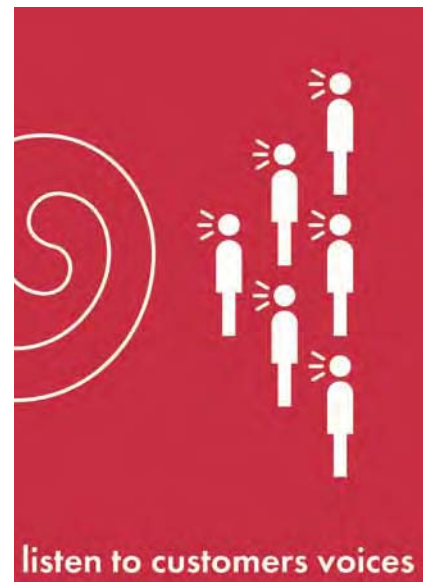
18) Motivate your employees (Lartsev, Russia)

Studies show that when employees feel job satisfaction, it can make up to 16% difference to the productivity of a company. Motivated employees work more productively. There are various techniques, both physical and psychological, which one can use to keep motivation in workforce high. In today's world, people have differing, and continually evolving needs, and likewise ways of motivating employees should be individual, diverse and up to date.

19) Provide comfort in the workplace (Christian Asmar, Lebanon)

Every year worldwide there are around 68-157 million new cases of occupational diseases caused by exposures in the workplace or unsafe working conditions. Much work nowadays involves spending many hours in the same position, for example, sitting in front of a computer in an office, or carrying out repetitive motion in a factory. When you are not comfortable at work, stresses and strains are common, and can lead to long term health problems. For business, this means more staff absence as sick-leave, and ultimately a lower level of productivity and profit. Taking simple steps to ensure the comfort and health of the employees can therefore save company's money.

20) Tell it like it is (Yuri Del Carpio, Peru)

Six out of 10 businesses that work with employee activities have observed a positive effect on their overall financial performance. Having the most up to date information can be what makes or breaks your business. However, a company is made up of much more than just its owner or manager. Sometimes the most important people in a business are the staff who keep it running. The employees play a crucial role in a company, and if they are not up to date on what is going on, inside and outside the business, it will be very hard for them to work to their best ability.

21) Listen to employees' voice (Haruka Saino, Japan)

A survey of over 5428 companies in 40 countries revealed that 43% of businesses had sustained one or more significant crimes during the previous two years Economic crimes, such as fraud, can cost your business serious money. Encouraging the employees to voice their opinion can help resolve internal problems before they become bigger and exposed to the public.

22) Work to live. Don't live to work (Mitsuyo Futaba, Japan)

A survey conducted in the UK showed that over 10% of full time employees worked very long hours (60 or more hours a week). Paid work is important both for personal fulfillment, and the economic survival of households. However, it is only one aspect of our lives. The reality is, for many people, work dominates too much time, sacrificing commitments to families, friends and communities, as well as sleep. Life-work conflicts decrease motivation and can cause serious stress, jeopardising work performance and even increasing employee absenteeism for personal sickness or family crises. Promoting a work-life balance, with sufficient income, also makes most sense for business, because employees are happier and able to use their abilities to the full.

Motivate employees

18.

Provide Comfort in the workplace

19.

Favour early correction over later mistake

20.

Listen to employees' voices

21.

Keep work-life balance
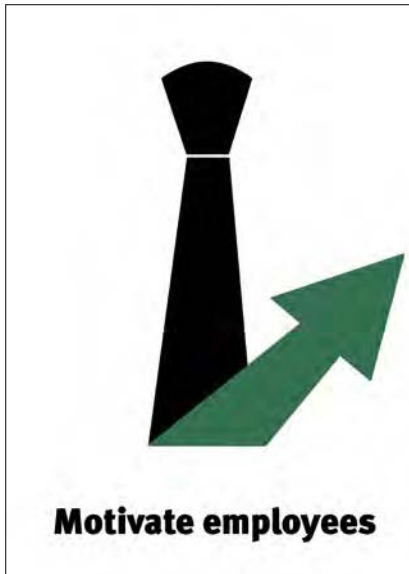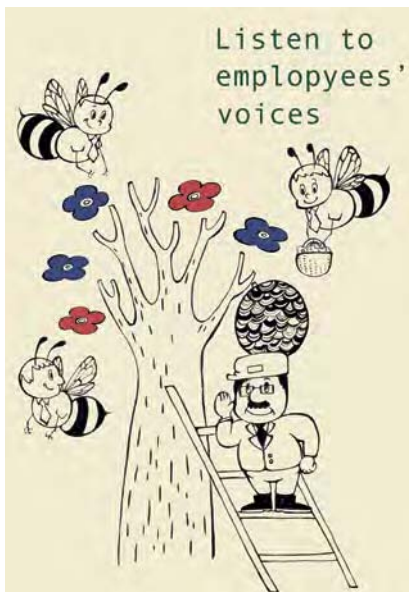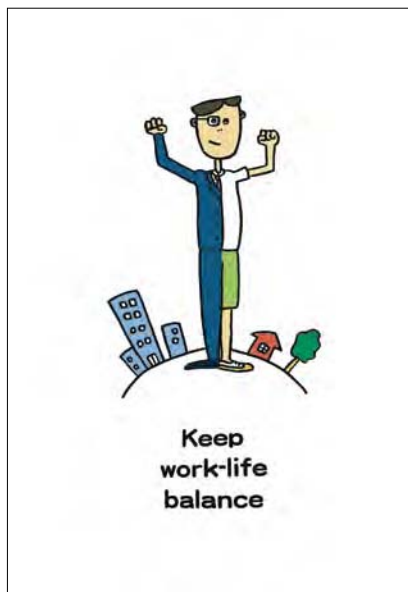
22.

<u>Human rights</u>

23) View diversity as an opportunity (Marilyn de Castro, Australia)

Well-led, diverse teams can outperform homogenous teams by as much as 15% Having a diverse workforce can bring valuable opportunities to a business. Diversity in a company means employing people with differing racial or cultural backgrounds, of different genders and with differing abilities/disabilities. With a diverse workforce, one is more likely to attract and maintain skilled employees, as well as increase productivity and innovation. The reason behind this is that diversity guarantees different life experiences meaning different ways of thinking, solving problems, identifying opportunities or making suggestions.

24) Discrimination and bullying is bad for business
(Sally Fowler, Australia)

Discrimination can prevent businesses from taking advantage of the full workforce available to them. For instance, only 28.3% of senior jobs worldwide are held by women. Discrimination in the workplace means giving potential or current employees a disadvantage on the basis of some factor, other than their skills, qualifications or ability to perform their job. This could be, for example, paying somebody a lower wage because of their age, sexual orientation, race or culture. Discrimination does not make business sense because it limits the number of workers and skills available to your company, slows overall economic growth as well as having a very damaging effect on a business' reputation.

25) Say no to child labour (Bokov Alexey, Russia)

In 2004 there were 218 million children trapped in child labour, of whom 126 million were involved in hazardous work. Children under the age of 15 years, or under the age of completion of compulsory school should not be forced to work. Employing childen can be bad for the business for many reasons. For instance, consumers now take human rights issues into account in their purchasing choices. Child labour is a sensitive issue which can greatly affect whether of not customers use products or services. In addition, employees and prospective employees now have higher standards, and want to work for a company with a good record on social issues. Investors want to invest in companies that are alert to human rights issues and less likely to take risks. Also, children forced to work will mostly be unhappy employees, leading to low productivity in a business too!

These are the 25 examples of how the themes were transformed into a strong visual image.

23.

24.

SAY NO TO CHILD LABOUR
25.

Conclusion

It is a design education project respecting diversity, using the impact of cultural variety as a creative resource and collaboration as a new motivating education practice. By this project, the students were learning about sustainablility, practising professional reality, experiencing international thinking and global responsibility.

Acknowledgements

All information is based on CSCP information. The project is creating interest and demand for getting books and hosting the exhibition from around the world. I want to thank my colleagues at the 12 academies and universities for their great support during the developing stage. And a big thank you to all students who have participated with their creative works.

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About the author

Sustainable conception and visual design for global communication Helmut Langer has created many multicultural and global communication projects of international signification, e.g. for several UN organisations including UNESCO, UNEP, UNFCCC, etc. International visual competence, published worldwide and represented in major international design collections, exhibitions. Helmut has received many prizes and awards at international competitions.
From 1987 to 1993, Helmut has served as President and member of the board of Icograda. For many years he has served as a juror at international competitions and a speaker at international conventions. He is teaching at various universities in Asia, Latin America and Europe. In 2008, Helmut was honoured by the Nagoya University of Arts in Japan with the title Professor honoris causa.

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THE APPROACH OF GUANGZHOU ACADEMY OF FINE ARTS: DESIGN EDUCATION BASED ON REGIONAL TRADITIONS AND CULTURAL DIVERSITY

ZHAO JIAN

ABSTRACT

Guangzhou Academy of Fine Arts of China (GAFA) has always been attentive to and accepting of local styles, such as the Guangdong regional culture of "inclusiveness and accommodation," the Lingnan artisan spirit of "folkways and optimism," and the strong tradition of "business orientation and pragmatism" that Guangzhou shares with Hong Kong and Macao. Design faculties at Guangzhou Academy of Fine Arts focus on the inter-linkages and complementariness between traditional craftsmanship and modern design, being one of the first to experiment with basic training in new styles of design as well as in the construction of new design theories. Guangzhou Academy of Fine Arts is among the first to orientate itself towards the market and the social practice. Given that Guangdong's economy assumes a "leadership" role in China's sustainable development, the design at Guangzhou Academy of Fine Arts has always emphasized pragmatism, concreteness, and high degrees of completeness, all of which brand the design at Guangzhou Academy of Fine Arts with a distinctive focus on "application". For these reasons, Guangzhou Academy of Fine Arts sets up its design education in a way that is markedly different from that at other academies of fine arts.

In recent years, design education in China has been undergoing rather profound changes. As other academies of fine arts in the country, Guangzhou Academy of Fine Arts has been closely monitoring these changes and implementing necessary adjustments in an effort to "keep up with the times".

To the extent that it is difficult to clearly define the activities of the Beijing Olympics and their impact, design educators are having an unprecedented tough time attempting to define the tangible or intangible boundaries for design education in contemporary China. To the extent that it is difficult to trace how the concept of the Olympic Games is generated, disseminated, rejuvenated, and recycled, we are having an unprecedented tough time attempting to offer an "accurate account" of the key steps in the evolution of design concepts: the origin of design creativity, strategic path, value-adding modules, and the assessment of the effect. In this ongoing process of "being made chaotic" and "being rendered ambiguous," we have come to feel the urge exacted by the impending trend or momentum in China for Chinese design education to make a timely and elegant transition - to "infiltrate" but not necessarily "inject," to "be responsive" rather than deliberately "indoctrinate," which in fact has become a trait shared by the Chinese value, the Chinese way, and Chinese design education.

Whether it is predicated on "multiple interaction" or derived from "extension strategy," design should rightfully employ "precision agriculture" on the soil of "light reading" that is typical of our age. Whether it is following the "consumer logic" or extending the "added value," design should rightfully pursue "intensive cultivation" of intelligence service products, which is somewhat different from "art". In contemporary China and, for that matter, the whole world, the independent stance

of information and its inter-related nature subsequent to massive multiplication result in each unit (of information) being primarily "light" vis-à-vis space and time. Of course, this lightness is not "superficial" or "shallow"; instead, it should be understood to be "concise and lively"; this lightness is not "simply symbolic"; instead, it should be understood to be "cognitive in a convenient and spirited way"; this lightness is not "just games"; instead, it should be understood to be "differential interaction". "For example, Bird's Nest and Water Cube of the Beijing Olympics bypass, as far as architecture is concerned, the polemics on "depth" in terms of spatial design. They "transgress" into (architectural) "surface," which used to lie within the domain of visual cognition. This elicits a differential reaction from the audience, in the form of "light" reading, thus accomplishing the resonance breadth and implanting depth of the "Beijing Olympic memory." Relying on the same strategy of "cognitive integration" and "memory reliance," the features of the product, which is based on creativity and intended for servicing others, are established by smooth linkage of original shape design, symbol interpretation, concept extension, capital appeal, social inertia, and media contagion.

Design's rhetorical concept of the new era has deviated considerably from traditional occupational norms such that, in this time and age, it is no longer possible for design education to disregard the outside world and indulge in narcissistic "internal language" and "internal logic".

"The new style of design education" should probably make more reference to social platforms and social vocabulary, with more focus on" organizing and refining social resources" rather than on "creating artistic masterpieces".

FULL PAPER

The design faculty at Guangzhou Academy of Fine Arts (hereinafter referred to as GAFA) was conceived in understanding and transforming industrial design in the region. It went through gestation by comparing arts and crafts with modern design before being born out of basic training in new design along with the construction of design theories. It has matured drawing inspiration from the real market and the depth of practice. In the late 80s of the last century, teaching at Guangzhou Academy of Fine Arts found its new value-adding spot in its design faculty. Design at Guangzhou Academy of Fine Arts achieved relatively high levels of excellence due to the following factors:

- The non-mainstream status, in a national sense, of Guangdong Academy of Fine Arts and Guangdong culture in general, thereby giving rise to temperaments of inclusiveness and accommodation;
- The folkways and optimism of "Lingnan regional arts and crafts," along with its cognitive tendency towards "valuing application rather than philosophical depth";
- Traditional business orientation of the region and its value system of pragmatism and win-win strategy, resulting in Guangzhou Academy of Fine Arts being never dominated by "scholars". Instead, the natural focus has always been on "application";
- The "overseas ways of doing things and the new consumption concepts," as practiced and promulgated in Hong Kong and Macao, that is seamlessly adopted due to similarities in ethnicity and culture;

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- Urgent, concrete, and high viability demands placed on the local design faculty by the Guangdong economy, which pioneered in China's economic reform and sustainable development.

For these reasons, Guangzhou Academy of Fine Arts set up its design education in a way that is markedly different from that at other academies of fine arts.

This avant-garde position enjoyed by the approach at Guangzhou Academy of Fine Arts is, however, no longer tenable because things are changing and there has been a "big leap forward" in design education on a national scale. As a leader of the design faculty at Guangzhou Academy of Fine Arts, I am deeply concerned about "the current dynamics" that is affecting a transformation in the definition of design. In response to this, my colleagues and myself are treading nervously as if on the edge of an abyss, exerting our utmost to study ways of accommodating "design in motion".

Contemporary design is experiencing temporary chaos precipitated by cyclical transfiguration in the environment and cause-effect chain of changes in the past. School of Design at Guangzhou Academy of Fine Arts, School of Continuing Education, Department of Education or Printmaking Department and other design programs, all have to confront this stage of chaos and controversy, take the initiative to question the orderly, to positively identify the dynamics of our time amongst the chaos, and to catch the signals for the next round of transformation:

- "Depth" is gone and replaced by "flatness";
- "Focused" is gradually giving way to "dispersed";
- "Integration" has long lost its balance and quietly given rise to"fragmentation."

When "professional" concepts and terminology that used to be powerfully expressive can no longer convey our intentions or ideas — becoming hardly capable of assess or define today's teaching performance, we are left with no alternative but to experiment with "non-professional" language in our attempt to "describe" (instead of evaluate) our "profession" with which we used to be so familiar. The complicated diversity displayed at Guangzhou Academy of Fine Arts bears witness to this forced "non-professional description".

In the face of these "unspeakable" quiet transformations, we are convinced that development does not equate a simple accumulation of "quantity" and "technical" sophistication. As a result, we firmly believe that the aforementioned "flat, dispersed, and fragmented" situation contains new opportunities of "development" that are unforeseeable, impossible to plan for, yet definitely pregnant with a true significance. Specifically, the "opportunities" are related to the inherent ambiguity of the traditional professional boundaries – our "professional learning cluster" concept is coping with such ambiguity in a planned manner, step by step giving concrete form to the "content" that used to appear only in the "Assessment Report," such as teacher relationships or teaching processes. The "opportunities" are also related to the attitude and the procedure in which the interaction between formation and design is recognized-designers will have no reason to refuse aesthetics, when modern design accepts the "mark of made-with-hands" due to its "non-replication," when "unique or limited editions" are on an equal footing with mass-produced products,

when "buzz design" featuring "events" and "activities" rightfully go hand-in-hand with "functionality and standards," when both "sensibility" and "recognizability" are deemed to be value-adding "components".

We are used to equate "design" with "success," with "perfection," and with "adequacy," but the aforementioned "flatness, dispersion, and fragmentation" has assumed a ubiquitous and irreversible presence, constantly converting or even subverting those abiding standards in "design"-if we are not accustomed to "inadequacy" as overriding concept in today's design, then we will lose a lot of territories pertaining to design; if we are still finding it hard to appreciate "imperfection," then our "design education" is very likely turning its back to things that may be temporarily unknown but certainly with brilliant aspects to them; if we still stick to the "safe rules" of all-rounded "fullness and thoroughness," then we would be having a tough time integrating the new design strategy, which adopts general ecology as its controlling theme.

Likewise, those "flatness, dispersion, and fragmentation" attract our attention to "coincidence," "opportunities," "process value," and "sustainable wit"... Values successively generated since the beginning of the new century mostly present themselves during the conversion process of cognitive concepts. Most of them were born in the elegant behavior logic that defies gravity.

We need to learn to respect "flatness," focus on "dispersion," and appreciate "fragmentation," regardless of the fact that, even today, we may not grasp them completely. We should also learn to question "success," restrict "perfection," and dissolve "adequacy," regardless of the fact that, even today, we can hardly bring ourselves to doing it.

Could we let the Graduation Project transcend the conventional curriculum instruction and gradually shape itself into a "super link" with blurred boundaries. For example, this can be composed of two domains for design: the "signifier" and the "significance":

• "Signifier" pertains to a focus on the interaction between the designer's target and the restraints, media, catalysts, which should be "selected without limitations" and "employed resorting to whatever that is available". Manipulation of the "signifier" constitutes the most concrete "means test" for expression in the creative process, which calls for the most adaptability and intelligence in design's value creation.

• "Significance" pertains to a focus on the positioning of the "intention," the construction of which consists in the anticipation and programming of various interdependent elements, which may generate a variety of overlapping paths through different linkage.

In the formulation of the "significance" gradually emerges the so-called creative "quality". Of course, in the present day parlance, "quality" also includes "appearance" or even "immediacy" and so on. In-depth mastery and apt employment of such words were once not the forte of Guangzhou Academy of Fine Arts, though this is an inescapable issue for design education.

Could we transcend the rather passive and unilateral position of a "product producer" and gradually expand, in our design education, into interconnected aspects of content and systems that involve and develop planning, execution, critique, and collection.

• Tomorrow's creative activities of design will be more likely no longer

performed by the individual alone; effectively connecting with the above-referenced various aspects of the design operations will improve and extend the intent and extent of design. What design in the past did not need to include but today's design must contain is: the emergence, continuation, and conversion of the designer's starting path, motivation for the layout, language description, and tempering of the results, etc.; the composition and counter balancing of the "signifier" and the "significance".

- When it comes to tomorrow's teaching of creative design, "creation" should be more deeply penetrate the student's whole curriculum rather than limited to "graduation project". To this end, the design capacity will not necessarily fully synchronize with "basic training". The formula of "basic training before specialization" will be gradually not applicable to all learners. As a consequence, design education should gradually incorporate "several" coordinated design creation phases during the "several years" of the program, as well as the corresponding "intentional" planning activities.

- On the platform of design creation during "several years," the "content" will inevitably include detailed categorization of design objects (rather than "specialization"), which leads to the generation and perfection of the personal vocabulary, the planning of the ongoing status and transition of the individual approach, the timing and intensity of the individual pursuit, etc, which will gradually become integral components of design (results), and, as such, become the new content of design education.

In setting up tomorrow's design education, "design faculty" apparently ought to seek a closer relationship with "the humanities and academic disciplines" than what was the case in the past. Objectively speaking, the design faculty of the past can be described as "self selected and self defined (or self directed)"; by the same token, in the past, humanities and academic disciplines were also essentially "self rectified, self consolidated". The former, "on the tangible side of metaphysics," exhibited obvious linguistic dilemma and feeble or far-fetched values; the latter vainly sought self-interpretation while "on the intangible side of metaphysics". The two sides had similar longitudinal direction and a high level of recognition but lacked behavior measures to reinforce each other's causal actions. It is true that, apart from "independent research and operation," the humanities and the academic disciplines have been playing the admirable role of "fellow travelers" and each other's in their respective professional creative activities, which is indeed already quite challenging. Looking into a future of interactive relationships, we should endeavor to enhance "strategic thinking" and "promotion" functions. That would be the only to establish bilateral relations more healthy and compatible with our time.

We can roadmaps that will guide us in our sustainable development, while at the same time there are also periodic cycles that may impede our progress. We need to make every effort to maintain our optimism and self-motivation as well as a reasonable dose of foresight, and to appropriately adjust our approaches and reach beyond our comfort zone, all for the purpose of maintaining the momentum for Guangzhou Academy of Fine Arts to forge ahead and provide all designers with easy

access to a comprehensive linguistic environment that is being enriched as our time marches on.

At this point in time, we would like to maintain our normal mentality in order to assess the status of Guangzhou Academy of Fine Arts from an "abnormal" angle, fully appreciative of the labor of our students, the wisdom of the teachers, and the indescribable wonder of design in the new epoch.

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Deputy Director of the Academic Committee, Guangzhou Academy of Fine Arts,
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About the author
In 1987, at the age of 31, Mr. Zhao Jian was promoted from a teaching assistant to associate professor and became the youngest professor in Sichuan Province at that time, breaking the convention in the profession. In 1992, at the age of 37, Mr. Zhao was promoted from Associate Professor to full Professor and became the youngest professor then at Guangzhou Academy of Fine Arts, setting another precedent.

Xin: Icograda World Design Congress 2009
This paper was submitted for the Icograda Education Network (IEN) Conference that took place during the Icograda World Design Congress 2009 in Beijing, China, which was planned in collaboration with the Central Academy of Fine Arts (CAFA). The broader theme of the congress, Xin, literally signifies human speaking and hence message/ letter in Chinese, Xin-信 which represents a primitive means of communication. The IEN conference invited papers under the following themes: Design Education and Innovation; Design Education and Diversity; Design Education and Cross-Disciplinary Collaboration and Design Education and Regional Development.

Han culture
Holistic design culture
Birth of Chinese design
education

REGIONAL TRAITS AND MOBILITY OF THE DESIGN CULTURE IN ANCIENT CHINA AND THE STARTING POINT FOR DESIGN EDUCATION IN CONTEMPORARY CHINA

ZHANG PENG CHUAN

ABSTRACT

I. Regional design culture as a result of integrating multiple sources of design culture

Regional traits of design culture in ancient China were built on the basis of multiple sources of contributing factors such as diverse natural conditions, various modes of production and a plurality of colourful lifestyles.

The middle reaches of the Yellow River, the north and south of the Yanshan region, the eastern coastal areas, the middle reaches of the Yangtze River and the downstream region of the Yellow River each displayed distinctive characteristics that contributed to design culture in ancient China.

I.I Formation and evolution of the pluralistic yet holistic design culture with the Han culture at its core

During the Warring States period, regional cultures underwent integration. At the end of this period, The First Emperor Qin established an unprecedented unified empire. Later on, Liu Bang established the Han Dynasty, which laid the foundation for the ethnic Han people bonded by the Han culture.

Ancient design culture of the Han culture exhibits certain sustaining characteristics:

1. Chinese characters were used as the main communications tool
2. Confucianism, Buddhism, and Taoism complemented one another in design philosophy
3. Urban planning featured palace houses, places of worship streets and marketplaces in a flat checkerboard style layout
4. Buildings adopted predominantly wood frame based architectural styles
5. Draperies, curtains, and screens were frequently installed as combination furnishings
6. Eating utensils such as bowls, plates, pots and cups were usually made of porcelain
7. Jade accessories served as the principal items of decorations
8. Literati art and folk art reinforced each other in arts and crafts
9. Loose apparel was commonly worn by the upper class, who observed rituals and practised re-refined manners
10. Transportation vehicles such as sedans and boats carried hierarchical markings

Over the different historical periods, the Han culture centred in the interior of China interacted with a plurality of cultures practised by a vast variety of ethnic peoples living in the surrounding regions. By absorbing exotic cultures throughout its long history of development, a pluralistic yet holistic design culture with the Han culture at its core came into being.

<u>I.II Rise and fall of major urban centres along transportation arteries vis-à-vis mobility of design culture</u>

In the pre-Qin period, rivers functioned as the main transportation linkage for people residing in different regions. Little wonder that early Chinese cities were mostly built on the riverbanks.

With the opening of the Silk Road, exchanges on a massive scale came to pass between the east and the west of ancient times.

Emperor Yang of the Sui Dynasty ordered the construction of the Grand Canal, which strengthened contacts and exchanges between north and south China. Prosperous commercial centres emerged along the canal route, shifting the economic centre of gravity gradually from the north to the south.

Since the Sui Dynasty, there was a gradual expansion of maritime traffic, giving rise to a series of important ports along the coast. After the Qing Dynasty lost the Opium War, coastal areas transformed themselves into start-up places for Qing government-run enterprises and new businesses operated by the nationalistic bourgeoisie. Shanghai gradually emerged as the first metropolis of the Orient, which also became the breeding centre for China's modern design culture.

<u>I.III The starting point for design education in contemporary China</u>

In the past 100 years or so, the Chinese design culture has experienced the evolution and transformation from the classical to the modern. Development of design education in contemporary China is linked to that of the outside world. Inside China, Chinese design culture is pluralistic yet holistic, absorbing foreign cultures through various channels. In terms of internal and external strategies, Chinese design culture would be well advised to promote "harmony without uniformity". "Harmony without uniformity" underlines why Chinese design culture has survived and prospered. It should therefore serve as the starting point for our design education.

FULL PAPER

Over the past 100 years or so, there have been significant archaeological discoveries in various regions of China. Many of the archaeological results are truly refreshing in changing people's simplistic views of the social history in ancient China and throwing new light on the complex composition of ancient Chinese culture. This motivates the present study into a discussion of the regional traits as well as the mobility of the design culture in ancient China. Proceeding from that discussion, I will also contemplate the starting point for design education in contemporary China.

I. Regional design culture as a result of integrating multiple sources of design culture

Ancient China enjoyed relatively stable boundaries, due to its geographical environment. Ancient China was surrounded by plateaus, mountains, deserts, and oceans, which together constituted a macro geographical zone.

Ancient China's macro geographical zone spans from north to south boreal, temperate and subtropical regions, each with different climatic conditions. Topographically speaking, it slopes from west to

1. Topographic Map of China
"Atlas of China", SinoMaps Press, 2005.

2. Henan Longshan Culture Pottery
Made with Inner Molds, Li Wenjie:
"Ancient Chinese Pottery Process,"
10:1 plates. Science Press, 1996.

3. Erlitou Culture Bronze Tripod,
China Millennium Monument:
"National Treasures of the Century -
the Chinese Civilization", P53, 2001.

4. Shang Simuwu Copper Quadripod,
Museum of Chinese History:
"A Chinese History Exhibition,"
Figure 3-3-6. Zhaohua Press, 1998.

5. Xinglongwa Culture Jade, Institute
of Archaeology, Chinese Academy of Social
Sciences, the Chinese University of Hong
Kong, Centre for Chinese Archaeology
and Art: "Exploration of the Origin of Jade",
P44. Centre for Chinese Archaeology
and Art, 2007.

6. Warring States Bullion-Interlaced Bronze
Statuette Of A Tiger Devouring A Deer,
Art Exhibitions China: "Mainland China
Antiquities and Treasures", P103, 1992.

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REGIONAL TRAITS AND MOBILITY OF THE DESIGN CULTURE IN ANCIENT CHINA AND THE STARTING POINT FOR DESIGN EDUCATION IN CONTEMPORARY CHINA

east, encompassing complex and diverse terrains (Figure 1). Chinese ancestors adapted to local conditions to carry out production activities and developed, in the ancient land of China, a variety of economic zones such as predominantly agricultural, predominantly livestock-based, semi-farming and semi animal husbandry, half-farming and half-fishing zones. Most areas featured agricultural production, with millet-based agricultural areas in the north and rice-based agricultural areas in the south. Regional traits of design culture in ancient China was built on the basis of multiple sources of contributing factors such as diverse natural conditions, various modes of production, and a plurality of colourful lifestyles.

1.

During the Neolithic Age, China saw many ancient cultures distributed over its vast lands. With increased productivity, the clans people were expanding the reach and scope of their activities, while the clans went through integration and mergers among themselves. This facilitated the emergence of regional design culture as a result of integrating multiple sources of design culture. Throughout the evolution of design culture in ancient China, design culture in different regions contributed, to varying degrees and at different times, to the formation of ancient Chinese design culture featuring pluralistic characteristics.

I.I The middle reaches of Yellow River
Across the middle reaches of the Yellow River lies the Loess Plateau that is an important birthplace of millet-based agriculture in the northern China. Ancestors living in this region pioneered a mode of residence evolving from deep crypt, half-underground development to above ground construction. Combining wood and mud as construction materials, they continuously improved construction techniques deploying wood frame and mud walls, which remained building technology of choice in the subsequent thousands of years over the vast land of China.

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Living in low-ceiling caves, the residents adopted a lifestyle of sitting or lying on the ground. Ancestors living in this region produced pottery with delicate texture; they also created beautiful pottery patterns. During the late Neolithic period, the middle reaches of the Yellow River became the most developed regions for pottery moulding, which provided the moulds for shaping utensils, as in the formation of bronze artefacts via inner moulds (Figure 2).

The emergence of urban settlements resulted from full development of primitive tribal centres. The middle reaches of the Yellow River was where urban areas grew the fastest. 50 sites have been identified as urban locations during the Longshan culture period. An area of more than 2 million square meters, in Taosi, Xiangfen, Shanxi, has been found to be an urban site during the Longshan culture period.

Erlitou culture represented by Henan Yanshi Erlitou site is considered part of Xia culture. It is at Henan Yanshi Erlitou site that the ruins of a palace town were found, suggesting the existence of a large palace complex, large-scale bronze smelting workshop and turquoise processing workshops, as well as ceramics and bone sites. Unearthed there were a set of bronze ritual vessels and jade artefacts (Figure 3), indicating that the ruins cantered around Erlitou site may represent one of China's earliest townships. It is not only the political and cultural centre of the Central Plains region, but also a hub of design culture influencing neighbouring areas.

At Zhengzhou, capital of mid-Shang Dynasty, and at Anyang Yinxu, capital of late-Shang Dynasty, archaeologists found palace sites, bronze and bone workshops, and a large-scale bronze ritual vessel used by the royal family. Simuwu Quadripod unearthed there weighs 875 kilograms, indicating that the Shang capital monopolised bronze raw materials and casting, representing the highest level of bronze craftsmanship (Figure 4).

I.II North and south of Yanshan region

Yanshan borders Liao River Plains on the northeast, then Inner Mongolia Plateau on the northwest, and the North China Plain on the south. It is the intersection of the Central Plains agricultural culture, northern grasslands culture, and the eastern coastal culture. This is a region where the jade culture emerged and developed. Xinglongwa culture is represented by the ruins at Xinglongwa sites of Chifeng City, Inner Mongolia, where a number of 8,000 year old jade artefacts such as slotted jade rings were unearthed (Figure 5).

Yanzhao region of the Warring States period kept in touch with the Central Plains culture, but also showed significant cultural influence of the Northern Prairie. This is where Zhao capitals Handan and Yanxiadu emerged and prospered. These cities boasted advanced iron smelting workshops. It is at Pingshan County, Hebei Zhongshan that a royal tomb was excavated, yielding a total of more than 19,000 pieces of relics, including copper works of art such as silver inlay sacred animal with double wings and a tiger devouring a deer (Figure 6), which demonstrate the impact of the grassland culture.

I.III The Eastern coastal areas

China's Eastern coastal areas, extending to Liaoning on the North and

Zhejiang on the south, interconnect several cultural regions such as that of Liaohe, Haihe, lower reaches of Yellow River, lower reaches of Huaihe, lower reaches of Yangtze River, and Qiantang River. It is a region marked with frequent cultural exchanges but also a lack of cultural stability and continuity. Some 5,000-6,000 years ago, Liangzhu culture on the southeast coast and Hongshan culture on the northeast were already famous for their production of exquisite jade ornaments and ritual objects (Figure 7, 8). China's eastern coastal areas became an interconnected jade cultural area, whose influences extended in all directions.

The southeast coast is where architecture of wood tenon joint structure framework originated (Figure 9). Wood frame structure became

7. Liangzhu Culture Jade Ornament, State Administration of Cultural Heritage, Museum of Chinese History, Museum of Chinese Revolution: "National Treasures", P48. Zhaohua Press, 1999.

8. Hongshan Culture Jade Osprey, China Millennium Monument: "National Treasures of the Century - the Chinese Civilization", P29. 2001.

9. Hemudu Culture Tenon Type Wood Component, Zhang Zhiheng: "General Theory of Chinese Archaeology", Figure 4-51. Nanjing University Press, 1991.

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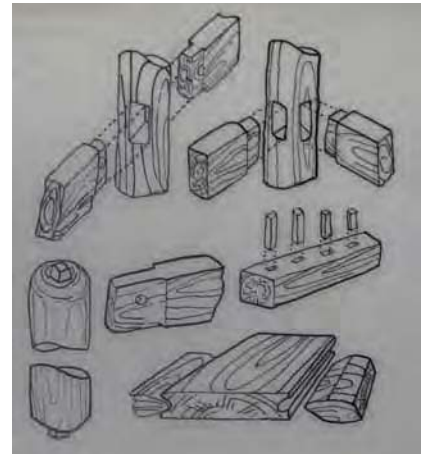
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the main component of ancient Chinese architectural construction, which has far-reaching influences on urban planning, living space, sitting and lying habits, interior furnishings, paintings display, etc., of the agricultural region.

In the period transitioning from Western Zhou Dynasty to Spring and Autumn Period, due to the widespread use of high-temperature by royal ceramic kilns in Taihu Lake region, first to produce stamped hard pottery at high-temperature and then to manufacture imitation bronze ritual vessels, artisans produced primitive porcelain that was glazed like copper and sounded like chime stones (Figure 10). In the centuries following the Eastern Han Dynasty, celadon craftsmanship, as represented by the Yue Kilns, expanded rapidly, facilitating the maturity of Chinese porcelain.

I.IV The middle reaches of the Yangtze River
This area is the birthplace of Chu culture. Chu culture is one of the two

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mainstream cultures of the pre-Qin period. Chu's capital, Ying Du, is located at Jiangling in Hubei province. It is the first large urban centre rising along the Yangtze River. Taoism, as represented by Lao Tzu and Chuang-Tzu, is an important component of China's brilliant ancient wisdom on design. Bamboo craft and lacquer processing illustrate the glowing splendour of Chu craftsman techniques. They created magnificent lacquer ware and furniture sets (Figure 11). Use of Chu bamboo tablets popularised cultural education and set up the format of writing on vertical columns and reading from right to left, which lasted for more than 2000 years. This also determined the display mode from right to left.

11.

In Chu Tombs, along with writing bamboo tablets, writing brushes were frequently found. As writing and painting tools, writing brushes exerted a singularly powerful impact on artistic expression through Chinese painting and calligraphy.

I.V The lower reaches of Yellow River

Located in the lower reaches of Yellow River, ancient culture of Shandong region experienced relatively stable development. Centering on Taishan, southwest Shandong gave successive rise to Beixin, Dawenkou, and Longshan cultures (Figure 12). The design of tripod and high feet pottery was consistent and composed a complete sequence of cultural development, symbolizing the most important cultural achievements of Dongyi culture.

All kinds of ideological and cultural creativities flourished during the Spring and Autumn period, of which Confucian-based Qilu culture assumed an important role. Confucius founded Confucianism that had a profound impact on design culture of ancient Chinese. Qi capital, Linzi, was the most developed industrial and commercial city of ancient China at that time. It was also a manufacturing centre for metallurgy, textiles, carts, coins, etc.

I.VI The upper reaches of Yellow River

Majiayao culture spread over Gansu and Qinghai, dating back 4,000-5,000 years or so. It is distinguished for its painted pottery culture (Figure 13). Approximately 4,000 years ago, Qijia culture thrived in Gansu, Qinghai, and Ningxia regions, with increased use of bronze (Figure 14) that shows the influence of the grassland culture.

In the Shang Dynasty, Zhou Dynasty, and Warring States period, the upper reaches of Yellow River region witnessed the emergence of Qiang, Zuben, Yuezhi, Wusun, Yiqu, Huns and other nomadic nations.

10. Wuxi Hongshan Warring States Proto-Porcelain Modeled after Bronze, Museum of Wuxi Hongshan, photo by Zhang Peng Chuan.

11. Changsha Warring States Lacquer Screen, edited by Lu Jimin; "Lacquer" Volume I, P39. Thread-Bound Books Press, 2006.

12. Shandong Longshan Culture of Black Pottery High-Handle Cup, Editorial Board of The Complete Works of Chinese Pottery and Ceramics: "The Complete Works of Chinese Pottery and Ceramics – New Stone Age", Figure 199. Shanghai People's Fine Arts Publishing House, 2000.

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13. Majiayao Culture Painted Pottery, Editorial Board of The Complete Works of Chinese Pottery and Ceramics: "The Complete Works of Chinese Pottery and Ceramics – New Stone Age", Figure 49. Shanghai People's Fine Arts Publishing House, 2000.

14. Qijia Culture Bronze Mirror, Qinghai Provincial Cultural Relics Department, Qinghai Provincial Archaeological Institute: "Qinghai Cultural Relics", Figure 46. Cultural Relics Publishing House, 1994.

15. First Emperor Qin Mausoleum Terracotta Warriors and Horses, Yuan Zhongyi: "Dictionary of First Emperor Qin Mausoleum Terracotta Warriors and Horses ", Plate 7. Wenhui Publishing House, 1994.

16. Wuwei Wooden and Bamboo Slips of the Han Dynasty, Gansu Museum: "Atlas of Gansu Provincial Museum Antiques", P106. Sanqin Press, 1994.

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770 BC, Qin was established in the east of Gansu. During the Warring States period, regional culture accelerated its further integration; ultimately the Qin unified the six countries and First Emperor Qin established an unprecedented unified empire.

II. Formation and evolution of a pluralistic yet holistic design culture with han culture at its core

After the Qin Dynasty came into being, a series of measures were developed to strengthen unity. First Emperor Qin Mausoleum of Qin Dynasty with its Terracotta Warriors and Horses reflects its ruler's vision for a unified empire (Figure 15). Chu-based coalition from the south overthrew the brutal Qin Dynasty. Liu Bang established the Han Dynasty, setting up its capital in Chang'an. From Chang'an as the centre, contacts and exchanges extended in all directions. The Hua Xia-based culture system in the North and The Chu-based culture system in the south gradually merged into one cultural system, giving rise to ethnic Han people bonded by Han Chinese culture.

Ancient design culture of the Han culture exhibits certain sustaining characteristics:

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1. Chinese characters were used as the main communications tool (Figure 16)
2. Confucianism, Buddhism, and Taoism complemented one another in design philosophy
3. Urban planning featured palace houses, places of worship, streets and marketplaces in a flat checkerboard style layout (Figure 17)
4. Buildings adopted predominantly wood frame based architectural styles (Figure 18)
5. Draperies, curtains, and screens were frequently installed as combination furnishings (Figure 19)
6. Eating utensils such as bowls, plates, pots, and cups were usually made of porcelain (Figure 20)
7. Jade accessories served as the principal items of decoration (Figure 21)
8. Literati art and folk art reinforced each other in arts and crafts (Figure 22)
9. Loose apparel was commonly worn by the upper class, who observed rituals and practiced re-refined manners (Figure 23)
10. Transportation vehicles such as sedans and boats carried hierarchical markings

17. Layout of Chang'an of the Tang Dynasty, Shaanxi History Museum: "Scenes of Flourishing Tang", P27. Zhejiang People's Fine Arts Publishing House, 1999.

18. Shanxi Ying County Wooden Pagoda of the Liao Dynasty, Editorial Committee of Chinese Encyclopedia: "Encyclopedia of China – Fine Art I", Plate 7. Encyclopedia of China Publishing House, 1991.

19. Qiu Ying of the Ming Dynasty, "Pictorial Character Stories" III, Editorial Committee of Chinese Art Collection: "Complete Works of Chinese Art – Painting Series 7 – Ming Dynasty Painting (II)", Figure 70. Shanghai People's Fine Arts Publishing House, 1988.

20. Eating Utensils in "Han Xi Zai Evening Banquet Painting," Editorial Committee of Chinese Art Collection: "Complete Works of Chinese Art – Painting Series 2 – Sui Tang Five Dynasties Painting", Figure 65. People's Fine Arts Publishing House, 1984.

21. Han Dynasty Nanyue King Tomb Jade Series, China Millennium Monument: "National Treasures of the Century - the Chinese Civilization", P154. 2001.

22. Qing Dynasty Chen Mansheng Purple Bamboo Pot, edited by State Administration of Cultural Heritage: "Dictionary of Chinese Cultural Relics – Pottery and Ceramic Volume" Figure 615. Shanghai Lexicographical Publishing House, The Commercial Press, 1995.

23. Ming Dynasty Zeng Jing "Wang Shimin Figurine", Editorial Committee of Chinese Art Collection: "Complete Works of Chinese Art – Painting Series 8 – Ming Dynasty Painting III", Figure 112. Shanghai People's Fine Arts Publishing House, 1988.

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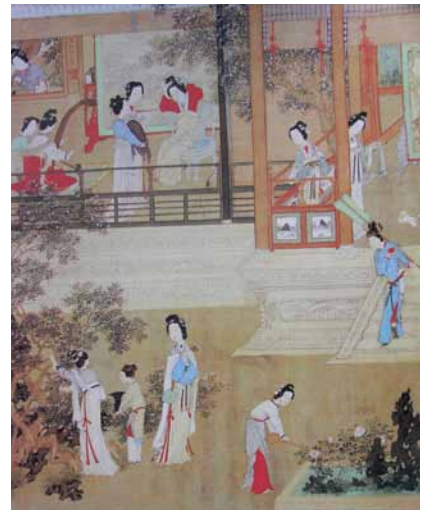
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Ethnic Han people inhabited mainly agricultural areas along the Yellow River and the Yangtze River. North of the Great Wall, the grasslands and desert regions saw the rise of numerous nomadic nations. Xianbei established the Northern Wei dynasty; Khitan tribes established the Liao dynasty; Jurchen established the Jin Dynasty and the Qing Dynasty; Dangxiang Qiang established the Western Xia Dynasty; and Mongols established the Yuan dynasty. The dynasties established by these minorities introduced to the interior of China the nomadic lifestyle and utensils along with the design patterns of the grassland culture (Figure 24).

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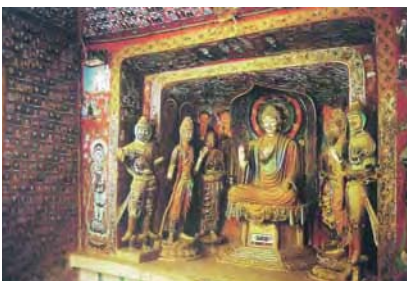
The mountains of southwest China offered a relatively stable living environment for multi-ethnic neighbourhoods. This region nourished bronze culture as represented by Dian culture (Figure 25); Ba Ren culture as represented by its Tiger features and bronze weapons (Figure 26); bronze drum culture popular among various ethnic groups in the southwest (Figure 27); colourful costumes and the architectural culture of Yunnan and Guizhou (Figure 28); and Tibetan culture with its dominant religious art (Figure 29).

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In the west, Gansu Hexi Corridor opened to the north and south transportation routes of Tianshan, encircling an extended oasis region, where West Asian culture, South Asian culture, and Han Chinese culture interconnected through exchanges. It is through this region that China was exposed to, among others, ancient Greece and ancient Roman culture, Persian culture, Buddhist culture, Byzantine culture, and Islamic culture. The region was truly a hub of multi-cultural confluence for Asia and Europe (Figure 30). Over different historical periods, the Han culture cantered in the interior of China, interacted with a plurality of cultures practised by a vast variety of ethnic peoples living in the surrounding regions. By absorbing exotic cultures throughout its long history of development, a pluralistic yet holistic design culture, with the Han culture at its core, came into being.

III. Rise and fall of major urban centers along transportation arteries vis-à-vis mobility of design culture

In the pre-Qin period, rivers functioned as the main transportation linkage for people residing in different regions. Little wonder that early

24. Liao Dynasty Gold and Silver Saddle Ornaments, Shanghai Museum: "Prairie Treasures - Inner Mongolia Cultural Relics and Archaeology", P232. Shanghai Fine Art Publishing House, 2000.

25. Western Han Dynasty Yunnan Shizhaishan Copper Receptacles, State Administration of Cultural Heritage, Museum of Chinese History, Museum of Chinese Revolution: "National Treasures", P139. Zhaohua Press, 1999.

26. Warring States Ba Ren Tigrine Bronze Spear, Chinese Cultural Relics Bureau: "The Chinese Cultural Relics Dictionary – Bronze Volume", Figure 1119. Shanghai Lexicographical Publishing House, The Commercial Press (Hong Kong), 1995.

27. Western Han Dynasty Guizhou Hezhang Jingdu Pattern Bronze Drum, State Administration of Cultural Heritage: "Dictionary of Chinese Cultural Relics – Bronze Volume", Figure 1119. Shanghai Lexicographical Publishing House, The Commercial Press (Hong Kong), 1995.

28. Women's Clothing of the Miao Nationality, edited by Wang Bomin: "The Chinese Minority Art History – Part IV," Fine Arts of the Miao Nationality, Figure 22. Fujian Art Publishing House, 1995.

29. Tibet Ali Tuolin Temple Mural (10th century), edited by Jin Weinuo: "Tibet Ali Tuolin Temple Mural", Figure 11. Hebei Fine Arts Publishing House, 2001.

30. Dunhuang Northern Zhou Dynasty Grottoes, Tetsuo Yamaori, Kenjir Kojima: "Beauty and Heart of Dunhuang", Figure 25. (Japan)

31. Han Dynasty Silk Road Map http://www.cchmi.com/tabid/411/Default.aspx Yzanku, 2000.

32. Gold and Silver Ware of The Tang Dynasty Unearthed at Xi'an, Shaanxi History Museum: "Scenes of Flourishing Tang", P147. Zhejiang People's Fine Arts Publishing House, 1999.

33. Datong Yungang Northern Wei Cave No. 5, Luo Zongzhen, Shao Wenliang: "Wei, Jin, Northern and Southern Dynasties Culture", P75. Xue Lin Publishing House, Shanghai Science and Technology Education Press, 2000.

Chinese cities were mostly built on the riverbanks to facilitate exchanges of people and goods. Yanshi in Henan is considered to be the capital of Xia Dynasty; Henan's commercial city Zhengzhou used to be the capital of early Shang Dynasty; the two city sites are both quite close to the Yellow River and are centrally located in the sphere of influence of Xia and Shang dynasties to facilitate the reception of tributes and raw materials from outlaying territories.

31.

As Chinese topography slopes from west to east, its main rivers flow from west to east. It is for this reason that China's internal contacts between its west and east were much stronger than that between its north and south.

During the unprecedentedly powerful Han Dynasty, with the opening of the Silk Road, massive exchanges took place between the ancient East and the West. During the South and North Dynasty, the Sui Dynasty, and the Tang Dynasty, China's exchanges with foreign countries gave rise to cities along the Silk Road, such as Chang'an, Luoyang, Wuwei, and Dunhuang. China's silk, porcelain and other goods were transported along the Silk Road to the West (Figure 31). From Persia, Byzantine and other places, gold and silver artefacts, glassware, and decorative patterns were imported and had a significant impact on Chinese arts and crafts. The Tang Dynasty capital of Chang'an became the most important centre for the production of gold and silver ware (Figure 32). Buddhism was introduced from ancient India through Central Asia into China's interior.

32.

33.

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REGIONAL TRAITS AND MOBILITY OF THE DESIGN CULTURE IN ANCIENT CHINA AND THE STARTING POINT FOR DESIGN EDUCATION IN CONTEMPORARY CHINA

It was assimilated into local culture, evolved, and thrived, leaving behind a rich heritage of Buddhist art (Figure 33).

Emperor Yang of the Sui Dynasty ordered the construction of the Grand Canal, which extended to Zhuo Jun in the north and Yuhang in the south, greatly strengthening contacts and exchanges between north and south China. During the Yuan, Ming, and Qing Dynasties, the Grand Canal became the main north-south transportation artery, sustaining exchanges of goods and commodities. Prosperous commercial centres (Figure 34) emerged along the canal route, shifting the economic centre of gravity gradually from the north to the south. From the late Ming Dynasty to the mid-Qing Dynasty, Suzhou became the largest commercial city in southeast China. Suzhou fine arts and crafts were particularly acclaimed everywhere, enhancing Suzhou's fame in overseas markets (Figure 35). With the development of a commodity economy and the expansion of transportation routes, China's regional design culture underwent partial adjustment and transformation, which was more obvious in the eastern coastal areas.

During and after the Sui Dynasty, maritime traffic gradually increased; from the Five Dynasties to the Song and Yuan Dynasties, Guangzhou, Quanzhou, Wenzhou, Min Zhou, and Hangzhou became important ports. After the Qing Dynasty lost the Opium War, ports such as Shanghai, Ningbo, Fuzhou, Xiamen, and Guangzhou were forced to open for foreign trade; later, this was extended to commercial centres located in seven coastal provinces and the middle reaches of the Yangtze River (Figure 36). These commercial ports served as beachheads of foreign capitalist invasion of China, allowing a large volume of foreign goods to flood the Chinese markets, bringing at the same time a foreign business culture. Coastal areas transformed themselves into start-up places for Qing government-run enterprises and new private businesses operated by the nationalistic bourgeoisie. Subsequent to the Opium War, Shanghai gradually emerged as the first metropolis of the Orient, which also became the breeding centre for China's modern design culture.

34.

34. China's Grand Canal Map
http://www.china.com.cn/
aboutchinazhuanti/2008-09/17/
content_16492183.htm

35. Qing Dynasty Suzhou Print
"Suzhou Jin Chang Map", Zhang Peng
Chuan: "A Study of the Restoration of
Suzhou Jin Chang Map", P55.

36. Map of East Coast Commercial Ports
during late Qing Dynasty and early Republic
of China.

IV. The starting point for design education in contemporary China

In the past 100 years or so, the Chinese design culture has experienced the evolution and transformation from the classical to the modern. Meanwhile, design culture around the world is also evolving. Development of design education in contemporary China is linked to that of the outside world. Design concepts and models are imports from the West. At Chinese institutions of higher learning, the establishment of design and design disciplines is something fairly recent. During the early years of the Republic, schools called this course "pictorials" or "patterns". In the initial period of the Republic, design evidenced a transition from traditional design to modern design, while design introduced from the West started to exhibit tendencies of progressive localization.

After the founding of New China, the academic discipline of "pattern" was gradually replaced by "arts and crafts". In 1956, the Central Academy of Fine Arts was established, though there was very little introduction of foreign design education. In 1965, the Cultural Revolution was launched and studying traditional arts became a crime. Like other

35.

36.

disciplines related to the art, Chinese art and design education endured a blank period of over ten years.

Over the three decades since the reform and opening up, China's art and design education expanded at an accelerated pace in step with the rapid growth of the national economy. In order to adapt to modern lifestyles where emerging new technologies and new products are a constant, the traditional discipline name of "arts and crafts" is deemed no longer capable of covering a multitude of new contents; accordingly many post-secondary institutions and trade schools replaced the name "arts and crafts" with "art and design." Against the backdrop of a global economic tsunami, Western design products and design concepts are pouring into China. At post-secondary design institutions and design trade schools, Western design concepts are being directly implanted, without adaptation, in their design education. On the other hand, after the aforementioned name change at post-secondary design institutions and design trade schools, these faculties of art and design put emphasis on skills education. Some institutions compressed their design theory courses and gave even less attention to traditional design education. The present study proposes the concepts of design culture's regional traits and mobility, in order to call attention to notion that design education should not neglect understanding the internal logic of the regional culture and that it is not appropriate to treat "design" or "tradition" as some superficial or static symbols.

The global economic situation is shifting; multi-cultural coexistence in the world of design is a trend that is gaining momentum. In short, the world's design culture has become much more multi-faceted and colourful. Inside China, Chinese design culture is pluralistic yet holistic; we would not have a healthy Chinese design culture if we ever neglect either "pluralistic" or "holistic". In its interaction with the outside world, Chinese design culture has been, since ancient times, absorbing and assimilating foreign cultures through various channels while developing its own traditional design culture that is highly eclectic. In terms of internal and external strategies, Chinese design culture would be well advised to promote "harmony without uniformity". "Harmony without uniformity" underlines why Chinese design culture has survived and prospered. It should therefore serve as the starting point for our design education.

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Culture
Design Education
Diversity
Industry
Practice of education

DIVERSITY OF DESIGN EDUCATION IN CHINA
PAN LU SHENG

ABSTRACT

Design education is fundamental not only for the socio-economic and cultural development, but also for the enhancement of creativity in the country. With its particular philosophy and function, design education in China has been influenced by China's society and culture. An in-depth study of design education, under the context of "globalization" and of the diversity of design education in China will help us to more accurately anticipate its future development. Taking as a case in point the practise of Shandong University of Art and Design, this article aims to trace the historical interaction between education and economic development for the purpose of illustrating an educational vision, that seeks to connect faculty set up with industry development and professional training with market needs.

FULL PAPER

I. Development patterns of design education in China

First of all, we will have an overview of the scale of design education. According statistics released by the Ministry of Education, as of May 18, 2007, in China's 31 provinces, municipalities and autonomous regions, there are 1,909 institutions of higher learning (including national and private undergraduate institutions as well as professional or trades colleges). Based on incomplete statistics, among the afore-mentioned schools, 1,259 schools, or 66% of the total, have some type of curriculum involving design education. In addition to professional art institutions, design curriculum is also widely offered in comprehensive universities, polytechnic schools, teachers colleges, as well as financial, languages, sports, music, agriculture, forestry, medical and other specialized institutions. By gauging design faculty's national total admission of nearly 300,000 in 2008, the total number of design students in Chinese schools would approach one million, though the scale and proportions are still showing unstable trends. For instance, the turning point in the number of students applying to "Art programs" has already occurred, as in the case of Shandong Province, where there was a drop of 70,000 applications in 2009 compared to 2008, a decline of 40% or more. At its existing scale, combined with the movement towards popularization of higher education and increasing rate of high school students enrolling in colleges, design education in China will nonetheless continue to operate on a very considerable scale.

Secondly, we will take a closer look at the curriculum of "art and design" education. The 1998 revised directory for the design faculty already included specializations such "environmental art and design," "product form and shape design", "dyeing art and design," "clothing art design", "ceramic art and design", "interior decoration art and design", "decorative art and design". Today, new and emerging disciplines of design are constantly being created, for example, "new media art and design", "exhibition & convention art and technology", "cultural industry design management". Art and design represents a major development of design education in China. In terms of structure, the design faculty tends

to be highly interdisciplinary, as shown by, from 2003 to 2006, where newly created design faculty locates itself in academia: 57% resides within arts programs; 17% forms part of engineering and management faculties; and 26% belongs to faculties that admit both arts and sciences applicants because their programs displays features of both arts and engineering disciplines. Overall, the design education's curriculum exhibits its inherent interdisciplinary nature by combining applications with academic research, which reflects both social needs and academic requirement.

Thirdly, we will trace the current pattern of design education to its root causes, which include the transition from the "elite education" to "mass education" in terms of enrollment policy; the "art program admission exams" mechanism, the role of ambitions administrators bent on expanding the size of their schools, and a multitude of other factors. The most profound cause, however, has to be the inherent need of social development for the design profession. If we say that a country's economic development is a matter of transforming its industrial structure, then, as the predominance of the labor force and gross domestic product shifts from the first and second industries to tertiary industries, the economic role played by culture, knowledge, information, science and technology, as well as psychology is increasingly important, outstanding, or even a decisive.

In this process, art and design is bound to appear more and more influential. Design R&D and design creativity assume a central role not only in the manufacturing sector, but also in various governments' industry planning, business operations management, and particularly in cultural and creative industries. A certain period or a certain industry may need somewhat more or less design talent; at a certain stage of development, the training of design professionals may or may not meet the social need. The general trend, however, remains irreversible. Art and design are playing an increasingly important role in economic and cultural development. Social, economic, and cultural development is the driving force behind the development of design education; it also propels design education on its path of rationalization.

Fourthly, in light of the need for development, certain existing problems are revealed in China's design education. The almost massive scale of design education stands in sharp contrast again the unimpressive benefits or effects it generates in economic development. The style or methods of training design professionals leave much to be desired. There is a shortage of innovation. The most fundamental is to follow the internal logic of the design disciplines while responding to the need of social development; to build upon the current scale of design education while seeking a new path of diversified development. If the "1,000 schools are built on one model" adopting essentially identical curriculum, it will be effectively turning our back to the need of a pluralist society. It would be ignoring the conditions under which we are running our schools and failing to understand that the design disciplines are interdisciplinary and application-oriented. To solve the problem of design education being out of synch with social needs, it is necessary to first focus on the variety and diversity of education itself. The future development of design education lies in achieving variety and diversity, which is inevitable.

II. Trend towards diversification for design education in China

Socio-economic and cultural development presents diversified needs for of design professionals. From the point of view of the overall economic and cultural structure, design plays pluralistic role. It may be true that, in an industrial society, design is separate from manufacture and plays an independent role of importance. As the center of industry gradually shifts from the production of tangible goods to the provision of intangible services, design is bound to specialize and submerge into complex technologies displaying multiple forms and playing diverse roles. To be specific, in manufacturing, the role design plays and the demand production operators place on designers vary from "Original Equipment Manufacturer" (OEM), "Original Design Manufacturer" (ODM), "Original Brand Management" (OBM), to "Original Strategic Management" (OSM), depending on the aspect or levels of the operation. Related analysis points out that, in the case of "Original Equipment Manufacturer" (OEM), the designer only needs to have basic design skills and play the role of an "interpreter", explaining the design drawings and related details of the well-designed product that is already designed. In the case of "Original Design Manufacturer" (ODM), the designer needs to have product-related market information, exercise creativity, and maintain the competitiveness of the product. In the case of "Original Brand Management" (OBM), the designer needs to have not only original ideas, but also management skills; not only focus on improving product competitiveness, but also endeavor to create new brands; not only do market research, but also carry out adequate market promotion and engage in market competition. In the case of "Original Strategic Management" (OSM), the designer needs to be extremely innovative and capable of strategically exploring and occupying new markets. In addition, different product development and manufacturing calls for the designer to command knowledge and expertise in specific areas of the profession. The design team sometimes even asks for direct participation by patent specialists, psychologists, sociologists and other experts in different fields. Meanwhile, in the broader tertiary industry sector, business operations, media communications, industrial planning and management, etc. all offer the designer plentiful opportunities for development. Their demand also tends to be more professional, particular, and diversified. On the other hand, from the regional economic and cultural perspective, design calls for pluralistic content and characteristics. Internationally renowned good design is usually able to embody national or regional cultural heritage. Different economic and cultural characteristics of different regions demand different discovery and expression in design, which contributes to the designer's distinctive vision, expression, and knowledge structure. Design education in different regions should develop variety and diversity.

Further, the diversified development of design education is determined by the inherent properties of the discipline. Design relies on culture as its foundation, blending art and science. Design's various subdivisions accommodate professional expertise from different specialty areas, thereby giving rise to differences in their knowledge structure, thinking, and ways of expression. For this reason, design education ought to be diversified. As an applied discipline, its inherent characteristics are a good match with its external social demand. Therefore the diversified

development of design education is an inevitable trend.

At present, China has a good base for the diversified development of its design education. On the one hand, design programs are set up in different types of colleges. According to data provided by the Ministry of Education, as of 2006, among educational institutions with design programs, comprehensive universities account for 29%, polytechnic schools accounting for 28%, teacher training institutions account for 15%, finance, language, sports and other specialized institutions account for 6%, and professional art schools account for 5% . Independent schools that are affiliated with either comprehensive universities or normal colleges account for 17%. This lays the foundation for design education to tap into different academic resources and form its distinctive professional features. On the other hand, these more than a thousand educational institutions with design programs are located in different regions, where regional economic and cultural development provide for opportunities to practise diversified design education. In addition, China's economic development, industrial restructuring, and, in particular, the launch of the State Council's "Cultural Industry Promotion Plan" conspire to open new frontiers for a broad-based and pluralistic design education.

Built upon the aforementioned base, the diversified framework for design education is reflected in training a variety of design professionals at different level. It is also reflected in different specializations among different design programs, because different types of colleges consider their own teaching conditions, give full play to regional economic and cultural advantages and aim to train design professionals with related expertise in relevant fields of studies, realizing diversity in design education. When it comes to particulars of training design professionals at different levels, the first level should be design professionals of basic design and applications, equipped with a solid, comprehensive design knowledge and aptitudes, full of creative expression and hands-on operational skills, capable of managing front-line operations and good at learning from practice as well as demonstrating innovative potential. The second level of design professionals are design strategists with a vision, talented in both design and management, coming from a science, engineering and other professional background, committed to design based on scientific and technological innovation, market development, and industrial planning. As all-rounded talents, they can upgrade design to a strategic height in order to generate greater benefits. The third level of design professionals are high-end, elite talents of design culture, with in-depth theoretical acuity and cutting-edge research and development capacity, able to explore cultural resources or develop and apply high-end technology. They deploy design as a medium to accelerate essential creativity and innovation in their pursuit of cultural heritage and development.

The development of design education in China is blessed with powerful propellers that, when managed properly following its logic dynamics, will lead us to a diversified development pattern, full of vigor and vitality. In view of this analysis and understanding, as art and design instituted of higher learning, Shandong University of Art and Design has set its own development orientation and is in the process of active exploration and practice.

III. Positioning and practice in diversified design education at Shandong University of Art and Design

Pursuant to a recognition of design disciplines as applied arts and of our school as a provincial art institution, positing our school within the framework of design education in China, Shandong University of Art and Design has established a mission statement for training design professionals: By employing a "teaching through practising model", Shandong University of Art and Design shall strive to train "innovative and application-oriented design professionals". To this end, a practical teaching system has been envisioned and instituted for producing designers with "the scientific spirit, the humanities sophistication, artistic creativity, and technical expertise".

At present, the most prevalent practice is to classify Chinese colleges and universities into 4 major categories: "research-focused", "research-oriented with teaching", "teaching-oriented with research", and "teaching-focused". We break through these rigid categories when we position our school on a "teaching through practising model". The first consideration is of the characteristics of the design disciplines. Design is no longer simply to plan and reshape products; it is now meant to create lifestyles. Designers must have not only solid design skills and artistic talents, but also pragmatic design concepts, a positive attitude towards social responsibility and cultural development; not only the ability to interpret, express, and realize design concepts, but also the capacity to strategize design development, organize and manage the design team, and operate commercial design services. Obviously, such all rounded aptitudes and talents could not be cultivated through teaching or training that is divorced from the real world. What it calls for is holistic and integrated training and practice. And we believe that, in the context of higher education transitioning from "elitist" to "popular" approach, design education should be oriented towards social services. "Teaching through practicing" proves to be an important way to integrate educational resources for the purpose of achieving our educational objectives.

Under the guidance of the basic positioning with its educational objective of producing "innovative and application-oriented design professionals", our school commits itself to establishing an all-rounded "teaching through practicing system." Our infrastructure construction has seen the completion of 3 experimental centers (Integrated Experimental Center, Specialty Industrial Art Experimental Center, and Digital Arts and Experimental Media Center) and 33 faculty laboratories, which provide hardware facilities for teaching through practising. Through our school's joint venture with Shandong Fine Arts Publishing House, Shandong Television Station, Lang Chao Group, and other enterprises, 25 off-campus practice sites are available for actively facilitating off-campus practicum and meeting the needs for teaching through practising. Our lineup of curriculum offerings feature art and design as the core programs, which are supplemented by related programs in the fields of humanities and engineering. This curriculum setup corresponds to the development of creative industries. The imperative is to demonstrate the interdisciplinary nature of art and design through "the merging of arts with science", to respond to society's demand for all-rounded design talents, to construct a reasonable curriculum that is market-targeted and comprehensive so

as to perfect students' knowledge structure, talents, and aptitudes. Our instruction models have expanded to incorporate: "holiday classrooms", "teaching by way of projects", off-campus teaching practicum sites, field investigation, market research, strategic planning, and professional or trade exhibitions, etc. These cover teaching through practicing in a rich variety of forms: classroom practice, creativity practice, project practice, industry practice, different levels of social practice, which reflects a progressive series of levels in our instructional regime.

To expand the vision and new frontier of design education, our school attaches great importance to international exchanges and cooperation as well as social services, reinforcing our commitment to our community and the integration with the real world outside of our classrooms. Our school has in operation joint-venture protocols with more than 30 colleges and universities including the Swedish Royal Institute of Technology. As a member of "International Association of Universities and Colleges of Art, Design and Media (CUMULUS)", our school has established regular exchange arrangements with 140 institutions in the world. As a member of "International Council of Graphic Design Associations (Icograda)", our school actively pursues exchanges and cooperation in the international arena of design in order to ensure that our educational vision remains open and at the cutting edge of new development. This pursuit functions as an important driving force to promote the teaching through practicing model. To strengthen social services, our school actively works with government departments to deliver information services and product development. In addition to actively cooperating with local governments, our school is also involved in various government initiatives: developing "National Professional Standards for Advertising Designers" issued by the Ministry of Labor and Social Security; completing "A Survey Report on Rural Shandong Cultural Industries" sponsored by the national propaganda and cultural circles as part of the "Four Types of Talents" strategic project for HR development. Through these initiatives, our school contributes to government policy formulation and industry development. In recent years, our school has been actively undertaking large-scale work projects in the area of services and cultural construction. These include the following: image design for "2006 Shandong (International) Cultural Industry Fair"; participation in organizing "Qilu International Photography Week"; since 2008, design of the visual image for the emblem of "the Eleventh National Games" and "the 19th National Book Fair", etc.; current design of the Shandong Pavilion at the 2010 Shanghai Expo. Apart from carrying out joint-venture projects, our school offers its professional expertise and honors its social responsibility by actively engaging in public service communications: e.g., organizing the "Peaceful Shandong" poster contest; sponsoring "Earthquake Relief and Home Rebuilding Exhibition", which were all well received by the public.

It is our belief that, to focus on application and stay connected to the new frontier of the industry, it is necessary to effectively consolidate educational and instructional resources, explore more opportunities for off-classroom practice, train design professionals that possess in-depth knowledge and comprehensive basic skills, capable of operating successfully in the real world. At the same time, it is also a prerequisite to cultivate cultural sensibilities and sophistication as the deeper roots for

high levels of artistic creativity and innovation. Therefore, our school pays tremendous attention to teaching of and research on traditional arts and crafts, in our efforts to cultivate national cultural sentiments in modern design talents, to strengthen our students' capacity to experience, appreciate and transmit tradition and heritage. The goal is for our students to submerge themselves in traditional culture before enabling them to inherit and develop our cultural heritage in modern design. To inherit and develop our cultural heritage is a profound obligation for design and design education. It has a far-reaching significance.

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Xin: Icograda World Design Congress 2009
This paper was submitted for the Icograda Education Network (IEN) Conference that took place during the Icograda World Design Congress 2009 in Beijing, China, which was planned in collaboration with the Central Academy of Fine Arts (CAFA). The broader theme of the congress, Xin, literally signifies human speaking and hence message/letter in Chinese, Xin-信 which represents a primitive means of communication. The IEN conference invited papers under the following themes: Design Education and Innovation; Design Education and Diversity; Design Education and Cross-Disciplinary Collaboration and Design Education and Regional Development.

Modern design education
Development
Driving force

CONTEMPORARY FORCES DRIVING THE DEVELOPMENT OF DESIGN
WANG XIAO JIE

ABSTRACT

The evolution and current status of modern design in China and the West is analysed and compared in the context of the economic, technological and cultural development in China and the West. The dynamic interaction between these three elements and modern design reveals the forces that drive the development of design education in modern China, namely: a new type of industrialisation, global economic integration, internationalisation of education, digital media technology, Internet technology, culture and creative industries, modern services industries and cyclical industries.

FULL PAPER

China's modern design education includes art and design (including environmental art, interior, apparel, graphic, and packaging design), industrial design and architectural design. Since the beginning of the twenty-first century, design education in modern China has encountered major challenges and opportunities presented by industrial restructuring due to the emergence of the new economy, high-tech development and international integration. In what direction should design education be moving? This is a hot topic of debate for China's modern design education. We need to decide how design education may recognise the current situation, grasp the key elements and push forward, through adjustment, reform and innovation, the development of design education in modern China in order to meet the needs of China's economic development, where major battles are being fought. To study this issue, we must first of all obtain an appropriate understanding of the development and current status of modern design in China and the West, which will reveal the economic, technological and cultural factors that have determined the current status and drive the future development of design education in modern China.

I. A comparison of the history and current status of modern design in China and the West

I.I. History of modern design and education in the world
(See Figure 01) Industrial Revolution in Britain → the process of industrialisation in Europe → Bauhaus school in Germany → modern design was born in the United States → continued development in Europe → development in Australia → development in Japan and other Asian countries and regions → development of modern design in China since 1980s.

Generally speaking, Europe and the United States took the lead in developing modern design; then Japan and other Asian countries and regions followed suit; and now these forerunners are influencing the growth and development of modern design and education in developing countries.
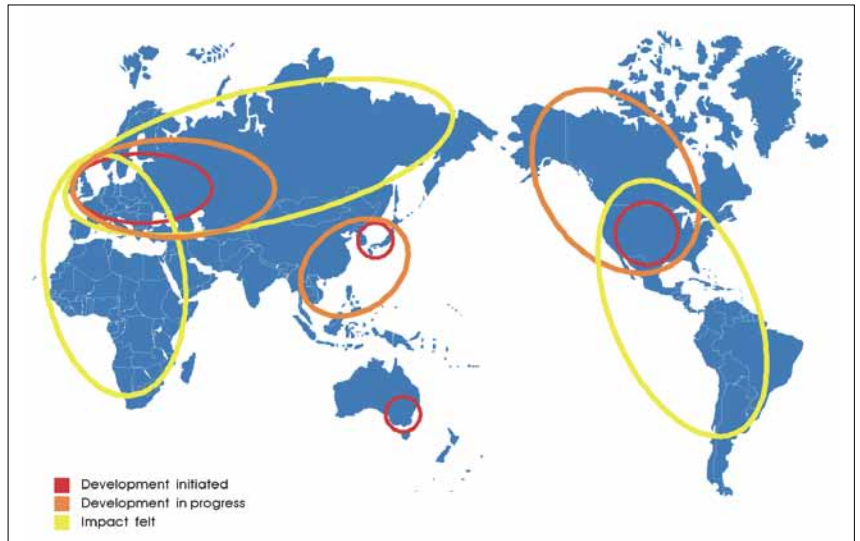
1.

I.II. History of China's modern design and education
(See Figure 02) China's Hong Kong and Taiwan were the first to be influenced by Europe and the United States in 1970s, when modern design began to grow and develop.

In 1980s, Mainland China witnessed the emergence of modern design and education, initially in major colleges and universities in major cities that dotted the Pearl River Delta, the Yangtze River Delta, and Central Bohai region. From the beginning of the twenty-first century, the influence began to be felt in South China, East China, Central and North China.
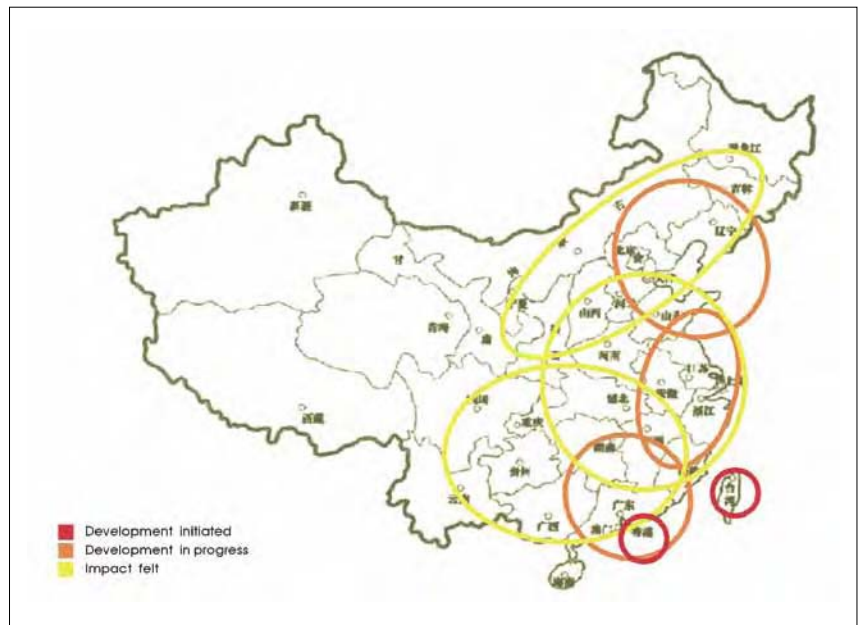
2.

I.III. A comparison of modern design in China and the West
Figure 03 shows that modern design in the West has progressed from form design, professional design and management design to strategy design, whereas, in China, our modern design has morphed from imitation design to form design and professional design. To summarise

4. Economic development of developed
countries in the world
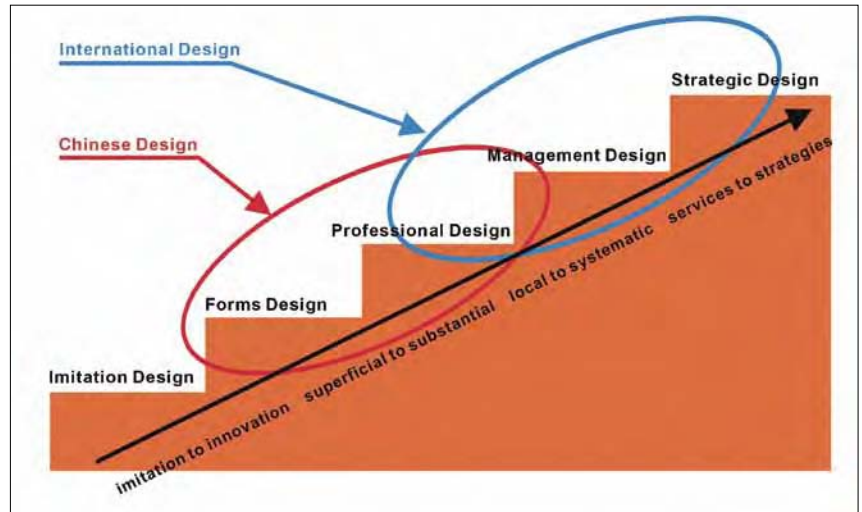
3.

the pattern of its development, the path of step-by-step evolution is from
imitation to innovation, from superficial to substantial, from local to
systematic and from services to strategies.

II. Three interactive factors that impact modern design education

II.I. Stages in socio-economic development and modern design education
Modern design functions to meet the needs of the people's life and work.
Its growth and development move in tandem with the economy and
the markets. Modern design originated during the European industrial
revolution, its birthmark being the establishment of the 'Bauhaus school'.
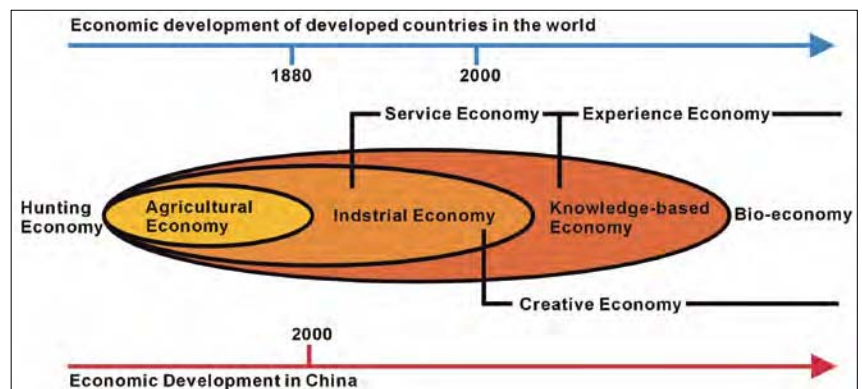
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The transition (see Figure 04) from traditional industries to
first modern industries and then post-industrial economy essentially
determines and shapes modern design and education from its
germination, through growth, and to maturity in the world.

The advent of a post-industrial and knowledge-based economy,
along with the arrival of modern service economy, innovation economy,
experience economy, and other new economies, directly impacts the
evolution and future development of modern design.

II.II. Development of modern technology and modern design education
Modern design is a cross product of technological, economic and cultural
development. Every major technological breakthrough and restructuring
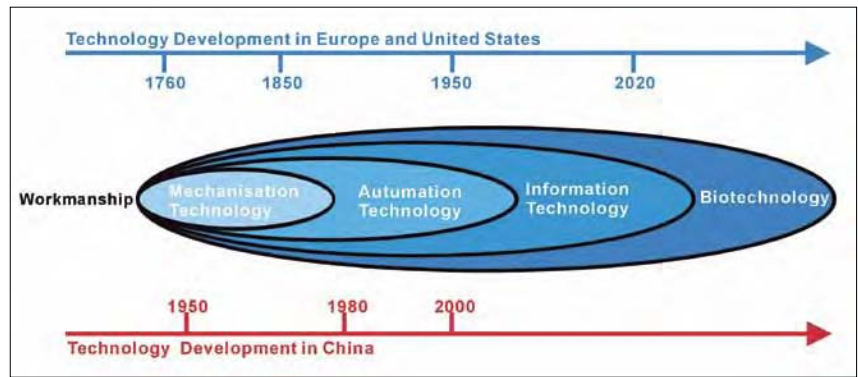
5.

affects not only the living condition of mankind, but also the evolution and breakthrough in the methodology of modern design and education.

From large industrial machines and technology to automation, intelligent technology and computer technology to Internet technology, every science and technology breakthrough and its application propels modernity to a new level in terms of design concept, content quality and so on. The history of global scientific and technological development (see Figure 05) can also be shown to inform the development of applied sciences and education, which includes modern design.

II.III. Cultural differences and modern design education
Modern design resides within the humanities disciplines. All design activities and design education are rooted in the cultural foundations. Good modern culture is conducive to the development of modern design and education, whereas certain characteristics of certain sub-cultures may prove unfavourable towards modern design.

Modern design is nourished upon the modern industrial civilisation and the modern culture, relying on culture as its core support. The differences in the Chinese and Western cultures (see Figure 06) are bound to result in differences between China and the West in the concepts, characteristics and process of modern design and education. It falls upon us to recognise the essentials of Chinese and Western cultures, promote outstanding features in Chinese and Western cultures and incorporate those features as the core values for developing modern design and education.
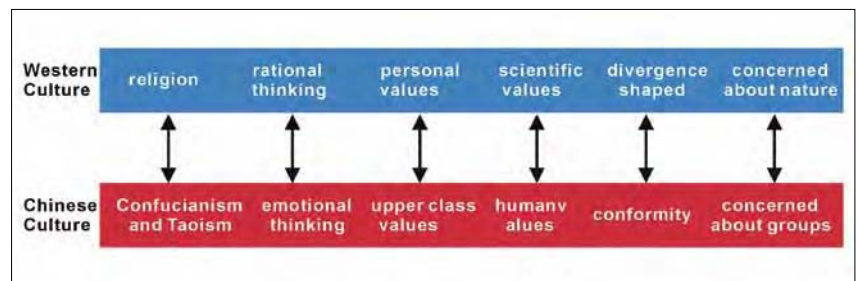
6.

III. Eight major forces that drive the development of Chinese design and education
Analysis and research indicate that there are eight major internal forces driving the development of Chinese design and education:

141

7.

III.I. Evolution of China's new industrialisation as the fundamental force driving modern design education

Evolution of China's new industrialisation serves as both an opportunity and a challenge for the development of design education. At present, China has become the globally recognised 'world factory'. China faces numerous grave issues: strong competition in global manufacturing and limited domestic resources, ecology, and sustainable development. The call for a transition from "Made in China" to "Created in China" is echoing across the country, coming from both the government and the general public. In the words of David W. Kelly, Founder and Chairman of IDEO, a famous American design firm: "Innovation is more of a challenge than an opportunity for China. The essence of creation – to put it simply, is the ability to design in its broad definition." On the cover of the January 2006 issue of Business Week, a renowned business monthly magazine, (see Figure 07) the eye-catching title exclaims: Chinese Design. Insiders in the industry around the world observed that this marks the rise of Chinese design on the world stage. At present, many well-established enterprises regard innovative design as an important tool for branding "Designed in China" in addition to "Made in China". Big names such as Haier, Lenovo and a number of Chinese brand-name companies have been setting up design shops around the world as part of their strategy to expand overseas. This poses a serious challenge to modern design education in our country. In response to the universal call from the industry for training a new generation of design talents that are market-oriented, management-oriented, research-oriented, all rounded and service-oriented, an urgent mission is to reform the model of modern design education and to proceed with internationalisation of our education.

III.II. Global economic integration as the central driver advancing modern design education

Global economic integration is proving to be irresistible. The process of integration facilitates the free flow of goods, capital and labour around the world: all kinds of economic unions are coming into being; multinational corporations are bent on their continued borderless expansion of business activities; and design professionals are globe-trotting in pursuit of global division of labour to grow their design business; import of overseas design services grows along with the expansion of Chinese design business overseas; manufacturing business development has been shifting from OEM to ODM and then OBM; international design business offshore outsourcing is also on the rise. China will be running a serious shortage of international design professionals and institutions that are blessed with an international outlook and well trained in the international practice of design business management. This will not only pose a challenge to the design industry, but also raise an important issue for design education, which has no choice but move in step with the process of economic integration and strive to educate qualified design talents who satisfy the requirements of that process.

III.III. Internationalisation of education as a powerful motivator of modern design education

The new century has ushered in waves upon waves of internationalisation of higher education in China. In January 2006, Chinese and foreign university presidents participated an international forum on education held in Hong Kong. In July of the same year, the third Chinese-Foreign University Presidents Forum was successfully held in Shanghai. All of these events accelerate the pace of internationalisation of education, which in turn will inevitably affect the advance of internationalisation of modern design education. In recent years, China has witnessed movement in internationalisation of the educational process pioneered by Academy of Arts & Design, Tsinghua University, College of Design, Guangzhou Academy of Fine Arts, the School of Design, Hunan University and some other institutions. In their efforts to develop design talents with an international vision and skills, they adopt the applications of international design tools, implement cultural education curriculum with a global vision, increase teacher-student ratios in international design programs and expand cooperation in international design courses and exchange programs. These measures effectively provide additional impetus to China's reform and development of modern design education.
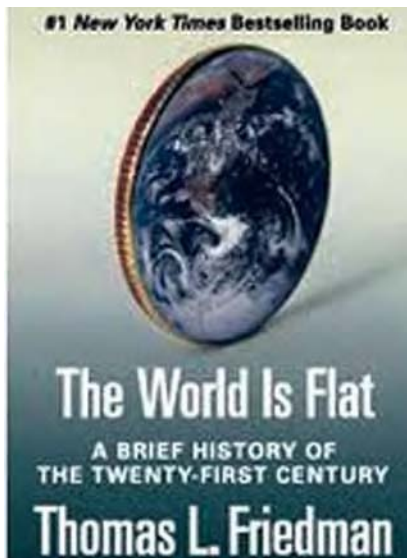
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III.IV Digital media technology as a revolutionary force reforming modern design education

Digital media technologies are generally based on computers, cables, communication satellites that, through the use of 0 and 1 for digital encoding processing and transmission of information, by means of digital encoding, compression, transmission, modulation and mediation, create characters, voices, languages, images, animation and other digital media content. Thanks to its interactivity, integration, real-time, nonlinear and intelligence, digital media technology fundamentally reshaped modern design and its education reform, giving rise to a large number of emerging new media. At the same time, they need modern design for rejuvenation through art and design. In the arena of design, digital media has brought a new vista to design content: its holographic technology makes it possible to provide high-quality design; its inherent qualities alter design methodology, enhance design efficiency and expand design space. The situation where the "Design Master distances himself from his time" has begun to take shape. In the area of design education, a fundamental change has occurred in the tradition of educational format. A change of paradigm in teaching knowledge and ability is such that the emphasis in design education has shifted from ability to create tangible forms to capacity of innovative thinking.

III.V. The Internet technology as a catalyst precipitating reform in design education

During 2006 and 2007, China as well as the rest of the world was blown over by a book entitled, "The World is Flat" (shown in Figure 08), whose author is Thomas L. Friedman, a famous writer in the United States. This book cites a huge amount of data to drive home the point that the world has been shrinking from big to medium to small and eventually to flat, due largely to the Internet and human factors, resulting in a flat

world. Internet technology has influenced and modified every aspect of our life. It also served as a catalyst for the development of modern design education. In the presence of the Internet, design as a behaviour has overcome geographical barriers to become a borderless endeavour. Global division of labour has become a reality, completely changing design communication, transmission, and business operations. Designers today can break through cultural and language limitations to cooperate with designers of different cultural backgrounds. The use of the Internet renders the global convergence of content in modern design education increasingly prominent. With overseas design teaching interaction becoming a reality, network-based international design courses are no longer a fantasy. With access to the Internet, reform of and innovation in design education have become richly colourful, extending the capacities of modern design education into new territories.

III.VI. Cultural and creative industries as the latest push on modern design education

The term "creative economy" was coined in the 1920s by John Howkins, a British man known as the father of creative economy. His theory (see Figure 09, book cover of "Creative Economy") has been adopted by the British Government and rapidly gained a following in Europe, the United States and around the world. Since 2005, China's central and local governments have been vigorously pushing the development of cultural industries, positioning the creative economy as the core of cultural and creative industries, which has been included as a special project in the 'Eleventh National Five-Year Plan'. More and more people in different
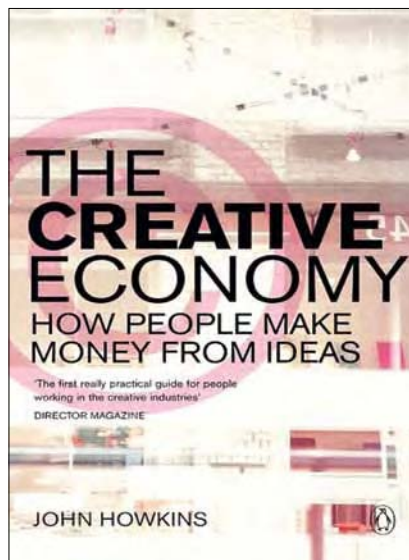
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industries have come to fully understand the role of creativity. As Bill Gates puts it, creativity has a fission effect, with an ounce of creativity bringing countless commercial benefits and business miracles. At the core of cultural creativity lies modern design. Throughout China and the rest of the world, creativity centres and industrial parks have been cropping up like mushrooms: London well-known as 'the world's creative capital', Turin ranked high as the 'Design and creativity capital of the

world', Shenzhen as China's 'design capital', Guangzhou's Creativity and Design Harbour, Hangzhou's Creativity Industry Park, etc. All these illustrate the rapid development of cultural and creative industries, once again reminding us how urgent it is for design education to produce the required design talents. It is imperative that emphasis be placed on creative aptitude and appreciation of originality, building modern design on cultural foundations. All of these considerations ought to guide us as we set new targets for development.
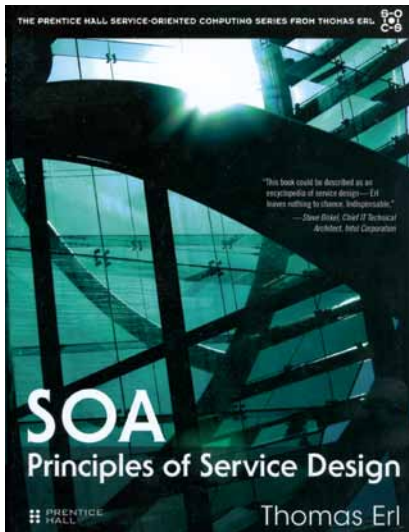
III.VII. Growth of services industries as a guiding force for modern design education

The State Council's Decree No. 2007 clearly identifies industrial design as part of advanced services industries for accelerated development. The Shenzhen Municipal Government's Decree No. 2007-1 includes creative design services such as industrial design, animation and graphic design in its eight high-end services for strategic development in the city. Creative design services that incorporate modern design have become hot spots for new economic growth in the central strategies pursued by all levels of Chinese government (see Figure 10, National Report on the Development of Serves Economy). Developed countries have already introduced modern design into their service industries. 'Service design' has established its own theories and become a field of study (see Figure 11, book cover of "Service Design"). On the one hand, the design industry, as part of modern services economy, places new demands on professional training and design education. On the other hand, the use of design leads to innovation and new rounds of resource integration in the service industries, highlighting design to enhance competitiveness in the service industries. The implementation of these two processes is contingent upon training a new generation of modern design talents who are service-oriented with both the mentality and skills required.

III.VIII Cyclical economy as a coordinating force advancing modern design education

Since entering the new century, under the banner of 'Pursuing Scientific Development' and 'Building a Harmonious Society', Chinese government at all levels attaches great importance to and vigorously promotes cyclical economy and sustainable development strategies. In particular, Chinese industries are up against a series of international green standards: EU's WEEE and ROHS Directives; ISO14000 and so on. In the face of China's energy crisis, the increasingly worsening environmental pollution and industrial sustainable development, Chinese government at all levels has come to a profound understanding of the symbiosis between humankind and Planet Earth as the inevitable trend of historical evolution. The State Council's Decree No. 2005-22, Guangdong Province's Decree No. 2007-4, and Shenzhen Municipality's 'Eleventh Five-Year' development plan on cyclical economy, all focus on the importance of an ecological strategy. As the starting point for industry and engineering, design directly affects ecological issues triggered by economic activities as well as promotion of green ideas and behaviour. It all begins and ends with design, ultimately depending on education of people that includes modern design education, which is therefore obliged to be attentive to the symbiosis between

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11.

humankind and Planet Earth. By strengthening sustainable design in the curriculum and setting up new green design programs, we can train all types of design professionals to recognise the importance of developing and applying green design theories and practices. This will play a critical role for the healthy development of cyclical economy in China.

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Xin: Icograda World Design Congress 2009
This paper was submitted for the Icograda Education Network (IEN) Conference that took place during the Icograda World Design Congress 2009 in Beijing, China, which was planned in collaboration with the Central Academy of Fine Arts (CAFA). The broader theme of the congress, Xin, literally signifies human speaking and hence message/ letter in Chinese, Xin-信 which represents a primitive means of communication. The IEN conference invited papers under the following themes: Design Education and Innovation; Design Education and Diversity; Design Education and Cross-Disciplinary Collaboration and Design Education and Regional Development.

Co-design
Community of practice
Learning space
Place-making
Re-directive design

GRAPHIC DESIGN AND THE AESTHETICS OF PLACE
KATRINA SANDBACH

ABSTRACT

This paper describes the early stages of a doctoral project entitled "Envisioning Design: The Role of Visual Communications in Place-making" which engages University of Western Sydney (UWS) Bachelor of Design (BDes) Visual Communications students in the process of co-designing places for learning and practicing graphic design. Through a series of focus groups, BDes students identify factors that shape their undergraduate experience and explore ways to renovate or create new and more inspirational places for their emerging community of design practice. The focus group is unique because participants are users and young graphic designers, and it is assumed that their emerging expertise in visual communication, design production, and student experience will enable them to make a particular contribution to place-making at their university.

Place-making emerged in the 1970's and as a relatively new practice. It is typically manifested through the collaborative efforts of architects, planners, builders, interior designers, engineers and landscape architects. Revitalising and in some cases redesigning public spaces is certainly on the agenda around the world and in Australia – 'place' has become an 'in' word, with increasing acknowledgment of its importance in contemporary human existence. In this context, the project seeks to understand if and how graphic design practice can make a contribution to the methodologies of place-making, and speculates on what form/s may emerge from a re-directive commercial graphic design practice.

FULL PAPER

Introduction

Envisioning Design: The Role of Visual Communications in Place-making is a doctoral research project in its early stages, and ultimately it investigates how graphic design affects "place". This paper will outline the two themes being explored in the project – graphic design practice, place-making, and their connection through the goal of advancing sustainable design practice. Following this will be a discussion and reflection on preliminary findings, with the intention of stimulating graphic designers to think in this direction.

Themes

Graphic design practice in flux

Since the 1970's and with increasing momentum, graphic design practitioners and scholars worldwide have reflected on and began amending practice to align with socially and ecologically responsible principles, focusing internally to cultivate a "greener" design industry. Primarily concerned with the material impact of design practices, these principles are intended to cultivate ecological, economic and cultural conditions that will support the well being of the earth and its inhabitants indefinitely (Thorpe, 2007). Sustainable graphic design is a holistic approach to responsible design practices, an ideology that informs what kind of design work is sought, how it is acquired and then conducted.

Emerging from this is a material aspect that is also concerned with developing processes and outcomes that lessen graphic design's ecological footprint. However, another significant facet of sustainable graphic design begs inquiry – methodology. Through exploring this aspect, we may begin to see graphic design's potential less as a material than a social practice, developing further understanding and tangible evidence of sustainable graphic design practice.

In 1971, designer and educator Victor Papanek (1985) challenged designers of all kinds to take responsibility for the social and environmental ramifications of their work. Papanek's strongest message is that as designers, we should be concerned with looking at real-world problems and trying to solve them in an ecologically-sound and efficient, forward-thinking way, with the help of the stakeholders – the people who are actually affected by the design problem and its potential solutions. We can describe socially conscious graphic design practice as a guiding ideological framework that holds the social impact of all its actions at the forefront, and in addition to this, Papanek calls for a user-centered and participatory approach.

Co-design is a relatively new term referring to the creative capacity of designers and people not trained in design, working together at the design development phase. Participants are engaged from the beginning, at which stage it is often unknown whether the deliverable of the design process will be a product, a service, an interface or building etcetera. Sanders and Stappers (2008) explain that in this critical phase considerations revolve around understanding users and contexts of use, the goal being to establish what is to be designed, and sometimes, what is not to be designed. In co-designing, the designer is no longer just a creator or author, but also a facilitator, producer and manager, and there is a need to develop skills that will enable them to lead and guide their non-design trained co-designers. Design skills are still required, such as visual thinking and design research, and designers can also provide expert knowledge such as emerging technologies, production processes and business contexts – knowledge that other stakeholders in the co-design context may not have. Sanders and Stappers propose that in the future, designers will "make the tools for non-designers to use to express themselves creatively" and from this will come new types of designers with "specialties based more on the purpose of designing as opposed to the products of designing" (2008:13).

The overarching goal of co-design is that the process is enriching for all involved because of a sharing of insight and expertise, bringing a clarity of purpose to all, and fortifying the project's objectives through articulating stakeholders' aspirations and ideas. Although commonly used in built environment and product design practices, participatory approaches are not typical in commercial graphic design and projects that do actively engage the audience or user as co-designers are rare and unique (Bennet et al., 2006). One of Envisioning Design's objectives is to develop further understanding of its effectiveness in graphic design practice.

Design discourse describes a sort of "re-designing" of design, and moving forward, it is vital that graphic design look outside of its typical domains. Tony Fry (2009) describes a new type of "redirective" practice

that recognizes design's importance in overcoming a world made unsustainable, challenging design to reinvent itself to meet the call for sustainability. He suggests that redirective design cannot be theoretically generalized, "it can only be situated and circumstantially reactive" (2009:10), and new knowledge about it will be generated on-the-go. It can be said that redirective practice will elevate the "seriousness, importance and futuring potential of design" (2009:54). From this we can describe the motivations for graphic design as being in flux, with a shift towards giving more sustainable purchase to graphic design practice.

Having come to design education and research from graphic design practice, I believe that it is crucial to conduct evidence-based research which explores different graphic design methodologies with implied commercial applications, in this case co-designing and redirective design. Envisioning Design's findings may testify for graphic design's potential to shift outside of its typical domains and develop new opportunities for graphic design practitioners. In the scheme of this research project, motivations for graphic design in flux are being purposefully shifted to constructively align with the imperatives of place-making.

1. Motivations for graphic design are being shifted to align with the imperatives of place-making.

MOTIVATIONS FOR GRAPHIC DESIGN	FROM	TO
WHY	consumption	connection
HOW	exclusively (client-driven)	inclusively (user-centred)
WHAT	products	relationships
WHO	designers	stakeholders

1.

Place-making

Around the world and also in Australia revitalizing, and in some cases redesigning public spaces is on the agenda. Australia's Department of the Environment, Water, Heritage and the Arts has formulated a number of initiatives aimed at promoting and facilitating sustainable development at the local, regional and national level. In NSW, the City of Sydney's Sustainable Sydney 2030 initiative engaged 12,000 people over 18 months, consulted through phone and website submissions, live forums and exhibition feedback. Embodying the aspirations set by the community, the City of Sydney's Sustainable Sydney 2030 strategic plan (2008) describes a remaking of the city into one that is "green, global and connected".

As a relatively young practice, place-making has been described as fractured, with practitioners comprising of architects, planners, builders, interior designers, engineers and landscape architects (Schneekloth and Shibley, 1995). Nonetheless, Madden and Kent (2009) describe that "place-making is a transformative agenda that is beginning to take hold in

cities throughout the world," as governments, organizations, and private citizens have looked for ways to reinvent their communities around the simple idea of "place". Place-making consultant Kathy Legge explains that place-making should:

- Reveal and respond to the true character of the place
- Involve people in the planning and activation of the place
- Respond to people's emotional needs and aspirations
- Be attractive to people by providing them with multiple experiences
- Create pleasurable experiences that evoke aesthetic delight

Importantly, place-making is not a "one size fits all" formulaic approach, and successful place-making hinges on community engagement. Ultimately, the objective is to create or transform space into place that people want to inhabit, "a place that stimulates the imagination" (Legge, 2008).

In Poetics of Space, Bachelard's notion purports the home as a metaphor for the self, and that space is subjectively experienced. Basing his observations on the principles of topoanalysis or the lived experience of architecture, he explains that "a house that has been experienced is not an inert box. Inhabited space transcends geometrical space" (1994:47). "Inhabiting" is a primal, intuitive and intimate act giving form to the places and spaces in which we dwell. In turn, those places themselves influence and shape our feelings, memories, and experiences. This suggests that it is through this exchange between user and the physical space that "place" is made. Bachelard's musings have influenced thought in architecture, landscape and interior design, however, the actions of professional place-making — planning, building and renovating places — are considered technical, rational acts rather than the essential, intuitive, poetic ones (Schneekloth and Shibley, 1995). Nonetheless, Bachelard's subjective dimension is pivotal, and a reason to engage communities in the place-making process, perhaps drawing from their poetic inhabiting practices will enrich the rational actions of place-making.

Berleant (2003) suggests that place designers need to develop their perceptual capacities, that "a poetics of place must put the aesthetic in place". He argues that the aesthetic dimension of place is easily overlooked and identifies two aesthetic traits that can convey a sense of place. The first is physical identity that a location can convey, that certain qualities set it apart from other places, such as a harbour or a monumental building. The second is physical coherence, architectural similarity that creates the sense of a distinctive place, in contrast with other surrounding areas, for example, new suburban residential developments. Berleant asserts that no one formula can achieve place — each site, each project, each situation is different, "and a sensitivity to the possibilities inherent in its unique feature will help in designing distinctive and authentic places" (2003:52). This argument primarily focuses on aesthetics of a built environment, but Envisioning Design explores graphic design in place as an additional aesthetic trait.

Convergence of themes

The word 'aesthetic' comes from the Greek *aisthetikos*, literally to perceive by the senses, and for both graphic design and place-making aesthetics is key. There are some other distinct connections between

the themes as illustrated below, and Envisioning Design sees these connections as an opportunity for graphic design and place-making to work together through the goal of advancing sustainable design practice.

2. Connections between themes.

A GRAPHIC DESIGN PRACTICE IN FLUX	PLACE-MAKING
Socially responsible	Responds to people's emotional needs and aspirations
Co-designing	Involves stakeholders in the planning and activation of the place
Redirective practice (reinventing design to meet the call for sustainability)	Sustainable development, remaking cities into "green, global and connected" places (Sydney)

2.

If the aesthetic is an important dimension of place and of human life, it follows that graphic design, as a visual discipline, can be employed in place-making. Prevailing approaches to place-making which have incorporated graphic design are projects of branding or visual identity in order to build market share, and these existing graphic design practices can be used to delineate communities or places instead of explicitly moving product. My professional practice background in brand communications and visual identity design will mobilise aspects of this research project.

By exploring graphic design's agency in place-making, Envisioning Design aims to gather evidence of the practice's ability to move outside of its typical domains. Furthermore, graphic design's effectiveness in place-making may reduce the need to overhaul the built environment, which reduces material implications and is also a far less intensive undertaking, possibly a more economical approach to place-making.

The problem context

Envisioning Design specifically examines places used to teach graphic design at the University of Western Sydney (UWS) in Penrith — a densely populated suburban and commercial area, 50 kilometres west of Sydney's central business district.

At an unprecedented high, the UWS Bachelor of Design (BDes) student population comprises of individuals travelling from all over Sydney to this outer Western suburb where the Werrington South campus and the BDes resides, Here the existing built environment reflects previous learning cultures, potentially hindering attempts to foster new pedagogical approaches and the cultivation of a BDes community of practice.

While classrooms can still be seen as a core learning environment, focusing on classrooms is no longer an option and educational discourse now uses the broader term 'learning space' to capture a wider range of both physical and online venues for teaching and learning (Brown and Lippincott, 2003) including lecture theatres, study areas, studios, and

3.

3. A typical UWS BDes classroom that reflects previous learning cultures.

eLearning environments. New learning spaces not only incorporate technology, they also create new patterns of social and intellectual interaction (Mitchell, 2004) and in response to the radical shift in student learning cultures, learning space design has emerged as an important consideration for universities in the last decade (NLII, 2004).

Despite recent renovations to particular Werrington South campus sites, it remains that the spaces used for teaching and learning are still most appropriately described as classrooms. The Editor of UWS student newspaper Degree described the Werrington South campus as a "neglected middle child" of UWS – a forgotten place, even though at this location there is a concentration of advertising, photography, film and design students, making it "conducive to a creative atmosphere" (Dollin, 2009). This untapped creative potential for place-making required exploration, starting with design students who are significant stakeholders in the problem context. Through a series of focus groups between 2010-2014, final fourth year BDes students identify factors that shape their undergraduate experience and will explore ways of renovating or creating new and more inspirational places for the emerging BDes community through graphic design.

Preliminary findings

The significance of "place" for learning and doing design
Fundamental to design practice is the design studio. However, there is sparse existing literature, and considering how important studios are to graphic design it is astonishing how little there is on the subject (Brook and Shaughnessy, 2009). Professional standing and market edge is measured by profile, awards and output in glossy publications, rather than access to processes inside the studio. Shaughnessy (2009) argues that it is impossible to understand contemporary graphic design without also understanding how studios function. This suggests that if the goal of design education is to cultivate feasible practising designers, studio experience should be in the foreground of learning and teaching design.

The design studio in the context of design education can be generally described as "a physical place where students learn to become practitioners through 'learning by doing' rather than the more conventional transmission of knowledge content" (Shao et al., 2007). This is the principle of situated learning fundamental to Lave and Wenger (1991) who argue that it is through the process of collaboration and sharing information that the members learn from each other and develop their community. Wenger (1998) describes a community of practice as a group of people who share a profession, craft or interest. It can develop naturally through the members' common interest, or it can be created specifically to gain knowledge in their particular field.

Rabbithole is the UWS BDes learning studio, created specifically for fourth year BDes students and operating from a dedicated space at the Werrington South Campus. Coordinated by graphic designer and lecturer Samantha Edwards-Vandenhoek, since 2007 Rabbithole has facilitated opportunities for students to work on 'real life' design projects, with actual clients, bridging the "gap between theory and practice, student and industry life" (Rabbithole, 2009). It is a broader learning environment which connects people, enables interaction, dialogue, and sharing of

knowledge, a "living curriculum" (Wenger, 1998). Equipped with the essential studio trappings – iMacs, meeting spaces and a printer, this is where future graphic designers consolidate their skills, hone their professional practices and develop and/or consolidate their communities of design practice. By definition, the Rabbithole is a learning space rather than a classroom, but more importantly, the presence of graphic design artifacts here is significantly more than in other BDes spaces. Past student murals, print samples, packaging experiments, images of graduation photoshoots, and student graffiti adorn walls, corners and crevices of the studio. It is for this reason that Envisioning Design claims it as an ideal site for investigating how graphic design affects place.
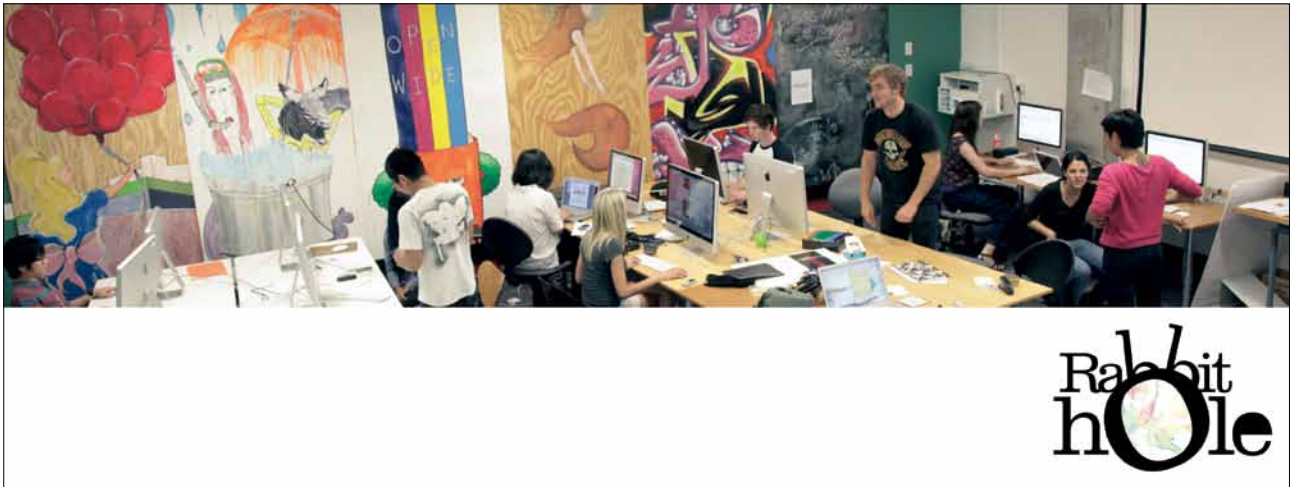
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4. The Rabbithole is a dynamic place and a "clubhouse"(Image: Minus the Rough 2010 BDes graduation exhibition catalogue).

The focus group

Fourth year BDes students in the final phase of their design education are assumed to have a particular expertise in learning at UWS. Between 2010-2014, they will be invited to participate in a project-oriented focus group, the objective is to understand:

• How do they see the Rabbithole in the context of their learning experience
• What do they think of the existing spaces used for BDes
• What are their ideas for improvement

Focus group participants in 2010 regard the Rabbithole as a cornerstone of the UWS BDes, symbolizing the accomplishment of 3 years of study and also giving them a place to anchor down in their final year. Significantly, students perceived the Rabbithole as a kind of "clubhouse" for their community and a place where they can play, rest and shelter.

They described the Rabbithole as an active, noisy and messy place — where learning and doing design occurred in a social environment, and where friendships were formed or consolidated through collaboration. What participants refer to as "messy" are the remnants of past studio design output such as print samples and photographs, as well as current studio output such as poster test prints and design experiments. While this was initially identified by one participant as a negative, another asserted that this was "evidence that others have been through — it's a positive". Other participants interjected "looking around you can really tell that other students have been in here, there's stuff everywhere" and "I like it, it feels like it's been used, it's history".

It is important to note that these participants did not utilize Rabbithole as a workspace but as a meeting place, preferring to conduct the majority of their design work from home where they have free access to food and resources, control over the environment, and where they can focus in isolation while simultaneously staying connected to online design and social networks at their discretion. Students have easy access to all of the technology they need to organise their studies and conduct design work remotely, whenever and wherever it suits them. Exacerbated by the demands of paid employment and busy family or social lives, focus group participants confirm that their physical presence on campus is managed around the minimum requirements of attendance, in concentrated and scheduled bursts, generally kept within the confines of closed classroom spaces and the occasional trip to the library or food dispenser when required.

This is an important insight that Envisioning Design will explore further, but undeniably, student-campus interaction has been significantly affected by today's learners' extensive usage of the Web for information, communication and socializing (Warger and Dobbin, 2009). Can this be overcome by creating magnetic learning spaces that students feel compelled to use? Or should we focus on making places that "stimulate the imagination" (Legge, 2008), foster students connection to each other and to UWS? Perhaps the two are inextricably connected, and one focus group participant sums it up by stating "if you're gonna spend a lot of time there, you want it to be inspirational".

The aesthetics of BDes

What is "inspirational" to BDes students? Focus group participants explained that inspiration is subjective and comes from within, however they believed that the physical environment can affect this. What they described as inspirational are elements in "BJ", the building used predominantly to teach BDes practical courses. Framed displays of student design work, as well as graffiti-like student markings scattered inside and outside the building inspired participants — "anything student-generated is going to inspire everyone, it's an expression and that creates atmosphere".

There is a distinction between official displays of student work organized by the school, and the unofficial graffiti-like, sneaky student installations. The former is a representation of design accomplishment, self-pride, and the University investing in student work. The latter communicates freedom of expression, playfulness, and creative thinking. Although quantities of either are few, the aesthetics transmit the "designing" taking place behind classroom doors that is otherwise imperceptible and what students find most inspirational is seeing the work produced by their peers, past and present.

While there are permanent areas for framed displays of student work at four locations in BJ, two of these areas are usually vacant for reasons that require further enquiry. It is also important to note that upon returning to the site to take more photographs of the student graffiti identified by focus group participants, it was discovered that most of these had been removed, perhaps during the recent renovations to expand the photography studio in January 2011. If students see these visual artifacts as "history" that

5a.

5b.

5c.

5d.

5a-d. (left to right) In the common areas of BJ, a framed display of 3rd year BDes student magazine covers, and the playful student graffiti scattered around the design building work together to create an inspirational atmosphere.

"create atmosphere", what is the effect of removing them, scrubbing the place clean of these forms of student expression? Describing the general spaces in BJ one participant said "everything feels really temporary, like those pop-up classrooms in highschool" and this is disconcerting, especially since BDes has inhabited BJ for at least twenty years. This highlights that more can be done to identify BJ as the permanent residency of BDes, and make it more inspirational for students.

Returning to the Rabbithole, Focus group participants pointed to the visual legacy of past students as what is most inspirational about the studio. This includes past murals, posters, and print samples, which are traces, marks and symbols of those who have left and progressed to professional practice, and signs that represent their impending professional journey. Participants described the Rabbithole as the place where they consolidate everything they know, learn even more about design practice, and start building their professional networks. They understand that physically being in the studio is important for their learning, but by fourth year their attitudes and patterns of campus usage which can be simply described as "get in, do what I need to do, get out" are ingrained, and this can be difficult to shift at this stage. This suggests that the BDes student first year experience is a crucial time for place-making intervention.

Using elements from the Rabbithole or expanding its presence outside of its basement space was discussed with the focus group, the premise being that some of the elements within the Rabbithole can be used to transform classrooms and other less active BDes spaces into more magnetic places that keep students inspired and motivated, spaces that exude "design". Students analysed inactive spaces in BJ by investigating existing graphic design artifacts (or lack thereof) at these locations, and then used graphic design methods to visualize their initial ideas of how to make improvements. Of particular note were the ideas to:

- install environmental graphics to identify different design working zones such as photography studios to convey the activity taking place behind closed doors, which is usually imperceptible
- expand the Rabbithole branding to the external building façade as a way of increasing awareness of the studio in students at all stages of the

6a.

6b.

7a.

7b.

6a-b. (left to right) the existing area outside photo studios, environmental graphics by Teresa Chhay.

7a-b. (left to right) the existing basement rear entry to building BJ, Rabbithole branding applied on the entry doors by Michael Osborne.

degree and foster a sense of belonging, pride and ownership of the studio
• artwork critique walls outside the Rabbithole which invites passers-by to comment on studio work-in-progress or simply to display work to encourage community discussion and collaboration

Reflection

Envisioning Design is in the first phase of a four-year action research cycle and there is still significant exploration due. However, the first focus group participants have provided valuable insights, highlighting some of the important factors that shape their time as UWS undergraduate students. Participants do value their community of design practice and importantly, identify the Rabbithole as a significant site for the development of their community.

Although the problem context is specific to design learning spaces, some issues are synonymous with those experienced by the widespread UWS learning community and it is anticipated that BDes students, through articulating their own vision and desires for what makes an "inspirational place" will make a unique contribution to place-making at UWS. Many universities worldwide describe their campus as "a microcosm of society", and in this sense it is anticipated that the problem context

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has far reaching implications — on Sydney and perhaps even beyond. Population expansion, infrastructure development, sustainability, and the impact of technology are significant issues that affect UWS campus life, but are also prevalent issues in contemporary urban life.

Place has become an "in" word and we now understand its importance in contemporary human experience. Berleant (2003) adds that discourse in architecture, sociology, geography, advertising, real estate and travel industries exemplify this current fascination with place, but suggests that the aesthetic dimension is often overlooked. The UWS Werrington South campus built environment testifies to this, and evidently this has affected how BDes students see and use the campus.

Educational discourse asserts that classrooms are no longer an option, and in agreement, students emphasise that the Rabbithole studio is not only important as a physical space for learning and practising design, but also, significantly, as a symbol of what the students have achieved (3 years of prior study) and what they are striving to be (professional designers). Rather than prioritising the latest equipment or a slick interior-designed studio cavity, what participants say is most inspirational are the visual artifacts produced by their peers. They also perceive the current exhibition of works at designated but few locations in the design building as a reflection of the School's recognition of their accomplishment, which has implications on their ongoing relationship with UWS, although this requires further enquiry. It is apparent, however, that graphic design is a significant aesthetic trait of the BDes learning environment.

Approaching place-making using graphic design may reduce the need for a complete overhaul of the built environment, reducing the material implications, and also positioning the place-making process as more attainable to those who require change or improvement, but may not have the resources to fund an intensive project. There is a lot of scope and potential for graphic design to be part of place-making methodology, although whether this manifests design artifacts which affect place, or remain as methodologies employed in place-oriented research is to be explored further.

In the meantime, it is hoped that Envisioning Design triggers graphic designers to start thinking in the direction of place-making, and see opportunities for their own graphic design practice.

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AgIdeas International Design Week
This paper was written for the agIdeas 2011
International Design Research Lab, which
took place on 2 May 2011 as part of the
agIdeas 2011 International Design Week,
in Melbourne, Australia. The DesignLab
is a one-day forum that provides design
educators, researchers and practitioners
the opportunity to present design research
to their peers. The inaugural forum aimed to
create awareness of new knowledge in the
areas of multidisciplinary design practice
and its benefits, and the relationship
between design practice and education.
Design researchers were invited to submit
abstracts that address the brief, "Where
is design practice at today?" Submissions
for the DesignLab were peer-reviewed by a
team of Iridescent reviewers. They selected
five authors for online publication.
Papers and posters were selelcted by a
multidisciplinary panel. Members of the
panel included: Jeremy Yuille, Veronique
Vienne, Sherry Blankenship, Selby Coxon,
Ashis Jalote-Parmar, Audrey Bennett, Evert
Ypma, Hernan Casakin and Rebekah Davis.

DESIGN FOR ENABLING SUSTAINABLE LIVELIHOODS IN COMMUNITIES

DESIGN FOR ENABLING SUSTAINABLE LIVELIHOODS IN COMMUNITIES
SIRIPORN PETERS

ABSTRA T

This paper focuses on how designers can contribute to enabling sustainable livelihoods in communities, especially communities of people with physical disabilities. This is a new area of design research and practice. The paper draws on a case study of the role and contribution of designers in one of the most disadvantaged communities in a semi urban area of Thailand between   7 and   . This was a collaborative project with nineteen community members with physical impairment in the Samutprakran province. This community had a long history of developing crafts for income generation. The aim was to explore and test new approaches that would result in a model leading to alternative livelihoods, including transforming their capabilities and using available resources in their community to achieve positive outcomes. Participatory Action Research (PAR), - uman- entered Design (-   D) and Sustainable Livelihoods Approach (SLA) were employed as research strategies and approaches. The project was structured around three workshops targeting three successive stages:

. recruiting participants for a case study and facilitating
  the gathering of their own data and doing the necessary analysis
. enabling them to create and make their own choices
  to improve their situation
' . monitoring and evaluating the effectiveness of the implementation.
    There were four key findings. Firstly, the community participants stated that they had achieved the livelihood goals that they desired. They also devised a complementary income-generating activity which enabled them to continue to improve their capabilities, earn income and reinforce their value in their community, and to reduce their vulnerability. From the researcher's perspective, PAR integrated with -   D and combined with SLA were shown to be effective strategies and approaches because they facilitate the transfer of knowledge to the participants, giving them both incentive and ownership in their ideas and actions, enabling them to create and pursue their own solutions. Finally, this study demonstrated the benefits of reorientation of the designer's role from that of a solution provider to that of an agent of sustainable change.

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Design for enabling sustainable livelihoods is a process which should facilitate and enable community representatives to investigate their situation, with the assistance of a design-researcher. According to   hambers and   onway (:5), a "livelihood" is defined as a means of gaining a living. A livelihood comprises the capabilities, assets and activities required for a means of living. They say a livelihood is only sustainable when it can cope with, and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation and which contributes net benefits to other livelihoods at the local and global levels and in the

short and long term'(hambers and onway,). This paper draws on doctoral research investigating the role and contribution of designers for enabling sustainable livelihoods in a very disadvantaged community in Thailand. It aims to discuss strategies and approaches, how designers can use these to enable this community to attain a sustainable livelihood that they want. This also includes the role and potential contribution of designers.

se stu y

This case study was a collaborative project with nineteen people with physical impairment in Samutprakran province. The aim was to explore and test new approaches that would result in a model leading to alternative livelihoods, transforming their capabilities and using available resources in their community to achieve positive outcomes.

This community was selected because there was experience with previous research with groups of disabled people in – onthaburi and Samutprakran province. This was a team project of design instructors of —ing ongkut's Institute of Technology Ladkrabang, funded by the – ational Research ouncil of Thailand. Its aim had been to develop new handicrafts for these groups, so they could compete in the market and prevent unfair competition locally. The research team provided all solutions for participants from generating design concept to making prototypes for them to test in their markets (see figure and). After this project was completed, a return visit to these communities revealed that they had not taken up the solutions created for them. ommunity leaders suggested that, after the research team withdrew, they did not understand what they had to do to develop their products. The leader of the Samutprakran community hoped a different approach could help them develop their capabilities and attain a sustainable livelihood.

This discussion revealed that the project had provided neither a long-term solution nor the continued support needed once the design researcher had withdrawn. When the final reports were submitted to the government it had seemed successful, but this feedback highlighted that it was not. It was now necessary to ascertain what had gone wrong before any further research was undertaken, as the previous projects had not yielded the anticipated outcome of continued development.
The advanced research capability of a doctoral program could provide the opportunity for an in-depth investigation using the previous research projects as a foundation.

A literature review revealed that a research project, which could continue to be effective long after the life of the project is over, requires not only the development of good design solution, but more importantly it must generate methods for knowledge transfer which can support sustainable change. According to c– iff and Whitehead (6:), sustainable change occurs when community members who seek to improve their situation create and implement their own ideas instead of accepting and implementing ideas created for them (c– iff and Whitehead, 6). The previous research had not generated sustainable change because of two main factors: the way of thinking and behavior of the design-researchers and that of the participants involved.

Sustainable change requires design-researchers to cease believing

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that they provide solutions for people. They should encourage participants to generate and implement their own ideas, so they understand what they have to do and why (Peters,   ). To support this concept, design-researchers need to shift their approach from designing to solve a problem for people to designing to enable people to transform their existing situations. Participants are the ones familiar with their situation and who have the ongoing commitment to benefit from change.

1. Project with a group in the Nonthaburi province, illustrated by the author, 2007.

2. Project with a group in the Samutprakran province, illustrated by the author, 2007.
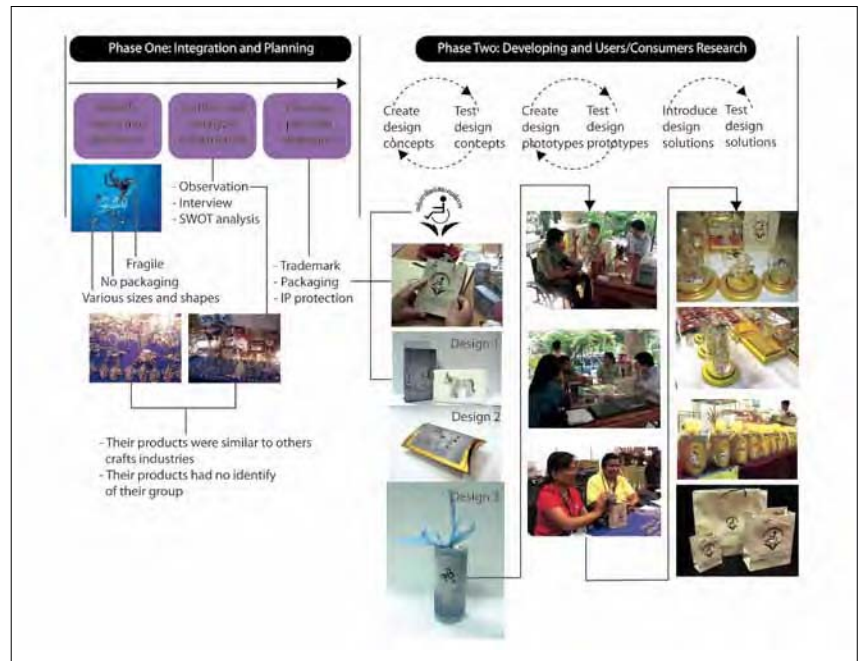
1.
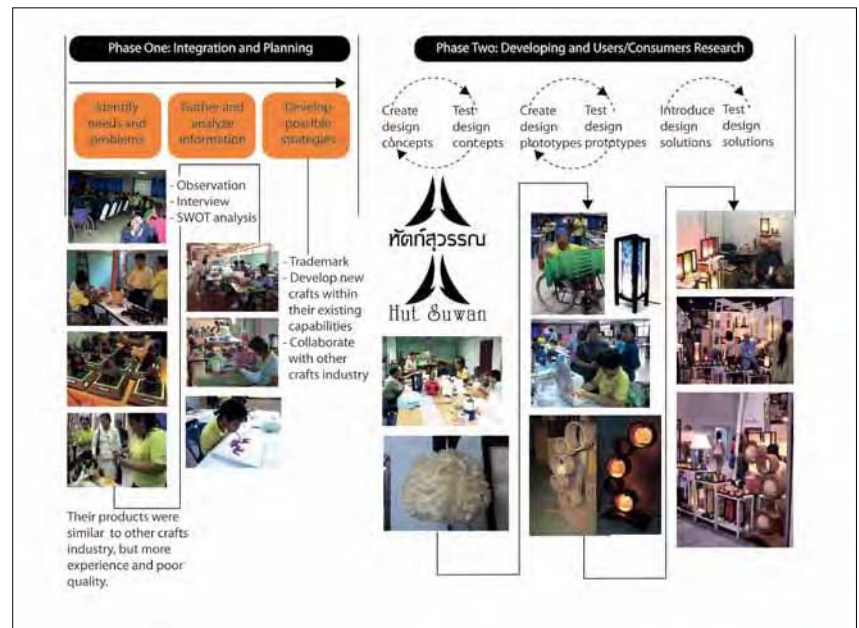
2.

Previous research had shown that this group of disabled people in the Samutprakran province had previously worked side by side with the Samutprakran Disabled Person Association (SDPA), a local organization of people with disabilities. Although this organization has various

resources available to it, the group had not continued to advance their opportunities. Therefore, they were selected as a case study.

Participants

This self-help community, established by the SDPA, relied for their income on accessing commissions from local government organizations, such as selling lottery tickets each fortnight for the Government Lottery Office of Thailand, and making artificial flowers for four months each year. According to the SDPA database, approximately ',5   people were registered as members. To avoid burdening the whole community or organization, only a limited number of people of members were invited to participate in this project.   ost disabled people in this community had mobility and literacy difficulties. Those chosen to participate were both literate and had fewer mobility issues.

Theoretical framework

This research has its basis in the theoretical frameworks established in the field of - uman- entered Design (-   D), a specific approach to design, and Sustainable Livelihoods Approach (SLA), an approach to community development. -   D focuses on working with and for people who will use the design artifacts or systems, and exploration of their particular needs or experiences provides a framework for achieving more successful design solutions (- anington,   ' , hamberlain and Bowen,   6). -   D is an approach to innovation that draws from available resources and integrates the needs of people, the possibilities of technology, and the requirement for a successful solution (Brown,   ). It is also a process of ensuring that the concerns, values, and perceptions of all stakeholders are considered and balanced (Rouse,   7).

SLA is widely employed by international development agencies, such DFID, " – DP, Oxfam and   AR" . SLA concentrates on ways of understanding the practices, realities and priorities of people, including what they actually do to make a living, the assets they have available and the problems they face in doing this (IFAD,   , Farrington et al.,   ). SLA is considered best practice' in development and it is most widely applied to design and support development interventions among poor and disadvantaged people (Davies et al.,   ). It is also used to identify the main constraints and opportunities faced by poor people as expressed by themselves (IFAD,   ). - ence, SLA was selected for use.

ethodology

Participatory Action Research (PAR) is an activist approach widely employed for generating sustainable change in community development (cIntyre,   , —indon et al.,   7,   cTaggart,   7, Whyte,   ). PAR was employed as the research methodology because firstly, PAR enabled design design-researchers to enter the real world of the people central to the study by co-developing processes with people rather than for people. Secondly, PAR enabled some members of the community under study to participate actively in the quest for information and ideas to guide their future actions. Thirdly, PAR has been defined as an approach to empower people through the process of constructing and using their own knowledge to increase the relevance of the research

process (" lden and Levin,   , cTaggart,   7, Balcazar et al.,   6, —indon et al.,   7, cIntyre,   ). Finally, a PAR cyclical process allows both design-researchers and community members to learn from their experience (cTaggart,   7).

<u>Procedure</u>

This investigation was composed of a series of workshops (see Figure '). The first focused on recruiting participants, collecting data about them as individuals and as a community, and facilitating them in using SLF to gather their own data and do analysis, so that they could achieve their goals. The second concentrated on enabling them to deal with key tasks and issues, so they could become more self-reliant. In the third, which was designed to evaluate the projects' effectiveness, the participants created and implemented their own ideas and operated the whole process themselves.
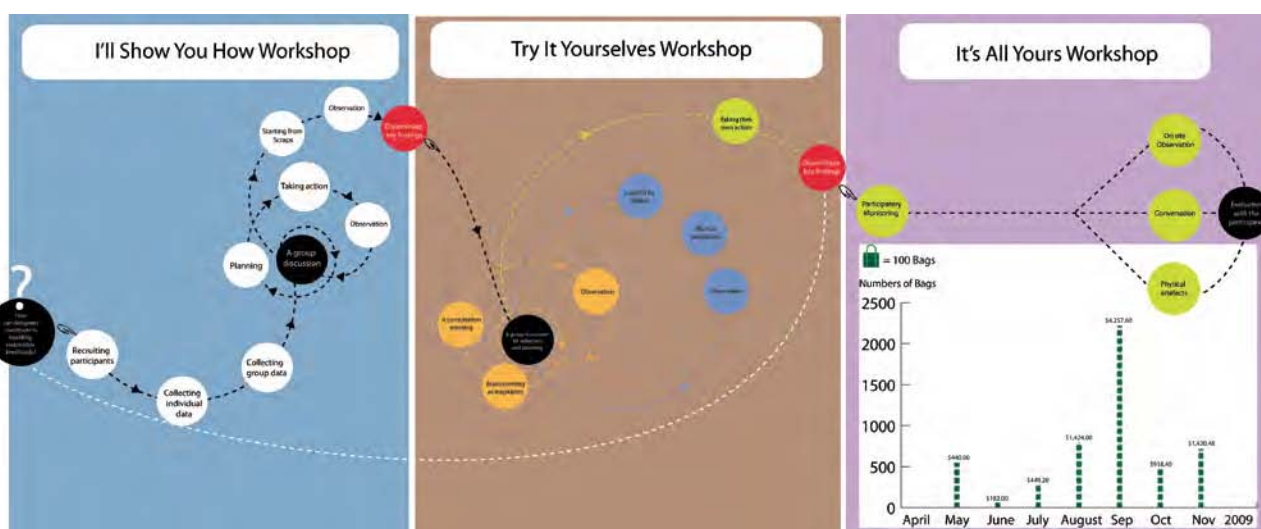
3.

3. Research procedures, illustrated by the author, 2010.

<u>Research tools</u>

Sustainable Livelihood Framework (SLF) is a main tool used for data collection and assessing exiting efforts to reduce poverty (DFID,   ). SLF is composed of five main components:

   . vulnerability context
   . livelihoods assets
  ' . policies, institutions, and processes
   . livelihood strategies
  5. livelihood outcomes (DFID,   )

   SLF has been developed by the " nited —ingdom Department for International Development (DFID), and widely employed by the " nited – ations Development Program (" – DP), Oxfam, and   AR" (arney,

  '). It has been known as a tool to help external agents to understand the livelihood of the poor, so, it was used in this study.

Workshop o e –   ll show you how

The objectives of workshop one were to recruit participants, collecting data on them as individuals and as a group, so the design-researcher could understand their situation. SLF was used to facilitate evaluation with

the design-researcher. Four integrated research methods were employed: survey, group meeting, group discussion, and on-site observation. These would enable both design-researchers and participants to understand the community and generate a solution.

During recruiting participants, the community's main financial source was not making handicrafts, as had been expected, but a fortnightly commission selling lottery tickets for the Government Lottery Office of Thailand. - owever, this office was planning a new electronic ticket system. This would significantly impact disabled communities, and there were substantial protests leading to postponement of the system's introduction, with resulting uncertainty as to when the government would implement it. Anticipating this change, nineteen people decided to take part in this research so that they could seek an alternative livelihood with the assistance of the design-researcher.

Survey

A survey was used to collect individual data and to develop further questions for the group meeting. It revealed that most were not residents of the Samutprakran province as had been expected. This raised a series of issues because one of initial research aims was to enable participants to draw on the community's resources. The survey also demonstrated that the participants possessed various skill-sets. While most could sew, they could earn more selling lottery tickets. To understand their situation and how they worked together as a community, a set of questions was generated for a group meeting.

Group meeting

The community had been established by the SDPA to enable members to obtain commissions from local government organizations. They had built the SDPA facility as a ticket distribution center for their members only, operated by the SDPA committee. Access to their facilities or to the sale of tickets was restricted to the SDPA members who must reside in the province. Thus, many disabled people had moved in. At the time, ' ,5 members were registered as lottery retailers. In   , this was threatened by the proposed introduction of the new electronic lottery system, and these ' ,5   members were at risk of losing their present livelihood. Recognizing this, the participants were invited to a group discussion to identify their own goals and resources.

Group discussion for data collection, analysis, and planning

In this discussion, SLF revealed crucial information as follows (see Figure   ). The vulnerability context for these participants and their community was population and technology trend. The population trend occurred in their community when a significant number of disabled people had moved into the community to entitle them to distribute lottery tickets. At the time, the SDPA committee had been unable to resolve this problem, and where '   people were seeking work, only 5   could be involved. The technology trend occurred after the Government Lottery Office did introduce electronic lottery tickets.

Their livelihood assets were as follows. The human capital comprised each participant's skills and knowledge, such as management,

marketing, sewing, making hand-made items (e.g., artificial flowers, resin souvenirs, tie-dyed fabric, miniature Thai house souvenirs, papier mache, hand-woven mats from textile remnants). ost SDPA members had the capacity to work and were waiting to be recruited. This community had extensive social networks and support from local government and private sector organizations because of their social networks, while the SDPA president worked closely with different authorities. The community could access financial support and information when needed. Located in a semi-urban area, they could access a health care center, the government vocational training center and other basic services (electricity, water, transport, communication). Working at the SDPA facility also provided various resources and equipment. The community possessed substantial financial capital from the sale of lottery tickets. This was managed by the SDPA and could be accessed through the committee members. The SDPA is a profit-making organization so they generally support promising income-generating activities. Through the provincial inistry of Social Development and - uman Security, they had access to small business loans and financial support for short training courses. To access these it was necessary to submit formal proposals through community organizations. Any such organization was required to provide training for a group of fifteen people sufficient facilities and equipment and a training program different from any already provided by the government vocational training center. Therefore, working together with SDPA was their initial livelihood strategy because it enabled them to access these resources.

4. Livelihoods of the participants as a community, illustrated by the author, 2008.
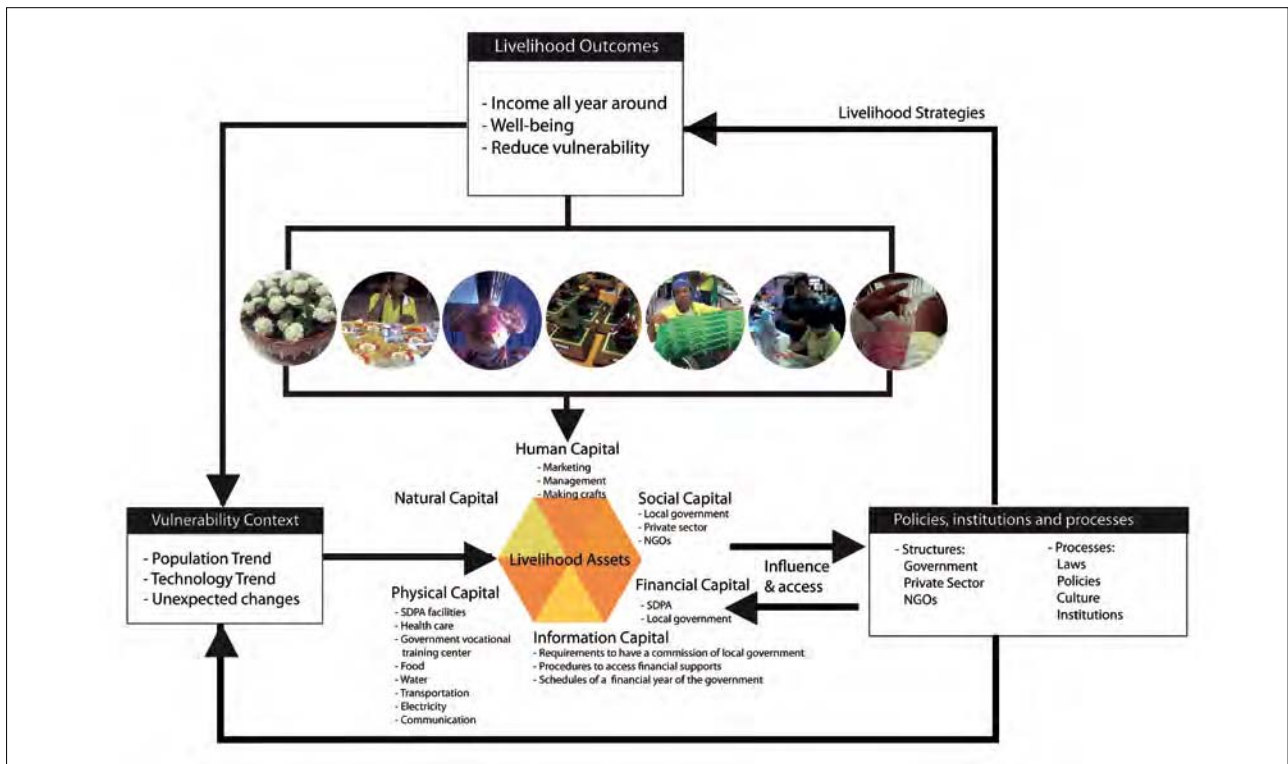
4.

Their desired livelihood outcomes were to generate a reliable income, continue to improve their capabilities, reinforce their value in

their community, and reduce their vulnerability in that community.

Applying SLF uncovered their vulnerability and revealed the assets and potential strategies available to them. It also enabled them to realize they had various opportunities to achieve their goals. To identify their available choices, they were encouraged to undertake group analysis with the design-researcher.

Group analysis

Living in this semi-urban area, they did not consider natural resources as potential assets. - owever, they had a lot of human capital in their community. They were encouraged to integrate this with their social and financial capital to achieve outcomes clarified in their group discussion.

ost participants could produce hand-made items and use sewing machines. onsequently, these became the main focus of this analysis. SWOT analysis (strength, weakness, opportunity and threat analysis) was used to assist the participants. Group analysis revealed that sewing skills could create a new income-generating activity. ost participants and SDPA members could already sew and had sufficient facilities and equipment, and were persuaded to select this solution. They were encouraged to use tie-dyed fabric to create unique items for the local market. As a result, the majority agreed their next action should be making a prototype to use it to find potential markets.

Since producing tie-dyed fabric required financial support, participants suggested they could request financial support from their local government, for which they lodged a formal request. If they received the money, they would start making prototypes.

Group discussion for reflection and planning

After two months, the participants were informed that their request was still pending because of a political crisis. " nsure when they would know the result, so they decided to proceed without waiting. This was a significant change in the participants. Only a few participants decided to proceed. They confessed that this suggested solution was not what they really wanted. " ven though the majority had agreed, they felt that this choice was not theirs. They also did not want to develop new items from tie-dyed fabric because it was a time-consuming process and they could not do it by themselves, because of their physical impairment.

On reflection it seemed the mistake had occurred during the group analysis. The design-researcher had persuaded the participants to select this choice, utilizing a majority vote to ignore their silent dissent.

5a-b. Making a prototype from fabric scraps, photograph by one of the participants, 2008.

5a.

5b,

5c-d. Making a prototype from fabric scraps, photograph by one of the participants, 2008.

5c.

5d.

The design-researcher's desire to improve their situation had almost collapsed this project. With a conscious shift of mindset, instead of trying to come up with ideas for them, the design-researcher asked the participants, "What should they do about this?"

One community member (not a participant but invited by them) suggested they could to use fabric scraps or a manufacturer's textile remnants instead of tie-dyed fabric. She had working experience and utilized her sewing skills to make a living, and offered to provide some fabric scraps for the group. As soon as the participants saw the material, they agreed to create new items together. Their next action was developing new items from these scraps (Figure 5). They did this immediately at the SDPA facilities, taking approximately two hours.

Observation of the participants' action

The participants discovered that they needed better equipment to stitch particular parts and patch small pieces together faster. Some felt they needed to improve their sewing skills: only two of the participants were at this stage able to use the sewing machines. This problem was to be discussed at the next meeting. The group decided to meet again in two weeks, for a follow-up discussion.

Reflection on workshop one

Based on this experience, the design-researcher should never ignore local knowledge, as this is vital to gaining the group's confidence and willingness to participate. It is also basic knowledge which the design-researcher may not have. The community member who had made the suggestion possessed skill-sets, local knowledge and professional experience different from the design-researcher and participants in the first group. In addition, she was an actual resident of this community, so she knew the resources available better than other participants who were not. This helped to demonstrate how the limitations of both design-researchers and participants could limit the choices presented to the community. It is obviously essential that the design-researcher should not overlook local knowledge and wisdom when working with communities.

For the design-researcher, working as a facilitator reduced the burden of being a solution provider, with no further obligation to generate choices for the participants. In this, SLF had opened up various possibilities for the participants to choose and develop their own project.

Some who decided not to continue taking part helped to demonstrate that in the group analysis they had been persuaded to choose from suggestions made to them. These had not always taken into account the

different physical impairments of some, or the fact that not all could use the sewing machines.

Workshop two – Try it yourselves
Following on from workshop one, workshop two was intended to enable the participants to do their own evaluation, and empower them to create and implement their own ideas, so they could become more confident and self-reliant. This workshop took place over four months. It usually involved a larger group of people than the first, although the number could vary, while new members joined throughout the process. The design-researcher's main role was now to observe their activities, so the main tool was site observation.

<u>Group discussion for reflection and planning</u>
Group discussion aimed to encourage participants to identify their progress, assessing problematic issues through their experience, so they could later resolve such issues on their own. Participants acknowledged that their items were presenting new opportunities, especially a tote bag (Figure 6). They agreed their next plan was to find appropriate markets for their products.

6a-d. A group discussion, photograph by one of the participants, 2009.

6a.

6b.

6c.

6d.

To enable everyone to propose their ideas and evaluate their choices, a brainstorming process was introduced (see Figure 7). After the brainstorming process, participants confirmed that they preferred to make customized items commissioned through the local government, a process with which they were familiar. They were able to negotiate volume, cost, and production time with their clients, and were confident they could follow this strategy through their social networks. They agreed their next action was to consult local authorities about their new items.
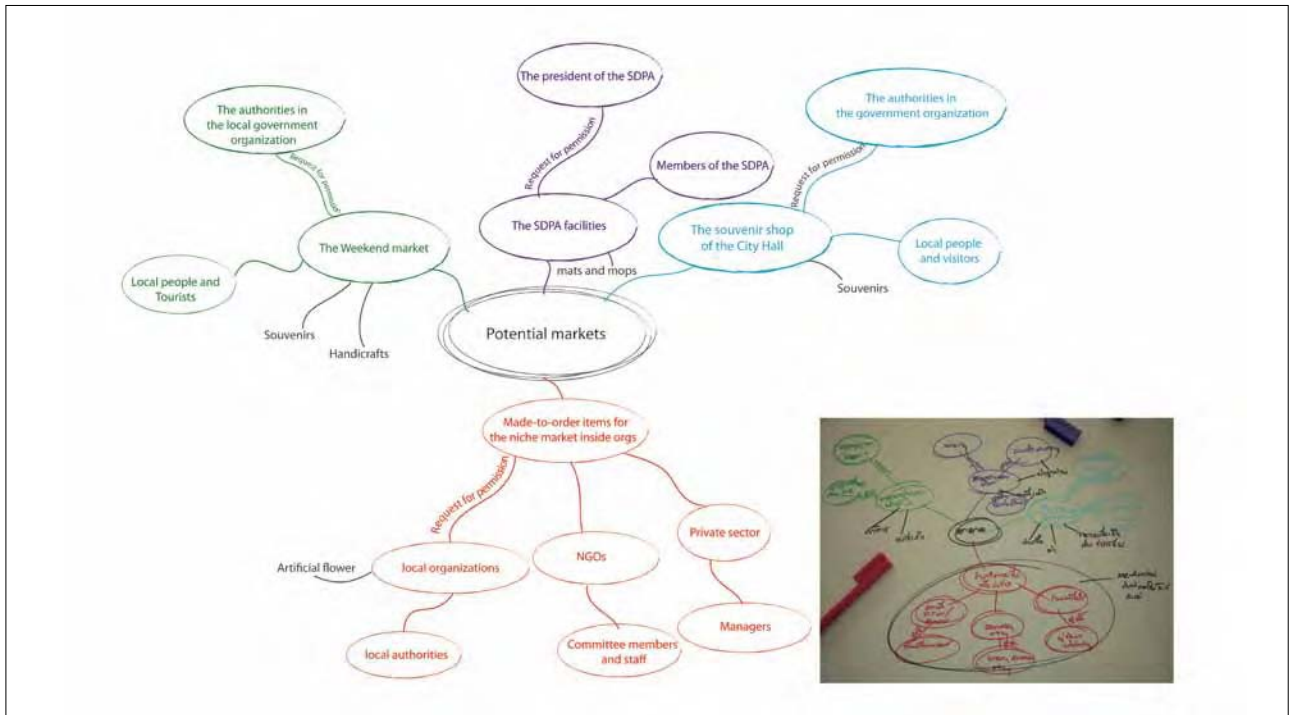
7.

7. A brainstorming process, translated
and illustrated by the author, 2009.

Observation of the participants' action

Participants met with the Governor of the province, other government
officers of the   inistry of Social Development and - uman Security and
private organizations. These all fully supported the participants' ideas and
activities. During a meeting with supermarket managers, an opportunity
arose for the participants to actively become business partners,
collaborating in the development of new items such as shopping bags for
distribution in the supermarket. This action was not premeditated, but
sparked by the desire to connect with a local organization which could
continue supporting them in the long term, after the completion of the
project. This proposal and the response gave hope and expectation to the
participants that a change in direction could actually occur. Reviewing
the literature, this was seen to be the natural action of a catalyst, where
Anne Toomey (Toomey,   ) explains that a catalyst's effect is often
unintentional, with the origin of the new idea or action often forgotten
as others take up responsibility to follow through on determined action.

The supermarket managers agreed that the proposal was good
however, they were not authorized to stock new items without permission
from their management. To obtain this, the participants needed to submit
a formal request, including samples. The group could see that represented
a great opportunity, agreeing to create samples of shopping bags to send
with their formal request to management in Bangkok.

Group discussion for reflection and planning

The group then met together to plan, confirming that If they had an
opportunity to make these bags, this would become an alternative
livelihood for many in their community. They realized critical decisions
had to be made to permit the project to proceed, for example, accessing
labor and facilities. They agreed to:

. set up sufficient facilities and equipment

. recruit community members with competent skill-sets in sewing

' . develop the tote bag as a shopping bag, for which they now had a possible buyer

. request financial support for improving their capabilities (training people with different physical impairments to sew required an experienced trainer, time and financial support)

5. request donations for equipment, such as electronic sewing machines, from different organizations because the government would not provide equipment and such purchases were beyond their means (see Figure).

aking these samples was now their priority. - owever, they were unfamiliar with such shopping bags. To demonstrate what was needed, they were shown images from the internet, after which they were confident they could make them.

Observation of the participants' action

For the three months left in this workshop, the process was observed both on site and from a distance, principally to observe how they dealt with tasks and issues by themselves. Participants collected photographs and videos, crucial because it was the first time the participants had taken independent action. This was an opportunity for them to become more confident in their own decision-making.

After this, there were observable changes to the community (see Figure). The SDPA facility, especially the training area, was well organized with fifteen electronic sewing machines. With an eye to future expansion, there was a new building next to the current work area, with sufficient space for thirty people. Finally, it was busy, with cutting-out, sewing and completed products to be observed. ommunity members were working alongside participants, and sewing techniques were very different from those in use earlier.

It was apparent that their action plan had been implemented. It was also evident that they had taken ownership of the project. This was a significant point because there had been a seamless transition placing

8. Mapping out a plan, illustrated by the author, 2009.

8.

9a-e. Participants' activities, Photograph by the participants, 2009.

9a.

9b.

9c.

9.d

9.e

these people at the center of development and giving them authority to design their own future.

<u>Group discussion for reflection and planning</u>
Independent activities in the community had been progressing well over the previous three months. The participants and their community had accomplished a number of things and reached many of the touchstones in their project. Firstly, they had finally found their alternative livelihood. This decision was made after they completed 55 bags for their first customer, found while their request for collaboration with the supermarkets was pending. As they already had marketable items, and an adequate production team, they had decided to seek other potential customers with whom they had existing connections. This action confirmed that the group was able to act as well as being committed to change their situation. They confirmed that this project was fully funded by the SDPA because it was a promising income-generating activity, again confirming that the group had ownership of their ideas and actions. Their project had another spin-off in that two more experienced

people joined the production team, bringing the total to four. Finally, their project was supported by other organizations through a donation of five electronic sewing machines and irons from a private organization in their community.

After the meeting the group confirmed that they would continue developing their capabilities and seeking more work. This proved that the group was committed to improving their situation, creating a series of actions which could generate a sustainable change in the behavior of the participants effectively.

<u>Reflection on workshop two</u>
The participants were confident and confortable to operate the whole process by themselves, so the design-researcher decided to commence the final stage.

Workshop three – t s ll yours
Workshop three involved monitoring and evaluating the project. The participants and the design-researcher both had different goals and employed different methods. The participants took action by themselves while the design-researcher monitored their activities from a distance without any intrusion. After six months, the participants and design researcher met to evaluate progress, using SLF to assess the on-going effectiveness of the project before the design-researcher withdrew from the community. Based on evidence gathered by the participants, such as monthly records, it revealed that they were still working together on their own project. ” ach month, they had varying amounts of work and income because they did not rely on any one organization to provide them with a commission. (see Figure   )

10. Monthly record of the SDPA, illustrated by the author, 2009.

10.
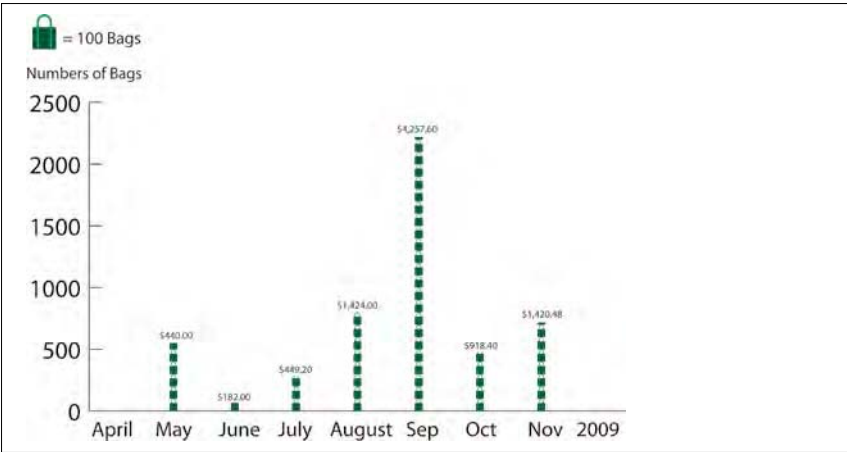
According to the SDPA report, they had received financial support for short training courses from the – ational Office for ” mpowerment of Persons with Disabilities. This confirmed that the participants and their community were still improving their skills and capabilities, and implementing their ideas in their community (see Figure   ).

After six-months of monitoring, SLF was again used to assess progress. On-site observations and casual conversations with participants provided more information. They confirmed that this project had enabled

11a-d. participants' activities, photograph
by participants 2009.

11a.

11b.

11c.

11d.

them to achieve their goals. This was a most satisfactory solution because
it helped their community to reduce their vulnerability in the future, with
community members actively assisting one another, becoming assets
in their community as explained in Table   on the following page.

esult

This project produced four key findings. Firstly, participants stated they
had achieved their livelihood goals. They also devised a complementary
income-generating activity which enabled them to continue to improve
their capabilities, reinforce their value in their community, and reduce
their vulnerability within that community. From the design-researcher's
perspective, PAR integrated with -   D and combined with SLF were
shown to be effective strategies and approaches because they facilitate
knowledge transfer to the participants, conferring incentive and
ownership in their ideas and actions, enabling them to create and pursue
their own solutions. Finally, this study demonstrated the benefits of
reorientation of the designer's role from that of a solution provider to
that of an agent of sustainable change.

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PAR and SLF are not a new strategy and tool. Activists to create change in
community development across the world have used them. They are just
strategies and tools, but it is how they are used that is most significant.
This study has shown that they would not work effectively unless they
were operated by a design-researcher with the mindset and behavior of
an agent of sustainable change. This role is not that of a catalyst. It was
innovatively, consciously, and intentionally designed to enable people to
achieve a sustainable and satisfying livelihood. A sustainable change agent
should be mindful of, work responsively with, and support local people,
especially disabled people, to attain their goals. Significantly, the project
itself was a catalyst because it sparked new ideas for the participants and
their community, showed them how to identify their own problems, and
let them generate their own solutions.

Livelihood Components	Before	After
Livelihood in the community	Distributing lottery tickets every fortnight	Using sewing skills to make items, especially tote bags as their customers requested
Vulnerability	**Population Trend:** Their livelihood was threatened by this trend because a lot of people chose to distribute lottery tickets in the community. However, they did not have enough tickets for all of them.	Many people acknowledged this alternative livelihood and wanted to join them as a production team. However, they needed to have a vocational qualification, sewing experience, or participate in the 15 day training workshop, which was provided for them free of charge between 2009 and 2010. The more people who join their production team, the larger production capacity they will have in the future.
	Technology Trend: Their livelihood was threatened because the government planned to implement e-tickets.	Using their sewing skills to make a living would not be affected by this technology.
Livelihood Assets: Human Assets	Only a few people (2 participants) made a living by using their skills to make hand-made items. Most of the participants, especially the community members sold lottery tickets for a living.	More people (3 participants and 4 community members) made a living by using sewing skills. The SDPA aimed to have two more training workshops, so they could have 60 people take part. After the training, they expected to have a total of 90 people who could join them. This included the 30 people from the first workshop which had been held in October. However, they had limited facilities and equipment for 30 people only. Therefore, the rest could work at home and get paid for numbers of completed items. The SDPA aimed to continue providing more training in the next four years to improve their members' capabilities. They had full support from the local government for this longer project. They expect to have more people join them in the next four years.
Livelihood Assets: Physical Assets	The SDPA facility had only buildings and work areas for 10 -15 people.	The SDPA facility bought more land next to current land. They had a new building for their working area for 30 people. They planned to build more building for providing accommodation for 30 people who were their production team in the future.
Livelihood Assets: Social Assets	This community had extensive connection with local authorities and organizations in their community	This community had expanded their social capital to residents, other government organizations, and private sector organizations, both inside and outside the Samut Prakran province
Livelihood Assets: Financial Assets	This community had financial support for their training workshop from their local government only once a year if they processed a formal request. Main source of their income was from distributing lottery tickets.	This community had financial support for their training workshop from their local government three times in one financial year. They also had financial support for four years to continue their training workshop as a long term development. Main sources of their income were from distributing lottery tickets and making tote bags as requested.
Livelihood Assets: Natural Assets	They had only one building with limited land surrounding it.	They bought more land for building more facilities.

Table 1: Evaluation of the livelihood outcomes

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About the author
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AgIdeas International Design Week
This paper was written for the agIdeas 2011 International Design Research Lab, which took place on 2 May 2011 as part of the agIdeas 2011 International Design Week, in Melbourne, Australia. The DesignLab is a one-day forum that provides design educators, researchers and practitioners the opportunity to present design research to their peers. The inaugural forum aimed to create awareness of new knowledge in the areas of multidisciplinary design practice and its benefits, and the relationship between design practice and education. Design researchers were invited to submit abstracts that address the brief, "Where is design practice at today?" Submissions for the DesignLab were peer-reviewed by a team of Iridescent reviewers. They selected five authors for online publication.
Papers and posters were selelcted by a multidisciplinary panel. Members of the panel included: Jeremy Yuille, Veronique Vienne, Sherry Blankenship, Selby Coxon, Ashis Jalote-Parmar, Audrey Bennett, Evert Ypma, Hernan Casakin and Rebekah Davis.

NOT AN ACADEMIC TYPE: WHAT DO COMMUNICATION DESIGNERS KNOW ABOUT RESEARCH?

NEAL HASLEM

ABSTRACT

Communication designers, like all designers, operate in the generative yet problematic territory that exists between science and art. Their work is technical and instrumental, yet simultaneously imaginative, intuitive and creative. This is an activity of becoming through the poetics of the material. The relationship between the communication designer and client creates an intersubjective space in which new knowledge is both enabled through and accessed in materialised propositional artefacts. This knowledge is both experiential and tacit, formed in the interstices between designer and *the other*.

How can the activity of communication design, and the knowledge it produces, find a place in academic research? How might research be undertaken, not only about design but also through design? Some aspects of design can be adequately analysed, described and optimised using the methods of scientific research. This paper argues however, that the aims of this particular research project—to better understand the intersubjective aspects of practice—suit 'practice-led' research; a method based on the practice of design rather than a scientific research method applied to design.

This paper discusses a particular communication design case-study, and the observations and understandings it produced, in order to demonstrate how the practice of communication design can adequately and usefully be incorporated into academic research discourse; upholding the standards of academic rigour yet ensuring the rich complexity of design is not abandoned along the way. Communication design's entry into the academic world is recent, especially at a research level. What can the academy offer communication design and what can communication design offer the academy?

FULL PAPER

Introduction

This paper discusses a case study in communication design practice; firstly in order to provide an example of 'practice-led' research and demonstrate its ability to contribute to academic research, and secondly to examine the understandings generated through the case study. The aim of this research project was to investigate the intersubjective aspects of communication design practice.

The case study discussed was a common day-to-day communication design project; a visual identity design for a client wishing to start a new practice in psychoanalysis. Each stage of the project was documented and reflected upon. As the project neared completion I conducted a semi-structured interview with my client in order to gain insights in my client's experience of working on the project.

In this paper I describe a number of observations I made during the project — the sensitivity of the designer/client relationship; the difficult partial communication; and the anxiety present in the initial stages of the relationship. Many of theses observations are also referred to by Donald

Schön in *The Reflective Practitioner* (1983). In one of the last sections he states:

> Both client and professional bring to their encounter a body of understanding which they can only very partially communicate to one another and much of which they cannot describe to themselves. Hence the process of communication which is supposed to lead to a fuller grasp of one another's meanings and, on the client's part, to an acceptance of the manifest evidence of the professional's authority can only begin with nonunderstanding and nonacceptance — but with a willing suspension of disbelief (p. 296).

Schön indicates the manner in which both client and designer come to a design situation with a body of understanding (or knowledge) that they are not yet able to communicate. He makes the point that the start of a design process — a process that aims to lead to a fuller grasp of meaning — begins with a tenuous grasp of that meaning.

A further observation I made, not indicated in Schön's description above, was the collaborative nature of communication design work with my client. My observations have lead me to a range of propositional understandings, suggesting that communication design is more than an instrumentalist activity and supporting a proposition for the critical role of *the other* in the activity of communication design — that communication design is activated through communication with *the other*; that artefacts allow communication with *the other*; that artefacts instantiate hermeneutic/heuristic steps; that communication with *the other* is achieved during communication design; and that communication design with *the other* is, both epistemologically and ontologically, a generative practice.

This project, the discussion and many of the understandings articulated in this paper extend directly from my doctoral research titled, *Communication design and the other: investigating the intersubjective in practice.*

Research aims and method

<u>Research aims</u>

The aim of this research is to better understand the intersubjective aspects of communication design practice. The design writer Jorge Frascara defines communication design as 'broadcasting specific messages to specific sectors of the public' (Frascara 2004, p. 2). While the design and production of 'specific messages to specific sectors' describes some of the aspects of the work my client and I did together during this design project, this research aims to better understand how the intersubjective aspects of communication design practice are activated during the process of producing Frascara's 'specific messages'.

The term 'communication design' is used in this research rather than 'graphic design'. Although its use is still to become widespread, the International Council of Graphic Design Associations (Icograda) ratified the term 'communication designer' (Icograda 2007) in 2007. Communication designers increasingly operate in a non-media specific capacity; developing what might better be described as 'conceptual strategies' rather than as 'graphics'. These conceptual strategies are

applied across multiple media, often incorporating interactive and time-based applications. The term communication design recognises the changing nature of the practice of this field of design, the changing social and technological contexts within which this type of design is practised and supports the future development of this design field.

The term 'intersubjective' is used to indicate the relationship formed between the individual subjects engaged in the design activity; in this case the designer (myself) and my client. The concept of intersubjectivity assumes subjectivity and, with this, the concept of the other. This research aims to better understand the roles *the other* has in the practice of communication design: How is the other active in enabling the creation of new design artefacts? What effects does *the other* have on the activity of design?

Research method
Practice-led research

This research belongs to a relatively new, and yet to be widely recognised, method of research known as practice-led or practice-based research (Archer 1995; Downton 2003; Frayling 1997). Practice-led research uses the researcher's own practice, and the practise of that practice, as the method for the research. As practice-led this research is conducted 'through' the practise of design, rather than 'for the purposes of design' or 'about design' (Archer 1995, p. 11). The particular design project discussed here provides a case study through which the research aims are investigated.

A focus on specific goals is critical to practice-led research. Although the case study investigated was an everyday communication design project my role in that project was always that of designer and researcher. My reflection upon the project focuses on my research aims; the role of *the other* and how *the other* was active during the process of design. The practical nature of practice-led research was used in order to allow the potentially abstract and philosophical concept of *the other* to be investigated whilst remaining grounded in, and therefore relevant to, practice.

Practice-led research develops from the more established research method of Action Research, as such it is necessarily subjective and situation-specific. The researcher is recognised as a significant actor in the human situation being researched and therefore, unlike traditional scientific research method, the research cannot aim to produce objective, independently verifiable research results (Archer 1995, p. 12). However, practice-led research provides the opportunity to gain insights into practice that might not be obtained otherwise. Importantly, it also allows practitioners/researchers like myself to use their established practitioners expertise as the main method for their research endeavours and therefore the means with which to engage usefully and valuably in scholarly research.

Reflective practice is an important aspect of practice-led research. Practice-led research is at its core a practice of phenomenological investigation. As such, the subjective insights of the practitioner/ researcher provide the critical data for the research. Reflective practice

enables those subjective understandings to be reflected upon, analysed, synthesised and communicated. In his book *The Reflective Practitioner*, Donald Schön (1983) describes the 'reflective practitioner' as one who is able to successfully negotiate situations of 'uncertainty, instability, uniqueness, and value conflict' (p. 50) to produce valuable and appropriate insights without being forced to rely upon pre-defined knowledge. Reflective practice is critical for both my practice and my research; it provides a method, an epistemological standpoint and, fundamentally, an ontological foundation for this research.

In her research into practice-led research Nancy de Freitas demonstrates the use of 'active documentation' by the researcher in order to provide critical perspective and reflective ability (de Freitas 2002). During this project I kept a detailed reflective journal, recording my observations, impressions and emotions while working through each stage of the project. In this paper I base my critical reflections on the contents of that reflective journal.

Towards the end of the visual identity project I invited my client to discuss her experience of the design process with me. Prior to our discussion I emailed her a number of framing questions based on my research aims. Within the analysis that follows I quote directly from this semi-structured interview.

The role of the artefact
Although this research is practice-led it is important to clarify that the artefacts designed during the research project do not necessarily embody *all* the design research knowledge that has been produced. Instead these design artefacts embody aspects of knowledge; materialising and instantiating propositional knowledge during the design project. These design artefacts articulate and embody knowledge in a different way to that of written knowledge. As design theorist Cameron Tonkinwise states, unlike the universality of immaterial text-based knowledge 'the knowledge of making cannot be extricated from the specificity of its material context' (2008, p. 3). The artefacts produced during this research project embody this 'knowledge of making'. The 'knowledge of making' inheres the type of knowledge that the phenomenological education theorist Max van Manen terms 'practical active knowledge'. This 'form of practical knowledge' van Manen states, 'realizes itself (becomes real) in the very act ...' (1995, p. 9). Consequently design artefacts have the capacity to become material repositories for practical knowledge; they externalise and instantiate it, contributing the core process of practice-led research. The concerns of this research do not lie with communication design artefacts but with the practice of communication design. Thus, although design research artefacts enable the investigation, they should not be seen as the outcome of the research; they are the means rather than the ends.

The project
The project discussed is a visual identity design for a newly practicing psychoanalyst. This client approached me in order to provide a website and business card for her new practice. With her permission I incorporated her project into my research.

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NOT AN ACADEMIC TYPE: WHAT DO COMMUNICATION DESIGNERS KNOW ABOUT RESEARCH?

1. The designer and the client.

2. The designer, the client and the artefacts.

3. The designer, the client and the artefacts, during the design activity.

Visualising the method

The intersubjective space formed between my client and myself during this design project is visualised in Figure 1:
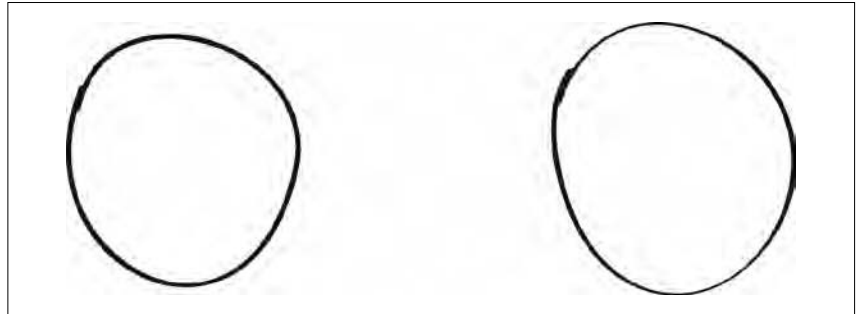
1.

Additionally, as a process of communication design, this project can be visualised in the following way:
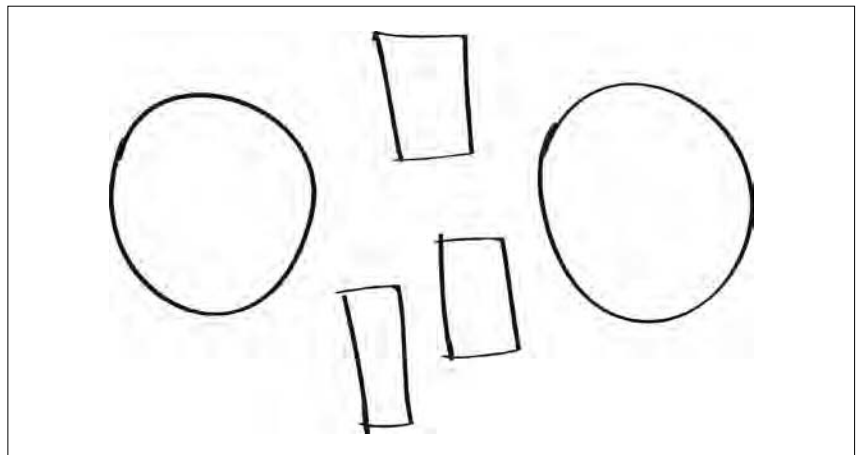
2.

In Figure 2 the rectangles represent artefacts. My client and myself engaged in an intersubjective relationship with and through artefacts.
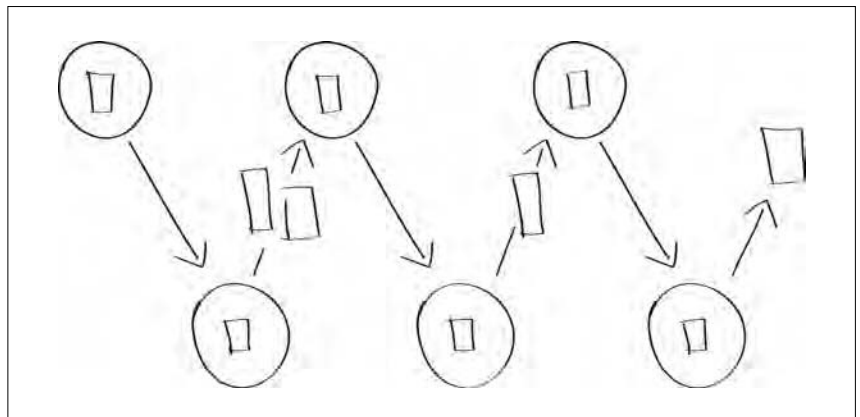
3.

In Figure 3 the upper circle represents my client while the lower circle represents the designer (myself). The rectangles within each of our circles represent our evolving concepts for the visual identity, the rectangles outside the circles represent the materialised propositional

artefacts iteratively developing during the design process time. Figure 4 shows one of the propositional artefacts produced during the design process; a mock-up of a business card.

4.

First email

In August 2008 I received an email from a prospective client informing me that she was 'about to start private a practice as an analyst', and asking whether I had the time to 'design a few things'. I realised that the project offered me an opportunity investigate my research aims; giving me the opportunity to record and reflect upon the experience of communication design from a designer's and a client's point of view within a contained design project.

The fact that my new client was an analyst suggested that she would have a well-developed capacity as a reflective practitioner. My hopes for this were well founded; during the project she commented insightfully and thoughtfully, consequently contributing significantly to this research. It was due as much to my client as to myself that this project became such a valuable case study for my research.

A critical relationship

During our first meeting I asked my client whether she would agree to allow me to incorporate her project into my research. Although she agreed to my request this was a difficult question for me to ask. At the time asking the question felt like an intrusion into the sensitive working relationship we were just starting to form. The difficulty I had asking the question made the delicate nature of the new designer/client relationship explicit to me—a delicacy I was not previously conscious of. It was through reflection upon the moment when this delicate process was

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threatened that I gained this insight into the critical nature of my relationship with my client. The interruption of my normal practice caused by my dual role of practitioner/researcher caused this insight to become apparent.

The development of mutual trust was also revealed as an important initial part of the design process. For my client our working relationship was charged with the possibilities of her future practice's identity and the risk that came with revealing and defining that identity. My client came to me because she felt I would be able to design communication artefacts that would help her to start her practice. Creating those artefacts required us to define and concretise many other aspects of her future practice.

Ostensibly a communication designer's work during the first meeting is simply to collect a 'brief' and gain enough information in order to return to the studio, complete some research and design an appropriate artefact or artefacts. However this project demonstrated that there were other important aspects to the meeting beyond collecting a brief. Rather than handing over information or a list of pre-prepared aims and objectives, we were embarking together on the process through which those aims and objectives would be located.

Design anxiety

My client had just finished her training as a psychoanalyst. To practise as an analyst was the logical next step, but a new role for her. Commissioning a designer required her to articulate and make decisions about the nature of her new business. This was a highly personal, anxiety-producing act. The artefacts we produced together would become physical manifestations of her personal practice as psychoanalyst. When I interviewed my client she talked about the anxiety she felt embarking on this project:

> For me it's been an anxious making thing to do, I don't know any other analyst who's got a website, and in some ways I'm embarrassed to be doing something like that. Other people haven't done it yet and I'm thinking that maybe there are really good reasons they haven't done it or maybe it's 'tacky'. How can you reduce Lacanian analysis to five pages on a web wall? So I have felt very anxious about it.

She also commented that she was commissioning me to design artefacts for which she could find no precedent:

> On the one hand I've thought [commissioning design work] is a way to start a practice, I don't know how other people start a practice but this is a way I can think of. On the other hand its really edgy-making; it has to work, it has to look like that *place that hasn't been made before* is being made properly, in a way that doesn't betray the people to whom I'm connected (my italics).

My client's recognition of the capacity for design to make a 'place that hasn't been made before' suggests the source of her anxiety. Communication design's ability to generate this 'place' comes hand-in-hand with the anxieties of working without established precedents in the arena of the unknown and the innovative. There is a real risk taken when one concretises one's personal ambition in the form of communication design artefacts.

Disjunctive communication

Although one of the perceived aims of communication design as an activity might be assumed to be that of clear communication, I observed that our communication was not always clear. I became aware that we often talked in parallel. We took turns to talk, making observations and conversational points that, while initiated by each other's words, did not respond clearly to each other's intended meaning. My client might broach a topic and state her opinion only to have me select one aspect of that topic and take it in my own direction. Although communication did occur there was also miscommunication, misinterpretation and distraction. I describe this communication as 'disjunctive'; connected by a similar area of intention without connecting literally with what the other party was actually saying. This project revealed that disjunctive communication, as much as clear communication, is an important and active aspect of communication design action.

Propositional provocational artefacts

Following our first meeting I reviewed the symbols my client had shown me in Écrits (Lacan 2006 [1966]), a text with which all Lacanian analysts are familiar. I sketched some symbols and diagrams that might be appropriate to form part of a visual identity (Figure 5). I typeset my client's name and address in a range of different typefaces to identify which were appropriate (Figure 6). I drew quick sketches combining these typefaces and symbols and selected some of these to develop into mock-up business cards on a computer.

Early in the design process my client and I decided together that her identity would include a logomark based on one of Lacan's diagrams. Which diagram and how it appeared formed the main work of the identity design process. Initially the 'knot' design seen at the top of Figure 8 was chosen, however, after a number of different iterations a version of the 'lozenge' device became the preference. Although the variations might seem subtle, each one suggests a different identity. The final version, chosen for its situating of my client's business, can be seen in Figure 8.

5. My initial sketches from psychoanalytic diagrams in Écrits (Lacan 2006 [1966]).

6. Typeface tests. From top to bottom—Orator; Bembo; Berkeley; Bodoni.
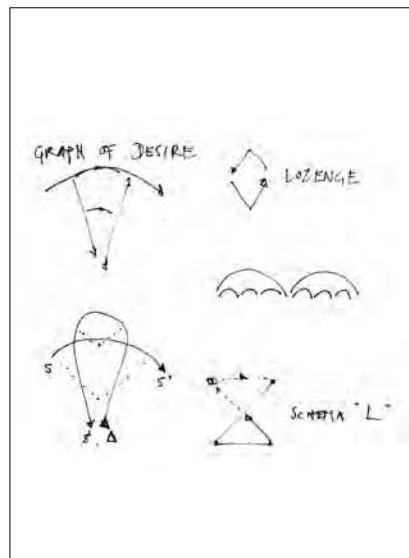
5.
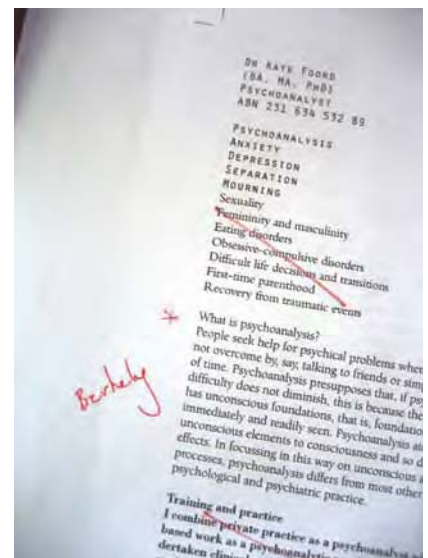
6.

7.

7. Computer 'screenshot' showing initial variations of the visual identity applied to a business card format.

I used the form of a business card to aid in developing the first iterations of the visual identity (Figure 7). I have found that it is a useful provocation to propose a new identity using a physical propositional artefact like a mock-up business card. A mock-up business card can be seen, handled and its 'use' as a physical artefact can be trialed.

Project reflection
More than an instrumentalist activity
Frascara's definition of 'broadcasting specific messages…' privileges an instrumentalist view of communication design practice. However, my reflection upon this visual identity project suggests that if we confine our understanding of communication design to instrumentalist aspects then we miss important aspects of the activity. This research investigates the intersubjective in practice; that which is activated between subjects. When my client's and my own subjective appraisals of the world come together and interact an intersubjective interaction occurs. This is as much a space of mutual misunderstanding and misapprehension as it is one of mutual understanding. I am not my client. I do not inhabit the world as she does. I can never be her; I can never *fully* understand her nor *fully* empathise with her. For me she is *the other*, as I am *the other* to her.

Additionally, like any subject, my client does not have direct access to all aspects of her self; new aspects are revealed as she takes on new roles and develops new capacities. An important part of the work we did together was enabling new aspects of her self to be uncovered including her new practice and how it should be communicated.

When my client and I developed her 'specific message' through a series of propositional artefacts, we undertook a process of 'making knowing'. This knowing through making can be seen as a process of knowing through design; the propositional artefacts enable communication, both between my client and I, and within ourselves. Each artefactual iteration embodied a new propositional provocation and stimulated intersubjective communication and negotiation. New knowledge is found and new artefacts are designed in response to that communication. The design process that produced the final artefact occurs across an intersubjective space and, furthermore, is activated by that intersubjective space.

A generative practice with, and through, *the other*
This visual identity project suggested that the presence and agency of *the other* creates generative disjunction during the design process. These disjunctive acts problematise design. The disjunctures are not random—though they might not be comprehensible—they extend from another's subjectivity, created through an intersubjective dialogue. This is similar to the process of dialogical meaning generation that Russian linguistics scholar Mikhail Bakhtin attributes to language, when he posits that words gain their meaning dialogically through our use of them with other people:

> *The word in language is half someone else's. It becomes 'one's own' only when … the speaker appropriates the word, adapting it to his own semantic expressive intention (Bakhtin 1986 [1979], p. 277).*

Hans-Georg Gadamer, a German philosopher is well known for his work

in the area of philosophical hermeneutics also provides insight into the dialogical, *the other* and communication:

> To allow the Other to be valid against oneself – and from there to let all my hermeneutic works slowly develop – is not only to recognize in principle the limitation of one's own framework, but [it] also allows one to go beyond one's own possibilities, precisely in a dialogical, communicative, hermeneutic process (Gadamer 2000, p. 285).

It is the aspect Gadamer refers to as 'going beyond one's own possibilities' that is initiated during the intersubjective act of communication design with *the other*. From the client's point of view 'going beyond one's own possibilities' allows insights into, and access to, aspects of one's self that cannot be accessed alone. From the designer's point of view it takes one beyond the role of an individual designing material artefacts. Bakhtin also refers to this ability for *the other* to reveal aspects of ourselves that otherwise remain hidden:

> In order to understand, it is immensely important for the person who understands to be located outside the object of his or her creative understanding. (Bakhtin 1986 [1979], p. 6).

Communication design through communication with *the other*

Design is taken by Schön to refer to the act of a designer working, as an independent agent, in 'conversation with the materials of a situation' (Schön 1983, p. 78), using their designerly abilities, listening to the 'back-talk' from their propositional artefacts and iteratively refining their design outcomes.

This research project suggests a different understanding; design as an act of designing through an intersubjective relationship with *the other*, in the process of communicating with *the other*, activated by miscommunication as much as by communication. The attempt at intersubjective communication with *the other* brings about the disjunctive nature of the process, thus enabling the design activity to be generative for all participants. This understanding privileges the attempt at communication and the generative hermeneutic process that results from that attempt. Artefacts are not the end-point of the process or the ultimate aim of the process, instead they are the means through which the generative hermeneutic process creates connection across the intersubjective space; communication design enabled by, and enabling, communication with *the other*.

Artefacts enabling communication with *the other*

Once designed, a new artefact can be experienced as an external object. It can be seen, handled and reflected upon. In the case of this project, as is frequently the case in design practice, new artefacts provoked the design of further artefacts. The artefacts enabled both my client and I to see propositions for my client's new visual identity, made material. They produced new responses and these provoked further propositional artefacts, until an appropriate outcome was found.

Before our second meeting I printed out the mock-ups and mounted and trimmed them so that they had the size and weight of business cards. I did this to give my client a physical sense of how her business card (and these propositions for her visual identity) would communicate. My client

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later commented about her ability to respond to the mock-up artefacts:

> *You know, a finished product I could tell you what I think of it, and I'd*
> *have a whole argument there, but I don't know how to produce that,*
> *either technically or in my imagination...*

In using the term 'whole argument' I suggest that my client refers to knowledge she obtains (or is given the ability to articulate) once she can see, and hold, a mock-up design artefact (Figure 4). The artefacts allow my client to articulate her 'argument', for or against, appropriate or not. My client's responses are not available without the propositional artefacts.

Artefacts instantiate hermeneutic/heuristic steps

Frascara's (2004) 'specific message' did not exist previous to my client and my design process; this project was not a case of transposing a message into visual form. Rather the process was one of transformation; the message was discovered, reified and concretised through the activity of design, and then instantiated in a new form. This new form has the capacity to change what is known. My client had experienced this process previously in her work in publishing, and she indicates its transformational quality:

> *It always surprises me when something happens to text and*
> *it becomes a different thing, you know, an object, that has a way*
> *of... carry[ing] me into situations which help me to 'make a practice'.*

My client's, and my own, responses to my mock-up artefacts, and our iterative responses to each other's responses, help create commonalities in the intersubjective space between us. The propositional design artefacts provide artefactual nodes and instances of communication within that intersubjective space. They are concrete artefacts allowing connections in the intersubjective space. The mock-ups are physical manifestations of the hermeneutic activity of intersubjective communication; they visualise to my client my interpretation of what and how she has communicated about her new business. Through my action, as *the other*, she is given an understanding of how her intentions, and her communication of her intentions, have been interpreted by *the other*.

This, I would argue, is the most important action of communication design with *the other*; the ability to provide a client with access to knowledge that they would not otherwise have. The means through which this knowledge is accessed is the give and take of responses to artefactual nodes in the intersubjective space. Our responses to the propositional artefacts form an inter-connected inter-weaving of understandings, impressions and intimations. To quote from Bakhtin again:

> *Such a dialogic encounter of two cultures does not result in merging*
> *or mixing. Each retains its own unity and open totality, but they are*
> *mutually enriched (Bakhtin 1986 [1979], p. 7).*

Likewise my client and I are not 'merged' or 'mixed' in the design process; we maintain our individual identities but are 'mutually enriched'.

Conclusion

The work I produced for my client was not final. Rather it was a process, with the final artefact being a moment in that ongoing process. The design artefacts I produced during the process allowed us both to move on to

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8. Final version of my client's visual identity applied to a business card.

further iterations, which provoked further responses. The final outcomes are less a final solution than a momentary instantiation of that process (Figure 8).

This design project provided, as a research project, a series of observations about communication design and *the other*. The first observation was that my client's and my communication was not always clear. If we adhere to Frascara's definition of communication design we might be inclined to think that the important information communicated during the activity of design would be the clear unambiguous information that could be transposed into graphic form to be communicated to the target audience. During this project I observed that disjunctive communication appears as important to the design process as the clear communication. Through the presence of disjunctive communication the design activity became *transformational* rather than merely *transpositional*. The second observation was that anxieties are present in the relationship between designer and client. We both described feeling anxious during the design activity. My client about whether she could, or should, enable the change she wished through communication design artefacts. My own anxiety arose during the negotiation of the designed artefacts. The third observation was that the relationship between us was a critical part of the design activity. Rather than a peripheral but necessary start to the design activity it appeared that it was through our relationship that the design activity was allowed to take place. The fourth observation, and the last to be noted, is that the design activity was an heuristic collaboration. We worked together through the design process, discovering the direction as we took it. We were able to do this due to the action of design and the propositional artefacts that were produced. Neither of us knew what the final chosen outcome would be until we found it together.

These four observations suggest a series of understandings, the first being that communication design is more than an instrumentalist activity. Although communication design is often described, and conceptualised as, an instrumentalist practice, this only describes part of practice. The critical nature of our relationship and the ability for our work to reveal new understandings reveals a more complex and holistic view of practice. Secondly communication design is enabled through communication. The process of communication design is activated through the designer and client's attempts at intersubjective communication. Thirdly communication design artefacts, both propositional and final, enable intersubjective communication. Fourthly communication design artefacts instantiate hermeneutic steps. Within the intersubjective space formed during the activity of design the artefacts produced are physical instances of the designer's interpretation of *the other*. Fifthly this visual identity project suggested that communication is enabled through communication design—communication design artefacts creating connections across the intersubjective space. Finally this project suggests that communication design is a generative practice with, and through, *the other*. Communication design, through access to *the other*, has the capacity to reveal and create the new knowledge and new ways of being; it is both an epistemologically, and an ontologically, generative practice.

These observations and understandings indicate a role for communication design beyond that of the production of artefacts that

communicate. This project indicates that the knowledge incorporated into and communicated through the design artefacts arises during the process of design with *the other*; revealing communication design as epistemologically active; as having the ability to change what the participants in the design activity know; and further, to change what they can know. The analysis of this project also indicates that along with the capacity to create knowledge the process of design is active in generating 'what is'. That is, the activity of communication design has the capacity to be ontologically generative; through the process of design my client and her community of stakeholders come into knowledge of herself and her practice. Simultaneously she gains access to knowledge about her new 'business self', and how it might come to be in the world.

This visual identity project was completed through the practice of communication design. This research was enabled through practice. As a reflective practitioner I use my own practice as a research method. This mode of research through practice provides access to insights that otherwise might remain inaccessible to research and the academy. The research described is an instance of practice brought within the academy and the established protocols of peer review and substantiation. This is practice-led research, revealing new knowledge and insights about the practice of communication design and new directions for research in communication design.

Acknowledgements

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About the author

Neal Haslem is a communication design researcher, educator and practitioner. He has practised for over twenty years across a broad range of communication design areas, producing award winning publication design as well as exhibition and interactive work. His current practice is based in a small studio in the inner North of Melbourne, Australia. He has been active in communication design education for over ten years and has recently taken up a full-time lectureship at RMIT University. His practice-based masters research degree 'The practice and the community: a proposition for the possible contribution of communication design to public space' was awarded in 2007. He has continued researching the social aspects of communication design and is currently completing a practice-led doctoral degree titled 'Communication design and the other: investigating the intersubjective in practice'. Neal lives in Carlton, Melbourne with his wife and daughter.

AgIdeas International Design Week 2011

This paper was written for the agIdeas 2011 International Design Research Lab, which took place on 2 May 2011 as part of the agIdeas 2011 International Design Week, in Melbourne, Australia. The DesignLab is a one-day forum that provides design educators, researchers and practitioners the opportunity to present design research to their peers. The inaugural forum aimed to create awareness of new knowledge in the areas of multidisciplinary design practice and its benefits, and the relationship between design practice and education. Design researchers were invited to submit abstracts that address the brief, "Where is design practice at today?" Submissions for the DesignLab were peer-reviewed by a team of Iridescent reviewers. They selected five authors for online publication. Papers and posters were selelcted by a multidisciplinary panel. Members of the panel included: Jeremy Yuille, Veronique Vienne, Sherry Blankenship, Selby Coxon, Ashis Jalote-Parmar, Audrey Bennett, Evert Ypma, Hernan Casakin and Rebekah Davis.

Communication design
Design education
Pre-selection

COMMUNICATION DESIGNERS FOR THE FUTURE? UNDERSTANDING PRE-SELECTION FOR K-12 EDUCATION
BRONWYN CLARKE

ABSTRACT

The features of great design education are important to define, in order to achieve the contributions good communication design can make to competitiveness, innovation, and sustainability to strengthen an economy. Lisa Colley (Director Creative, Industries Innovation Centre) at the launch of the Australian Design Alliance was asked, "What do we need to change about design education in Australia?" Her suggested features of a great design education system included: consideration of design in Kindergarten-Year 12 (K-12) curricula, a design industry engaged in the curriculum process at tertiary level, living laboratories for collaboration opportunities, highly developed intern programs and design graduates with their degrees across faculties.

To understand the changes required to attract communication designers for the future, I believe it is important to understand the context of students' experience of applying for higher education. As a design educator, I am interested in exploring how the development of these features can be informed by the context of selecting for potential talent in a Communication Design Program. Specifically in the context of, the pre-selection processes for the Bachelor of Design (Communication Design) Program at RMIT University.

Pre-selection processes are often a requirement for entry into Communication Design programs. My research has focused on understanding the phenomenon of the pre-selection process from our students perspective and how or if their experience has informed engagement with our program. My methods included semi-structured interviews, which were recorded, and a thematic analysis of the data from students who are currently in the process of completing the three-year bachelor degree.

Some initial findings from my interviews have revealed many students would not have considered higher education without the pre-selection process due to a lack of confidence in their secondary education performance. Additionally, students welcomed the opportunity to present their creative abilities directly to the program and they valued the 'people first' experience. They felt valued in it and believed they took this experience into their higher education.

Given the above, the main focus point of this paper will be: To evaluate the student experience of the pre-selection process for communication design students in the Bachelor of Design (Communication Design) at RMIT University and document the conclusions that may inform the type of design education experience that needs to be introduced from K-12 to achieve the other features we hope for at tertiary level."

FULL PAPER

Introduction
Programs with pre-selection process at RMIT University have been criticised for their processes being demanding of time and resources of both academics and administration staff.

Without any documented assessment against the applicant experience

and longer-term outcome for the program such as the all important retention/attrition rates and subsequent completion rates.

For the past eight years, I have been the selection officer for the Bachelor of Design (Communication Design) at RMIT University. During this time I have been (informally) tracking the students Australian Tertiary Admissions Rank (ATAR) that indicated within our program little correlation between ATAR and outcomes. On reflection this has influenced my decision to continue with the pre-selection process as it stands, rather than move to ATAR only selection. I recognised little research has been undertaken on the applicants' experience of the pre-selection process of kits and folio interview for creative programs and as a program we had no formalised research to undertake a closer assessment of the value of this process to applicants and the program. My research, detailed below, confirms our earlier decision. By undertaking this research to examine and review the pre-selection process in the Communication Design program at RMIT University I can now evaluate the student experience.

1a). How most students are chosen for Australian University Programs:
The process of getting into a university program in Australia is highly competitive. The 'best' universities have fewer places available than there are students seeking to attend. Some programs use the Australian Tertiary Admissions Rank (ATAR). The ATAR system generates a score between 0 and 99.95 for every student in Year 12. This score is a rank system used by all states of Australia, excluding Queensland.

Important to the general university selection process is the match between admission criteria and students' capabilities. Furthermore, it is generally acknowledged the admission criteria of an institution signals to the student the institutional standards and requirements (Braxton & Nordall, 1985). Highly competitive and capable students will ensure that they have the qualifications to gain admission and will maximise their potential number of university choices (James, Baldwin, & McInnis, 1999).

Students who are not as capable may seek institutions where access is more readily available. However, they may maximise their choices within their self perceived capability (Hughes, 1994). A student's shortlist of the universities they will consider attending will be limited to those universities that they believe they will get into. Added to this, some institutions have individual processes.
These processes include:
- Entry examinations
- Interviews and
- Folio assessments

In the main, the selection process is designed by the institution to ensure an appropriate "fit" between the institution and the student. Selection processes of this nature are usual when the ATAR score does not provide enough clarity in deciding between alternate students. When there are 8,000 applicants and 50 places, the difference between an ATAR score of 99.95 and 99.75 could be the difference between a good day and a bad day in a student's assessment period.

The score, on its own, will not be a predictor of success. (Anderson, Caldwell, Dawkins, & King, 2005). As a consequence, in

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selective institutions (those running programs using ATAR scores as their key selector to define which students will be accepted), the selection process will often have additional criteria (i.e.: further testing based on professional/program knowledge) to enable selection between students at the upper levels of relative performance.

While institutions use selection processes to determine capacity to succeed, students will use admission criteria as a proxy for other factors. That is, they may decide that the institution is or is not right for them based on advertised selection criteria or experiences through Open Day engagement with current students, graduates, and industry recommendations. The process of selection is a two way process. The student applies: the university selects. The task for the university becomes: "How to get the best students to apply so that they can be selected?"

1b) Pre-selection for graduate outcomes:
In the domain of communication design education, we are constrained by the need to find people who will eventually be able to contribute to and develop the creative profession into the future. As educators of people who intend to use their learning in their careers immediately upon graduation, we need to develop students who can 'hit the ground running' as communication designers who can practise in the market place. We need to teach them how to create, think and research. These three key skills are intrinsically interlinked and a student's "potential" is often not evidenced in their ATAR score given the variety of educational opportunities they will have or have not experienced.

In addition to selecting the best students, we also need to consider keeping them in the program long enough for them to graduate. Attrition and progress rates are important benchmarks of quality in the Australian University System (Blackmur, 2004; Mustafa & Dalen, 2006; Quality Assurance Agency for Higher Education (UK), 2007).

From the university's perspective, student retention is important because *lower attrition rates lead to lower marketing costs overall.* The chief benefit is lower attrition rates and higher progress rates which lead to better outcomes for our students as they establish relationships that will take them through their university years and subsequently into their careers. Attrition and progress rates are strongly linked with the fit between the student and the institution (Bianchi, 1980). However, 'the fit' is not just in the eyes of the institution; 'the fit' is also from the perspective of our students.

1c) Seeking the 'spark' - selecting students for creativity:
There are multiple benefits for recruitment processes that lead the *"right"* students to apply, along with subsequent selection processes that enhance the fit of the student with the institution. However, in the RMIT University's Communication Design Program we have concerns. Firstly, we field a very large number of applications for a relatively small number of places. We therefore have a responsibility to ensure the students we do accept have the *"potential"* to succeed. Secondly, we have a fourth year Honours option available to those students who are most successful in their three-year Bachelor program. This fourth- year option has an even smaller number of places available. Thus, the very best students compete

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strongly to gain access to this fourth year of study.

The idea of such an environment (some may say "elitist") can be daunting for many students who desire to attend, but become afraid their skills may not be up to par, and face the perceived fear they may not be accepted. Self-evaluation of their own capabilities may lead potential applicants to withdraw from the process if only because they lack confidence they will pass Year 12. Creative students often doubt their scoring ability in subjects such as english and mathematics. Added to this fear is the fact that a "good" result in a Year 12 creative subject carries a lower all-round ATAR score.

This then leaves us with a dilemma. How do we ensure Year 12 students know enough about themselves, and carry with them the self-confidence to apply to our program? A common trait of Year 12 students is negative self-censoring. In this self-doubt mind set students may not have the self-confidence to apply to our program. This is particularly important for the male gender, which seem to respond poorly to the ATAR system. It is important we understand the value of a pre-selection process to students as applicants to better inform the university environment and their secondary educators.

To overcome some of the elements of this dilemma we use a pre-selection process, which enables us to differentiate prospective students. Over several years, we have refined the two key criteria of our pre-selection process: "The Kit" and "The Folio Interview". This selection review has seen benefits to the program in retention rates and reported student engagement, however, we've realised we had not explored what this was to our students as "an experience".

1d) Methodology:

To explore the pre-selection process in Communication Design at RMIT University the following methodology was undertaken. As I was interested in the student's experience of this process I chose semi-structured face-to-face recorded interviews, and the data was subsequently interpreted into thematic categories.

Each year, the program has an intake of approximately 58 commencing local students into the three-year bachelor degree. I chose to limit the selection of students I interviewed to those who, at time of entry to our program, had just completed Year 12 or a Year 12 equivalent, as I wanted to more clearly understand the experience of this cohort to our program in comparison to the literature available on ATAR as a predicator for success in a program.

Our students were approached through an email request to participate in the interviews. Once the self-nominated students were identified they were then asked to participate in follow-up interviews to reflect upon and comment on the themes identified as a result of my research.

At the interview, the students were asked the following questions:

1. Did you value the opportunity of a pre-selection process?
2. Were all parts of the pre-selection process valuable to you?
3. Would you have considered higher education without this process?
4. Do you feel pre-selection engaged or prepared you for your studies in the program?
5. Workload of producing a folio has been raised as a concern in recent studies on selection. Are you able to comment on this?

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The focus of the semi-structured interviews I conducted was on the value of the process of pre-selection, its workload and student consideration of higher education. General surveys on university application processes from secondary students' perspective have been conducted previously. Those prior surveys indicated applicants found the process of producing a folio was onerous. This was further supported by anecdotal evidence from staff and students in our program. My research focused on human experience. Did our students find the ensuing pre-selection process "valuable"?

I was particularly interested in the value of both parts of the pre-selection process, "The Kit" and "The Folio Interview". Our program had in the past five years reflected on and reviewed both of these components. In my role as our program's selection officer I have researched ATAR as a means of student selection and have decided to retain pre-selection kit and folio interview. Previously, the interview component of our pre-selectionprocess was a "show and tell about mediums and process" by our applicants. During my review, I recognised we had been too focused on looking at the crafting and presentation of the pieces rather than a students potential to engage with reflective practice and design thinking.

Following that my review, we have moved toward an emphasis on concept and student reflection on their learning. As a result, both my colleagues and myself agree we are now choosing students with a greater diversity of experiences.

1e) Key outcomes:

I was surprised at the number of male students who participated in the interviews (see table below) given that male students make up approximately one third of the commencing student cohort. As seen in the table below there was an even distribution of male and female students who participated in the survey from across all three years of our program. Overall the responses were favorable to a pre-selection process, with only three female students out of 61 interviewed nominating that it was not a valuable process.

In further conversation, these students indicated they had high ATAR scores and they would have preferred a process where ATAR was the focus with an interview to discuss just a few key pieces of work, their thinking process and/or respond to questions during the interview. One student explained the stress of the preparation for the pre-selection process had impacted significantly on her preparation for her (Year 12) exams... and as a result, impacting on her final ATAR score.

Question 1.: Did you find the pre-selection valuable?											
Respondents	1st Year Students: Number of respodents =25				2nd Year Students: Number of respondents =22				3rd Year Students: Number of respondents =14		
Gender	Male: 8		Female: 17		Male: 12		Female: 10		Male: 6		Female: 8	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Number	8	0	17	0	12	0	10	0	6	0	5	3
Percentage (%)	32%	0%	76%	0%	55%	0%	45%	0%	43%	0%	36%	12%

Table 1.

The main themes to emerge from responses were:

Human Experience

It was the opportunity of "conversation at interview" that was raised as one of the most significant factors in students decision-making during the pre-selection process. Students felt both informed and informative as result of the engagement with RMIT University staff. *"I valued the conversation at the interview, I felt it was an interview both ways. I am not sure that I need to put all the work into crafting my folio and my visual diary. Conversation from the ideas "in it" was of more interest to me and it seemed (the same way) to the staff. I needed that interaction to confirm the value in my creativity".*

This response and others similar, aligned with anecdotal evidence reported by staff on conservations held with applicants once they had received placement offers. The students overall indicated they valued presenting their work in the pre-selection kit and folio interview. It was the opportunity for their work to speak for themselves when they could not (i.e. the pre-selection kit).

Unless they come from a creative family, students who demonstrate creative traits are often told to "concentrate on your other convential studies, so you have something to fall back on," further squashing their creative dreams. Non-actively supportive environments at school and at home will easily deter the less focused.

Will my ATAR be high enough?

Ninety percent of our male students indicated they would not have gone onto further study at higher education if programs did not have pre-selection processes. Lack of confidence in academic performance was highlighted as the main issue, combined with an ability to feel general confidence in their abilities. "Many of my friends were waiting to see what their ENTER score would be to see where they MIGHT get in. By comparison I had a sense that I had a say in where I might go and that my creative voice meant something. I had an opportunity to belong to something that valued who I was as a creative person. I did not apply to programs with ENTER (as their primary basis for assessing applicants) as I knew my score would not be strong".

We are aware that many male students during Year 12 lose focus — often as a result of creative subject availability, and poor performances in the linear or exam based subjects. Added to this is the gender based maturation issues with males maturing later than their female counterparts, and their belief systems being negatively affected accordingly. All, or a combination of the above may result in a lower ATAR score.

These responses correlated with our own informally collected data showing that a significant number of male students have ATAR's between 55 and 65. My informal tracking of student performances over the three years of a Bachelor degree has indicated that over time, many male students will finish our program with scores higher than their female counter parts. Furthermore a higher number of male students go on to establish their own businesses within five years of completing their studies.

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If our program was based SOLELY on an ATAR score, these male students may not have considered higher education at all, and instead chosen another career (i.e. a trade). Interesting to note, it is our male students who most regularly go on to be the highest performing students in the third year of our program. If our program was SOLELY based on an ATAR score, our profession would miss out on these students who go on to be valuable industry contributors. Overall, female students were more confident about selection into programs, and they selected a broader range of programs at higher education and TAFE with varying degrees of pre-selection processes and/or ATAR.

It provided focus

Some of our applicants found themselves becoming as focused on their Year 12 studies as those aiming for more linear thinking programs. Because of the pre-selection process in which they participated, they returned to their Year 12 studies with a renewed focus, having seen where their inherent creativity can take them. *"I needed both processes (the kit and the interview) to focus on which creative program I wanted to belong to. I realised I was still learning about where design could take me. Another creative program just had the ENTER (ATAR) score so I had no idea if I was valued. I realised through being involved in these (pre-selection) processes that I was learning how to better represent myself and felt people would encourage me to learn."*

Engaging in their further education

Many students felt comfortable in the program from day one. Having been through the pre-selection process gave them a common experience to relate with peers on all the work they had done to get into the program as well as confidence to talk to staff who they knew from the selection interviews.

"I think once you have been through pre-selection it makes you focused, you are collaborating daily with students who have put alot into getting into the program. The program for many of us is the first true experience that our creative talent can lead to a valuable professional outcome that we can do well at. I want to work overseas and feel if I work hard I can do (participate in the 4th year) honours. I have not felt like that about study, ever."

As a program the first year experience can be full of many issues varying from maturation, moving from the country, interstate or out of home, and the adjustment to managing their own studies. This can cloud the assessment of how well (or not) students are engaging in the program due to the daily pastoral care issue we undertake.

"I think you still need to learn a lot about the possibilities of what you can do with design when you start in the program, I am not sure it changed what I still had to learn but I now feel like sticking around".

"Friends often laughed at the time I put into my uni work. I want to start my own business so I am now focused on doing honors. I would not have thought about that three years ago at secondary school".

Students confirmed the pre-selection process kept them focused in the program even though many friends were dropping out in the first year of studies or changing programs.

Since the program's review of the pre-selection process (commenced

five years ago), I continue to see improvements in our student's ability to engage in the program. As of 2010, we have a retention rate of 98% of our commencing student cohort. This is impressive compared to the average RMIT University retention rate of between 75% to 85%. Of the program's continuing cohort, the retention rate remains high at 96.5%.

An increase in applications to the fourth year honours program is a strong indicator of continued engagement with our program. Over the past five years, applicant numbers to the honours program have increased over 100% (from 30 to 65 applicants) for the 15 commencing places. The competitive nature of entry is not a concern to students as they engaged in a collaborative workshop over two days as part of their selection process to the honours program.

As an experienced selector, I believe this high retention level is greatly due in part to the engagement with our applicants prior to selection. The pre-selection process qualifies both their abilities in the program and the program's ability to meet their needs.

Workload of producing a folio

Historically, there has been much discussion as to the additional workload required of Year 12 students to produce folios for pre-selection interviews. It has been claimed by some that our requirement of applicants to produce a folio may have been a deterrent to some students applying to the program. In the "Designing Our Future" article, (Design Victoria 2009. p.43) it was reported "the workload associated with producing a folio in a subject could leave students less time to dedicate to other subjects and thus they might under-perform in those subjects". My research has found quite the opposite. Our students reported they valued both the process involved in preparing the folio, and the opportunity to discuss the folio in greater detail during the interview. In preparing the folio, it actually made them MORE, not less focused during their Year 12 studies.

Our first year students were in agreement that producing a folio was a significant workload, often impacting on other studies and acknowledged they had reported this back to secondary teaching staff and career teachers at the time. Second and third year students were more reflective on the folio experience, citing that while it was a workload to produce a folio, poor time management, and lack of skills to produce a folio contributed to the creation of the workload. *"If I had understood at that time that the folio is a tool for communication of creative thinking, rather than just a show and tell of every piece of work it would have been a lesser workload."*

Folio as a communication tool

My research has brought attention a contradiction within our own program. We have moved the assessment of the selection folio to be a "reflective process". We assess the thought process behind the creation of the folio pieces – with these thought processes being discussed during the interview process. What we failed to recognise is the term "folio" at secondary school level is still based on a "show and tell" model. And we are still asking for a "folio", thus not reducing the students' workload.

To create a design education that builds programs across multiple facilities, we need to support the development of a secondary school

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subject(s) to explore what a folio is, as a communication device that may be of value for a range of educational applications.

Conclusion

My research has found students are supportive of the current pre-selection process in the Communication Design program. On the whole, the experience of our students is positive and interestingly, becomes increasingly more positive in their later years.

Whilst workload issues were raised (mainly from first year students) in producing their folios for pre-selection whilst still studying Year 12, many students reported the pre-selection process actually made them more focused in their final semester of secondary school. Students in the second, and third year of our program cited they now realised production of the folio (for the Communication Design program) is more about the process (of the folio's creation), rather than the outcome - that it is not a "show and tell" product.

It has also raised that creative males often finish secondary school with lower ATAR scores than their female counterparts. And yet at the end of the third year of our program, males finish ahead of their female colleagues. If entry to our program was based on ATAR (and not the current pre-selection process), industry (who, after all, we are educating for) could be defined quiet differently.

Many of our students commented on the support they received during the pre-selection. Moving forward and thinking about K-12, I believe there is a real need for collaborative opportunities to be introduced in the pre-tertiary education system as suggested by Lisa Colley. This, in turn, will support the students who demonstrate creative qualities and may lead to a higher number considering higher education in a range of fields. To support these traits will only further increase the quality of graduate we present to the profession.

Other points that have been identified during the collation of my research, which may benefit from further analysis, are:

- Can a human experience inform current lineal assessment models for subjects in K to 12 education?
- How may design be suited to better engage creative males with education, encouraging them to pursue higher education?
- Explore what the folio is as a communication tool at all levels of education to be a valuable assessment tool
- Should Higher Education (generally) look at a range of alternative entry processes (to the ATAR score) more broadly that it currently does to encourage students to apply for Higher Education?

In conclusion I have found the majority of the students benefited from "The Human Experience". Being involved with the program while still in secondary school, it gave those students a focus they may not have had previously. This critical time of assessment preparation, combined with the knowledge they were surrounded by like-minded creative people enabled the student to focus on their further education. With this understanding, our first assessment of the type of design experience we may introduce from K-12 might be the value of the Human Experience. To develop earlier collaborations, between all levels of education, building a better understanding of collaboration, innovation, and sustainability in education, industry and for the economy.

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AgIdeas International Design Week 2011
This paper was written for the agIdeas 2011 International Design Research Lab, which took place on 2 May 2011 as part of the agIdeas 2011 International Design Week, in Melbourne, Australia. The DesignLab is a one-day forum that provides design educators, researchers and practitioners the opportunity to present design research to their peers. The inaugural forum aimed to create awareness of new knowledge in the areas of multidisciplinary design practice and its benefits, and the relationship between design practice and education. Design researchers were invited to submit abstracts that address the brief, "Where is design practice at today?" Submissions for the DesignLab were peer-reviewed by a team of Iridescent reviewers. They selected five authors for online publication. Papers and posters were selelcted by a multidisciplinary panel. Members of the panel included: Jeremy Yuille, Veronique Vienne, Sherry Blankenship, Selby Coxon, Ashis Jalote-Parmar, Audrey Bennett, Evert Ypma, Hernan Casakin and Rebekah Davis.

Community
Cultural understanding
Design education
Multi-disciplinary

DESIGNING IN AND FOR COMMUNITIES: BREAKING INSTITUTIONAL BARRIERS AND ENGAGING DESIGN STUDENTS IN MEANINGFUL AND RELEVANT PROJECTS

BERNARD J. CANNIFFE

ABSTRACT

Traditional art and design curriculum revolves around instructing students and evaluating their individual projects without considering that a student's future professional life and success will require that he or she function in a complex design environment with multi-faceted levels of relationships. Educators nurture, and the institution rewards the 'me' designer while the professional world requires that a designer operates as 'we' and 'us'.

For the past nine years, I have developed classes that operate on a different paradigm—where students are forced out of their academic comfort zone to come to grips with complex, "real world" community issues, ultimately resulting in a greater understanding of the strengths and weaknesses of art and design. These classes rely on partnerships forged with researchers from The Johns Hopkins University School for Public Health, educational institutions in the Middle East, local communities, and community organizations. The multi-fold objectives of these classes have been to understand and translate research into creative solutions for disenfranchised and neglected communities, for students to function in multi-disciplinary teams, and to increase students' awareness of how the designer functions within these different groups. These creative solutions have translated research projects about inner city gun violence, hypertension, religious and cultural understanding into multiple delivery vehicles, benefiting all constituents. The paper will address specific case studies as well as highlight the strengths and weakness of working with groups that have different needs and objectives. The paper will showcase two recent projects involving: (1) encouraging inner city women to breast feed their children, and (2) three interconnected projects that engage with a local Somali Muslim community. Each case study will have examples of the final products as well as an overview of the pedagogical structure of the class.

FULL PAPER

Introduction: graphic design education

The educational model for graphic design must change. Both the scope of the profession and the marketplace's expectations for what graphic design should deliver have evolved dramatically in the past thirty years, necessitating a shift in how graphic designers are trained to meet those demands.[1] However, the educational delivery in US design schools has either resisted or been incapable of meeting these demands, resulting in a widening gap between educational instruction and professional practice.[2] Students seek a realistic and professional educational experience grounded in design theory and history, which are not only important to their education, but also necessary for acquiring the appropriate skill sets to enter the competitive work place. Graphic design instructors are faced with the complicated task of giving students

1. See Morelli, N. 2007. Social Innovation and New Industrial Contexts: Can Designers 'Industrialize' Socially Responsible Solutions? *Design Issues*, 23(4), Autumn (discussing the historic call for design to engage in socially relevant issues and to "shift ... designers' activities from products to systemic solutions").

2. See Margolin, V. 2007. Design, the Future and the Human Spirit. Design Issues, 23(3)4, Summer. ("[W]hile the world has heard many calls for social change, few have come from designers themselves...").

both technical and theoretical skills in a discipline that is segmented and structured. The resulting assignments end up being 'artificial' projects with open, generous parameters and easily achievable time constraints. If instructors buck this pedagogical trend and attempt to implement real-world projects, they are faced with the struggle of first finding an appropriate client and project, second identifying a workable budget, and third engaging a willing client committed to enriching the educational experience of the students. The typical result has been the implementation of various classroom design assignments, which fit neatly into the academic structure, yet these types of projects lack the professional benefits necessary for the students' development.

Thus, the students end up lacking experience in client management, project management, team-centered solutions, access to and engagement with target audiences, and development of multiple delivery vehicles—ultimately missing the opportunity to create workable design solutions for the real world. As corporations and businesses compete in a marketplace that is global, complex, fast moving, culturally sensitive and volatile,[3] graphic design education needs to embrace and meet these challenges.

1. Graphic Design Education.
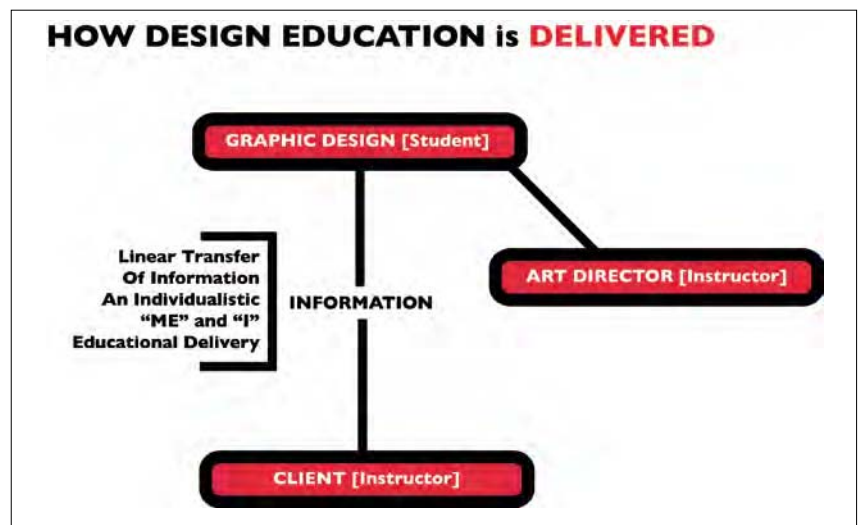
1.

This framework has become the accepted model of graphic design education where the instructor acts as client and/or art director and the student acts as designer. The informational process is linear between student and instructor and the projects are mainly theoretical and based either upon pedagogical needs or the instructor's experience.

The design educational structure is divided by academic years, by semesters, and by classes.[4] Many American design programs operate on a sixteen-week semester, where students attend a selection of studio and academic classes; and the students' choices are, largely, controlled by their academic year. Each class is sequenced and structured into modules where one skill set builds upon the next. There is usually one design instructor for every class, consisting of about eighteen students; all students are from the same major and the same academic semester. The instructor delivers the educational content of the class through a series of specific learning objectives that are organized by design projects.

3. Thackara, J. 2005. In the Bubble: Designing in a Complex World. Cambridge, MA: MIT Press 5. ("[In] one single day of [2004], as much world trade was carried out as in the whole of 1949; as much scientific research was published as in the whole of 1960; as many telephone calls were made as in all of 1983; as many e-mails were sent as in 1990.").

4. For the purpose of this paper, my discussion is limited to design studio classes and does not discuss academic or liberal arts classes.

The project is presented to the entire class, and the project content attempt to simulate an art director's relationship to a design team in a professional studio. The instructor switches between a teacher, an art director, and a client as the project develops, but ultimately the transfer of information is linear—from teacher to student—with a focus on the student as being 'me' or the 'I.'

The academic institution can also act as an impediment to students taking an active role as a graphic designer in the global economy. Academic institutions are isolated bubbles that neither welcome or embrace the community in which they are located.

2. Actual Reality Model: this figure depicts the problematic nature with departments within the academie.
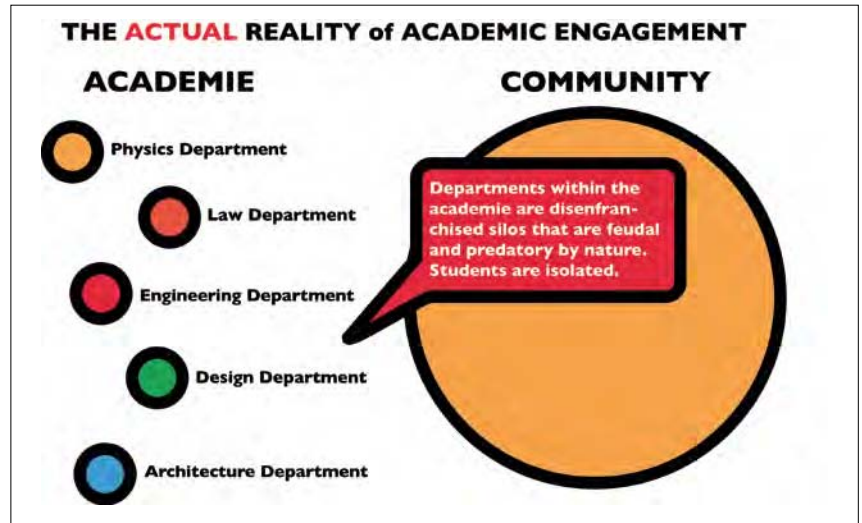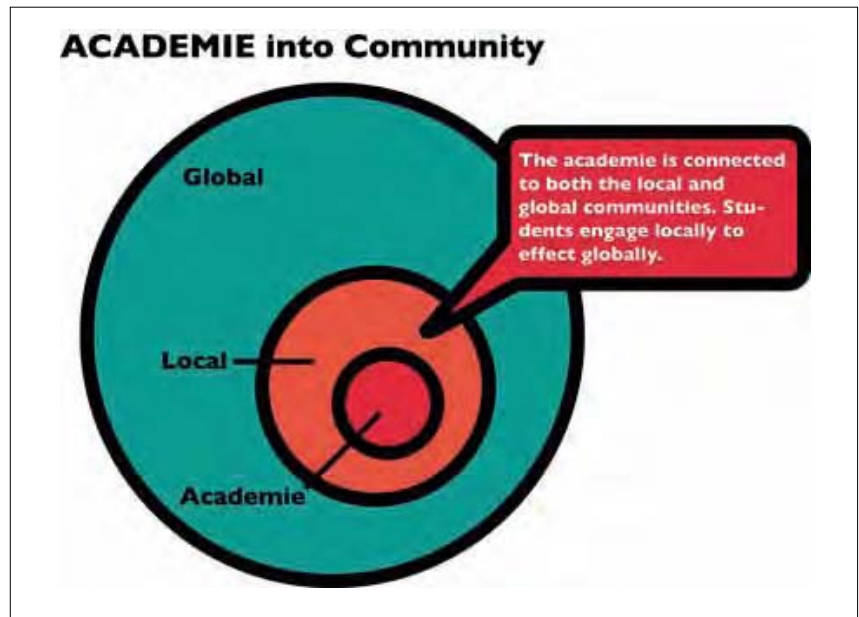

2.

We need to think of the academie as being isolated from the surrounding community and its departments being disconnected from each other within the academic bubble. Then, by coming to grips with this actual reality, we will begin to understand that we are not preparing our students for careers in the market neither are we able to connect to exterior communities because the academie is severely fractured, isolated and isolated. Students seek cooperation and community through interdisciplinary engagement, yet the academic structure rewards isolation and division. Students remain for most of their education nestled with the confines of academic buildings. The outside community does not understand what happens within art and design schools, or in many cases, is not even aware that an art and design institution is located within their community. By failing to engage the community, academies are missing opportunities to provide students with "real life" experiences as well as a plethora of potential projects.[5]

By understanding how the academie fits into the heart of its local community, students will have the opportunity to connect to local community organizations as well as individual community members. These conversations can develop into community projects that in turn will connect the students to larger local and essential global issues. This structure forces students to think both locally and globally. By engaging in participatory projects, students are better equipped and prepared to become global citizens. Graphic design students need to be instructed and taught to engage locally and think globally.

5. Bentley, T. 1998. Learning Beyond the Classroom: Education for a Changing World. London: Routledge/Demos, at 1. ("[T]here are two crucial tests of an effective education system: how well students can apply what they learn in situations beyond the bounds their formal educational experience, and how well prepared they are to continue learning and solving problems throughout the rest of their lives. To do this, education must be both broader and deeper. Broader, because it must include a wider range of learning experience, experience of roles and situations which mirror those we value in society. Deeper, because it must nurture a greater understanding in young people: understanding of themselves, their motivations and goals in life, and of the subjects and disciplines they study.")

ACADEMIE into Community

Global

Local

Academie

The academie is connected to both the local and global communities. Students engage locally to effect globally.

3.

The graphic design profession

The graphic design profession is a complex, organic, multi-disciplinary and interconnected structure. The design studio structure is hierarchical. The first layer comprises of either a company partner or principal owner, dependent on the size of the organization. A principal's primary responsibility is to drive the financing and mission of the studio as well as meeting and nurturing existing and prospective clients. The next layer consists of either an art or creative director who manages a creative team of senior and junior designers as well as production artists and student interns. This individual is responsible for the creative output of the team and may meet with clients along with the principal or individually. The design teams switch around based on the needs of a specific project, and the focus is more on "us, them" and "we" with less of a focus on "me" and "I." All projects are client-based and dependent on everyone working together and cooperating. Although one could argue that the initial transfer of information is linear—from the client to the creative point person, the information delivery within the design agency is cross-pollinated within multidisciplinary teams.

Figure 4 (on the following page) portrays a typical structure of a professional design studio. Although there is a linear informational process between client and owner/partner, with a much more interconnected informational structure within the creative teams. It is important to note that some personnel, for example, production managers, have specific areas of technical expertise, but for the most part, the studio operates as multidisciplinary teams. All projects are client-driven.

It is apparent that design education contradicts design practice, resulting in a lack of professional preparation and skills for the student. It is also apparent that design education is failing to educate students in a manner that prepares them to be design leaders and innovators in their profession, community and on a global basis. The institution continues to focus inwardly and think myopically whilst the design world requires global thinkers who are outwardly looking and able to understand
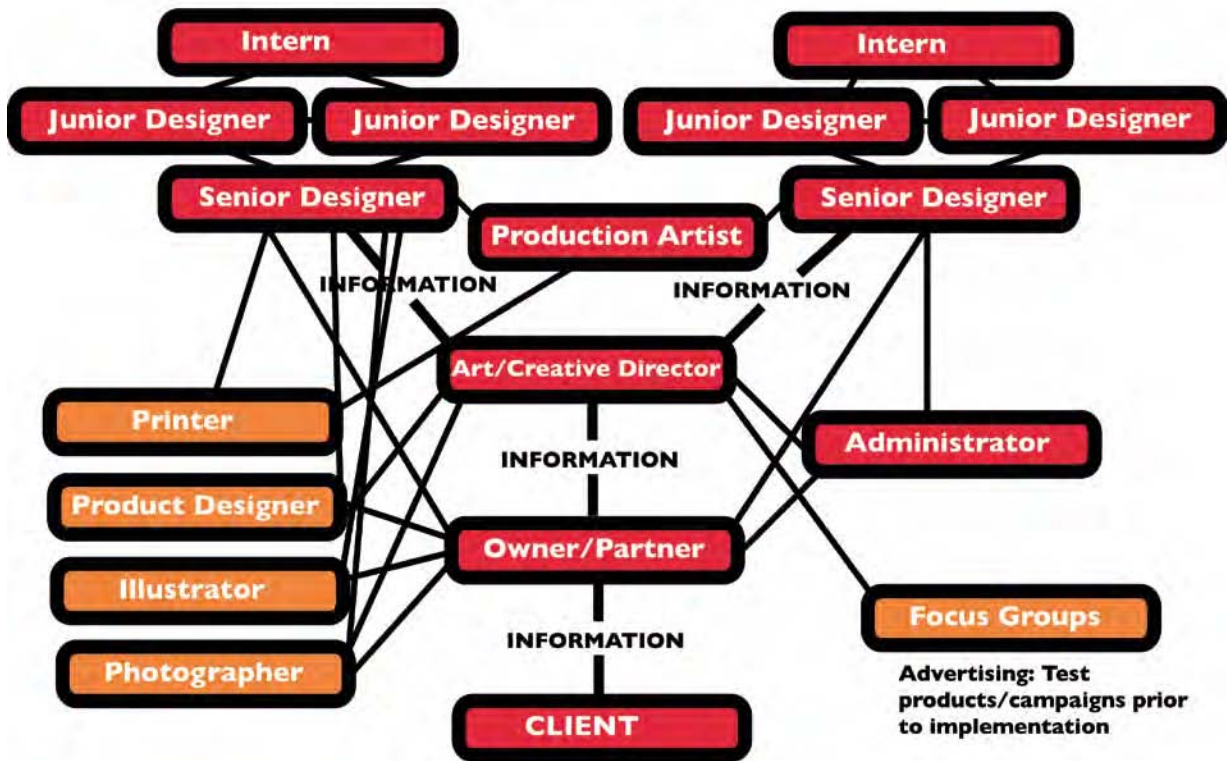
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4. Graphic Design Professions.

complex problems. There is a continual need to develop educational structures that addressed these imbalances.

New directions and approaches
Between 2002 and 2009, I was the graphic design co-chair at the Maryland Institute College of Art (MICA) in Baltimore, Maryland, on the East Coast of the United States. In 2002, at the request of Johns Hopkins University School of Public Health (JHSPH), to address JHSPH's desire to communicate their health research results to the community in which JHSPH is located within, I developed a studio course called the "MICA/JHU Design Coalition" — a course that met the professional–practice desires of the students as well as addressing the pedagogical concerns of the instructor. It was hoped that the class would create an educational model that was closer to the design profession.

This was the theoretical framework for the expected MICA/JHU Design Coalition Class. It was hoped that the class would develop a structure that was similar to the design profession. Although there is a linear informational link between client and graphic design student, there is a much more complex and interlinked informational links between all other constituents.

East Baltimore, where JHSPH is located, is a poverty–stricken, predominantly African American, urban neighborhood that begins a
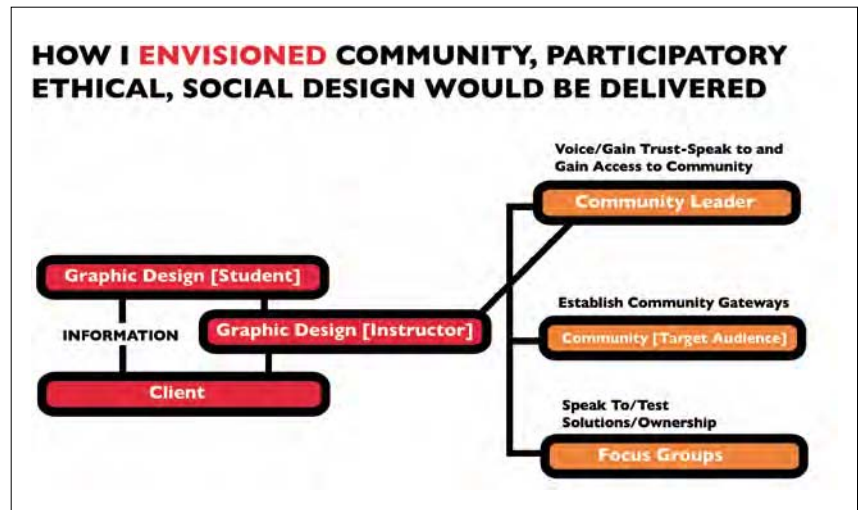
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few miles from the MICA campus. The neighborhood has high infant mortality rates and disproportionately high syphilis and heroin indices. East Baltimore is a violent place to live, has a plethora of single parent homes, and high rates of unemployment. Less than half the children graduate from high school and one quarter of the households fall below the federal poverty level, reflected in the statistic that one in three children live in poverty in East Baltimore. In addition, the lead poisoning statistics in Baltimore City (much of which is concentrated in East Baltimore) have been consistently high for generations. The citizens are prone to depression, drug addiction, hypertension, obesity, and diabetes. Because the challenges of daily life within East Baltimore are so intense, people have difficulty prioritizing long-term health issues.

Translational research model
Interesting educational structures were developing out of the MICA/ JHU Design Coalition that flowed from the manner in which the Johns Hopkins medical researchers conducted their research and connected to the community. Researchers at Johns Hopkins talk about bringing the research bench closer to the patient's bed. Their goal is to translate their complex and important research and deliver their findings back to

6. Translational Research Model
This figure shows how the translational research model was applied to the MICA/ JHU Design Coalition class. It is important to note that this model could also be applied to corporations, and non-profit organizations as well as medical research institutions.

6.

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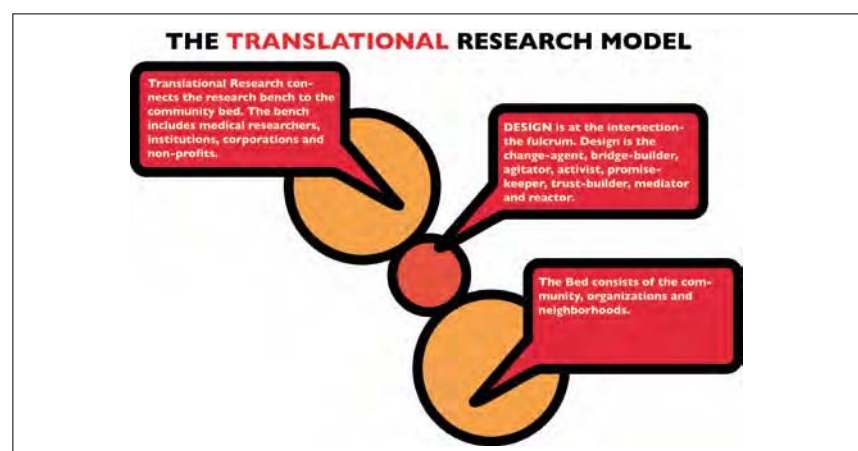
their subject community that participated in testing. I discovered through the MICA/JHU Design Coalition class that researchers needed to deliver their information to the community in a manner that was not overly complicated or appeared to be overly simplistic and condescending. The graphic designer could act as the fulcrum to connect both the researcher and subject community together, translating the research data into a meaningful and creative delivery vehicle that was accepted by both constituents.

MICA/JHU Design Coalition course
The MICA/JHU Design Coalition was an elective course offered every semester to the entire MICA student population. The graphic design department anticipated that this approach would allow students to self-select the course, reflecting their level of commitment to the course. It was hoped that students in other majors would also enroll in the course, as it was not clear that graphic design would always be the appropriate delivery vehicle to address the needs of the client and community. Students from other majors might also contribute other methods of problem solving to the class and provide alternative project solutions. The hope was to always have a diverse student population and a socially responsible partnership between the three communities involved in the projects–viz: JHSPH, MICA and East Baltimore. A key asset of this course was that the students could potentially get their work published. In fact, students expressed the primary reason for taking the course was to engage with the client and interact with the community and getting published was a secondary consideration.

On the first day of class, the students were instructed on the differences between client, community, and community leaders. The instructor instilled the importance of building crucial connections between students, community leaders and the target audience, in order to inspire an actual change of behavior in the target audience, leading to an improved quality of life.

Later that day, students met with the JHSPH researchers (the client) who present their research projects and discussed their goals for disseminating results. After the clients' presentation, MICA students went on a walking tour of East Baltimore. These walking tours were lead by Baltimore community leaders familiar with the community and its members. The walking tour strategy proved mutually beneficial, as the community awareness of the MICA/JHSPH partnership increased and the students could demonstrate a tangible understanding of life in East Baltimore.

It is important to note that the graphic design department paid the community leader for the services of the community tour. The graphic design department also recognized that the community should be involved at each stage of the process. Furthermore, the project should utilize the already existing community organizations as "community gateways" (discussed below) for testing possible design solutions and for disseminating information.

For the second class, students were asked to research background information regarding the clients' presentations and the target audience. The students then presented their findings to the individual JHSPH research teams (on the fourth class) to ensure that the students'

understanding of the nature of the project was in line with JHSPH goals. The students did not show creative strategies at this stage. This approach was beneficial to both JHSPH researchers and MICA students.

What was becoming apparent was the actual framework for the MICA/JHU Design Coalition class was much different than was expected because the real-life focus of the class had multiple projects happening at the same time. Students were involved in all projects at different levels of engagement and that meant that the educational model was becoming far more complex and dynamic than I had first envisioned. For example, a student might be involved in taking the photographs for one research project and writing copy for another and being a project manager for a third. Students were involved with different groups and different projects and involved at different levels all at the same time. Students who took this class were much more prepared for the design profession.

HOW COMMUNITY, PARTICIPATORY ETHICAL, SOCIAL DESIGN WAS DELIVERED

West Baltimore

East Baltimore

Awareness and Promotion

Neighborhood Design Center

Lead Poison Study

JHU Researcher

Graphic Design [Instructor]

Elder Harris

Community Leader

Leon Purnell/Glenn Ross

Community Leader

Graphic Design [Student]

Martha's Place

Community Organization

Environmental Justice Partnership

Community Organization

Sandtown/Upton

Community [Target Audience]

Tench Tilman School

Community [Target Audience]

Delivered:
1. Historical Brochure
2. Art Center Identity
3. Interactive Presentation
4. Promotional Book

Delivered:
1. Mobile Exhibition
2. Educational Colouring Book
3. Awareness Book

7.

7. Actual Outcomes of MICA/JHU Design Coalition Class.

This figure shows the actual framework for the MICA/JHU Design Coalition Class. Students were involved with different groups and different projects and involved at different levels all at the same time. For example, one student could be a project manager one project and a copywriter on another whilst being a creative designer on another and a fundraiser on the final project.

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The MICA/JHU Design Coalition educational framework was only one unique outcome that the class was creating. Another structure that I was beginning to see as a specific outcome was the connection between all parties involved in the class. I would explain this interconnection to the students by asking them to think of the structure as a three-legged chair, where all legs were equally important and all had equal value. The graphic design student who enrolled in this class had to navigate complex systems and communities. Students had to be taught a different design methodology and design vocabulary to work with these different constituents, each of whom had very specific needs.

8. Three-Legged Chair Model: this figure represents the theoretical framework I created for the MICA/JHU Design Coalition class.

THE THREE-LEGGED CHAIR APPROACH

LEG ONE: CLIENT
Medical Researcher
Research Institution
Corporation
Non-Profit

LEG TWO: ACADEMIE
Design
Business
Law
Architecture

LEG THREE: COMMUNITY
Neighborhoods
Community Organizations

8.

MICA case study—Breast feeding project

Prior to the start of the fall 2008 semester, the MICA graphic design department was contacted by The Urban Health Institute at Johns Hopkins University (UHI) to see if we were interested in partnering with them on a specific research project they were conducting. UHI is a research organization that generates a variety of research projects specifically focusing on health issues in urban environments. The UHI director, Doctor Chris Gibbons, had heard of the community work that the MICA/JHU Design Coalition had been providing to various East Baltimore community organizations and felt that we could provide design expertise to his research. The research project aim was to increase the numbers of women breastfeeding within the African American community in East Baltimore. Within the community, there was a great deal of negative association revolving around breastfeeding. Even though breast milk was more nutritious and cheaper than formulae, women continued to use formulae because formulae was given to the baby in the hospital and each mother was given a limited, free supply of formulae after they left the hospital. It was difficult to get the mothers to feed their children naturally after that the free supply of formulae was exhausted. Also, the community historically had spread negative stereotypes regarding breastfeeding. In the second week, the students attended a meeting with a local governmental organization called Healthy Start whose mission was to educate young African American

mothers about breastfeeding as well as to dispel myths. Healthy Start was chosen to provide feedback for our project. The students spent several weeks interviewing expectant mothers, concentrating on understanding their negative perceptions of breastfeeding, as well as identifying what magazines, music and fashion the mothers were interested in.

The students created a youth magazine that promoted breastfeeding and provided women in East Baltimore with positive breastfeeding role models. The youth magazine targeted moms aged 12 to 25 in the community. The magazine included photographs of East Baltimore mothers, bold graphic shapes, bright colors, and decorative typefaces with easy-to-read text. The text was informative, but not overwhelming. The typographic style was created in response to listening to the young women. For example, the typography was an amalgam of tattoo styles and fonts that appeared in the magazines that the young women were reading. The intent of the publication was to reinforce positive role models through real stories of young women who were breastfeeding as well as to dispel negative myths while increasing self-esteem and self-awareness.

By week fourteen, they had finalized a sixteen-page two-color photo publication that they wanted to share with a focus group compromised of several young women involved in Healthy Start's programs. The class arranged the day and time and prepared for the presentation. The group was to be served a healthy lunch as well as receiving payment for their time. The focus group failed to go as expected because the number of women volunteering for the group was not limited and had increased beyond for what had been budgeted. There was a break down between all parties—UHI, Healthy Start, the students, and the focus group regarding the lack of payment and ultimately the lack of trust, resulting in the project being uncompleted.

In hindsight, we should have cancelled the meeting in order to wait for adequate funding. But, our desire to show the target audience the publication and to avoid letting down the focus group and Healthy Start by postponing the meeting led to a meeting that ultimately ended the project. Although there was not a satisfactory outcome to this project, lessons concerning working with community, investing in real projects and real clients was a valuable lesson learned by all.

MCAD advanced senior seminar class
In August 2009, I moved to Minneapolis, Minnesota, a mid-western city in the United States, to assume the Design Chair position at the Minneapolis College of Art and Design (MCAD). Although Minneapolis is much more of a multicultural city than Baltimore, it is predominantly white. The communities surrounding the MCAD campus comprise of Arabic and African Muslims, Hispanics, Vietnamese Hmong, Liberian and African Americans. However, many things remained the same. The surrounding communities are impoverished and disenfranchised, and the MCAD community remains within its institutional bubble. This academic isolation was reflected by a lack of a community-focused social design classes. I decided to use an existing class, Advanced Senior Seminar, as a test case to see if students would be receptive to engaging communities, and, by the same token, if the community would embrace the institution. Unlike in Baltimore, I did not have an establish community

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collaborator as I did with Johns Hopkins University or identified community leaders. On the first day of class, the students divided into four groups with each group identifying a socioeconomic problem important to them that existed in Minneapolis. They had three hours to research topics, one hour to compile the data, and present the information to the entire class in fifteen minutes. One research topic centered around the disenfranchised, local Somali community, specifically identifying the drop-out rate of Somali teenage boys leading to gang involvement or returning to Somalia to join Muslim extremist organizations. The second presentation was about bike safety and bike equality between all races and classes in the city. This group identified that cycling lanes on roads and access to bike paths did not extend to poor, inner city communities. The last group presented research regarding access to universal healthcare.

MCAD case study—Design Blitz
In the second class, students were asked to select one research topic from the last class to further investigate and pursue. The class selected the Somali community project. Next, the class was divided into three different groups and each group participated in a creative free-association exercise to identify and dispel cultural stereotypes. After twenty minutes, the groups were asked to present their ideas, and from those presentations, the class selected the most creative solution that would be developed. The class decided that the most creative solution was the phrase "US+THEM," representing the existing barriers between MCAD and the Somali community. The students were then tasked to implement the US+THEM campaign and saturate the city in 18 hours. This was termed a 'design blitz' which started at 5.00 PM and finished at 7.00 AM the following day. Students created US+THEM flags, banners, posters, and stickers that were placed around the MCAD campus and the Somali community, and stencils that were sprayed in the snow. They also created a video recording that documented the project development and implementation that was posted on You Tube.

Riverside Towers and Halhal Hotdogs projects
The US + THEM campaign was positively received in and around the MCAD community because it was seen as a call to action for the MCAD community to engage in community participatory projects. The Somali community was excited by the prospect of a predominantly white academic institution reaching out to them. Several Somali community organizations have subsequently contacted the MCAD design department to create partnerships on different initiatives. For example, one organization, called ARAHA contacted me after they had seen the US+THEM campaign outside their office. ARAHA stands for the American Relief Agency for the Horn of Africa, and strives to alleviate the suffering from hunger, illiteracy, diseases, and poverty in the Horn of Africa, as well as helping the east African community in Minnesota. They were interested to see if we could develop initiatives to help them promote their case stories to a wider audience as well as reach out to potential funders. They were also interested if we could help them develop new products that could address specific needs in the Horn of Africa. We are looking to develop a specific class that serves the needs of

this organization as well as developing an internship program. Some specific student projects that have been developed as a result of the US+THEM campaign are the Riverside Towers and Halhal Hotdogs projects. The Riverside Towers are located north east of MCAD and is a predominately Somali neighborhood. The towers are a modernist apartment complex that opened in the early 1970's. Although the complex was initially a mixed-housing initiative earmarked for both high and low-income residents, including renters and leasers. However, the buildings' new owners converted the structures into subsidized housing, and the buildings quickly fell into disrepair, which lead to nicknames as the "Ghetto in the Sky" and the "Crack Stacks. One student decided to link the building history to how the Somali community have been neglected and forgotten. We worked with a Somali community organization located inside the complex and the living relatives of the architect who originally built the towers. The final project was a photo novella newspaper that told the history about an apartment complex and an accompanying website. The newspaper had the website URL and it was placed inside the towers' community center as well as distributed throughout the city. Reading the newspaper would only give one part of the story, and you needed to engage with both elements to understand the disconnect between the architectural dream and the communities reality. Another project is being produced by a graduate graphic design student this current semester is the Halhal Hotdog project. The student is engaging the Somali community by handing out Halhal hotdogs from a hotdog cart that has been specifically designed. He has been invited to distribute the Halhal hotdogs at the annual Somali Minneapolis Festival that takes place every July, and we are in the process of developing tee shirts as well as inviting Muslim designers in the Middle East to produce posters that would be displayed behind the cart. Two important Somali photographers based in New York are excited about the project and are coming to assist us in the project development and we are in discussion with a museum in Dubai and a University in London who are interested in exhibiting the findings. The future looks optimistic and it is hoped that this class will become a catalyst for increased institutional involvement with the community.

Conclusion
Both classes at MICA and MCAD addressed the needs of both students and faculty. Students were instructed on how to use their skills to understand a community, and the needs and desires of a client and navigate between both in a constructive and creative way. At MICA, many students re-enrolled in the Design Coalition course numerous times with some students deciding to seek employment with studios focused on social issues. Some MICA alum have gone on to be employed in medical publication departments, while others have enrolled in socially–related graduate programs. Many companies have stated that the reason they employed MICA students was, in part, because of the work produced and experience gained in the MICA/JHU Design Coalition course.

The development of the MICA/JHU Design Coalition course and partnership with JHSPH and East Baltimore community has created educational and social benefits. MICA had developed strong links with

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both JHSPH and the East Baltimore community. More importantly, the East Baltimore community had increased their exposure to the significant research carried out at the JHSPH, positively impacting their lives. The partnership also helped to dispel the many negative myths associated with the Johns Hopkins institution. The JHSPH faculty and staff have provided services and assistance that have proved crucial to the course development. They also helped to create Community Gateways and provided many research projects.

Since the development of the partnership, the Maryland Institute College of Art's graphic design program was inundated with requests from the East Baltimore community to produce graphic design projects. The MICA/JHU Design Coalition produced design solutions for Type Two Diabetes, Child Injuries Through Gun Violence, Infant Lead Poisoning, Kidney Donation and a Mobile Safety Center (CareS), research projects that have all been implemented.

It is too early to say with any clarity what the impact of the social projects will be at MCAD since there have only been three classes offered. What is clear is that the institutional profile has been raised in the local communities, and of the 40 students who took the first initial class, ten have graduated, and five have retaken the class. A desire to collaborate between the institution and the local community is gaining momentum.

In conclusion, the benefits outweigh the risks. There is a need for graphic design students to become involved in real projects involving real clients in real communities in order to broaden both students' educational experience and their understanding of client management. The students have expressed that they find out more about themselves as designers and individuals from interacting with the community. Students have also expressed that they have benefited from understanding the needs of the client, time management, and project constraints. These classes inevitably involve a great deal of reflection as the student questions issues about inequality in inner city communities and the effectiveness and limits of design. For the student, the class opens up a wider understanding of the complexity and interconnectivity of the world, and their role as a designer within that complex system.

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About the author

Bernard J. Canniffe is the Chair of the Design Department at the Minneapolis College of Art and Design (MCAD). He co-founded PIECE STUDIO in 2008 — a collaborative, multidisciplinary social design studio, and is an advisor to the social collaborative group Project M. He is the recipient of the Graphis: Inspiring Designers for the New Millennium Award, 2000, the Baltimore Step 10 Most Influential Designers Award, and The Joseph Binder Award, 2010.

Mr. Canniffe's work has been published in Graphis, HOW, STEP, Metropolis, GOOD, PRINT, Concept-Indonesia, Design-South Korea and CCPH Perspectives.

Mr. Canniffe has made presentations on design for the common good at international medical, design, and academic conferences throughout the world. He was a presenter at the Cumulus Design Conference in Portugal; National Institute of Design Conference Ahmedabad, India; Willem de Kooning Academie, Holland; Zayed University, Dubai; Osaka University, Japan; Shinghwah University, China; Samsung Design Academy, South Korea; Yale University, Connecticut; P&D Design Conference, Brazil; Virginia Commonwealth University, Qatar, and Johns Hopkins University, Maryland.

Mr. Canniffe has led design projects and workshops that address socioeconomic and cultural topics, and he has spent the last several years working extensively in the Middle East developing mechanisms to promote cultural acceptance.

Mr. Canniffe, originally from Merthyr Tydfil, South Wales, has lived in the United States since 1991, and moved to Minneapolis in August 2009. He holds a BA Hons in graphic design from Newport College of Art & Design, University of Wales, and an MFA from the Savannah College of Art and Design.

AgIdeas International Design Week

This paper was written for the agIdeas 2011 International Design Research Lab, which took place on 2 May 2011 as part of the agIdeas 2011 International Design Week, in Melbourne, Australia. The DesignLab is a one-day forum that provides design educators, researchers and practitioners the opportunity to present design research to their peers. The inaugural forum aimed to create awareness of new knowledge in the areas of multidisciplinary design practice and its benefits, and the relationship between design practice and education. Design researchers were invited to submit abstracts that address the brief, "Where is design practice at today?" Submissions for the DesignLab were peer-reviewed by a team of Iridescent reviewers. They selected five authors for online publication. Papers and posters were selelcted by a multidisciplinary panel. Members of the panel included: Jeremy Yuille, Veronique Vienne, Sherry Blankenship, Selby Coxon, Ashis Jalote-Parmar, Audrey Bennett, Evert Ypma, Hernan Casakin and Rebekah Davis.