DESIGN EDUCATION – EVOLUTION FROM MAKERS TO CHANGE MAKERS

Ramneek Majithia¹, and Shilpi Burman²

¹Pearl Academy, New Delhi, India, ramneek.majithia@pearlacademy.com, ramneekmajithia@gmail.com; ²School of Communication Media & Film, Pearl Academy, Noida, India, shilpi.burman@pearlacademy.com, shilpiburman@gmail.com

ABSTRACT:

This paper explores the ways in which design education can take up an ongoing dialogue from the environment and successfully create solutions for the community that sustains it. Over the years designers have realized that Design Thinking can effectively transform the society by identifying a situation/problem/opportunity area in the ecosystem, analyzing, ideating, and evaluating possible solutions to address the concern.

This paper shares the socially relevant solutions created in the 'Content Design' module by semester five students of Communication Design at Pearl Academy. It addresses the usefulness of starting from the 'why,' (the emotional reason people connect with a concept) and creating life of an idea to arrive at possible solutions. It evaluates the effectiveness of engaging students to explore opportunities at various levels starting from a single word, interpreting its meaning, contextualizing it to the society we live in and creating systems for sustaining the idea through media strategy, multidisciplinary approach, and building fresh content.

This project was divided into 3 phases:

- Phase 1: Understanding the WHY? Introduction to the design thinking explore the opportunity and get insights. Develop an ability to understand the need for design intervention and factors that influence design solutions
- Phase 2: Exploring the HOW? Students set the scenario/ context of the issue/ situation and identify related communication design opportunities
- Phase 3: Creating the WHAT? Develop concepts and create functional and validated design solutions for specific design opportunity area

This paper further discusses the methods and process adopted in understanding and analyzing the issues/opportunities and concludes by discussing the sustainability of solutions offered by students.

Keywords: Design education, Design Thinking, Changemakers

1. INTRODUCTION

In todays fast changing world complexity of issues is expanding and culture is getting redefined. Culture describes "how things are", "how things operate" and reflects how we view the world (Kruse and Louis 2009). Simple social interactions have been redefined with

the advent of the virtual space. With swift change in technology boundaries are blurring and we humans are no more mere spectator to this scenario but are at the center of it. This is not just limited to the virtual space but also extends to the wicked problems in the real world. Youngsters who are the digital natives are adept at embracing change and are redefining the human values. They are setting the trends and lead the change as innovators, designers and leaders of the future. They become the change agents.

TheBetterIndia (2015), an initiative that celebrates positive stories of innovations, empowerment and social development, has featured several such young change agents in the recent past. These range from a team of girls from Women's Christian College, Chennai who conduct a hair donation drive annually to collect hair that can be used to make natural wigs for cancer patients; to 22-year-old Kalyani Khona who through her Loveability app is helping people with disabilities find their perfect life partners; to Mansoor who using technology and people management skills, is making waste collection a well organized profession. These stories of change, propelled by social media, are inviting wide participation, and in turn inspiring more people to make small, but thoughtful efforts for bringing about lasting changes to their communities and the society at large.

2. CONTENT DESIGN

B.A. (Hons.) Communication Design at Pearl Academy is a 4 years degree course validated by Nottingham Trent University. It covers a broad range of skills, knowledge and career options, all centered around the design of visual communication for print, screen, space and interactive.

Content Design is the first module in the third year of the course. This module gives the students an opportunity to learn how to create powerful content, and take design solutions in new directions by following their curiosity, refining their expertise, and selecting appropriate mediums based on factors like client, market, contemporary needs, environment, and community that influence possible solutions. They then evaluate the design solution with validation and feedback. Having studied this module, students should be able to demonstrate an understanding of current issues and concerns and formulate persuasive design solutions for identified situations taking into account differences in mediums, context and materials etc.

2.1 THE CHALLENGE – FROM CONCEPT TO REALITY

There were five concepts for students to pick from. Their project had to address ONE of these concepts to help find an interesting idea for the course project!

Five concepts were: Silence | Change | Connection | Secret | Light

As Dewey noted, "If we teach today as we taught yesterday, we rob our children of tomorrow" (Crichton 2014). Higher education colleges, where a large number of youth start to question and form their own views/ opinions, play a key role by encouraging new ways of thinking about – and being in - this world. Our goal with the choice of concepts over well-defined brief was to give students freedom to build their own association, meanings and

interpretation. This way they realize their unique point of view, preferences, biases and interests, as well as the underlying reasons why those points of view are important. It gave them the liberty to steer the project in the direction they liked and willingness to personalize and make it important.

All the students picked up a concept and started to think and jot down what it meant to them. They also went out and started questioning people to understand their explanation of the chosen word and whether it matched with the student's own understanding. Now was the time to put the inferences together and draw mind maps for a better understanding. They had to focus on different facets of the chosen concept to make 20 interpretations and present it in 'Pecha Kucha' style in which 20 slides are shown for 20 seconds each (6 minutes and 40 seconds in total). Each slide should show a different dimension/ interpretation of the concept. By the end student had to identify one interpretation that excites them the most and based on it work out a project brief.

Generating interpretations was not very difficult but evaluating and identifying those ideas that were close to the student and how could those be made real took some time. It was interesting to see students pick up topics like sexual abuse, concern for blind, cleanliness, alternate healing methods etc, which might have seemed run of the mill/ routine/ boring topics. This way their perception had shifted and the interest level appeared higher. They diligently created mind maps with insights, reflection, interpretations, and stories to understand the causes and conditions from which the issue emerged. This served as evidence for critical thinking on the selected topic. They wanted to really make a difference; a challenge that is more adaptive and is addressed through changes in culture, people's beliefs, values, habits and loyalties. They can:

- Cope effectively with change,
- · Care about societal problems and solutions,
- Envision and are willing to help create positive scenarios for the future,
- Experience a strengthened political efficacy, and
- Effectively Implement change (Rowe, Bartleman, Khirallah, Smydra, Keith and Ponder 1999 from Rowe 2002)

"If I had 60 minutes to solve a problem and my life depended on it, I'd spend 55 minutes determining the right question to ask." – Einstein (Einstein's secrets 2008)

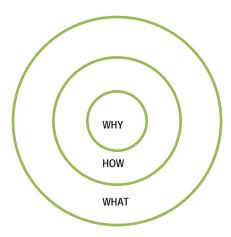


Figure 1: Simon Sinek's Golden Circle

What Simon Sinek has been able to do is capture this idea, which has been around for millennia, in a way that is simple, easy to understand and actionable - The Golden Circle - What we do,

Whoy weedto it, Tared what level is responsible for all rational and analytical thought and language. The problem is that what and how do not inspire action. Facts and figures make rational sense, but people do not make decisions purely based on facts and figures. It is the why that is responsible for all emotions, human behavior and decision-making (Simon Sinek 2014). Designers so far have been more interested in the what questions than the why of a context. With the current shift towards a human-centered approach and sustainable solutions, the social and environment framework within with design must function has become more absolutely critical.

This process of understanding a situation and designing an appropriate solution that better meets end-user's needs and desires is quite inspiring and magical. And sharing this insight with students, as they go along discovering and analyzing the important information in an attempt to find a suitable design solution is an exciting experience.

The project from here was divided into three phases

Understanding the WHY? - Identify one interpretation that excites you the most. Explore the opportunity, analyze the information and get insights. Develop an ability to understand the need for design intervention and factors that influence design solutions.

Exploring the HOW? Students set the scenario/ context of the issue/ situation and identify related communication design opportunities. Collect, write, draw, research and generate approaches that make it special. Document your working process using logbooks or sketchbooks.

Creating the WHAT? Develop concepts and create functional and validated design solutions for specific design opportunity area. Select appropriate media to share the idea. Validate the solution with your target audience. Deliver the final output

2.2 LOOKING AT THREE PROJECTS ATTEMPTED IN THIS MODULE

"Personal empowerment rarely comes with big, dramatic splashes," says Scott Boylston, "but instead usually sneaks up on us in the most unexpected ways, and through the most unlikely of individuals" (Fastcodesign 2015)

The experience of going through this transformation was filled with iterations, feelings of frustrations, failure, mental block, helplessness, dejection and wondering why do mentors ask so many questions, what do they want from us, 'why' do we need to research so much, what will people think when we keep going back to them? As the weeks progressed and the strategies began to take shape students became more assured and convinced to seek clarity of 'why,' discipline of 'how' and consistency of 'what' and the great impact it can make. The process adopted by three students is highlighted in the illustrations that follow.

Student Project 1: SOCH (a thought)

Aim: To create awareness towards gender equality and instill respect towards women. To design an experience for middle class youth, majority of age group 15 – 35 years residing in Delhi/NCR to have an emotional connect and realization to the current cause i.e 'Sexual Abuse'.

Student Project 2: LOO-NEAR-YOU

Aim: To bring about a change in the perception/ mindset of people to use public toilets instead of taking a leak in open spaces in cities. The intent is to create a responsible network to provide people in need with directions to nearby clean public toilets. It will also give information on efficient ways to use a public washroom.

Student Project 3: CARE

Aim: To help the partially blind/ conditionally blind (who have experienced vision and then lost it due to an accident or a medical condition) to overcome frustrations, perform their daily life routine activities on their own and rebuild their confidence, sense of pride and place in the family.

FROM MAKERS TO CHANGEMAKERS

REALITY Creating/Serving the purpose Future collaboration participation, self defence classes actor-director Farhan SUSTAIN installtions/campaign Change must be backed up by a legal system that works with Influence those who with 'Mard', an to become change Community experience the initiative by victims and their families and not Akhtar. To pay homage to the brave girl and remind crime, which needs to By creating interactive installations at various public places in Delhi, experience and realize how women feel when they are eve-teased/ sexually abused. horrendous act of CHANGE along the metro line, people of the to make people now stop! experience for middle class youth, majority of age group 15 – 35 years residing in Delhi/NCR to have an and realization to the emotional connect It would be a 16 day exhibition/experience presence where there ACTION pressing cause i.e supported by online tions/stalls etc. and 16 live events each day To design an would be different Sexual Abuse' Empowerment for people to get involved. kiosks/installa-MOTIVATION and its impact is likely deterrent than shame. Realization of an act Need to sensitive not don't raise their voice while witnessing such incidents. just the perpetrators Exploring/Making it special of sexual abuse but also onlookers who to be a stronger ACCEPTANCE stigma in our society.
Right now its looked upon with far too much indulgence. Its time that sexual abuse becomes a Need to create gender **AWARENESS** equality and respect towards women by police help, and need building support system for women self-defence classes, with confidence building sessions, for legal escalation. Understanding/Setting the purpose To create awareness to instill gender equality and respect towards To put a stop to sexual To stop victimizing the To confidently step out To defend oneself in and report the crime and identify the extreme situations Need to change the Empathy culprits. male-ego boost; blame the girl; victim suffers in isolation and Casual approach; victim's parents feel feels victimized further by society; realize how women feel when they are rape on the rise in the Why don't people Why are instances of CONCEPT youth disconnected Does education make Why is the average capital and the ashamed. eve-teased? people more/less gender-sensitive? rom the issue? country? The 2012 Nirbhaya case involved a rape and fatal assault that occurred on 16 December in Munirka, private bus in which she was travelling with a male friend. physiotherapy intern, was beaten and gang raped by six men in a happened when a 23-year-old female South Delhi. The incident Silence 20 interpretations Selecting Topic əsude leuxəs teniaga əvitaitini nA Sexual Abuse

Figure 2: Student Project 1

PRODUCT TO SYSTEM

* Icon made by Freepik from www.flaticon.com

FROM MAKERS TO CHANGEMAKERS

CONCEPT

► REALITY

	Creating/Serving the purpose	Collaborate with the Blind Relief Association in Delhi/NCR Association in Delhi/NCR also sign up to become volunteers for other people. The volunteers will interact and share information's tones etc. with both the visually imparied and the family members to create a positive and supportive environment at home. A website to reach out to volunteers for this service and visually imparied people and proposed.
	Creating/Servin	Volunteers will coordinate comprehensive range of services which enable the blind to maintain their independence and self-sufficiency in the community. An empathetic support system will win their confidence, into plus encourage them information, visus that share information, visus stories and laughter. The Awebsit to volunt service an impaired their family proposed.
	WHAT	Proposal for a service in collaboration with NGOs working in this area, where volunteers will be trained to aid a visually impaired person in performing simple tasks that they are likely to find difficult because of limited movement. I twould provide mentoring for dividuals who in turn uld guide the creted person and ir care-givers on a ety of blindness cs.
	ding it special	The real problem of blindness is not the loss of eyesight, but the misunderstanding and deposon has proper training and opportunity, the frustration with the impairment can be educed.
	Exploring/Making it special	ACCEPTANCE be The volunteers would be trained in a special simulated nerwinement so they can experience first hand what the world for a visual impaired person would be like. This sensitization would help them to identify the needs of the affected person. Breaking down everyday tasks into simple steps and a routine, life can be made easier for the silind.
		AWARENESS They would be also be sensitized through video tutorials about the physical/emotional needs of the person and the family members. An understanding of the nature of different avial impairments with and how each and how each the highlighted. Breewell and the simple with would be the highlighted.
	ing the purpose	he project's aim was on the project's aim was on the project's aim was a concerning to the project's aim was being the project's are of the project of the p
	Understanding/Setting the purpose	BEHAVIOUR People who are blind or have low vision are special needs for terpreting their vironment. I learning or teh to learn is ted to learn is ted to learn is ted to liment, but conally from the form a support or land support or learning or teh liment, but wers. by is the key to bay is the key to bay is the key to but their fears, The numents and build their fears, The numents and billing the liments and build their fears.
		There are many initiatives which work or the cause of the filled. However very wo fur would have ought about those to have experienced to have experienced on and then lost it to an accident or a lical condition. The cose of this project the ligh blind cose of this project the ligh blind ions and themselves to conce the weryday.
Light	20 interpretations	An initiative for the cause of visually challenged conditions for the perpentations and the perpentations are a conditions.

Figure 3: Student Project 2

PRODUCT TO SYSTEM

* Icon made by Freepik from www.flaticon.com

FROM MAKERS TO CHANGEMAKERS

CONCEPT

REALITY

Creating/Serving the purpose construct over 5,000 services for a hygienic The Project can work in association with the Collaborate with corporates that unveiled plans to SUSTAIN public toilets and provide efficient experience at a recently launched 'Swach Bharat Abhiyan' by the nominal fee. The perception of people that public Ratings of the public toilets in the mobile confidence in people taking the leak in open CHANGE In the future looking at loos are all dirty. People use public an overall culture of toilets instead of app will instill cleanliness. spaces. Designing a mobile app which will find you a hygienic toilet seconds. The app will services provided by the washroom on the Strips for these special washrooms informing scale of 1 to 5 stars. efficient ways to use a near you within ACTION let you rate the Designing Comic people about the public washroom. Empowerment MOTIVATION being part of larger system/endorsed by efficient and viable Exploring/Making it special Safety because of A cleaner city environment. A system that is corporates and participation. community ACCEPTANCE Access of information debate to the forefront instead of being a taboo subject. Ease and prolific use Humour brings the of apps is on the increase in India. AWARENESS When you are on the move and need to you may not be aware of clean public toilets urgently use a toilet, in your vicinity that you can access. This project will create a responsible network clean public toilets. It efficient ways to use a directions to nearby to provide you oublic washroom. information on will also give Understanding/Setting the purpose create a change in the perception/ mindset The Project aims to public toilets instead Need to say IT IS NOT of people to use of taking a leak in open spaces. Empathy open from childhood behaviour and men in BEHAVIOUR Taking a leak in the perfectly okay to do becomes a habit/ to take a leak publicly? Why do people prefer Why do people not use public toilets? particular find it Why do people not look for public toilets when in urgent need? Lack of cleanliness & Men taking a leak in bladder or find a clean CONTEXT diffcult to hold their take a leak in the open becuae of lack of clean Mothers helping kids the open on the Women finding it habit that gets carried public toilets. This leads to instilling a hygiene. public toilet. roadside. Change forward into 20 interpretations adulthood. Selecting Topic An initiative to provide clean public toilets Cleanliness Too Near You

Figure 4: Student Project 3

* Icon made by Freepik from www.flaticon.com

3. SUSTAINABILITY OF SOLUTIONS

3.1 EMPATHY

In a changing, technology-driven and connected world, hierarchies are flattening and power decentralizing to give rise to individuals that increasingly want to voice and manage their problems. These problems however are socially, economically and ecologically interdependent thereby forcing people to think collaboratively first as a community with common concerns, and then in turn as communities with interlinked concerns.

Ashoka (2015), one of the pioneering organizations on social entrepreneurship outlines that "empathy is one of the most important skills," to navigate this new complex landscape. "Every individual needs the skill of empathy to succeed. Empathy is foundational to the ability to resolve conflict, to collaborate in teams, to align interests, to listen effectively and make decisions where there are no rules or precedents, to solve problems and drive change."

As design students conceive projects that move communities to think and act for the betterment of their neighborhoods and beyond, engagement with people through "learning and listening in the field, before speaking and designing": is becoming a critical skill for them. Once the designer begins to view people not as "unfortunate obstacles to change plans" but as "key elements in these plans." (Herold and Fedor, 2008) and develops the will to reach out to the community, the building of effective solutions is seamlessly supported by a deep understanding and respect for that context.

In each of the projects students had a direct and personal engagement with their audience to identify their thoughts, feelings, concerns and motivations. For SOCH tools such as DILO's (with young women in Delhi), story collection (of eve-teasing and sexual abuse in public spaces) and personal interviews were carried out to understand the underlying issues better.

In the CARE project the student spent several days both with the community at the local Blind Relief association in Delhi, as well as in the home of a visually impaired person - observing, listening and interviewing both the affected person and the people supporting the affected person to identify needs that were both physical and psychological in nature.

For the LOO-NEAR-YOU project, the student did personal interviews with people out on the street on a daily basis to identify reasons for not using public loos, as also testing what tools/features/media would help them to form and support the information network of public loos.

The understanding gained in these preliminary exercises by the students formed the basis of the responsible content generation and design solutions in their projects.

3.2 FROM PRODUCTS TO SYSTEMS

Design thinker M P Ranjan, a strong proponent of Systems thinking in design states "Design exploration extends beyond the object and communication strategy to business models and global trends and perspectives" (Ranjan 2013).

Starting from an understanding of the people and their concerns, designers have the ability to put information in context, drawing inferences, relate information to one another and finally the creation of 'meaningful' systems and experiences. Designers are therefore seeking opportunities to participate in the initial planning of the projects, and use Design thinking, which at its roots questions the 'Why' of a problem. Authoring strategies and solutions that have a life beyond the making of an isolated product, is empowering for design students wanting to engage their world critically through insights, planning and making.

This process is embedded in the module aim of Content Design where students are encouraged to reflect on diverse knowledge base, and communicate, with reasons, their strategies and solutions across different media disciplines.

In SOCH, the student envisaged a campaign of a series of installations and events that would span across 16 days leading to the final event on the 16th December as a mark of respect, remembrance and realization. The choice of venues (high footfall public places within or near important metro stations in the city) and the content of each of the events was critical to the success of the campaign.

CARE, ensured that the solutions were not focused entirely on the 'training' for the visually impaired, but also building support system around the affected person through a sensitization program plus website and CD for the family/care-givers/volunteers.

LOO-NEAR-YOU proposed a mobile app that would track and advise on a nearest public loo to a user on the road, but would additionally become a responsible network with participation from the community using tools such as ratings of public loos, comic strips for using toilets in a civic way and suggesting technology for disposal of bio-waste.

3.3 STUDENTS MADE THE TRANSITION FROM MAKERS TO CHANGEMAKERS

Design institutions are negotiating a future of education that is not about giving students the skills and knowledge to fill existing jobs, but to create new ones (Falck 2014). While this approach would lead to a more robust economy of responsiveness and innovation, at another level it is challenging the students for responding to change – the ask is for strategies in sustainable development, which is at the intersection between economic, social and environmental concerns.

Young change makers, from culturally and geographically diverse backgrounds, are purposing their skills towards serving the larger good in the society. Besides the making of products and systems there is convergence "toward a range of initiatives whose purpose is not to offer immediate solutions to problems, but to spark interest in these areas and show, often paradoxically or provocatively, that there are different ways of seeing and resolving them." (Manzini 2015)

Communication designers in particular, adept to stimulate, energize and educate the human mind, can harness their skills to change behavioral patterns and possibly the more complex human mindset. This requires systems thinking skills to conceive and realize the design solution, as also strategic skills in determining how and who to collaborate with, such that

the design and its impact is sustainable. As J.Toy defined the goal of socially responsible design as "enabling a community to take on a project and to create a life of its own after we've left." (Lasky 2013)

In addition to installations that would sensitize the youth towards sexual abuse, SOCH proposes self-defense classes for women during the 16-day campaign to help them standup to abuse. The project also sought to collaborate with MARD, an initiative by a Bollywood actor to voice concerns of violence against women.

LOO-NEAR-YOU proposes to align itself to the Prime Minister's call for 'Swachch Bharat Abhiyan' (Clean India Movement), and also collaborate with private organizations that unveiled plans to construct over 5,000 public toilets and provide efficient services for a hygienic experience at a nominal fee.

CARE plans to collaborate with the Blind Relief Association in Delhi /NCR, utilize social media for promoting the cause and getting volunteers and funds to make the project live.

4. CONCLUSION

Design education builds our confidence that if we get to the core of any issue (real, varied or complex) we can transform the world, however difficult the challenge may be. If we realize the need and take responsible initiatives to pursue common good, we can contribute to our society. But the change starts within – when we make it personal, we make it important; and therefore act on it with complete passion.

India is a young country with more than 50% of its population under the age of 25. This generation believes that they have the right resources, energy and passion to bring significant change; all they need is guidance and support in the right direction. We have recently experienced the power of Indian youth where online activism built quick connections with likeminded, which then translated into real world movements.

No idea is small if we study and understand the issue and then take on the responsibility to make a difference through various initiatives. A strong belief and initiating simple approaches can lead to big dynamic changes in the future. Designers are poised to play a catalytic role in the defining and developing of communities that create positive and sustainable impact. It's time for the Maker Movement to become the ChangeMaker Movement and technology can lead the way for digital natives where online activism translates into real world stimulations and vice versa.

RFFFRFNCFS:

Kruse S. D. & Louis K. S. (2009) Building strong school cultures: A guide to leading change, Thousand Oaks, CA: Corwin.

Crichton S. (2014) Leapfrogging Pedagogy: A Design Approach to Making Change in Challenging Contexts, The Electronic Journal of e-Learning Volume 12 Issue 1 2014, (pp3-13), available at: www.ejel.org [accessed 10 October 2015]

Rowe (2002) Environmental Literacy and Sustainability as Core Requirements: Success Stories And Models, available at: https://www.lanecc.edu/sites/default/files/sustainability/rowe.pdf [accessed 5 October 2015]

Sinek S. (2014) Start with Why, available at: http://pssp.co.za/lead/start-with-why/ [accessed 25 September 2015]

Brown T. (2008) Design Thinking, Harvard Business School Publishing Corporation, Available at: http://www.unusualleading.com/wp-content/uploads/2009/12/HBR-on-Design-Thinking.pdf [accessed 10 October 2015]

Want To Help Kids Solve Problems? Have Them Design Their Own Solutions; available at: http://www.fastcodesign.com/1672941/want-to-help-kids-solve-problems-have-them-design-their-own-solutions [accessed 10 October 2015]

About Ashoka's Empathy Initiative (2015) available at http://empathy.ashoka.org/about-ashokas-empathy-initiative. [Accessed 13 October 2015]

Changemakers Related Positive News - The Better India (2015), available at: http://www.thebetterindia.com/topics/changemakers/. [accessed 13 October 2015].

Think It Up - Start Empathy (2015), available at: http://startempathy.org/ [accessed 5 October 2015]

Einstein's secrets (2008), The Ten Day Turnaround, available at: http://thetendayturnaround.com/einsteins-secret [accessed 5 October 2015]

Falck L. (2014) Beyond the Maker Movement: How the ChangeMakers Are the Future of Education, available at: http://www.forbes.com/sites/singularity/2014/07/29/beyond-the-maker-movement-how-the-changemakers-are-the-future-of-education/. [Accessed 5 October 2015]

Ranjan M. P. (2013) Reflections on Design Education: Futures and Trends - Slides Show - Jaipur 2013, available at:

https://www.academia.edu/4052976/Reflections_on_Design_Education_Futures_and_Trends___Slides_Show_-_Jaipur_2013. [Accessed 11 October 2015].

Manzini E. & translated by Coad R. (2015) Design, When Everybody Designs: An Introduction to Design for Social Innovation, USA: MIT Press, Available at:

https://books.google.co.in/books?isbn=0262028603 [Accessed 11 October 2015].

Lasky J. (2013) Design and Social Impact, Smithsonian Institution, New York, available at: http://scua.library.umass.edu/digital/mums686/mums686-Design-and-Social-Impact.pdf

David Herold, Donald Fedor (2008) Change the Way You Lead Change: Leadership Strategies that REALLY Work, Stanford Business Books, Stanford University Press, April 23, 2010