University of Cincinnati

Date: 7/1/2012

I, David S Mierke, hereby submit this original work as part of the requirements for the degree of Master of Architecture in Architecture (Master of).

It is entitled:
project: spARCH: Igniting Design Thinking Through Architecture
How the Architectural Design Process can Inspire Social Entrepreneurship

Student’s name:  David S Mierke

This work and its defense approved by:

Committee chair: John Eliot Hancock, MARCH

Committee member: Jeffrey Tilman, PhD
I, David S. Mierke, hereby submit this work as part of the requirements for the degree of: Master in Architecture

in:

School of Architecture and Interior Design

It is entitled:

project: spARCH Igniting Design Thinking Through Architecture
How the Architectural Design Process can Inspire Social Entrepreneurship

This work and its defense approved by:

Chair: John Hancock
Jeff Tilman
**The Issue**

As the world continues to expand and business partnerships become ever more global, CEO’s and project managers are consistently looking for new ways to innovate and stay ahead of their competition. Likewise, the most pressing issues such as homelessness, poverty, and global warming still plague our world necessitating a change of approach in order to reverse these dilemmas.

While the world waits for the next invention, advocates of design are calling for a revolution and a new way of thinking. Consistently thought of as “cosmetics” and “final touches,” design has been regulated to the confines of grade school arts-and-crafts. However, those who understand the true potential of design and design thinking realize the creative and innovative potential the profession offers. As corporations and the real-world ring the bell for original, innovative, and out-of-the-box employees, schools across the country are eliminating student’s creative outlet, art class, and instead are delivering soldier-like droids whose capabilities are pre-determined by standardized tests.

**The Response**

In order to combat the test-driven principles of the education system and display the true potential design has, a new method must be developed. A method rooted in social entrepreneurship in order to pass along the process, tools, and techniques that will help any individual look beyond their scope of the world and not only see the potential, but begin to attain it.

Project: spARCH (pronounced ‘spark’) is a high school design studio that teaches 25 inner-city high school students in Cincinnati, Ohio about the power of design thinking through architecture. Hughes STEM High School is a non-selective inner city public school that serves an at-risk population, primarily African-American, and focuses on helping students apply their education to the real world through business and community partnerships in the Greater Cincinnati Area.

By following a process that focuses on breaking down the creative barrier and opening student’s minds to new ways of thinking, students will be taught how creative problem solving, critical thinking, and out-of-the-box approaches can extend beyond the classroom and apply to situations in their own lives.

With a series of guest mentors from professional firms around the Greater Cincinnati Area as well as local organizations heads and faculty members from the University of Cincinnati, students will be able to obtain guidance, inspiration, and first hand knowledge about how the skills taught in this course can be applied beyond the typical “walls” of design and the classroom.
project: spARCH: Igniting Design Thinking Through Architecture
How the Architectural Design Process
can inspire Social Entrepreneurship

A thesis submitted to the Division of Research and Advanced Studies of the University of Cincinnati in partial fulfillment of the requirements for the degree of:

Master of Architecture

in the

School of Architecture and Interior Design
College of Design, Architecture, Art and Planning

2012

David S. Mierke
Bachelor of Science in Architecture; University of Cincinnati, 2010

Committee Chairs:
John Hancock, Professor
Jeffrey Tilman, Associate Professor
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Who thought she was here to talk me down off a ledge, but instead took the leap with me.

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Who took a chance on something that could be amazing, I hope it didn’t disappoint.

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Who always kept his reservations to himself while providing constant encouragement and support.

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Who thought I was crazy but kept agreeing to meet and assist me.

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Who, with open arms, welcomed us into his classroom and his world.

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Who opened their doors to outsiders so that we could inspire from within.

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Who, despite not always knowing what I was doing, kept supporting and pushing me forward.

To All Those Unmentioned
Whose support, encouragement, participation, and generosity made all of this and more, a reality.
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What is design? This simple question has been the focus of books, interviews, magazines, and films for well over a century. Design has frequently been used as a noun, verb, and adjective by people in a variety of professions, however in most recent times, the question has begun to shift to a more specific question: What is GOOD design?
As designers, we are trained in the visual & kinesthetic arts. Visual display of information is our preferred method of comprehension & understanding. For this reason, I have developed a mind-map of this thesis content & information. For those who feel they align with the visual method of learning, I hope this graphic representation will be appealing & act as encouragement to jump to sections of interest to the reader.

Life is chaotic but it is in this chaos which we find wisdom & understanding. Embrace chaos & embrace your true self.

Entrepreneurial Success

What? Why? How?

Social, Profit, Planet
What is design?

This simple question has been the focus of books, interviews, magazines, and films for well over a century. Design has frequently been used as a noun, verb, and adjective by people in a variety of professions, however in most recent times, the question has begun to shift to a more specific question:

What is **GOOD** design?

To many people, the success of a particular design (whether product, program, service, etc.) depends on how many magazines it is featured in. Yet there are those who believe success is based on more than mere accolades or bottom-line profitability, but should also consider how many lives it has touched. To these people, the “bottom-line” isn’t enough. Rather, the definition of “good” must be expanded to include community and environmental triumph for a design to truly be considered “successful.” For it is within this new understanding that organizations who value the impact and usability of a design will find the most success. This new vision will be led by the citizen designer who realizes the need of social entrepreneurship in today’s business environment in order to stir progress and a shepherd a new method of thinking.

Likewise, as people begin to understand the importance of social entrepreneurship and the benefits it can have on a company, people, and the world, advocates of design thinking are showing how the design process can produce creative and innovative solutions to problems that extend well beyond the typical
“walls” of design. From design professors to business managers to company CEO’s, people from all professions are beginning to see the benefits of design thinking. In its simplest form, the design process seeks to answer questions and solve problems by using a unique, innovative, and creative approach that utilizes various perspectives in order to identify the most appropriate solutions.

In architecture, the design process follows a method of continuous research and analysis coupled with a series of ideation and redesigns until a final outcome is developed. The architectural design process has gone through significant changes and reinterpretations through the years but has continued to use similar approaches in its process: architects and designers take into account a number of variables, including social and cultural influences, site and environmental issues, as well as political and economical constraints. Though all of these factors are typically taken into account during the design process, they are sometimes lost in the end design, resulting in socially UN-conscious buildings.

Which leads to the question:

Can the architectural design process be used to promote social entrepreneurship?

This thesis seeks to test this question in order to develop a better understanding of the scope and applicability of design, architecture, and design thinking as a method towards greater social entrepreneurship. In this document, this argument is divided into two parts: the What? and the How? The former, looks to clarify and define what the term “social entrepreneurship” means and how it has been applied in various models. By using a case study approach, the various forms of this concept will be examined and analyzed to identify how different companies and organizations view and participate in social entrepreneurship. The terms social-giver, social-doer, and social-educator, will be introduced as a way to identify and differentiate the various methods and goals under which each company or organization operates.
The How? of this thesis, will focus on the social-educator concept, and address the three main types of learning styles (visual, auditory, kinesthetic) in order to identify and understand the various methods in which people learn. The purpose of describing and analyzing each style is to determine where design thinking and the design process ultimately coincide. Once this is recognized, a journey through the elements that support and comprise design thinking will undergo thorough analysis. These analyses will examine the method, tools, environment, and impacts of design thinking and its process. Within this section, the relationship between education, design thinking, and social entrepreneurship will be continuously emphasized in order to display the interdependence among them.

The examples, methods, principles, and practices described in this document stem from a desire and interest to impact the world through design. Social entrepreneurship is a way to ensure this impact is both positive and substantial.

The second half of this document will consist of a thorough explanation and analysis of the design studio that was developed and implemented at a local high school. The analysis will consist of detailed class descriptions, guest, student, and instructor profiles, studio goals and pedagogical influences, final products and outcomes, and daily successes, setbacks and recommendations. This portion of the document will be used as a resource for future endeavors that focus on a more hands-on, project based curriculum in schools.

The examples, methods, principles, and practices described in this document stem from a desire and interest to impact the world through design. Social entrepreneurship is a way to ensure this impact is both positive and substantial. Likewise, the design project described in this document is a way to ensure this positive impact is not only carried on, but is enhanced in the generations of would-be architects and designers. The overall purpose is to provide an insight into the powerful impact both architectural design and social entrepreneurship have on the world today and the potential they have to create meaningful change for tomorrow.
SOCIAL ENTREPRENEURSHIP
As the world’s urban cities become more populated and the demand for better living standards increases, the concept of social entrepreneurship is becoming equally attractive.
Social Entrepreneurship

“At the most basic level, design and architecture are activities that affirm life”
(“Design for Human Scale, 1-2).

In 1983, Victor Papanek wrote these words in a book entitled, Design for Human Scale (“Design for Human Scale, 4). In this book, Papanek stresses the importance of instilling human use and enjoyment in all aspects of design. Only then, he says, can the relationship between design and people truly begin to create an environment that can “enrich our lives in every aspect” (“Design for Human Scale, 36-50).

Papanek was a visionary during the time when mass production and postmodern eccentricities were the norm. His message still holds true today as our society finally begins to accept design as more than just the art of form and functionality, recognizing the importance of its full impact on the world.

In her book titled, Design Revolution, Emily Pilloton presents one of the best definitions of social entrepreneurship:

“Social entrepreneurship in its most basic definition, is the application of entrepreneurial business practices and principles to organize, create, and manage a venture that both incites social change and makes a profit for some or all stakeholders. The goal of social entrepreneurship is to empower individuals, new enterprises, and economies through socially beneficial business ideas. In addition, the bottom line, which traditionally refers only to financial returns, is expanded to what is referred to as the ‘triple bottom line’: people, planet and profit (Pilloton, 10).”
In her efforts to define the true aims of social entrepreneurship, perhaps her biggest contribution comes in her final line: “people, planet and profit.” In order to understand how social entrepreneurship can help guide and affect the outcome of any given business, project, or idea, it must be understood that these three components are simultaneously interdependent on each other and in continuous interaction with one another.

The term “social entrepreneur” was first used in literature in the late 1960’s and 1970’s. Although it was typically used to describe various social movements, “social entrepreneur” has a rich and relevant history (Banks, 12). Historical figures, including Florence Nightingale, founder of the first nursing school and developer of modern nursing, as well as a more recent entrepreneur, Blake Mycoskie, founder of TOM’s Shoes, demonstrate the rich history of social entrepreneurship (Mycoskie, 20). While social entrepreneurship has been relevant for several decades, it is just now beginning to be understood as something beyond a mere “charitable donation,” and is being utilized to increase the worth of everything around us.

As the world’s cities become more populated and the demand for better living standards increases, the concept of social entrepreneurship is becoming equally attractive. Companies as large as Wal-Mart or Ford Motor Company are beginning to understand that putting up a facade is not the same as constructing a building. “Conscious capitalism is about more than simply making money, it’s about creating a successful business that also connects supporters to something that matters to them, something that has great impact in the world (Mycoskie, 32).” In his book, Start Something That Matters, Mycoskie stresses the fact that our “socially connected, smart-phone using, photo-shopped world must do more than create the allusion of social consciousness” (Mycoskie, 32). People today are too bombarded with advertisement images and are equally too well connected. In terms of architecture, as citizens return to cities and urban living, it is the character and substance of a place, not the marketing, that makes a place attractive.

According to Papanek, in the past “architects have resolutely turned their backs on human need, providing us with ‘conceptual’ buildings and post-
modern eccentricities, [where] much design and architecture is now a game played by an increasingly small elite, with a complete disregard for people” (“Design for Human Scale” 18). Where Papanek argues that architects and designers have become elitists, Steven Heller, in his book *Citizen Designer: Perspectives on Design Responsibility*, makes the argument that in order for design to be a force for the betterment of society, it is “paramount that the designer identifies himself as a citizen” (Heller, 21). Within his definition, a citizen designer is considered to be one who actively engages with the community in which he is designing, as part of the whole rather than regarded as an “expert.”

The concept of “citizen designer” has been gaining acceptance in the field of industrial design and other similar design professions, but has unfortunately been slow to connect in the field of architecture. Pilloton encourages designers to become “better listeners and collaborators, learning from the tinkerings and expertise of unexpected partners” (Pilloton, 18). However, it could also be said, that for as many different partners as there are in the world, there are just as many ways to collaborate. Within this idea, there are many different ways to promote social entrepreneurship, ranging in a variety of scales and impacts. The ways in which social entrepreneurship can be promoted can be relatively situated into three categories: social-giver, social-doer, and social-educator. While each category addresses each aspect of the triple-bottom line (people, planet, profit), as will be shown, there are various ways in which companies and organizations approach social entrepreneurship.
Social-Giver

“Altruistic concern for human welfare and advancement, usually manifested by donations of money, products, or services to needy persons” (“Philanthropy”).

The concept of the social-giver can be related to the 21st century definition of a philanthropist. As defined by the Merriam-Webster definition above, the social-giver focuses his or her efforts on supporting individuals, organizations, or causes that promote the health and quality of life for all of humanity. As David Rockefeller, patriarch of the renowned Rockefeller family, once said, “Philanthropy is involved with basic innovations that transform society, not simply maintaining the status quo or filling basic social needs that were formerly the province of the public sector” (Bratcher). Since its origins in ancient Greek playwrights, the idea of giving for the love and promotion of humanity has consistently been used as a way of giving back to ones’ society (Banks, 12). In today’s terminology, the concept has been slightly reinterpreted to include the social scientific and humanitarian aspects of the private initiatives for public good in order to differentiate them from other forms (Little, “Understanding Society”). In other words, besides the philanthropic motivation for any social entrepreneurial endeavor, there is typically some form of epistemology or fundamental value driving the activity, whether it be a company manifesto or an individual moral principle.

As the definition suggests, the social giver is any individual, company, or organization that supports causes through a series of public or private donations. These donations are often manifested as charitable monetary contributions, products, or services that could include everything from clothing and children’s toys to foundation grants and school tutoring. These donations are not restricted to size or impact as each can be given by a single individual or a large, multinational corporation. The motivation behind the social-giver is to give back or support a cause no matter how large or small the donation might be.
While the social-giver is not restricted to giving only money, products, or services, for the sake of this argument, a distinction is being made between the donation of “goods” and the donation of things such as physical labor or time. In this respect, this differentiation is not meant to compare or contrast the two in order to determine which is “better” or “does more,” but rather to establish an understanding between various models of donation. In this way, it will also become easier to identify how the triple-bottom line aspects of social entrepreneurship are evident in the ensuing case study analyses. These case studies will serve as a basis for understanding how an individual, company, or organization focuses its efforts towards social entrepreneurship and how to identify its various forms and methods.
Social-Doer

“It is easy to sit up and take notice. What is difficult is getting up and taking action”
(Al Batt).

For those that find satisfaction in working with their hands and taking a more physical and active approach to social entrepreneurship, the social-doer takes the idea of “giving back” quite literally. As the quote by writer Al Batt above suggests, the role of the social-doer can be equivalent to that of an active volunteer who is working in their community or abroad. As John Holland, former professor of sociology at Johns Hopkins University, suggests in his “Occupational Themes” personality study, those people who are classified as a “Doers,” “prefer to work a problem through by doing something, rather than talking about it.” Those people, also known as “Realistic” in Holland’s study, feel the best way to promote the health and quality of living for all humanity is to be physically present next to those who need help. “Realistic people are no-nonsense, down-to-earth individuals who enjoy working with their hands...and value things that are tangible” (Holland, 15).

The social-doer, just like the social-giver, can be any individual, company, or organization that donates their time and physical effort to help people or places in need. This physical donation ranges from corporate volunteer days to extensive disaster relief efforts that continue for years. In either extreme, a level of empathy is a key aspect in the role of a social-doer, where the donation of time and physical labor typically comes from the need to connect on a more emotional level. This is not to say the social-giver is completely devoid of emotional connection with any specific cause, but rather empathy is not the predominant attribute that characterizes a social-giver. Instead, social-doers find a need to connect in more tangible ways in order to promote a more empathetic relationship with those they help. These relationships can be seen in a variety of projects and efforts around the world that extend for any length of time.
Similar to other categories, the social-doer can be invested in each aspect of social entrepreneurship to various degrees. People from a variety of backgrounds and with different experiences can participate in more “hands-on” entrepreneurial efforts if they feel called to do so. As British writer and commentator Ben Edwards once said, “Activism can be defined as activities engaged in by individuals to change their or other’s situations” (Holland, 18-21). As a method, the social-doer provides a hands-on approach to social entrepreneurship for those whose desires and overall personality require a physical connection. In the end, the ultimate goal of a social-doer is to engage with others not only in physical or concrete terms, but also intuitively through compassionate interaction and understanding.

...a level of empathy is a key aspect in the role of a social-doer, where the donation of time and physical labor typically comes from the need to connect on a more emotional level.
Social-Educator

“When you cannot express it, your knowledge is of a meager and unsatisfactory kind”
(Lord Kelvin).

This quote by renowned British physicist and mathematician, Lord William Kelvin, presents the final model of social entrepreneurship: the social-educator. In introducing this term, it should be made clear that it is not in reference to the education of social life or the social studies of any particular area or culture, but rather to educating people on how to help better themselves and their surroundings. The social-educator seeks to teach those in need the skills necessary to help themselves, by offering them the tools they need through various forms of education. This type of education is a way for individuals, companies, and organizations to provide a lasting impact long after they have left.

While many aspects of the social-educator can be found in the social-giver and social-doer, there are vital differences that should be taken into account. Just as William Arthur Ward famed novelist once said, “The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires” (Jacobs, 32). The social-educator provides more than a service, as the social-giver might afford, but acts as a mentor to those he or she teaches. Similarly, the social-doer, while physically interacting with those in need, does not always have the skill set required to teach and empower others in an impactful way. These differences, while subtle, enable those people who decide to follow the social-educator model, an opportunity to combine the aspects of the social-giver with the social-doer in order to create something much more powerful.

Most companies and organizations that fall under this model tend to have the greatest balance of addressing the primary concerns of the triple-bottom line. Although each model has the capacity for a balanced relationship between
people, planet, and profit, more often than not, the social-giver or social-doer emphasizes only one or two of these facets. However, the social-educator, as it will be shown, provides a more rigorous and standardized method for focusing its efforts on each aspect equally. Regardless, each model is necessary in order to provide an opportunity for involvement by all. Again, to reemphasize an earlier statement, it was not the intention to compare and contrast each model in order to determine the “best,” but rather to encourage an appreciation and respect for each. The ensuing case studies offer examples of each model in order to clarify them further.
The 5% Giver: Target

Who they Are?
Target is an American retail “discount” store founded by George Dayton in 1902 as part of the Dayton Dry Goods Company. Headquartered in Minneapolis, Minnesota, and ranked as the second-largest discount retailer in the United States, the company is currently ranked number 33 on the Fortune 500 index. With over 1,700 stores across the country, “Tar-zhay” is one of the most recognizable brands in the United States and continues to be a leading innovator in its brands, products, business practices, marketing, and philanthropic endeavors (“The Target Family of Sites”).

What they Do?
As part of its corporate mission since as early as 1918, the corporation has continuously looked for ways to give back to the community. With its commitment being strengthened in 1946, the company’s management formally regulated that 5% of its total income would be put towards corporate responsibility, well above the national average of 1.3% by other corporations (Bratcher).

With over $3 million dollars each week being donated to organizations and programs that support education, arts, communities, law enforcement, and
several other areas, Target is consistently ranked as one of the most philanthropic companies in the United States according to Fortune magazine (Bratcher).

**How it Relates?**

While their corporate responsibility policy incorporates a series of programs and initiatives that include volunteerism and physical participation in community events by its employees, Target is most impactful through its funding and donation of programs and initiatives. Its 5% giving policy has helped fund several new school and law enforcement programs that have helped purchase school supplies, equipment, and other items. Target has also been known to offer its stores to local disaster relief organizations as make-shift headquarters providing water, flashlights, and other necessary products in addition to the use of space. While all of the initiatives and non-profit organizations Target helps to fund, the company is still a for-profit company and therefore tends to put a larger emphasis on the economic aspect of the triple-bottom line. In its corporate policy objectives, Target states one of their objectives is about, “Ensuring the ongoing health and strength of the communities in which we operate through financial support of education, arts and social action organizations, volunteerism, and respect for our physical environment” (“The Target Family of Sites”). As a large, multi-billion dollar corporation, Target and its affiliates understand their role in the social entrepreneurial world and how they can best utilize its resources and do so appropriately.
A Company With a Mission: Ben & Jerry’s

Who they Are?

Ben and Jerry’s is an American ice cream company that was founded in Burlington, Vermont directly adjacent to the University of Vermont by Ben Cohen and Jerry Greenfield. The company began in 1978 in a renovated gas station and is known for their rich, flavorful ice cream, free cone-days, and social activism. Since it’s founding, Ben and Jerry’s has become an icon in American culture, with over 600 stores and several privately funded community programs across the company (“The Ben and Jerry’s Family of Sites”).

What they Do?

Since it’s founding, Ben and Jerry’s has believed that a company should be invested in the people that it serves. Throughout it’s history, the company has seen itself as a voice towards serving the common good of humanity stating it has three social goals: “Use our company to further the cause of peace and justice; Make ice cream that’s aligned with our values; Take the lead promoting global sustainable dairy practices” (“The Ben and Jerry’s Family of Sites”). These goals have led to social initiatives that have ranged from supporting gay marriage and child education initiatives, to protesting the Vietnam War and child labor. Ben and Jerry’s initiatives have been a strong presence in the world.
of social entrepreneurship and the company has been recognized as one of the most socially responsible small businesses in the country receiving several awards throughout the years (“The Ben and Jerry’s Family of Sites”).

**How it Relates?**

Ben and Jerry’s uses its products and position as a small business to support grass-root efforts of social entrepreneurship. While Ben and Jerry’s is still a for-profit company, it has always placed an added emphasis on the people and planet aspects of the triple bottom line of social entrepreneurship. Its concern for the environment and naturally produced ingredients is evident in its mission goals and in the policies it enacts. Ben and Jerry’s also supports education and advocacy projects through funding and donations to several programs and initiatives dealing directly with humanitarian efforts. As part of its mission, Ben and Jerry’s states its goal is to, “Operate the company in a way that actively recognizes the central role that business plays in society by initiating innovative ways to improve the quality of life locally, nationally, and internationally (through) economic and social justice, environmental restoration and peace through understanding” (“The Ben and Jerry’s Family of Sites”). In all, Ben and Jerry’s has used social entrepreneurship as a way of branding and identifying itself as a socially responsible company and advocate.
One for One: TOMS Shoes

Who they Are?
TOMS Shoes is a for-profit company based in Santa Monica, California, that sells lightweight shoes and accessories. The company was founded by Blake Mycoskie in 2006 and follows a “one-for-one” business model in which the company donates one product for every product it sells. Convinced that starting a for-profit business rather than a charity would create a lasting impact, Mycoskie started TOMS Shoes after a visit to Argentina. During his trip, he noticed the severe poverty in rural towns and how several of the health related issues, which were soil based problems, could be prevented with a simple pair of shoes. Since its inception, TOMS Shoes has given more than one million pairs of shoes during its annual Shoe Drops and has since expanded its product line to include eyewear and accessories (Mycoskie, 2).

What they Do?
As part of its mission, TOMS Shoes works with “Shoe Giving Partners” in countries around the world as a way to identify, locate, and distribute shoes to local community members. Since its inception, TOMS Shoes has sponsored Giving Trips in which staff, volunteers and other members of the TOMS family have the opportunity to visit and participate in distributing shoes to children in
the various countries in which TOMS operates. In this way, participants have the opportunity to experience the joy of giving while also gaining a deeper understanding of how TOMS and its Shoe Giving Partners operate (“The TOMS Shoes Family of Sites”).

How it Relates?

At TOMS Shoes, the company began with a need to fulfill a shortage of shoes in rural communities. Its emphasis on meeting this need has been the driving force behind the company, placing people at the center of its mission. Although TOMS Shoes is still a for-profit company, its operation is different than other major companies and corporations, in that it offers its customers a way to physically connect with those in need. The TOMS Giving Trips are a way for people to do more than support a company doing positive things by purchasing a product, but offers a chance to be an integral part in the company. This opportunity lends itself to a more active participation in the social entrepreneurship of the company and its mission. At TOMS Shoes, the company believes that, “Shoes, which enable children to attend school, are a fundamental resource for protecting children from rough terrain, infection and soil-based diseases which can cripple a child’s long-term potential” (“The TOMS Shoes Family of Sites”). TOMS Shoes is a unique model which actively engages customers and volunteers, providing a way to physically and emotionally connect with those in need.
Hands Up!: All Hands Volunteers

Who they Are?

All Hands Volunteers is a non-profit organization that provides relief assistance to victims of natural disasters around the world. The organization was founded in 2004 after the Thailand Tsunami as a way to connect willing volunteers with those in need around the world. Founded on the idea of “True Volunteerism,” All Hands Volunteers doesn’t charge any fees to volunteers, nor does it require a minimum time commitment or any specific skill set. Currently, All Hands Volunteers have worked with over 6,000 volunteers in over 40 countries and have raised an estimated net value of over $7 million dollars in volunteer labor.

What they Do?

The organization provides a way to connect volunteers with those in need. With no minimum time commitment, volunteers are only required to pay for their travel expenses to the project site, where in return, All Hands Volunteers provides shelter and daily meals. Projects are typically disaster relief efforts in which volunteers will participate in clean-up, community recovery, and reconstruction projects. All Hands Volunteers provides an opportunity for volunteers to help people in need through a physical, hands-on approach (“The All Hands Volunteers Family of Sites”).
How it Relates?

All Hands Volunteers operates by giving those people that are interested, a way to physically and emotionally connect with people in need. For this reason, its method places the organization under the social-doer category of social entrepreneurship. Its ability to place people in the field and offer hands-on opportunities without extensive application policies is a unique way for people with time commitments or financial responsibilities to volunteer. As an organization, All Hands Volunteers, “Provides hands on assistance to survivors of natural disasters around the world, with maximum impact and minimum bureaucracy” (“The All Hands Volunteers Family of Sites”). The organization’s approach to social entrepreneurship creates the necessary vehicle for those who want to do more than donate money or products, helping to produce tangible results and benefits in communities that need it most.
**Design. Build. Transform.: Studio H**

**Who they Are?**

Studio H is a public high school program started in 2010 by Project H founders Emily Pilloton and Matthew Miller. Situated in Bertie County, North Carolina, Studio H is a one-year program offered to Junior-year students that offers an introduction to design and an opportunity to build real-world projects. The program walks students through the design process from sketching and site analysis, to model making, construction drawing, presentation, and finally construction and assembly. Studio H works with local organizations and government officials to enable students the opportunity to build real-world projects that have a real impact in their local community (Schwartz).

**What they Do?**

At Studio H, Pilloton and Miller use the design process as a method to teach students how design and design thinking can be used to develop creative solutions to everyday problems. Studio H maintains the belief that by offering students an alternative to typical education programs, it can provide a new type of learning that promotes self-confidence, active citizenship, and positive change. Its methods and mission are based on hands-on, real-world scenarios that provide inspiration and empowerment for students to develop new perspectives and creativity in order to become active, contributing citizens in their community and the world (Schwartz).
How it Relates?

Although it is rooted in design and design thinking, Studio H, at its core, is an education program. Through education, Studio H seeks to impact communities and student’s lives in a way that not only presents a new way of thinking about problems, but also offers the tools to design solutions on their own. Since the projects are based on real-world problems, students have the opportunity to use the skills they learn in the program and apply them to other needs, issues, or problems in their community. This method begins to establish a balance between the aspects of People, Planet, and Profit, as the effects of the program resonate among the community, their surrounding environment, and the economics the built projects encourage. In this way, Studio H is not only providing a service through education, but also a physical and emotional engagement that results in a relationship based on guidance and mentorship. At Studio H, they believe that, “By learning through a design sensible and ‘dirt-under-your-fingernails’ construction, we’re developing creativity, critical thinking, citizenship, and capital to give students the skills they need to succeed, while building the assets the community needs to survive” (Schwartz). Studio H serves as a prime example of how a social-educator can influence lives beyond the people it teaches in order to create a better world.
Sweat Equity: Habitat for Humanity

Who they Are?
Habitat for Humanity is an international, non-governmental, non-profit organization dedicated to building affordable housing for those in need. Founded in 1976 by Christian missionaries, Habitat for Humanity provides cost-effective homes and services to struggling families in countries around the world. Since its founding, Habitat for Humanity has built over 500,000 houses and estimates it has sheltered more than 1.75 million people. Within the organization, it has founded several other subsidiary programs involving youth and college students, retail stores, and mission trips around the world. Habitat for Humanity also provides educational support for new homeowners in order to teach residents how to maintain, both physically and financially, their new homes while repaying the necessary loans (“Habitat’s Vision”).

What they Do?
Habitat for Humanity provides an opportunity for volunteers to offer their time, skills, and physical labor to helping those in need. By providing a variety of opportunities for involvement, volunteers are able to determine the most appropriate method of donation for themselves. Volunteers at Habitat for Humanity have the option to provide physical labor towards the construction
of homes, product and material donations, or education for new homeowners. Each method supports Habitat for Humanity’s overall mission to provide decent, safe, and affordable houses for those in need (“Habitat’s Vision”).

How it Relates?

With construction on nearly every continent in the world and providing shelter for more than 1.75 million people at affordable prices, Habitat for Humanity is able to balance the three aspects of the triple bottom line in a way that benefits all those involved. Its role as an educator to new homeowners and volunteers serves as one of the best examples of a social-educator. Through its several programs, initiatives, and funding grants, the organization is able to serve people beyond the construction of a new home to impact lives in a much deeper way. Its mentoring opportunities and efficient model of operation also enables satellite chapters to function nearly independently in countries around the world. In this way, Habitat for Humanity as an organization can fulfill its mission to, “Eliminate poverty, housing, and homelessness from the world and make decent shelter a matter of conscience and action” (“Habitat’s Vision”). Habitat for Humanity provides the opportunity to improve the quality of life for those in need through a comprehensive model of social entrepreneurship.
LEARNING
STYLES
In terms of social entrepreneurship and the social-educator, it is important to understand the various learning styles in order to effectively communicate and educate various individuals.
30/40/30 Learning

“Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime”
(Chinese Proverb).

As the old proverb indicates, it is more worthwhile to teach someone to do something, than to do something for them. In terms of social entrepreneurship, the social-educator, as it has been explained, is perhaps the most balanced in terms of the suggested triple-bottom line aspects that include people, planet, and profit. This being the case, the question then arises: How best to teach a person? It is a well-known understanding that people tend to process information in very specific ways. The concept of learning styles, which originated in the early 1970’s by a group of psychologists from the University of San Diego, involves specific educating methods that enable an individual to learn best. As researcher J.W. Keefe describes it, learning styles are “cognitive, affective, and physiological traits that are relatively stable indicators of how learners perceive, interact with, and respond to the learning environment” (Reid, 3).

In terms of social entrepreneurship and the social-educator, it is important to understand the various learning styles in order to effectively communicate and educate various individuals. Although there are a number of theories that list a
variety of specific learning styles, generally the following three are recognized as the most prominent: auditory, visual, and kinesthetic/tactile. These three learning style modalities help identify important characteristics that can be easily perceived in a classroom situation in order to help direct how information is presented. By identifying how a student processes stimuli, instructors can cater how they present specific information so students will not only understand more easily, but will more likely retain the information better.

At its core, the architectural design process is a creative problem solving approach that uses a variety of methods to obtain, analyze, and understand a specific problem in order to determine the most appropriate solution. This approach utilizes the concept of design thinking and is a skill that, if taught properly, can be used in all areas of a person’s life. From determining what type of food to eat, to what school to attend, to the formation of a creative business strategy, design thinking and the architectural design process have the potential to incite positive social change while addressing the triple bottom line. However, due to this broad application, as stated, it is important to begin with an understanding of the various learning styles in order to determine how best to teach this process to others. In the following sections, each of the three learning styles (auditory, visual and kinesthetic/tactile) will be introduced and their core concepts analyzed, with this goal in mind.
“Babies communicate from the moment they’re born but learn to talk by observation and listening”
(Decker, “How Children Learn to Speak”).

It’s been said that one of the most sincerest forms of flattery is imitation. Imitation is also one of the most basic methods of learning. In our youth and educational career, a primary way in which we receive information is through verbal presentations, whether that be formal seminar or lectures, or one-on-one instructions from a parent. Although some people prefer a different form of learning style as they grow, a vast majority of the population continue to learn best through an auditory learning style.

Auditory learners tend to remember information better or master new concepts more easily by repeating things aloud. Most auditory learners are skilled in conversation and verbal explanation because they are able to ascertain what another person is saying through audible signals such as changes in tone or pitch (Yong, 5). Similarly, individuals of this learning style recall things first based on how they remember the information sounding, then by the actual content. Some examples of this skill would the memorization of person’s telephone number or the ability to recall and play a specific piece of music after hearing it. This type of person learns best through word association, lectures, group discussions, and oral exams. However, not all auditory learners hear and process information the same way.

In psychophysics, a branch of psychology that studies the relationship between stimuli and the sensations and perceptions they affect, auditory scene analysis is a model which organizes and classifies the various forms of auditory perception (Bregman, 32-40). Factors such as frequency (the rate at which something occurs or is repeated), pitch (the intensity of a particular sound when heard), and timbre (the quality of a sound) are consistently used in helping auditory learners interpret pieces of information. However, within the auditory scene analysis (ASA), how a person is able to distinguish multiple pieces of information in order to organize and retain each piece is based on different grouping principles.
The most accepted grouping principles are known as segmentation or sequential, integration or simultaneous, and schema-based. These types of grouping principles are, in essence, skills that people develop either naturally or through specific training. Musicians and conductors have highly developed grouping skills which enable them to identify, distinguish, and follow specific instrument “streams” while ignoring others that are present at the same time. People with less developed grouping skills may sometimes blend sounds together causing a misinterpretation to the point that sounds or words not spoken are actually perceived or heard by an individual. In this respect, it is important to understand each grouping principle in an effort to help those auditory learners receive and retain the intended information (Bregman, 32-89).

The segmentation or sequential grouping principle can also be described as the “cocktail party effect.” In this principle, there is a specific point at which a person is able to follow, or segregate, any one specific voice or sound while essentially ignoring or canceling out the other sounds present at the same time (Repp, 7). Typically, individuals who are more auditory learners have a more highly developed segmentation ability and can distinguish multiple sounds for a longer period of time.

A second principle known as integrated or simultaneous grouping takes a different approach to audible interpretation. This type of grouping principle can be identified such as a person being able to hear a single musical composition
versus hearing each individual component. This slight difference is important as it provides coherence among several unique parts and helps group specific elements based on some rule or criterion. This integration of specific elements helps people identify when a person's tone changes or places a unique inflection on a word or group of words (Bregman 56). This grouping principle helps differentiate auditory importance without requiring detailed analyses of each specific word or component of a sound.

The final grouping principle discussed by Bregman, is what is known as schema-based perception. Compared to the first two grouping principles which tend to be more innate and primitive forms of audible grouping, schema-based perception is more of a learned trait that is based on attention and prior knowledge. Particular aspects of schema-based perception would be the audible phonemic and phonetics of particular words. Schema-based perception is one of the reasons people can identify the region of a particular person based on how they speak or pick out a particular person’s name among many others in a list. This type of grouping principle utilizes specific learned knowledge as a way to separate and differentiate one sound from another (Bregman, 89).

Through understanding the various ways in which individuals obtain, interpret, and retain information, a person speaking to an auditory learner can formulate how to deliver the message in the best possible way. Whether that is through specific known verbiage, inflections, phonetics, or alterations to how the information is delivered, can affect how well the message is received by the listener. With a vast majority of people identifying themselves as auditory learners, it is important that social-educators understand the proper ways to communicate when visual or physical activities are not possible.
Show Me & I’ll Understand: Visual Learning

“What is to be sought in design for the display of information, is the clear portrayal of complexity” (Tufte, 12).

Most designers or people in graphic professions are, quite instinctively, visual learners. Their understanding of new concepts and their ability to express ideas rely on some form of image processing, whether that is through sketching, painting, etc. For visual learners, drawings and images are problem solving techniques that allow them to work through mental blocks in order to develop solutions. However, aside from those who have been trained in the graphic arts, most educators are not able to express their ideas clearly to visual learners. Instead they rely on programs that often complicate the message through poorly designed or obscure graphics. Instead, as Edward Tufte, expert on information design and data visualization states, “the task of the designer is to give visual access to the subtle and the difficult, not the complication of the simple.” For those without extensive graphic arts training, there are simple theories and principles that can help any educator develop images that are clear, impactful and memorable.

As is the case in most professions, there are several accepted methods for accomplishing a specific goal. In understanding how visual learners process information, one of the most accepted models is known as Multimedia Theory, developed by Richard Mayer, professor of psychology at the University of California, Santa Barbara. It builds upon several different theories of memory and visual perception (Quinlan, 8). Similar to other theories, Mayer affirms that the mind has two types of memory (working and sensory) with two distinct coding or processing systems for storage (verbal and visual). Within his Multimedia Theory, Mayer confirms that when an individual engages in specific cognitive processes, the individual will be able to move information from the working memory, or short-term, to the sensory memory, or long-term (Quinlan, 9).

As Allan Paivio, emeritus professor of psychology at the University of Western Ontario describes in his Dual Coding Theory, the human memory is essentially a network of pathways. Within these pathways, information is
linked through verbal and visual cues. Therefore, the more cues that exist, the more pathways there are that lead to specific information that can be more easily recalled later. In Mayer’s Multimedia Theory, he suggests specific methods to help individuals build those verbal and visual cues (Quinlan, 9).

The first method, known as selection, is when individuals combine and select relevant or specific words and images for processing. Those selected will then be distributed into their respective processing systems for storage as cues for that information. The second method, organization, has individuals arrange words and images based on some formal or informal grouping. Whether the information and cues are arranged sequentially, hierarchically, randomly, or based on a previous experience, the more meaningful or natural the organization, the better the information is categorized and remembered. Finally, the third method is integration, by which individuals successfully recall specific information when the verbal and visual cues are processed simultaneously. In this respect, the verbal and visual cues are linked together and actually assist each other when information is being remembered. While this information can be helpful for remembering both verbal and visual cues, Dr. Linda Lohr, professor of education and behavioral sciences at the University of Colorado, has described basic principles of perception that parallel Mayer’s Multimedia Theory in order to create effective visuals for instructors (Steele, 10-16).
The principle known as figure/ground perception states that for those individuals who find it difficult to multitask, the use of contrasting fonts, colors, space, and shapes will help them select and organize information based on importance. In this principle, the “figure” is the primary focus of attention, whether a single piece or multiple, while the “ground” is the remaining information or images that is disregarded by the mind. The most common example of figure/ground, is the black and white image of two faces and a vase. In this example, depending on which image you focus on, either the faces or the vase becomes the “figure” while the other becomes the “ground.” The figure/ground principle can help instructors organize the information they are trying to teach in a hierarchal or sequential order so students are able to visually understand which piece of information is most important.

The second principle Lohr describes refers to the organization principle of Mayer’s Multimedia Theory and is known as Hierarchy Perceptions. Lohr states that the mind typically prefers information to follow some relatively logical order. In this respect, the Hierarchy Perceptions is more of a pathway, then an organizational method. By presenting images and information in a clear and simple structure, visual learners will be able to follow the “story” of the lesson with little or no verbal cues required (Steele, 18). An example of this would be how comic books are designed, moving from top to bottom and left to right with various sized boxes. In this way, individuals are able to avoid confusion and disorientation while still processing and retaining the information the instructor is teaching.

The final principle Lohr introduces is known as the Gestalt Perceptions. In this principle, Lohr recommends various laws that play to the strengths of the human mind in order to minimize the information necessary and reduce cognitive overload. The “laws” include the understanding that an individual’s mind will essentially “fill in the gaps” when needed, will prefer logical sequential order, will group information into related categories based on proximity or other attributes, and will construct knowledge based on prior experiences (Steele, 21-24). Understanding these laws of the mind can help an instructor arrange information that a visual learner will grasp faster and more easily.
Although simple in theory, these principles are often overlooked by instructors resulting in poorly arranged presentations that inevitably confuse more than assist those individuals who rely on visual stimuli to learn. By adhering to Mayer’s Multimedia Theory and Lohr’s Principles of Perception, instructors teaching visual learners will be able to develop meaningful and memorable images that individuals will grasp. As social-educators, it is vital that their visual story-telling skills are well-developed, especially when verbal communication is insufficient due to potential language barriers.
Learn by Doing: Kinesthetic Learning

“Learning is not a spectator sport. Students do not learn much just by sitting in class...they must make what they learn part of themselves”
(Chickering, 3-7).

As early as 1961, there was a call from advocates and educators alike to shift the responsibility of learning from the teacher to the learner. This approach essentially converts the teacher to a facilitator or mentor while stressing the importance of activity and concrete trial-and-error experiences, rather than rote memorization. While not necessarily ideal for all students, for those who learn better by engaging in physical activity (experimenting, exploring, and discovering), it is ideal. Typically, those individuals who classify as kinesthetic learners learn best through hands-on experiences and learning by doing. These individuals are generally artists, musicians, dancers, athletes, performers, or other creative people that have fine-motor skills and are able to allow their minds and hands to work with little or no pre-planned format.

The term “kinesthetic learner” gets its name from the science of kinesthesia, which is essentially a person’s intelligence as it relates to the physical movement, awareness and balance of their body (Fleming, 8). Largely coordinated by the cerebellum in the brain, there are sensory organs within the body called proprioceptors that transmit data and respond to various positions and movement stimuli. In simpler terms, the reason why some people are excellent in balance or body manipulation activities such as gymnastics or diving, is due to the sensory organs within their bodies. Likewise, those types of people are generally kinesthetic learners who must be active or performing some physical act in order to concentrate and focus (Fleming, 12-17).

Within society, many kinesthetic learners are labeled as hyperactive or are diagnosed with some form of Attention Deficit Disorder. This is typical for most kinesthetic learners due to the fact that most education programs are not designed for what has been called “active learning.” Active learning is essentially any exercise or activity that engages students in cooperative learning where
students play a more influential role in their education (Fleming, 3). Some examples range from a simple class discussion, to debates, games, or other project-based activity. In this sense, for those who “learn by doing,” a typical presentation of facts through a straight lecture is neither appealing nor effective. Rather, it would be more effective to offer kinesthetic learners the opportunity to express themselves through tools, equipment, or activities they can manipulate on their own.

In dealing with kinesthetic learners, it is important to provide opportunities to learn by acting, moving, playing, or experimenting. With that said, it is also important to understand that there is difference among kinesthetic learners, typically between those with highly developed fine-motor skills and those with highly developed gross-motor skills. While it is not rare for people with kinesthetic intelligence to excel in both types, understanding that there is a difference is important (Benelli, 2).

Gross motor skills are typically larger body movements such as running or jumping that utilize larger muscle groups such as arms, legs, or torso. Typically, gross motor skills develop first as a child grows because of the larger movements they typically entail (Benelli, 4). Movements such as climbing a ladder, riding a bicycle, or jumprope would be considered gross motor activities. For some, these skills can develop at different rates. However, it is important to realize that for kinesthetic learners, it is imperative they are encouraged to essentially explore the limits of what their body is capable of.

...for those who “learn by doing,” a typical presentation of facts through a straight lecture is neither appealing nor effective.
Fine motor skills are typically much smaller movements that require a higher level of concentration, patience, and muscle control. Movements such as cutting small pieces of paper, buttoning a shirt, or building with small blocks are simple activities that require fine motor skills. Similar to gross motor skill development, proper exercises and encouragement are essential in order for students to develop these skills. One of the best practices for developing a student’s fine motor skills is art, due to the critical thinking, self-evaluation, and creativity required. Ironically, according to several sources including the British Columbia Teachers’ Federation (BCTF), drawing has been shown to improve not only dexterity used for proper writing grips, but also cognitive and language development, and various other important skills necessary for success in further formal education. In this respect, art and design have a tremendous influence on a student’s educational career starting at an early age (Fleming, 11-13).

As evident, kinesthetic learners have much to offer in terms of unique education methods. Their specific requirements, if properly addressed, can result in extremely creative and innovative individuals. However, simply identifying an individual as a kinesthetic learner is not enough: these learners must be given the opportunity to explore their creativity and active learning style (Fleming, 3-7). With this in mind, and as it will be shown, the architectural design process and design thinking concept require this type of project-based, trial-and-error curriculum in order to determine, develop, and refine the most creative solutions to problems. In the following sections, a detailed explanation of design thinking and the design process will be analyzed in an effort to connect the essential principles of each with the most appropriate methods suggested by each learning style.
Design is a process, an action, or a verb that describes the effective, yet sometimes circuitous, method in which problems are analyzed and new opportunities are discovered.
Design as a Facilitator

“Design without Soul, is like Life without Passion”
(unknown)

Design has the potential to create significant impact in the world we live in. As Victor Papanek once said, “Design and architecture are the tools mankind uses to change and adapt to its environment, extend human capacities, and thus comprehensively change itself” (“Design for Human Scale” 23). While design is by no means the “Holy Grail” of all of society’s problems, there are tools and techniques that can be used to assist in solving the problems that plague everyday life. Encompassing and guiding these tools and techniques of the design process is a concept known as design thinking.

While design is typically thought of in terms of the end product such as beautiful and elegant products, design in its most effective, true form is neither beautiful nor elegant. It can actually be an extremely messy, random, and a sometimes frustrating process. Yet, this is exactly what design is: a process, an action, or a verb that describes the effective yet sometimes circuitous method in which problems are analyzed and new opportunities are discovered. Design thinking is therefore simply creative problem solving in which an improved future is envisioned and created.
According to Herbert Simon, author of *Sciences of the Artificial*, where design thinking differs from critical thinking is in its outcome (Brown, 28). While critical thinking breaks down ideas in order to analyze and understand them more clearly, design thinking seeks to analyze ideas to build upon them in order to create something better. This vital difference is the reason why design thinking can be implemented in a hospital in DePaul, Missouri, to redesign the emergency room procedure, or in a rural high school curriculum in Bertie County, North Carolina. The open, yet constrained structure and procedure of design thinking and its processes allow for a variety of opportunities and problems to be addressed (“Design Thinking...What is That”).

So if design thinking and the design process have the potential to create such outstanding and amazing results, why doesn’t every person, from every profession use it? While it has the potential to yield these types of results, it is for the same reason that not everyone can play the violin or perform a heart surgery. Designers spend upward of five to seven years in college and then decades in the professional world understanding and developing the skills necessary to become true masters of their field. Design is not some magical formula that can simply be purchased and implemented. Rather, it takes time and experience, as well as specific environmental, methodological, and other specific types of tools to create the results that provide the greatest impact. In the following sections, these specific elements and tools of the design process will be analyzed in an effort to understand how they might be implemented in a variety of settings. These elements can, in any given situation, be used to address problems in order to create the most meaningful, beautiful, and impactful solution possible.
"When people believe in boundaries, they become part of them"
(Don Cherry).

Legendary jazz musician Don Cherry, known for his pocket trumpet and love of travel, made this comment in an interview about his unique playing. Similarly, Miles Davis believed that both music and life were about exploration and discovery in new and sometimes strange locations. So if creativity and innovation depend on expanding boundaries and thinking “outside-the-box,” why do most office environments consist of beige walls with high cubicle walls?
If creativity and innovation can strike from anywhere, why do we try and restrict it between the hours of 9am and 5pm in often stifling atmospheres? While it is not necessary to have pinball machines and large flat screen TV’s with video games in every office, there is a reason why people believe their greatest ideas come while in the shower or walking through a park. A person’s surroundings, in both the physical and cognitive sense, affect how they feel, think, interact, and produce, which, in terms of performance and perception, is essential for any company.

In his book Disciplined Dreaming, Josh Linkner walks his readers through the various components and specific steps that can help a company move from mediocre to innovative (Linkner, 23). Within this outline, Linkner places a significant importance on the environment in which ideas are developed. He emphasizes the need for high ceilings, colorful walls, surprising artwork, and plenty of natural light (Linkner, 12-18). These physical attributes of a space, Linkner states, “send a strong message to our clients and team members: that we are focused on fresh thinking and we are not like other companies.” These simple, yet effective features not only help recruit clients and employees but also have a significant impact on a company’s financial and workplace morale.

In a Cisco sales office in San Jose, members of the Cisco Workplace Resources (WPR) group decided to experiment with a new office design that focused on reducing company costs while increasing employee satisfaction. In this new office design, the Cisco WPR team used moveable furniture and a
variety of workspaces including quiet spaces where no cell phones are permitted, individual workstations, breakout rooms, and formal and informal meeting rooms. Cisco also developed wide circulation space and a central atrium space to encourage spontaneous interactions. In this design, the team hoped to accommodate the different working styles of their employees that would occur throughout the day. As a result, employees did not feel confined to an assigned cubicle but could move around based on their specific task (“Human Centered Atmosphere”). After the change from the traditional office design, Cisco found that not only did their employee satisfaction and overall production increase but the company also saved an amazing 45% in total cost of the new space compared to their traditional office design (“Human Centered Atmosphere”).

In the two examples provided, both Linkner and Cisco created physical spaces that promoted and encouraged creativity. However, as mentioned earlier, having a fun and colorful environment with pinball machines and artwork is not the only way to spur creativity, nor does it necessarily guarantee results. Rather, as Tim Brown, CEO of the product design firm, IDEO, states, “To be creative, a place does not have to be crazy, kooky, and located in northern California. What is a prerequisite is an environment in which people know they can experiment, take risks, and explore the full range of the faculties” (Brown, 75). IDEO, which actually is located in northern California, prides itself on its physical and psychological approach to design, much so that they developed the IDEO Method cards: a series of playing cards designed to help any company, organization, or group begin to open their minds to creative thinking and innovative problem solving.

Brown describes in his book, Change by Design, that one of the main obstacles to the formation of new and innovative ideas is the overall space in which
people work. “The physical and psychological spaces of an organization work in tandem to define the effectiveness of the people within it” (Brown, 22-26). While Brown places a large importance on the psychological or cognitive atmosphere, ironically, very small changes can make the largest impact. Things such as having a comfortable, relaxed environment with refreshments can do wonders for employee morale. As Brown notes however, “Relaxing the rules is not about letting people be silly so much as letting them be whole people” (Brown, 27). This difference leads to the second concept of allowing employees the freedom to explore new or unique ideas. It has often been said that the most extreme, radical or off-the-wall ideas are the ones which develop into the breakthrough ideas we see today (Linkner, 45). So allowing a more open, positive, and inviting forum for people to express their ideas, where they are not held back by fear of approval from superiors, is vital towards the development of creative ideas.

Finally, Linkner describes the importance of switching from a “heads-down” mentality to a “heads-up.” Similar to the difference between critical thinking and design thinking, a “heads-up” mentality focuses on developing new and innovative solutions by tapping into those around you (Linkner, 32-36). This type of focus necessitates not only a strong managerial effort to encourage this type of work, but also a physical approach, as eye contact is one of the strongest ways to begin conversations according to Beverly Palmer, Ph.D. and professor of psychology at California State University (Linkner, 40). This concept is the perfect example that combines both the physical aspects and cognitive perceptions of a person’s environment.

While there are several other physical and cognitive examples that can be implemented to help facilitate creativity, the few mentioned here have been some of the most widely accepted and successful in companies today. Their capacity to spur innovative thinking and promote employee satisfaction have resulted in several books and articles about the importance of a person’s environment. However, this is only one aspect of the design process that helps create the results that will provide the greatest impact. The next section will begin to identify the specific steps and methods of the design process that leading professionals and companies use on a daily basis.
How Does it Work? The Methods

“I really have, perhaps, one real talent, which is that I don’t mind at all living in the area of total uncertainty”
(Cross, 23).

The design process is said to be one of the most confusing, nerve-racking, and frustrating experiences any designer can go through. For those who are not designers, the process can be frivolous, circuitous, and even more frustrating. However, for those who believe in this process, as Nigel Cross, author of Design Thinking states, “A solution may be developed that not only the client, but also the designer never dreamed he wanted” (Cross, 32). This may make out the design process to be some mystical ritual, which in all actuality, it sometimes is. There are many cases in which designers, when asked where the inspiration came from, will respond either, “It just came to me like a bolt of lighting,” or something similar. However, as mystical as it might appear at times, the sudden illumination people sometimes speak of is typically a series of formulated apposite proposals that build upon one another over an extended period of time. This extended period of time is what is known as the design process and, as the word “process” implies, is “a series of actions or steps taken in order to achieve a particular end” (Design Thinking...What is That?).

Although in most processes the series of actions are performed in a specific order, the design process is much more of a dynamic activity than a sequential one. For this reason, there are many different names, orders, and number of stages to the design process. Take for instance the process employed at IDEO: (1) Understand, (2) Observe, (3) Visualize, (4) Evaluate and Refine, and (5) Implement (Brown, 70). Compare that with the process as defined by Herbert Simon: (1) See, (2) Shape, (3) Build (Kelley, 21). As you can imagine, there are dozens of other versions of the design process, adding some extra steps, or renaming the steps. However, no matter how many stages there are, the design process follows a universal trajectory: one of understanding, followed by the generation of ideas, including some form of selection or assessment, and finally implementation. Within these phases, several activities occur at various levels as a final solution is developed.
The first phase of the design process is defined by a period of research, analysis, and most importantly, definition. With most projects, there is some form of design brief or problem statement which needs solving. However, as Cross explains, “the design brief is not a specification for a solution, but the starting point for an explanation” (Cross, 73). In other words, while it may sometimes ask for specific requirements, the brief is a way for designers to begin to define what the true problem is and begin focusing on a way to solve it. The solution, says Cross, “only becomes apparent as you’re trying to solve it” (Cross, 74). So if you don’t know what you are trying to solve, how can you start to solve it? This metaphysical question is somewhat tantalizing, but it is in this uncertainty that the designer is able to bring something to the project which, in the end, creates a solution that is both creative and innovative. In the search for the solution (or problem), a designer will often conduct a series of research activities, ranging from interviews, user research, precedent analysis, benchmarking, or several others in order to have a clearer understanding of the project.

The next phase is a period of intense activity. In this generation phase, designers engage in a series of creative endeavors that include sketching, model making, drafting, and prototyping in an effort to work through various ideas. As Brown expresses it, “Design thinking is inherently a prototyping process. Once you spot a promising idea, you build it. In a sense, we [designers] build to think” (Brown,
In this phase, designers are working through a number of different problems, whether problems of scale, proportion, color, or form, sketching and modeling are ways in which designers are able to elicit feedback and progress through the project.

Finally, in the last phase, concepts and solutions are tested, refined, and implemented. Although “implementation” in the typical sense would be the end of the process, in design, it is usually just the beginning. As those who work in the design professions understand, design is never done. There are consistently new versions, new strategies, and new opportunities to build upon the “final” outcome of a project (Kelley, 56). As a designer, this is one of the hardest things to come to terms with, because as much effort as there is going into a project, there is always more that can be done with it. In some respects, it is one of the main reasons why designers are so passionate and ambitious. For some time, I have adopted a personal mantra: “Be satisfied, but never content,” meaning that, in whatever you produce as an end solution, be proud of it but don’t simply revel in the accomplishment, rather, look for the next opportunity to improve both the result and yourself.

As explained earlier in this section, the design process is a dynamic and cyclical activity, not a sequential one. With this in mind, designers will often switch between the various stages of the design process due to the incremental development that design naturally entails. Very rarely do ideas come fully formed, but rather develop in pieces as new information is uncovered and new opportunities discovered. In this respect, the “understanding” phase continues throughout the design process, often causing designers to deviate from a specific stage in the sequence. This deviation, as Raymonde Guindon, author of Designing the Design Process, suggests, might be inevitable. “These deviations are not special cases due to bad design habits or performance breakdowns but are, rather, a natural consequence of the ill-structuredness of problems in the early stages of design” (Cross, 87-90). These deviations, or “cognitive costs” as they are sometimes called, are somewhat essential to the design process as they will inevitably inform the final solution to some extent. Never the less, the ability
of the designer to move among the various stages of the design process, as well as being able to work on multiple activities at varying levels of detail, help the designer better understand both the problem and solution of the project (Cross, 92-96).

The design process is a method for understanding a problem with the goal of developing a solution that is beautiful, functional, innovative, and impactful. While often difficult to explain, it is a powerful tool and is the essential method for developing ideas and solutions. The following section will examine more deeply the specific tools and skills that a designer uses in the continued effort to understand what essential aspects of the design process must be introduced in order to promote social entrepreneurship through social-educators.
Designer's Tools,
Flickr
What Does it Require? The Tools

“Design brings more than just a set of principles; it also brings a methodology and a collection of tools that can help us realize aspirations” (Liedtka, 12).

In every profession, there are specific tools which, due to necessity, are developed or adopted that inevitably become embedded into the nomenclature of the profession, whether physical tools such as a doctor’s stethoscope or the bellow of a saxophone, or more abstract concepts such as the aria of an opera or the Maxwell-Mohr principle of civil engineering. Each tool is specific to a profession which helps a person in that profession perform tasks more easily and efficiently. Design is no different. Within design, there are specific tools in a designer’s “toolkit” that can be used throughout the design process to help them work towards the final solution of a project. While there are countless devices and principles designers use on a regular basis, there are certain tools which tend to be more essential than others. For this thesis, seven tools have been identified as essential for success in the design process.

In Change by Design, Tim Brown emphasizes the need for designers to rely on their “ability to be intuitive, to recognize patterns, to construct ideas that have emotional meaning as well as functionality, and to express themselves in media other than words or symbols” (Brown, 57-62). As a design director at IDEO, Brown understands the importance of (1) Observational Compilation in order to help articulate the latent needs people may not even know they have. People are rarely able to express in words what they desire; rather it is “their actual behaviors, which provide us with invaluable clues about their range of unmet needs” (Brown, 154). Therefore, it is up to the designer to actively listen and analyze what users say (and do not say) in order to create a solution that meets their needs.

After adequate accumulation of research, which can be an assortment of precedents, best practices, interviews, etc, designers will begin to try to understand the information collection through (2) Research Analysis. This is an
important step, not only to begin to formulate an accurate direction for the project, but also in defining the overall problem as well. Nigel Cross states that “experienced designers are repeatedly found to be proactive in problem framing” (Cross, 127). This important step he believes helps designers begin to “direct the search for solution conjectures” (Cross, 124). As stated earlier, one of the most important aspects of a designer’s job is determining what the proper question is (Cross, 27).

“...it is vital designers are able to “tolerate and work with uncertainty, to have the confidence to conjecture and to explore, to interact constructively...and to rely upon one’s intuitive powers of reflection-in-action.”

While analysis and definition of the problem continue throughout the design process, at various points designers will participate in some form of (3) Brainstorming Charrette. Either formal or informal, a charrette typically refers to a period of intense design activity (“Promoting a Creative Work Environment”). During these periods, designers will begin to develop various concepts and solutions either in groups or in isolation. As more information is discovered, concepts will continue to be improved, re-envisioned, or inevitably discarded until the final presentation (Kelley, 87). As this occurs in one of the least structured stages of the design process, it is vital for designers to be able to “tolerate and work with uncertainty, to have the confidence to conjecture and to explore, to interact constructively with sketches and models, and to rely upon one’s intuitive powers of reflection-in-action” (Cross, 127-132). This forewarning leads to the next tools designers typically use throughout the design process.

Most creative people, especially design professionals, are visual or kinesthetic learners. As described in previous sections, both types understand problems and subsequent solutions by envisioning possibilities through imagery or working with their hands to create something. Essentially, designers use drawings and models not only as ways of externalizing their cognitive ideas, but also as ways...
of actively “thinking by doing” (Brown, 36). Whether it is through (4) **Drawing and Drafting**, (5) **Physical Prototyping**, or even (6) **Computer Technology**, all of the tools are used by the designer as ways to express and envision their ideas and begin to solve the problem they have been tasked with. This “thinking by doing” process is so widely used that, as Cross states, “it permits and encourages the simultaneous, non-hierarchical participation of co-workers, using a common representation” (Cross, 122). If the violin and the bow are the tools used to create beautiful music, then these are the tools the designer uses to create beautiful solutions.

Finally, the last tool in the designer’s “toolkit” is (7) **Presentation Eloquence**. Although this may be debated by some, the articulation and fluent description of a designer’s solution is, in some respect, the “key” to its success. While the first six tools assist the designer in finding the correct “door” and developing the “key” that will unlock this “door,” this final tool will essentially determine whether the “door” will open (Brown, 156-162). Just like any other step towards innovation, this tool can be used throughout the design process as a way to affirm that the design is on the right path, or to help validate a specific aspect of the solution. Especially during the early stages of a concept, succinct and clear communication of intentions for an idea is crucial. Brown states that it is imperative to final resolution that an idea is “communicated with sufficient clarity to gain acceptance across an organization, proving it, and showing that it will work in its intended market” (Brown, 187). Effective communication is something that some great design-artists lack but is essential to the implementation of any idea.

Throughout this section, seven specific tools have been introduced as a way to display the vast amount of skills a designer must have at one point or another throughout the design process. With these tools, the designer takes on the role of researcher, artist, marketer, businessman, public speaker, and several others, all in an effort to develop a solution to a problem that sometimes defied previous attempts. While some of the tools described are more physical than others, each tool is pivotal to the designer in order help him or her work faster and more efficiently. What’s more, these tools are at the core of design and act as the vehicle for social-educators to promote social entrepreneurship through the design process.
Design is not a sacred guild, but rather a universal community, and it should be the duty of the designer to use his knowledge to enhance his world, making it better than when they arrived.
Finalé

“There is a big difference between planning a life, drifting through life, and designing a life”
(“Design for Human Scale” 85).

In 1983, when asked to talk about the “culture of design” Victor Papanek, one of the greatest socially-minded designers of the century, stated, “Culture is a learned response. There is no doubt that cultural responses, that is, environmentally and socially learned responses, make us react differently,” but it is up to the designer to help “reconnect the isolated fragments,” into something that can then become incorporated into the culture (“Design for Human Scale” 15). This thesis has attempted to define the true potential of design, it’s process, and it’s unique way of thinking in terms of socially beneficial outcomes. While many believe design is nothing more than artistic application, those mentioned in this book amongst others realize the true potential design entails.

In it’s most basic form, design is a creative problem method that has the capacity to solve any type of problem placed in front of it (“Design Thinking... What is That?”). Through a controlled chaotic approach, design uses specific tools and principles to guide people through sometimes intense situations in order to create a solution that is not only aesthetically beautiful, but economically viable, and empowering. It’s deep roots in human emotion, cognition, and physical desires...
creates a socially minded approach that matches the definition and overarching goals of social entrepreneurship.

The methods, principles, and surrounding influences that support the design process as described in this thesis, can solve a diverse set of problems if presented correctly. By understanding the ideal method in which to communicate, the social-educator can provide the necessary information to enable and empower those listening to use their own skills and knowledge to resolve problems in their own lives (Pilloton, 12-16). In this way, we are able to promote social entrepreneurship in a manner that passes along the ability to think differently and approach situations not for what they are, but for what they could be. Social entrepreneurship is rooted in empowerment and the design process is one method that provides the necessary tools for those that need it most.

Papanek was constantly concerned with producing solutions that met the needs of the people a design was intended for. He also believed that every person has the potential to be a designer and change how their life operates (“Design for Human Scale” 7). Design is not a sacred guild, but rather a universal community, and it should be the duty of the designer to use his or her knowledge to enhance the world, making it better than when they arrived. As Ralph Waldo Emerson stated, “The purpose of life is not to be happy. It is to have it make some difference that you have lived and lived well.” Design and social entrepreneurship are ways to impact the world for the better, so the next question is inevitably:

**Who will be the ones that will benefit the most from what design can offer?**
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project: spARCH is a high school design studio at Hughes High School that teaches students the power of Design Thinking through Architecture.
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BACKGROUND
A glimpse into the studio inception, conception, & precedent examination.
Question
Can Design Thinking be taught through Architecture to help build student’s confidence & creativity

Design Thinking 
|dəˈzɪn ˈθɪŋkiŋ|
noun, verb, adjective
1. a discipline that uses the designer’s sensibility and methods to match people’s needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity.
2. a process for practical, creative resolution of problems or issues that looks for an improved future result. It is the essential ability to combine empathy, creativity and rationality to meet user needs and drive [project] success.
3. creative problem solving
Hughes STEM High School is a non-selective inner city public school that serves a population that is at-risk & focuses on helping students apply their education to the real world through business & community partnerships in the Greater Cincinnati Area.

Solution

is a high school design studio at Hughes High School teaching students the power of Design Thinking through Architecture.

By breaking down creative barriers, students were taught how creative problem solving, critical thinking, & out-of-the box approaches can extend beyond the classroom & apply to situations in their own lives.
Where did this idea come from?

Always having a respect for the design process and the impact designers can have on the world, the idea was built upon years of experience and observation. The “light-bulb” moment came while working in studio one weekend and feeling that something was “missing” from my current project that prevented it from being “real.”

Inspiration came from a graphic design capstone entitled “Consider,” in which a student spent three months in OTR observing, interviewing, and researching what it was that people wanted to see changed in the neighborhood. In the project, the designer was able to interact and talk with community members in a way that made the project as much his project as it did the community’s project.

The impact and meaning this project took on could be seen in the eyes of the people in the photographs and in the voices of those interviewed. In short, to quote a friend, “It was a project with a SOUL.”
Has anyone ever done anything like this?

In 2010, an industrial designer started the first ever shoe design studio at DAAP. In 2011, teaming up with two other industrial designers, they decided to build off the success of the previous year and reinterpret it for high school students.

Working with Hughes High School, the studio focused on teaching responsibility, empowerment, and creative problem solving through footwear design.

The 7-week design studio included professional footwear designers that spoke about everything from the anatomy of the foot and shoe construction to overcoming adversity and ethical issues. The students then designed and developed their own shoe and presented their final concepts to a panel of faculty and guests.
What will the students get out of this?

The impact of the footwear design student was enormous and instantaneous. Reports found that, “Teachers and administrators at Hughes High are getting excited about new project-based curricula, parents are calling the school telling how excited their students are, and the kids in the class have been working harder and an improvement in grades in all classes.”

In this new studio, students will get an in-depth introduction to the architectural design process and the concept of design thinking. They will be exposed to new critical thinking skills and creative problem solving techniques in a studio setting that addresses a “real-world” issue, problem, or need at their high school.

Students will also learn how their decisions can impact the world and through determination, strong will, and creative thinking, they can build a better future for themselves and their community.
What does this project mean?

I want to show students that their present situations do not have to be their future outcomes. Things CAN change if they are determined, persistent, and creative.

At the same time, I want to inspire and empower the students to reach beyond their world and see how what they do can impact the world around them in a socially conscious way. Design thinking is a way to look differently at problems in the world (not just related to design) and develop solutions that are both creative AND innovative.

Architecture and design are tools students can use to shape, change, impact, and better their lives in small and large ways.
Pedagogical Precedents

Architecture By Children

The significance of the Architecture By Children program of the AIA is evident in this studio’s desire to introduce student’s to the architectural field. However, where ABC delves into a more “skill-set” curriculum including the research and development of architectural theories and building materials, project: spARCH seeks to impart students with a “mind-set” that uses architecture as it’s vehicle. In this sense, project: spARCH uses concepts such as precedent and site analysis as a way to convey how various aspects can influence a design solution, rather than merely understanding specific architectural principles.
The Stanford d.school focuses on teaching students and faculty members who are outside of the immediate design field the basic principles of design. By walking participants through a series of activities, they are able to immerse themselves into the concept of design thinking. While project: spARCH uses the design thinking concept as its core principle in which the curriculum revolves around, where it departs is through it’s focus on architecture. In this way, project: spARCH can be more accurately described as the liaison between a design thinking studio and an architectural studio.
Pedagogical Precedents

Studio H

Perhaps the most influential of the precedents, Studio H is a year-long design and architecture course at small high school in North Carolina. In this course, students are walked through basic design principles and skills before transitioning into architectural theory and practices. While not nearly as extensive, project: spARCH can be seen as a condensed version of Studio H without the depth and technical training. Studio H is the best example of how design thinking and architecture can merge into a single studio as a way to enlighten high school students to the design and architecture fields.
Project M is a short-term, intensive design studio for young designers who want to put their design skills to use to help solve social problems. Each studio is only ten days long that involves periods of research and observation followed by intense, 2-3 day “blitzes.” Each studio focuses on a unique social problem that allows students and young professionals the opportunity to immersive themselves in specific issues. The inspiring work and fast paced turn-around of Project M was the inspiration for project: spARCH in terms of it’s organization, schedule, and socially minded project that would help support the high school and the surrounding community.
Conception Blog Writings

{Refer to the Appendix for Complete Writings}

**A Project with a Soul...**

“He who chooses the beginning of the road chooses the place it leads to. It is the means that determines the end.”

**The Week that Was...**

**One**

“...the goal is to help inspire the students to reach beyond what they can grasp and push themselves to achieve something greater.”

**“Questions in a Coffee Shop”**

“What are the projects or activities that will stir the student’s passions and get them engaged and excited to participate?”

**An Autotuned Friday**

“Rather than credentials, students are imbued with a mindset. From Design Thinking Pillars to the mythical “light-bulb” moment.”

**The Week that Was...**

**Two**

“I feel like I have barely enough time to blink before another week has past and it is one more week closer to April.”

**The Week that Was...**

**Three**

“...through active participation and structure, the story can begin to be identified & connect us with the work. “Architecture is frozen music.”

**Scared, Stupid, & Selfish**

“1. Do it Scared.
2. Be Stupid.
3. Act Selfish.”

**The Week that Was...**

**Four**

“Rather, the initiation of others has proven time and time again what may result from the effective collaboration.”
The Week that Was...
Five

"In all, with only a month left before the studio begins, I am pleased with where the project is at this moment in time and optimistic."

The Week that Was...
Six

"When you want to succeed as BAD as you want to breathe, THEN you will be successful."

The Week that Was...
Seven

"...excited for the chance to work with a group that are just as passionate about opening the minds of younger students."

Two Wrongs Never Make a Right...Sometimes

"...being wrong is a mindset. If you never knew you were wrong, then you would feel like you were always right."

A Cliff Diving Journey

"Our journey has been anything BUT boring. Exciting at some points. Nervous at others. But ALWAYS ready to see what's next."

The Week that Was...
Eight

"What would I say? Where I would put my hands? Would I stand? Would I sit? And then...Nothing."

RECAP: {Week 1}

"...for as much planning and preparation, NOTHING could have prepared me for how awesome the students are."
OVERVIEW
A breakdown of the studio logistics, schedule and overall philosophy including team member profiles.
Studio Goals

Inspire creativity, critical thinking, & problem solving skills.

Initiate project-based learning that fosters professional, interpersonal collaboration.

Immerse students in the design process to develop innovative solutions to real-world problems.

Studio Pedagogy

Students will learn critical thinking skills & creative problem solving techniques that focus on real-world projects & applications through innovative, design thinking & the methods of architectural design.

This studio will take a “hands-on” approach to education through a project-based curricula resulting in a more engaged learning process, stronger collaboration between peers & more active social & professional relationships.
Studio Curriculum

Students will be placed into teams in which they will collaborate, argue, & learn the principles of design thinking & methods of the architectural design process.

Throughout the process, teams will engage in critical thinking & problem solving exercises challenging themselves to develop creative & innovative solutions.

Professionals from the Greater Cincinnati Area & the University of Cincinnati will visit as a way to engage, inspire, & mentor students, helping them understand how the lessons taught can relate to worlds beyond the classroom & design profession.

Project Goals

Establish creative and innovative solutions to real-world projects through interpersonal & professional collaboration while promoting positive community interaction.

Education through a architectural design process that focuses on idea development, exploration, & refinement.

Create a presentation highlighting the studio process from idea generation to idea refinement through models, drawings, sketches, & other mediums.
project: spARCH

RULES of

Stay Engaged
The best way to Create is to Participate!
Contribute to, Accept, Improve upon & LISTEN!

Patience Equals Progress
Creativity take time, so RELAX!
Your first idea can’t always be a homerun.

All Ideas are Good Ideas
No holding back ideas! Quantity over Quality!
When something comes to mind, say it!

Respect All Opinions
Everyone has something to contribute
No one may criticize or evaluate any idea.

Collaborate to Succeed
Listen to what others have to say & learn from it.
Build on the ideas of others. No ‘buts’ only ‘ands’!

Have Fun!
Positivity & Encouragement ALWAYS win.
Take chances. Help others. Think BIG!
Design Process

Introduction
{Identifying the Process}

Research
{Understanding the Problem}

Ideate
{Generation of Multiple Ideas}

Test
{Getting Feedback}

Refine
{Development of Ideas}

Deliver
{Presentation of Ideas}
Students will begin an assignment that transforms a song into a three dimensional space beginning with active-listening, Mind-mapping, and collaging techniques.

A continuation from last class, guests will help students move from 2D imagery to physical dancing as a way of expressing their ideas through a different media.

Students will work in groups to continue to develop integrated models and drawings using the influences from last week.

Students will reinterpret their 2D collages, and dance movements into a 3D spatial sequence based on the theme, emotion, story, and structure they have developed.

Students will receive feedback from guests on their designs as they move from physical to digital modeling via Google SketchUp.

Guests will help students move from 2D imagery to physical dancing as a way of expressing their ideas through a different media.

Guests will help students move from 2D imagery to physical dancing as a way of expressing their ideas through a different media.

It's All About Process...

Students will be led through an exercise to better understand the design process focusing on how to get ideas across in different medias & with various constraints.

Students will be shown how looking at projects from the past can inform their designs by applying elements of materiality, form, and space from chosen precedents.

Students will be shown how to design with a target user in mind by analyzing last week’s activities with mentors showing how a design can alter based on unique user constraints.

Guests will help students move from 2D imagery to physical dancing as a way of expressing their ideas through a different media.

Students will reinterpret their 2D collages, and dance movements into a 3D spatial sequence based on the theme, emotion, story, and structure they have developed.

Students will receive feedback from guests on their designs as they move from physical to digital modeling via Google SketchUp.
**WEEK 3**

4-16

*Intercession*

No Classes. Students will be given disposable cameras & asked to photograph:
1.) People at work/play/study
2.) Exterior/Interior environments

4-18

4-20

**WEEK 7**

5-14

*Work, Work, Work!*

Mentors will work with students towards final design directions, presentation requirements, and necessary documentation for the Gallery event.

5-16

*Represent Yourself*

Students will learn the importance of being detail oriented in school and life while showing how story-telling can redefine a design, an individual, and a society.

5-18

*Final Work Day*

Instructors will work with students towards wrapping up their final designs and presentation speeches. All documentation will be turned in at the end of the day.

**WEEK 4**

4-23

*Creative Brainstorming*

Following the method learned previously, students will begin brainstorming ideas for their own design projects by mindmapping, collaging and discussing possibilities.

4-25

*A Day in the Life...*

Students will be led through a physical activity that will follow the path of a target user in order to develop key insights into the functional requirements of the structure.

4-27

*Diverge to Converge*

Mentors will work with students to begin initial building designs through a charette style model building in which insights from previous classes will be used.

**WEEK 8**

5-21

*Final Presentations!*

Students will present their final concepts to instructors, DAAP professors, and professional guests who will help build excitement in moving forward.

5-23

*Studio Wrap-Up*

Mentors and guest visitor will lead a reflection about the studio concepts, what students learned, and how these principles/skills can be applied to other parts of student’s lives.

5-25

*Gallery & Celebration*

Gallery event held at Modern Makers Studio for students, parents, and guests to celebrate student accomplishments.
Instructor Profiles

I want to show students that their present situations do not have to be their future outcomes. Things CAN change if they are determined, persistent, and creative. I want to inspire and empower the students to reach beyond their world and see how what they do, can impact the world around them in a socially conscious way. project: spARCH gives me that opportunity to open up the minds and make a real difference in these students’ lives. At project: spARCH, architecture and design are the tools students can use to shape, change, impact, and better their lives in small and large ways.

I am interested in design that creates impact. Whether that impact is larger social issues such as poverty, homelessness, or hunger. Or something smaller such as being able to comfortably hold utensils for those with arthritis. Design is one of the most powerful tools mankind has to impact the world around him and thus, shape himself. It is up to us, the designer of our lives, to determine which type of impact we hope to leave this world.

Design thinking is a way of looking differently at problems in the world in order to develop solutions that are creative AND innovative. I believe the best solutions result from Post-it note brainstorming sessions, dirt-smudged sketchbooks, and piles of disposable cameras that focus on the journey of a solution rather than the destination. Design is not specialized. Design is universal and in the end, design thinking is not restricted to the classroom nor the design profession, because, after all, design thinking is really just...thinking.
Why did you want to be a part of project: spARCH?

I didn’t want to just have a job for the sake of having a job. I wanted to be able to do something more than that, something that gave back to the community around me. For the past few years I’ve felt particularly called to Cincinnati, to giving more to the community here than I have been taking. Project spARCH is doing that. Teaching design to the upcoming generation is incredibly important, and I really want to be able to have that influence on these kids’ lives.

What aspect of design most interests you?

The most interesting thing about design for me is the way that it changes perceptions. My way of viewing the world around has changed dramatically since I first came to school for design and I see much more meaning in everyday things. That perception and seeing deeper and more creative possibilities for everyday solutions is what really has been the best part of design for me.

How can Design Thinking be used outside the classroom?

Design thinking is really applicable and necessary across any field. It changes your thought process and starts making you look at both the big picture and the little details of any problem that you come across. That isn’t just valuable in design but in any workplace environment and even in the simple events of our daily lives. Everything we encounter becomes a puzzle that cries out to be solved.

“We have all read in scientific books, and indeed, in all romances, the story of a man who has forgotten his name. This man walks about the streets and can see and appreciate everything; only he cannot remember who he is. Well, every man is that man in the story. Every man has forgotten who he is, we are all under the same mental calamity; we have all forgotten our names. We have forgotten what we really are.”

-G. K. Chesterton

In order for this project to be a success, it was necessary to find the right teammates who would be able to bring project: spARCH to life. After much deliberation and establishing the program as a viable option for students’ Co-Op requirements (University of Cincinnati), three undergraduate architecture students were selected based on their qualifications and passion.
Why did you want to be a part of project: spARCH?

I chose to be a part of project: spARCH because at times, it feels so hard to make a difference in others’ lives, even though I desperately want to. So when an opportunity presented itself involving three of my greatest passions—design, teaching, and improving the lives of others—I could never say no. I want to instill a respect for the arts and an understanding of how they relate to other professions. Most of all, I want to encourage these students to reach their highest potential and make our world a better place using the skills they start to learn in project: spARCH.

What aspect of design most interests you?

I am most interested in the intuitive nature of design that is ingrained in us. Good design isn’t always identifiable through logical, rational reasoning; sometimes it just “looks” good. Sure, it also makes things simpler and easier, but part of it taps into a universal desire for and understanding of beauty.

How can Design Thinking be used outside the classroom?

To me, design thinking is just a fancy term for “problem solving.” Although we frequently use it to make tangible and visible things, design thinking can be applied to all aspects of life because it finds out what the right questions are and how to answer them. Someone with a good understanding of design thinking can find creative solutions to almost any challenge he or she faces.

“To conquer oneself is the best and noblest victory; to be vanquished by one’s own nature is the worst and most ignoble defeat.”
- Plato

Emmy BArch 2014
I wanted to be a part of project: spARCH because of the opportunity to educate youth on design thinking and creative problem solving. Project: spARCH allows for a unique experience in personal growth. I feel that this project will have not only a positive influence on the students but also on us as instructors. I feel that any situation that is relationally focused can be invaluable and life changing. If we as instructors can impact one life for the better, then the whole experience will be worthwhile.

I was initially attracted to design because of the creative potential and problem solving. There is never only one way to solve a problem and the great thing about design is the journey you take while solving that problem. Creative solutions are great, but the journey getting there is what matters and that’s what makes design fun.

I believe design thinking can be used in everyday life. Whenever a problem presents itself that is when design thinking can be utilized. Whether that problem is situational or relational, thinking creatively can help you come to the best solution, and that is what I think design is all about.
Hughes STEM High School is home to over 1,000 mostly inner-city students. Project: spARCH paired with one 11th grade Engineering class. The students taught represent a typical class of Hughes High School, with several learning and attention-deficit disorders. In response to these concerns, steps were taken to capture the effects of this studio. In order to track students progression from the beginning of the studio to the end, several interviews were conducted to assess their perception and overall understanding of the concepts being taught. The following student profiles depict both before and after answers to questions centered around design and it’s application to real-world scenarios. Their responses, paired with images of their personal work and class participation help to depict the overall excitement and engagement of the entire studio.

Andries Van der Bent is an Engineering and Technology teacher at Hughes STEM High School. Teaching students in 10th, 11th, and 12th grade, Andries teaches over 225 students each year. His engineering degree and soon-to-be Global Field Studies and Masters degree in Biology was a perfect match for both the final project and overall principles of project: spARCH. Andries’ energy and passion for teaching and opening students’ minds was a constant source of inspiration.
They design objects to help people and give them what they need.

Standing in front of the class to explain our project was the hardest part for me.

My definition of design is having a plan of some sort.

I learned how to design and a new process of design thinking.

Design is creating something that will soon become a masterpiece.

I learned about the design process and that design homes, cars, and other buildings.

Design is creating sketches and improving previous creations with sketches and measurements (research).

I learned to design something multiple times to create the perfect product.
Teacher & Student Profiles

What is the definition of design? 

Design is creating anything you can think of.

What is the definition of design? 

Design is designing the things that we live in everyday.

How will this apply to your life? 

Everything in life is designed.

How will this apply to your life? 

Designers think of different and better ways to construct and build their model of whatever they are trying to create.

What did you learn? 

I learned that there is always room for improvement and to take constructive criticism so that you can be better at what you do.

What did you learn? 

I learned that you have to have a plan when you are designing something.

What was the biggest challenge? 

The biggest challenge was putting our ideas together as a team and bringing it all together.

What was the biggest challenge? 

Designers create things, plan things out, and sketch out ideas to fix problems.
They sketch their ideas and draw out their thoughts.

Designers design everything, like cars, bridges, houses, walls, and sinks.

Designers design everything in the world.

I learned how to design a plan, and that the first idea is not the best or your last.

They assess problems and think of how to make a solution.

The biggest challenge was listening to others and considering their ideas too.

They help make creative dreams come true.

I learned to how to do sketches of the entire inside and outside of a house.
What is the definition of design?

Designers can design houses and other types of facilities and they decide how things look.

How will this apply to your life?

Like this school, there’s all different colors and they can design down to the doors.

What is the definition of design?

Designers take ideas and pull them up, model, and make successful ideas in the real world.

How will this apply to your life?

Designers design everything, like cameras, phones, microphones, bridges, and homes.

What do designers do?

They get a problem and then design things to solve the problem that they were given.

What was the biggest challenge?

The biggest challenges were thinking outside the box, being creative, connecting ideas, and bringing everyone in the group’s ideas together.

What is the definition of design?

Design is taking ideas and making them into what designers want.

How will this apply to your life?

It lets me be creative.
Designers design, plan, and sketch.

I learned to think more out of the box.

Designers create images that help them create the way that they view the world.

I learned the design process, teamwork, and creative thinking skills.

They design the vision through inspiration.

I learned how to open my mind and to think outside the box when designing.

Designers create things that others cannot.

I learned how to create things from nothing.
Guest Visitor Profiles

As a way to provide the students’ with a variety of perspectives and influences, over a dozen local professionals, professors, and graduate students visited the studio throughout the 8 week program to pass along their insight and help the students develop their designs and overall understanding of design. The following profiles highlight each guest’s background and overall philosophy on design, illustrating the variety of professions and perspectives that helped to transform project: spARCH from a high school design studio into a community-wide collaboration.
What is your definition of design?

- Anything that solves a problem in a meaningful way—be it aesthetic, technical, etc.

How is Design Thinking part of your profession?

- We approach every project from a design perspective—we chart goals/objectives early that are mindful of budget, geography, context, sustainability, etc.

How can Design Thinking be used outside the classroom?

- Creative thinking in general is a valuable skill-set. There are thousands upon thousands of career and project opportunities that are rooted in the ability to think creatively and solve problems.

- An aesthetic and utilitarian mode of expression.

- As a bridge between functionality and art.

- Design Thinking is a vital life skill as a means for thinking through a problem towards a solution.

- It is a noun, a verb, and a personal philosophy.

- Always. Period.

- To solve nearly any challenge, I would love to see design thinking in politics.

What is your definition of design?

- Design is a quality. It is the aspect of a space, building, product, or work of art that improves the quality of a person’s life.

How is Design Thinking part of your profession?

- Design Thinking plays a very important role in the field of architecture in that it forces the person in charge of a project to consider all aspects of a piece of work to create the best possible outcome.

How can Design Thinking be used outside the classroom?

- Design Thinking can be used outside of the classroom and the Design Profession and in a person’s every day life by allowing them to think through problems in a more creative and efficient manner. Design Thinking applies creativity and critical thinking to any issue—big or small.
Design is taking your own ideas and forming them into a new functional idea while improving on the last one.

My background is industrial design so sketching is KEY!

Observe surroundings and find out how to improve upon the things we use to live.

Creative problem solving to enhance the public good.

Creative problem solving can be implemented constantly to enhance personal, professional and client goals and objectives.

Design is all around you. You are designed too! Learning to appreciate that is demanding, but awareness is key. Adapt and improve the world around you.

The final function. That process which unites the utilitarian to move beyond.

As a problem solving tool. As a means to educate clients as to possibilities.

It’s an approach- a way of looking at an issue or problem- that draws from constraints rather than be limited by them. The logical exceeding of need.

Creative problem solving which centers on user insights to find opportunities.

In all aspects and all phases of any project, design thinking guides and creates the ability to try, test, refine; then connect different pieces together.

Design Thinking is a process which allows for rapidly generating ideas, quickly prototype through sketch and model, “fail” and try again can be applied to any industry and any field.
What is your definition of design?

Design is a word big kids use when they play. It is a way to problem solve in an effort to better an individual, group, and the world.

Express of spatial relationships to experiences to provide inherent social benefits to the community.

Design thinking can be used in various situations that require critical thinking and problem solving. It applies to things as small as presentations to as large as community planning. It is a language that can be understood by many.

A creative method of problem solving that makes the world a better and more beautiful place.

Design thinking can be used to create architecture that is beyond buildings- to create spaces and experiences, not just floors and walls.

Design thinking can be used in all sorts of situations that require problem solving- creativity can advance even basic decisions in your everyday life.

Non-linear collaborative problem solving.

Design Thinking is a critical part of the innovation process- we use it with every initiative.

An innovation mindset is a critical process, skill and deliverable in every day activity. Approaching things with a Design Thinking sensibility is a fantastic tool in enabling that innovation.

One’s decision to change the world around him or her.

It is the underlying process of everything we do as architects.

It can inform every decision made throughout the day, allowing one to critically rethink everyday processes.

How is Design Thinking part of your profession?

How can Design Thinking be used outside the classroom?
RESULTS

A highlight of the studio outcomes including instructors’ final insights & opinion of the studio.
Promotion & Supporters

project: spARCH is a studio rooted in the community. It’s success was dependant not a select few by a collection of many. The following companies and organizations have each contribute in either fiscal or time donation and were able to see the positive benefit the students and the city of Cincinnati would gain from this studio. Their efforts were the lifeblood of project: spARCH.

The adjoining page shows a glimpse into the overall promotion and marketing campaigns used to gain support and interest from the local community. The various tactics used were able to secure over $2500 in donations and contributions, which went towards studio materials, final production, and other financial nuances.
In an effort to build interest and support, a three-phase gorilla marketing scheme was developed beginning first with a series of installations. Stickers were used with the project: spARCH icon and placed in a variety of images throughout the Design and Architecture building at the University of Cincinnati. The images were followed by a series of cards with website and studio description. The installations were left for 2 weeks leading up to a fundraising event that would answer people’s questions.

The Grilled Cheese Fundraiser was the culmination of the gorilla marketing campaign that served as an information provider as well a donation platform for interested parties. The fundraiser was held over three days and was able to solidify the identity of project: spARCH, and gain financial support for the studio.
A series of printed materials were sent out to various parties that included members of local artist organizations and architecture/design firms, and members of various Greater Cincinnati Fortune 500 companies. The printed material was meant to provide general information and ways to get involved with project: spARCH in a more personalized way than mass emailing. Packages, brochures, and mailouts were sent spontaneously throughout the studio to build support.
A number of videos were made throughout the studio to keep interested parties informed about the happenings and successes of the studio. Students were also required to blog throughout the studio on the official project: spARCH website (projectsparch.org).
Studio Highlights

Over the course of 8 weeks, the students of project: spARCH engaged in several exercises and activities, worked with several professionals from the Greater Cincinnati Area, and have pushed their critical thinking and creative problem solving skills to limit. All of this in an effort to develop innovative and inspiring solutions that have real world application. Through design thinking and the architectural design process, students were shown how to open their minds as a way to express their ideas and use research, insight, and historic precedent as catalysts for change. The following images and final products of their efforts only reflect a portion of their overall understanding of how creativity and design thinking can be applied beyond the classroom and into their own lives.
Week 3 Immersion: Students were led through an exercise and field trip in order to insights and understanding for their project’s target user.

Week 2 Ideation: Students were taught through several activities, various ways to express, develop, and refine their ideas by using principles of active listening, interpretive analysis, & concept generation to open their minds to design thinking.
Final Products

Regeneration

The regeneration urban shed design derives it's form and function from the daily life cycles of the plants that make up the life of the garden itself. Acting like a flower, the building activates itself each morning when the sun comes out by catching the energy from the sun with solar panels and opening itself up. Three panels along the curve side of the shed open and close to follow the sun’s rays.

Welcome to the Jungle

“Welcome to the Jungle” is an urban garden shed that takes you from the streets of Clifton and places you on the trails of the Amazon. Using light, water, and plants, our Urban Garden Shed is set into the earth so it as much a part of the school as it is a part of nature. The curved roof allows for vegetation to grow as well as providing a space for visitors to relax and enjoy the surroundings.
Squarisphere

The structure is made entirely of recycled materials. Its roof is designed to collect water. The structure also features solar panels for electricity it needs and skylights that open and close to provide natural ventilation. To reflect its emphasis on natural resources, one wall of the structure is a mural made to look like water running down the side of the shed. Each “stream” is made of a different type of recycled material.

Cross-section

The overarching theme is intersection which manifests itself in the form of an abstracted cross. From intersection, we determined movement, and from movement we create energy. The three levels of our design idea are a driving force to culminate a well planned, interesting, and effective solution for our Urban Garden Shed.
ANALYSIS

A detailed review of each day that includes remarks and recommendations for future programs.

A Look Inside, Wrap-up, Daily Intents, Successes, Setbacks, & Surprises

47.

136.
A fast-paced group exercise that focused on redesigning the lunch experience.

Small groups of students brainstormed ways to improve the lunch experience. They discussed their likes, dislikes, and problems from individual point of view. Ideas were posted on post-it notes and then categorized for further discussion. Each student selected an issue and then quickly prototyped multiple solutions.

The instructors wanted to immerse the students into design thinking quickly and with little warning to keep the student’s on their toes.
Eventually the students began to lead the conversations and actively listen and discuss various problems and solutions.

Initially the students hesitated to participate and talk about issues or solutions. The instructors had to suggest and pull ideas from the students. After an idea was presented some students struggled to develop a deeper understanding of the idea.

Some students were both engaged and insightful. Those that were, deeply understood their ideas and expressed them with great detail.
The first day was designed to immerse the students into the world of creative thinking keeping them on their toes.

**Wrap-Up**

Pick a problem or topic that all students can relate to so it is easier to start conversations and have in depth discussions.

Some students may not fully understand the activity without proper explanation.

Practice the first day exercise beforehand to determine any flaws or adjustments that may need to be accounted for and corrected.

Give adequate amount of time for students to discuss their ideas.

Adding time constraints helps to control and maintain discussions and is critical to complete activity.
Day 02 A New Perspective
The instructors orchestrated an informal presentation and critique for the students to share their designs in a comfortable and familiar setting.

The students placed their designs on their desks and then walked around viewing their classmates work. They would then put a sticker on ones they liked and asked to explain their choices. The creator of the piece then had to explain his/her idea.

We introduced the critiquing process. This day gave the students the opportunity to critically communicate their ideas and opinions. It informed the instructors of how well the students could present their work and critique others. The day became a foundation for future critiques and other presentations.
The students eventually became engaged, and their ideas progressed after the critique. Many of the students responded well to constructive criticism and were able to make proper adjustments within their project. They also found commonalities between other classmates' projects, which helped them identify the “big problem” presented to them at the beginning of the week.

The students had trouble paying attention, critiquing works on more than just appearance, and critically analyzing the designs. Much of their responses indicated an apathetic attitude that the instructors struggled to repress.

The students were unable to critically explain why they chose the designs they did. However they successfully explained their own projects. This dichotomy became one of the main challenges the instructors had to overcome.
This day introduced students to a typical critique and helped lay the groundwork for basic presentation skills.

Make an effort to engage all students in order to create a dynamic first experience.

Building off of the students’ ideas helps to stir conversation and spark creative thinking techniques.

Some students will be more engaged than others.

Follow up with the students and explain to them why some projects were more successful than others to help begin developing a design sense.

Instructors should be prepared to start conversations but be sure not to completely dominate and lead the discussions.
Day 03 It's All About Process
The students played telepictionary as an introduction to the design process.

The students were put into groups and then stood in a circle. Each Student was assigned a different method of communication: acting, drawing, or writing. The first person in the circle was given a sentence and told to communicate the sentence to the person to their left only using their assigned form of communication. The process continued around the circle.

The exercise was meant to demonstrate the iterative process of design. The students were able to express ideas in different ways using various forms of communication and see first how that changes them.
The students that were engaged and excited about the activity eventually developed their own sentences different from what we provided them. They wanted to run through the activity multiple times and continued to talk about it even after the class had ended.

The students were exposed to an unfamiliar exercise and as a result were hesitant to participate. The activity required acting which many students avoided. Additionally, The instructors overestimated the amount of time it would take to complete the activity.

Unfortunately some students refused to participate at all and many didn’t understand the purpose to the exercise. They viewed it as a game instead of an educational experience.
This day introduced the students to the design process and various ways of communicating an idea.

Students were able to get excited and develop their own interpretation of the activity.

Continuously reinforcing the central principles of the activity helped students understand the overall purpose of the activity.

Some students struggled with the concept of non-verbal communication.

Most students enjoyed attempting to act out the various scenarios of the activity.

Be sure to thoroughly explain the purpose of the exercise and how it relates to past and future activities.

Be sure to have extra example sentences on hand in order to maintain student attention.
Day 04 From Song to Building
The students listened to a song and then developed a 2-dimensional collage that was supposed to graphically represent what they heard.

The instructors chose a song to show the students. The students were asked to identify themes, emotions, concepts, and develop a collage from magazines and other supplies.

This exercise was designed to help the students think abstractly and develop hand skills and presentation abilities.
Successes: Despite the students seemingly inability to translate the music into graphics, the students began thinking creatively and they enjoyed the hands-on activity.

Setbacks: The students had access to a very limited variety of magazines resulting in difficulty representing the music. The students were also unfamiliar with graphical representations of musical themes. The time allotted for the exercise was too short and many students

Surprises: The instructors were surprised at how few students were able to relate color and images to emotions and abstract concepts.
The students struggled with abstracting acoustics into graphics but the exercise was a necessary step towards design thinking.

Choose songs with minimal lyrics or songs in a foreign language in order to allow students the chance to analyze the rhythm and melody of the song.

Students hesitated when asked to cut up the magazines for their collages.

Using simple methods and mediums such as Post It notes helps organize students’ ideas.

Show examples of how to express emotions and ideas graphically.

Give the students a variety of magazines and materials to work with.

Although most students were excited, some students were disengaged and distracted.
Day 05 Dancing as Ideation
A break-dancing instructor visited the class for a day and taught the students simple break-dancing moves.

Visual examples of professional dancers and interpretive dances are helpful and informative, but the day was mostly successful because of the dance instructor. He was able to lead the class and reinforce the other instructor’s teachings.

This day was meant to show the students how to express emotion and ideas through the art of dance. It was also an active listening exercise and follow-up to the previous day's activity.
Many students grasped the concept of active listening and how to interpret the song. The dance instructors ability to translate the lesson into something understandable was invaluable.

Some students were hesitant to participate in the activity. The dance instructor didn’t use the songs we had chosen for the previous activity which resulted in some disconnect between days.

As students began to participate, they supported each other and encouraged each other to continue. The ones that were participating did so throughout the entire class period. The teacher also participated which helped to loosen the mood.
This day reinforced the song to object activity and showed the students a new form of expression and abstract communication.

"Dancing is a way to express emotion."  
_Trevon_

The instructors should engage themselves in the activity, and allot extra time for this class period.

Be sure the guest instructors are able to interact with the students throughout the entire activity.

The dance instructor took the students through a step-by-step process of how to do basic dance moves.

Every student was able to get involved in the activity at one point during the class.

Providing interactive and physical activities for students to participate in helps students engage and learn-by-doing.
Day 06 Method to the Madness
The students created a 3-dimensional diorama collage that was an extension of their paper collages.

The instructors provided the students with a four sided box (no top or bottom) and materials to create a 3-dimensional interpretation of their collage using many of the same materials.

The Students were asked to re-interpret their 2-dimensional collage and dancing experiences into a 3-dimensional object in order for them to become more acquainted with abstract thinking and more comfortable with model making.
Some students combined their individual collages into one piece, which showed creative thinking. A majority of the students seemed engaged in the project and wanted to take theirs home for additional time.

The students were not given enough time. Some of the projects were rushed and many students needed additional time outside of class. They also had difficulty translating literal magazine images into abstract objects, resulting in incoherent collages.

The students enjoyed the 3-dimensional exercise better than the 2-dimensional collage. They were more comfortable with the 3-dimensional space of the box, than the 2-dimensional space of the paper. Some students found the given example helpful, while others were confused by it.
The day ended too quickly for the students to fully develop their schemes but still showed a passion for their work.

Students were very engaged and really took to expressing their ideas through the models.

“Building the model really let me creative and express myself.”

Patricia

“I’ve never done anything like this before!”

Kiara

Make sure you allot multiple days for this exercise.

Give thorough instructions on what it means to create an abstract model.

Be sure to show multiple examples of other projects so students understand the concept and level of craft expected.
During the students week break from classes the instructors encouraged them to photograph and document various people in various environments.

The instructors provided the students with disposable cameras and worksheets to be completed throughout the break. The instructors asked them to focus on people interacting within work spaces.

The activity was supposed to enforce the lessons of the past two weeks and keep the students prepared for the weeks to come.
These couple days made apparent the student’s work ethic and helped the instructors realize how much they needed to push the students.

The instructors overestimated the responsibility of students. No one did the work assigned to them and because of that the instructors failed to follow-through with the rest of the assignment.

Even though the instructors provided the students with all the required materials, they still didn’t do their work.
Although helpful for instructors in terms of assessing the beginnings of the studio, great emphasis must be made during breaks in order to maintain pace and overall energy of the studio.

**Wrap-Up**

- Make sure each student understand specific requirements of homework in order to make work relevant to students.
- Quality technology should be used in order to receive usable photographs/information.
- Be prepared to follow-up on assignments in order to reinforce the significance and hold students accountable.
- A focus on specific aspects as they relate to the overall goals of the studio will help students deliver better photographs.
- Simple guidelines should be given to students so they know exactly what they should be photographing.
- Provide tutorial if necessary for specific technology to receive best results.

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Day 10 Creative Brainstorming
Students presented their 2D collages and 3D models.

Students informally presented their collages and models as a large group and explained their design intent.

Students already had practice presenting their ideas from the first week, but this was an opportunity to learn to present more abstract ideas.
The students had drastically improved presentation skills from the beginning of the course and were much more skilled at communicating their ideas. Their models and collages reflected increased creativity.

There was a lack of communication of the relationship between the object and the thought process behind it. A lack of participation resulted in the need for extra time.

The high quality of the models was a surprise, as was the depth of the students’ ideas. Working closely with one another resulted in students’ copying each other’s work.
Students learned to not only create something using abstract ideas, but to explain the process behind it.

Wrap-Up

Students may respond better to a more traditional means of analyzing work, such as worksheets or a grading rubric.

Provide engaging questions for students to ask each other about their projects.

“I liked being able to put whatever was in my head into a little box.”

Trevon

Ask leading questions. Students might need some help communicating abstract ideas with words.
A competitive simulation activity.

Instructors intentionally set up a poorly-designed prototype of an urban garden shed. Students competed in teams to complete essential tasks of an urban garden (harvesting, washing, drying, and packaging) in the fastest time. Then, time was given to develop a more efficient layout of the shed.

To actively immerse students in the project at hand, helping them understand what was needed in an efficient design.
Everyone was engaged. This was possibly the only day that every student in class participated. The students’ redesigns were effective, cutting their first-round times in half, and original.

Students got distracted by the high energy of activity. Instructors did not leave enough time for the students to reflect on the relevance of what was done.

The students were very engaged in the competition. Groups came up with unique ideas and ideated very quickly.
Students learned the concept of an urban garden and got a concrete, creative demonstration of its function and needs.

Wrap-Up

Create an immersive activity that relates to the project at hand in order to help students learn in a thorough and fun way.

No matter how fun it is, maintain focus on the activity’s objective!

You may get messy... leave time for preparation and cleanup before and after class.

Remember, this is useless if students don’t understand how it applies to their project. Add time to reflect on the purpose of the activity.

Add or emphasize a competitive element to engage students.
Students went on a field trip to the urban garden at Findlay Market in Over-the-Rhine, an inner-city neighborhood in Cincinnati.

Instructors arranged a field trip to a local urban garden to meet with a professional gardener, who explained the needs and preferences of his profession.

This served as an opportunity for students to get firsthand research for the assignment at hand.
Some students were very curious and eager to learn. They asked the gardener a lot of questions. All the students learned some information they were able to use in their final projects.

The gardener didn’t understand the purpose of the visit and therefore didn’t tailor his lesson to the students’ needs. It was difficult to maintain students’ focus and encourage participation. Some students didn’t understand the

There was a sharp contrast between the engagement in the competition and the lack of interest in the field trip. Students didn’t create a connection between the competition, the field trip, and the project.
Wrap-Up

This day was critically important for helping students understand the project at hand.

What is your project about? Find a directly relatable source for research.

Be sure to explain the purpose of the trip ahead of time.

“I learned what tools you need and that flower beds can be designed just like everything else.”

Prepare questions ahead of time to ensure students stay engaged.

Maintain the relationship between the immersive activity and the firsthand research. Don’t assume students will make the connection.
Day 12 Diverge To Converge
An introduction of existing unique urban garden sheds.

Instructors visually presented concepts and examples to serve as inspiration. Students identified their favorite inspiration images and explained what they liked about them. After seeing the images, students began to model their initial ideas for the garden shed.

This presentation served as an opportunity to show students new and different ideas. It got them to “think outside the box” and consider the possibilities for new and innovative ideas.
This day accomplished its goal—to broaden the students’ perceptions of the typical urban garden shed and what it could be.

The presentation was too short. Instructors had to split the limited class time between showing examples and brainstorming using them. Instructors did not prepare explanations of the inspiration images and the goal of the class.

The students’ ideas were well-developed from the very start. The students didn’t analyze the images the way we expected them to, but they were still able to use the examples as inspiration.
Students learned to think about the structure of garden sheds in a new way.

Wrap-Up

Require initial work before class so that you can discuss and refine it as a group.

Allot two class periods. Use one for image analysis and the other for applying the image to their designs.

Do not be afraid to use technology as a teaching method.

Remind students that all ideas are good ideas; they should experiment with each one instead of throwing it away.
Day 13 Building From The Past
Because the students were designing a building with unique needs and limited size, instructors offered relatable examples of unique buildings with similar constraints.

Instructors presented worksheets with images and descriptions of example buildings. They asked students to identify the main idea of each building and an example of how to apply it to their own designs.

To encourage students to think of creative solutions concerning limited spatial size and unique needs.
Students were impressed with the buildings and inspired by the main ideas of the given examples. Students offered good interpretations of and conversation about the examples.

Some students got bored filling out the worksheets. Some students had difficulty translating the main idea to their own designs. Students did not have enough time to discuss the buildings as a group.

Some students were concerned more with practical elements than design concepts. This made it difficult for them to be open to the idea of making their more “efficient” designs more artistic.
This day sparked new ideas in students and gave them the opportunity to add to or change their designs.

**Wrap-Up**

Be sure to allow enough time for meaningful discussion.

Try to include experts in the field.

Make sure every student participates in the discussion.

Have students look at an example and translate it into their main designs in order to spark creativity.

Present examples based on the theme of the project.
Day 14 The Personal Touch
Instructors offered examples of unique buildings that are heavily influenced by a specific culture or user.

As on Day 13, instructors presented students with worksheets with images and descriptions of example buildings and asked students to identify main idea and an example of how to apply it to their own designs.

To encourage students to think of ways to incorporate cultural and user influence into their designs.
The students clearly understood the design strategies of the example buildings. The exercise sparked intense group discussion.

As before, some students got bored making the worksheets. Some students had trouble relating to other cultures and understanding the significance of the buildings. Many students were content with their original designs.

It proved difficult for students to move forward with their designs after the precedent analyses.
Students learned to consider the needs of all users and how the target user and context could influence their designs.

Wrap-Up

Students learned to consider the needs of all users and how the target user and context could influence their designs.

Include an example of how to translate the main idea of a design into their own designs to jump-start students’ thinking.

Ask questions to keep the students thinking about how to apply ideas to their own designs.

Include video or alternative media examples, not just photos.

Allow guest visitors time to interact and engage with students.
Day 15 Surrounding Influences
Students analyzed certain conditions (slope, views, and solar effects) of the site for their final projects.

Each member of each group was assigned to a specific role. Students were given three sites and asked to analyze the site condition that correlated to their role. After analysis, they recommended the “best” site and came up with a design solution to environmental problems.

To understand practical real-world conditions and how they add constraints and inspire creativity.
Individual students focused and did each task well. Students caught on to their tasks and were engaged in them. After researching, students started conversation about their designs without needing prompting by instructors.

Students had difficulty understanding the purpose of the exercise and maintaining focus on the task at hand. Instructors did not provide enough equipment. There was not enough time to adequately analyze the site.

Students worked well in their groups, even when the groups were mixed. Students didn’t understand how to translate the new site information to their designs.
Wrap-Up

Students learned how to apply environmental constraints to their designs and move them ever closer to reality.

Emphasize the importance of site information and its influence on the outcome of the design.

Always ensure there is an adequate amount of time at the end of class to review findings.

Bring in extra help. It’s hard to keep all the students focused when they’re outside and separated.

Make sure to collect the worksheets after the end of the exercise.

Be sure to provide enough equipment, and set it up ahead of time.
Day 16 Bring It All Together
Students talked in their teams. Each team member presented his or her findings for the specific element researched and discussed and recommended a site location based on those findings.

To learn how to analyze site research and apply it to the project; to understand that there are no perfect conditions for a project, and designers must creatively get around those obstacles.
Students reached a group consensus quickly, with a lack of argument and a good deal of passivity among them. Not all group members realized the significance or relevance of their specific site analysis task and were therefore indifferent to the final decision.

Students were not able to retain the information they gathered. Since the instructors didn’t collect the worksheets, students lost them.

Each team member had to defend their position. The teams were able to reach a consensus on which site to use without too much difficulty.
Students learned to come to a group consensus based on the information they gathered as individuals.

Wrap-Up

Have the discussion immediately after completing the activity so students retain the information they learned.

Mapping the discussion is a good way to help the students visualize the problem at hand.

Be sure to engage ALL students and communicate that because each student had a different task, everyone’s opinion is valuable.
A formal presentation that included guest critics. The presentation included initial concept ideas, inspiration, research, and preliminary sketches.

One member of each group was chosen to present in front of the class. Groups were given 5 minutes to put together a speech for the presenter. Presenter had 5 minutes to talk, with 10 minutes of questioning and discussion by critics proceeding.

A important part of any profession is evaluation and feedback. Students were exposed to presenting their work in a more formal setting in order to obtain valuable presentation skills in preparation for their final presentation. Guest critics were assembled to offer constructive criticism for students' projects in order to identify strengths & direction.
**Successes:**

Although difficult in the beginning, overall, the students were able to obtain valuable feedback from the guest critics. Students were engaged throughout the presentations and somewhat more motivated afterwards.

**Setbacks:**

Some students were reluctant to present due to either lack of preparation time or fear of public speaking. There was an overall pushback from the class as students felt pressure to perform in front of the class.

**Surprises:**

Overall, the presentation skills of each student group were well developed and very well crafted. Although some groups struggled more than others, each was able to accurately describe their projects with few flaws.
A challenging yet effective day, this day pushed the students to move beyond their comfort zone & receive constructive criticism.

Wrap-Up

Be sure to sufficiently prepare students work to allow time for presentation prep.

Be prepared for some pushback from students who are uncomfortable speaking in public.

Stress importance of participation by group to ensure good presentation.

Have students provide variety of information in order to create interesting and in depth presentations.

Choose students who have shown potential throughout class in order to give the opportunity to create breakthroughs.
Day 18 Start of the End

[Image of a classroom setting with students and instructor]
A debriefing and review session with each group followed by a digital modeling tutorial.

Instructors met with each individual group to discuss reactions and results of presentation from previous class. Students were led through a simple tutorial of digital program by an instructor. Identifying tools and methods to create shaped and objects.

The purpose of the review/debrief session was to reflect on outcomes of presentations in order to determine new directions for each project. This session also allowed students to voice questions, concerns, & feelings on the presentation. The second half of class was to introduce a simple digital modeling program so student groups would be able to begin using technology as a method of developing projects.
Students were able to voice feelings and opinions in a formal setting, allowing for an open communication. This setting created a mutual respect between students and instructors. Every student was excited and engaged during digital modeling tutorial.

Although some students were able to grasp the rationale of the presentation, several students became defensive and aggressive towards instructors and curriculum. The class setting did not allow for an adequate amount of time for each activity.

The continued aggressive and resistant behavior from students was not anticipated. This required additional time spent with specific individuals in order to relinquish their negativity. The amount of creativity and overall knowledge of digital program was unexpected.
One of the most important days of the studio. Allowing students to voice feelings/reactions to class activities allow for mutual understanding and builds respect between class and instructors.

Wrap-Up

Make sure you can answer the question, “What's the point?” & “When we will ever use this?” Be confident and precise with your answers.

Do not be afraid to use technology as a teaching method.

Provide structured tutorial, but allow students the freedom to explore and create on their own.

Consider individual conferences with highly defiant students.

Be prepared for continued aggressive by students during review/debrief sessions.

Be sure to have specific comments for each group prepared in order to maintain focus and open communication.
Day 19 Work, Work, Work!
Student work day and discussion sessions.

Instructors discuss final presentation requirements with students and begin working with students towards developing final preparations.

Identifying final requirements enables students to focus on final presentations and disperse the workload amongst group members.
Most all students were engaged, motivated, and focused in developing the requirements for their final presentations. Work was done outside of class, both digitally and physically, in order to finalize project concepts and ideas.

The amount of time allotted for the development of final products was underestimated, requiring additional support by instructors to finish on time. Overall attendance was low due to additional assignments from other classes.

Some student groups were reluctant to incorporate feedback from presentation and guest critics. Student groups were focused and motivated to ensure final presentation was well-received.
These final work days are crucial in order for groups to produce the necessary requirements.

Be aware of time constraints. Plan on additional time for final product preparation.

Assigning specific tasks may help motivate and focus students.

More than likely, instructors will need to assist students in completing requirements. Be sure to make yourself available.

Being able to work with my hands is so much better than sitting at a desk doing worksheets all day. — Cameron

Many students do not recognize the importance of the quality of the final product. Be sure to reinforce and teach skills that will assist students.
Day 20

Represent Yourself
A presentation and work session on story-telling, presentation and communication skills, and user-led design.

Two lead designers from P&G visited and led the class in a discussion on user-focused design and how you tell a story determines how well it is received.

P&G’s commitment to developing user-focused products has made the company a leading retail force. The ability to develop a story and solve a problem that appeals to a specific user can help make the solution more relatable, appealing and thus more successful.
Students were very engaged in the discussion and story-telling exercises. The guest visitors were able to simplify the art of storytelling into relatable and understandable terms so students could apply the same process to their own design projects.

Some students were disengaged from discussion and somewhat skeptical/hostile towards the story-telling methods.

Students were able to develop strong responses to guests’ questions that related to their individual design projects. Guest mentors were able to keep students engaged throughout class by alternating between telling stories, asking questions, leading discussions, and engaging students during activities.
An educational and insightful discussion from one of the leading companies in the world put into perspective how a story is told and how to develop a solution to a problem for a specific user.

Engaging and energetic guests help to create a dynamic and engaging class period for all.

Metaphors and stories help illustrate ideas and concepts better than slideshows or worksheets. Keep students engaged through exciting stories.

Making the class period a conversation keeps students engaged and interested.

Be sure to balance lecture time with activity or exercise that gets students involved and participating.
Day 21: Final Work Day
A final work and presentation preparation session.

Class time was split between finalizing final requirements for presentation and preparing students’ verbal presentation that included a worksheet with specific questions to be answered by student presenters.

In order to prepare students for their final presentations, entire class sessions must be dedicated as working sessions.
Successes: ▶️ Students were engaged and committed to finishing final presentation requirements while developing new strategies for presenting their work and ideas.

Setbacks: ⬅️ The amount of students present and time available was not enough to completely finish all requirements. Instructors should anticipate getting more involved in assisting students during this day.

Surprises: 🌟 Students were requesting additional time to finish projects and offering to come in later in the day and after school. Even with pressure from fellow classmates, several students did not attend the final class session. Instructors did not anticipate length of time necessary to complete final presentation requirements.
Engaged and diligent students helped make this day a strong ending to an intense and demanding studio.

**Wrap-Up**

Students were committed to working together to complete final presentation requirements.

Keep students working on similar tasks together to maximize instructor assistance.

Instructors should be prepared to become more heavily involved in assisting students finish requirements.

Having instructors display commitment will help keep students focused.

Replenishing supplies and purchasing project-specific materials is important to keep production at a high level.
Day 22 Final Presentations!
A presentation and critique of student's final designs.

Visitors from the University of Cincinnati, architecture firms, local design organizations, and others were invited to be guest critics for students’ final presentations.

As part of the design process, it is important to be able to present your work and be able to receive criticism in order to further the development of a design project.
Students were able to present their work in a very succinct and professional manner. Guest critics gave valuable feedback and provided new perspectives and inspirations.

Not all students were able to be in attendance for the final presentation. Likewise, not all team members participated in the group's presentations.

As the presentations progressed, students were able to learn from critics in order to better answer questions. Visiting critics were extremely impressed with the students' presentation skills and overall design concepts.
An extremely successful day as students showcased their highly developed designs and refined concepts.

Visiting critics were extremely engaged and impressed with the level of design development each group displayed.

The overall presentations skills and responses by students showed their growth.

Providing students with a list of essential questions to answer helps promote a succinct and insightful presentation.

The interaction between students and visiting critics made each presentation insightful and powerful as students were able to receive valuable feedback on their projects and how they can use the lessons learned beyond the classroom.
Day 23 Final Gallery!
A final gallery showcasing student's work and overall studio information with award ceremony for students.

Pairing with a local artist studio, a gallery event was held in which students, parents, teachers, and guests could visit and view all of the work done throughout the studio.

A celebratory event helps put a positive close to the studio and is a way to formally praise students’ accomplishments.
Several people attended the event to recognize the students' accomplishments including guest critics, students and their family, and local organization heads.

Be mindful of the time it takes to set up all of the displays. Make sure there is a variety and ample amount of food and drinks for visitors.

Students were enthusiastic to talk with guests about their projects. Several local organizations and neighborhood visitors attended, increasing the amount of attention and interest.
A celebratory event to showcase student accomplishments and bring a formal end to a successful studio.

Proper advertisement is essential in order to spread the word about the event and increase attendance.

Create a separate space for students final presentations and allow students the chance to speak about their projects to visitors.

Having a venue outside of the school makes the showcase much more of an event and allows the students to display all of their work.

The gallery was a huge success with a large turn out of people from universities, professional firms, and local organizations attending and congratulating students and the studio achievements.
An addendum of materials and information used for the daily procedures throughout the studio.
The following remarks were made at the conclusion of the studio by the instructors. The purpose of each writing was to gain a perspective from those intimately involved in the studio to understand:

1. Rationale for choosing to participate in project: spARCH
2. Expectations & Obstacles
3. Growth & Lessons Learned
4. Alterations & Improvements
5. Reflection & Future Endeavors

These words are written by those who know best, whose passion helped inspire the minds of those they taught.
For the past 3 months I have had the privilege of being a part of the most influential project of my life. In December of 2011 I was looking for a co-op opportunity that would fit not only my personality but also my future career goals. During my previous co-op I had worked for a small firm in Cleveland, Ohio as a scapegoat for redlines and recycling. Being my first job as an architecture student I understood the lack of responsibility I was receiving and completed my tasks without complaints. However, from that experience I learned that I wanted to do something more, something worthwhile for my next co-op; I wanted to have an impact on the community and influence people. During my search for such a work experience I didn't know where that passion would lead and I looked for opportunities with an open-mind. I wanted a change from the typical eight to five desk job and I wanted to be able to relate to my co-workers as a peer and as a professional. I wanted my talents and my contribution to matter. Looking towards the future, I knew I wanted to work with people and have something deeper than just a professional, surface relationship. My thoughts wondered towards teaching design and architecture. I felt that teaching encompasses everything I'm passionate about and it would allow me to influence and impact lives beyond my own. During my co-op search I knew I would be hard pressed to find such an opportunity, but then I stumbled upon what would become known as Project: spARCH.

Towards the end of the winter quarter, I interviewed with David Mierke and he explained the project as a hands-on experience teaching inner-city students about the design process, creative problem solving, and critical thinking. He said he wanted to reach kids in the area and show them how design thinking could be applied to their everyday lives. Immediately, I realized that this project was the opportunity I had been looking for. And our journey as a team striving to make a difference for twenty high school juniors had begun.

Starting the first week in January, David Mierke (the founder), Emmy Jensen (second year architecture student), Tyler Gentry (third year architecture student), and myself met in the mornings at DAAP to prepare for the first week of classes. We would discuss different activities we wanted the students to do, what we wanted them to learn, and how it would relate to the overall theme of the course (design thinking). We had a week to prepare, and the excitement was palpable. We ran through practice exercises, trying to work out the kinks; and we met with design professors that gave us invaluable advice and feedback. After the first week, classes started and the time for preparation had passed. During the 8 weeks, each instructor worked closely with a group of five students. We became mentors to our group. And saw first hand the impact we were having on the kids. Each day brought new obstacles, struggles, surprises and successes. We were never faced with the same situation twice. I specifically learned how people relate to problems, solutions, and creative thinking differently. Creative thinking was foreign to many of the students, and without a formula they floundered. I had to learn how to break down the design process. I had to learn how to communicate to the kids how to use the process effectively in problem solving. Naturally, some students in my group reacted to the various situations they faced poorly. I had to deal with kids refusing to do what I suggested, stubbornness, and even resentment. Much of what I learned was on a relational level and those things that I learned will be great assets to my life as a professional. In dealing with the students’ struggles and successes, I was forced to grow and mature both intellectually and emotionally.

As a designer, I was stretched to comprehend the central idea of five separate projects. And then presented with the task of combining five ideas into a single cohesive whole. This experience was unique to my time with David and Project: spARCH. If I had worked with another architectural firm, I feel that I would not have been given the responsibility or respect that I was given at Project: spARCH, making this co-op experience worthwhile.

After a few dealings with the students, I was immediately surprised at the gap I saw between my understanding of design and various topics and the students’ understanding. Being a third year college student, I am only three or four years older than most of the kids I was instructing. Initially I was slightly worried about being respected as an educator. Yet it soon became apparent that I had a wealth of knowledge and resources to offer the students. I contribute this to the College of DAAP. I never realized how much I had grown during my time in the Architecture program until this experience. The most evident difference was my vocabulary. I found myself being misunderstood because the students had never been exposed to a design centered vernacular. We as instructors had tried to prepare for this by practicing what to say and how to say, but even with our preparation some of what we said was still lost on the students.

Despite some of the struggles I faced, there is very little I would change. The only thing that I felt was missing from our class was technical training on plans, elevations, and sections. We stayed very abstract with the students throughout the course. Since art has been totally removed from their curriculum, we tried to bring as much creativity and abstract thinking to the students as possible. Yet if we had taught them how to properly do architectural drawings, communicating new ideas from both the instructors and the students would have been easier. Since communicating to the students was one of the biggest struggles I faced, teaching them how to properly draw various architectural drawings would have been a great asset.

Looking back over the experience, I know I was a part of something bigger than myself. David described this project as “a project with a soul” and that is truly what he created. We reached out to twenty students and tried to brighten their lives with design and creative problem solving. For four college students to successfully complete such a project is astounding. I think back to the person I was before Project: spARCH and I realize how much this experience has matured me. Personally, I feel more self-assured and prepared for the coming years as a graduate student and as a professional. This experience allowed me to solidify my future goals as an architect and as a person that influences the lives of others. I want to be an architect that cares for people and puts them first before my own ego. Thinking towards graduate school, I in vision my thesis to be something like project: spARCH, a project with a soul.
I chose project:spARCH for multiple reasons, and looking back, none of them are as great as this project really deserves. At the time that I applied to project:spARCH, I was desperate for a co-op job in Cincinnati. Nothing else had panned out the way I hoped it would have, and the stress was eating me alive. So, when it came time to apply for the final round of jobs, I sent in my resume to what I saw as my last hope. That’s not to say that I wasn’t interested in project:spARCH. It looked like a cool project, it would play to my strengths, and I thought I would enjoy it—but it wasn’t paid, I couldn’t go back for my next co-op, and I wouldn’t get the type of work experience I was looking for. After my interview, though, I felt a little more excited about it. I thought it was a good thing to do and liked Dave and Jenna’s energy. I was definitely happy to be hired. Initially, though, I was skeptical. I thought it was a little naïve and idealistic to think that a project like this would actually have some kind of impact on the students’ lives. Chalk it up to hubris; I thought that my extremely limited experience working with CPS students had already proven to me that it was nearly impossible to change their lives through a little volunteer work. Sure, I thought, it was a nice idea, and I would try my hardest to achieve Dave’s vision, but I was still a bit hesitant. And so, at the beginning of the studio, project:spARCH wasn’t something I was really invested in, just something I was doing. Something cool and different and valuable, but that was as far as it went for me.

The reality is, when I started project:spARCH, I was a bit burned out on design. I wanted with my whole heart to be a designer, but I felt frustrated and stagnant. None of my ideas ever turned out right. The whole co-op search was disheartening, my grades were slipping, and I was beginning to question whether or not I had a future as an architect. In that sense, I am extremely grateful to this project for helping me learn so much. It opened my eyes to the world of design outside the narrow little realm of DAAP. It reminded me that I can be a great designer with the right encouragement. This is the “selfish” reason I loved this project; the reason that has nothing to do with the students.

As time went on, I started to really love the project. As frustrating as the students were most of the time (bordering on infuriating some days), I was extremely fond of them and got pretty attached to all five of them. I found myself becoming invested in their lives and futures. If there’s one thing I would change about the way I in particular behaved in the project, it’s that I would have been more open and sincere with my students about how much I really cared about them. Still, it became easier to talk openly with them as time went on. And the more I saw their reactions, the better I felt. When I saw Cameron’s collage, I felt encouraged by the depth of his ideas. When Patricia told me she wanted to be an architect when she grew up, I felt like I was on cloud nine. Each morning I woke up excited to get to class and teach. I felt confident and capable, and little by little I started to change my mind. Maybe I was making an impact. Maybe I was changing the way they thought about the world.

A big breakthrough moment for me as a person (though perhaps not as an instructor) was the altercation I had with Anthony. I handled the situation in an extreme way, and afterwards, I felt guilty. I felt I had done something bad and, oddly enough, that I was the one who was going to be in trouble—not him. But I quickly realized sticking up for myself and one of my students was the right thing to do. And after Anthony left, I sat down with my group and calmly and clearly explained to them that because I showed them respect, I expected to be shown respect in return—and they accepted that. How had I gotten through to them that way? It was so different from what I’d tried before. I’ve gone over that situation a million times in my head wondering if I could have handled it better. Truthfully, I could have. But it dawned on me later that day, looking back on the morning, that I was an adult, and I handled it in an adult manner. Maybe not the best adult manner, but certainly not the way I would have handled it a year or two ago. And that was the day I realized that project:spARCH had not only helped me grow as a designer, it had helped me grow up. Maybe that sounds corny, but it’s true; I’m not the same person I was when I started the project.

I mentioned earlier that I initially believed this project wouldn’t make much of a difference. So when asked about what my surprises were from this experience, I have to say that my biggest surprise by far is that I really and truly believe that we changed the way those students look at the world. For some, maybe it was just a seed we planted in their minds that won’t grow for years, but that doesn’t matter—it’s there. After seeing their final projects and how excited they were about them, I realized that this project didn’t just mean a lot to me, it meant a lot to them too. That’s the other reason I am grateful for this project; it helped me make a positive impact in someone else’s life. It was an impact I never thought I would make on someone else, and without this opportunity, I never could have done it. I was also surprised by how many people became invested in the project. It was great to see local professionals and educators show a sincere interest in it and do their best to help. I was surprised, too, by how invested I became in the project; I ended up with it as my number one priority and was very sad for it to end, and immediately started thinking about how to continue it in the future.

I learned a lot from project:spARCH about hard work and being a team player, how to be a leader and example for my students, and what design truly means. I also learned simply how to be a better human being. I really don’t know how else to phrase it. Despite the long nights and having to do my work over again five times every time, I have nothing but good things to say about this project. It’s a memory that I will value for the rest of my life and I am grateful in a thousand different ways for the experience I had. That traditional co-op I wanted so much before all this started has nothing on this.
When I was searching for an opportunity to pursue this past quarter, I knew I wanted to do something meaningful. My intent was not to simply work in an architecture firm, doing drawings and designing buildings for the simple purpose of having a co-op. To me, this type of job seems almost shallow. I knew that design and architecture could be used in a different way so that it could make life-changing impacts on real lives. This is what attracted me to Project Sparch.

Since the intent of Project Sparch was to enrich the lives of students and to expose them to design thinking, I knew I wanted to be a part of it. Its goal was not self-oriented for profit, but it sought the good of others. This is how I desire to pursue a career, using design selflessly.

Despite my interest and my desire to get involved, I had no idea what to expect on that first day. I have had no real experience in the educational field and I was certainly nervous to start. However, I was surprised to see how easy working with the kids was initially. It definitely helped that we spent ample time preparing for that first day, but I also found that I had more confidence then I gave myself credit for. Throughout the time we spent at Hughes, that confidence was surely tested, and I experienced all of the frustrations that generally come with teaching. In spite of all of the hardships that we endured, I believe that my confidence has increased dramatically, and I became much more open to putting myself in a position of leadership. That experience was priceless to me.

In addition to my growth as a leader, I feel as if this program helped me to grow extensively as a human being. I come from what would probably be considered an upper middle class home, located in an extremely safe suburban town. Nothing ever exciting or bad ever really happened there, and I definitely feel like I have always been sheltered from what the world is really like in places less fortunate. Getting to know these kids, I was honestly a little culture shocked by the stark differences between the lives that these kids live and my safe and secure little life. They deal with issues and problems that I have never had to, and they are forced to grow up fast. I realized it becomes so much harder to concentrate on their education and their future because of issues that are in present in their lives right now. They fail to see the relevance of education and what it can do for them.

This was honestly the most surprising aspect of my entire experience, yet it was also one of the most important. I was surprised to find how hard it was to get them to see that they should care about learning and the development of their education. I was surprised to see how little we could expect them to actually do what we asked of them. I was even surprised to see how little they respected us sometimes. It was precisely because of those issues that we were there. That is what we could do for them, that is what we aimed to give them. We could be there and show them what people can do if they put their minds to it. With learning and with design thinking, these kids could do great things themselves. Showing these students what they could do and who they could be became a priority to me.

From those experiences, I definitely have decided that I want to continue to work with inner city kids in some capacity. These kids have great potential and intelligence and I want to continue to show them that they are indeed capable of using it to succeed in life. I’m working on getting connected with a program in which I will spend time just hanging out with and loving on these kids to show them how great they really are. I believe that I will end up working with students from Hughes again, but that has yet to be decided. Project Sparch definitely pushed me forward in the development of that goal.

If I could go back to the beginning of the quarter and start all over, I don’t think I would change much about the studio. I learned so much, matured as a person, and I believe that we impacted those students in an exceedingly positive way. Personally, however, I do believe there were a few things I could have done better. Starting off, I wish I had been more confident in my leadership ability, and more secure in what I was doing. This was definitely something I did learn to be better at throughout the course of the studio, and I do think that the students responded to that, but it could have been better at the beginning. I learned the hard way that we sometimes had to really pull the kids along and assert our authority in order for them to accomplish anything. We couldn’t always be the “fun teacher” that they wanted us to be.

All in all, I consider the studio a huge success. Everyone involved took something valuable out of it, including the students, instructors, and visitors. I believe that we truly impacted lives for the better and I only hope that the students will take the lessons they learned with them for years to come. Project Sparch made the world a little bit of a better place, and I certainly feel blessed to have been a part of it.
Due to time constraints and the amount of material necessary for the studio, facilitator guides were developed for each day. Each day consists of overall objective statement, materials necessary, homework, and activity time intervals. Although unexpected and spontaneous changes were necessary at times, the overall intent for each day remained in order to maintain focus. The following guides should be used as an example of the preparation and planning necessary for a highly creative and interactive studio.
Day 1

**Project: spARCH**

**Day 1**
April 2, 2012

**Exercise**

**Step 1**
Introduction
10min
An introduction to project: spARCH, instructors, overview of class and the concept of Design Thinking.

**Step 2**
Interview Session
15min
Students will be split into 4 groups each headed by a mentor. Students will describe their own lunchtime experience.

**Step 3**
Share & Review
10min
Students will write 3 things they would like to see changed/improved/added on Post-It notes. Mentors will group and categorize Post-It notes to determine what the largest issues are as determined by the group and talk about the reasons and rationale behind the categorizations.

**Step 4**
Take a Stand
3min
Select most compelling goal and insight and write a problem statement. \((\text{name}) \text{ needs a way to } \text{because/but/since } \text{insight})\)

**Step 5**
Sketch Ideas
5min
Students will sketch AT LEAST 5 radical ways to meet user’s needs. More is better.

**Step 6**
Develop
5min
Students will choose one of their sketches and develop a new or more detailed sketch of this idea.

**Step 7**
Prototype
10min
Use given materials to create a small scale model of ONE of their sketched idea. Create an experience, not just a replica. The prototype should be a test model as opposed to a final display model.

**Exercise**

Students will continue to refine their prototypes for next class.

\{Student interviews Tuesday, April 3\}

**Materials**

- Popsicle Sticks
- Pipe Cleaners
- Scissors
- Duct Tape
- Clay
- Glue
- String
- Foil
- Chipboard
- Trace Paper
- Construction Paper
- Paper, pencils, pens, markers,

**Worksheets**

- Stop Watch
Day 2

**Daily Goal**

What Design Thinking is and what it can do
Review session

**Exercise**

**Step 1**
Introduction

- 5min
- Description of a critique and it's importance in developing appropriate solutions.

**Step 2**
Gallery Studio Critique

- 20min
- Students will use Post-It notes to vote on one design per group they most enjoy.
- Chosen projects will then be critiqued as an entire studio being asked to describe their design and their problem statement.
  - What did you learn from the interview session?
  - How did talking as a group inform your design?
  - How did testing and getting feedback impact your final design?
  - How does your design solve your problem statement?
  - What do you like the most about your design?
  - What could change/be improved?

**Step 3**
Small Group Discussion

- 10min
- Students will reconvene in their original small groups and further discuss their designs. This should be a more informal critique, allowing each student to briefly describe their design, why they did what they did, and how it might be improved.

**Step 4**
Prototyping

- 10min
- Students will be given the chance to redesign/refine their original prototypes, making necessary changes based on group critique.

**Step 5**
Small Group Discussion

- 10min
- Students will present and speak about their new prototype.
  - How did testing and getting feedback impact your final design?
  - What was the most challenging part of the process?
  - How can this process be used in daily life?

**Homework**

*Song to object, Song Examples*

**Materials**

- Popsicle Sticks
- Pipe Cleaners
- Scissors
- Duct Tape
- Clay
- Glue
- String
- Foil
- Chipboard
- Trace Paper
- Construction Paper
- Paper, pencils, pens, markers
- Prototypes
Day 3
April 6, 2012

**Daily Goal**
What is the design process?

**Telephone Design Process**

**Step 1**
Introduction

10min
Instructors give overview of exercise

**Sentences**
The Octopus is swimming away from danger.
The Eagle is building a nest.
The Pig is happy he is rolling in the mud.
The Bear is mad because he is being stung by bees.

**Step 2**
Sentence to Drawing

4min
Person 1 is given a sentence and asked to draw a picture based on the sentence.

**Step 3**
Drawing to Sentence

2min
Person 2 is given Person 1 drawing and asked to write a sentence.

**Step 4**
Sentence to Acting
Acting to sentence

2min
Person 3 is given Person 2 sentence and asked to act out the sentence to Person 4.
Person 4 watches acting by Person 3 to write a sentence.

**Step 6**
Sentence to Drawing

2min
Person 5 is given Person 4 sentence and asked to draw a picture.

**Step 7**
Reflection

15min
Understanding the layering process of design.
How restraints can create new results.
Discussion on different ways to express ideas.
What was the most difficult part of the exercise?
What was it like seeing the exercise progress from step to step?
What elements seemed to continue between steps?
What was it like when you could only draw?
Could only write? Could act?
Which step was your favorite? Why?
Which way was the easiest/clearest to express/understand?

**Step 8**
Repeat

Students will repeat exercise with new sentences and new group order

**Materials**

**Student Kits**
Sketchbooks
Pens and Pencils
Bag
Buttons
Stickers
Magnets

**Wristbands**
Sweatbands

*{Intercession worksheets to be completed}*
Daily Goal
Active Listening in order to move from abstract song to 2D collage

Exercise

Song to Object

**Step 1**
Introduction
15min
Explain assignment, give examples, play example song

**Step 2**
Research
5min
Students sort through magazines moving rapidly to tear out everything they initially relate to the song.

**Step 3**
Collaging
15min
Mentors will work with students to make a collage using magazines images and materials

**Step 4**
Reflection/Discussion
15min
Discussion about active listening within 2 small groups
*How does active listening help you understand a story better?*
*Did writing, drawing, or sketching help you to better understand a song?*
*How does collaging help to retell the story of the song?*
*How do you express the emotion you feel from the song?*

Homework

_{Construct boxes for 3D objects}_

Materials

Magazines
Scissors
Glue
Paper
Pens, Pencils, Markers
Tape
Day 5

April 11, 2012

Daily Goal
Express core concepts of chosen song through movement

Exercise

Song to Object and Guest Visitor

Step 1
Introduction
5min
Biography and introduction

Step 2
Instructions
25min
Guest visitors will demonstrate example dance.
Teach basic moves and how to actively listen to the song before performing a movement.

Step 3
Practice
20min
Students will break off into groups with guest visitors roaming and helping students develop movements and dances.
Identify central theme of song?
Main emotions of song?
What is the structure of the song?
How can a movement signify part of a story?
How can certain movements express certain emotions?

Step 4
Photo Shoot & Discussion
10min
Discussion on different ways to express ideas.
Mentors will photograph main dance movements (time lapse) of students to be used later.

Homework

{Photographs need to be printed and given to students on Thursday.}
Students will begin thinking about object by tracing over movements and completing problem statement worksheets for Friday.

Materials

Sweatbands
Cardboard
Cameras
Tripods
Day 6

*Daily Goal*
Reinterpret 2D collages and images into a 3D spatial sequence.

**Exercise**

**Step 1**
Introduction
10min
Biography and introduction

**Step 2**
Construction
30min
Mentors will help students begin to construct their 3D spatial sequence based on collages and images by translating the main themes, colors, shapes, and concepts identified by students.

**Step 3**
Reflection/Discussion
15min
Mentors will discuss core concepts, successes, and overall process from moving from abstract song to collaging to dance to 3D built space.

- Discussion on students' models within small groups.
- What themes and emotions are being expressed in the model?
- How does this model tell the story of the song?
- What does each material represent?
- How did the past assignments influence this model design?

**Step 4**
Assignment
5min
Explain and distribute intercession assignment

**Homework**

*intercession worksheets to be completed*

**Materials**
Popsicle Sticks
Pipe Cleaners
Scissors
Duct Tape
Clay
Glue
String

Foil
Chipboard
Trace Paper
Construction Paper
Paper, pencils, pens, markers,
**Daily Goal**
Understand how specific users interact, influence, and relate with their built surroundings

**Exercise**

**Intercession Observation**

**Step 1**
Using a disposable camera.
1.) Photograph (8-12) people at work, play, or action in their specifically designated environment.

2.) Photograph (8-12) exterior/interior environment focusing on specific details in which people interact with.

3.) Complete assigned worksheet:
- What kind of tools do target users use?
- Where do they sit/stand/work most of their day?
- Is there enough space for them to work?
- What else do they need or could use to make their job easier?
- What kind of rooms do they use?
- What are some materials and objects are in the room?
- What type of place/rooms are close by?

**Homework**

{Garden Shed Examples}
{Garden Shed Example Worksheets}
{Task list for Urban Gardener Walkthrough}
{Urban Gardener Walkthrough example shed}

**Materials**

Worksheet
Disposable Cameras
Day 11

Daily Goal
Understand the operations of an urban garden shed

Exercise

Urban Gardener Walkthrough

Step 1
Activity
35min
Activity that walks students through the functional aspects of the urban garden shed. (Film activity)
1.) Pick out vegetables
2.) Delivery of vegetables
3.) Wash vegetables
4.) Dry and separate
5.) Bag, weight, and label
6.) Take to market

Step 2
Reflection/Discussion
15min
Discuss new opinion of what the urban garden should/needs to be.
How can the urban garden shed be more than strictly a storage shed?
What tasks were easy to do? Why?
What was missing?

Homework
Have first initial design sketched out.
Design should include labels, colored floor plan, perspective and interior elevation.

Examples of user influenced designs-Children’s School, Cultural Center

Materials

Desks/tables
Bucket of spinach
Ziploc bags
Tags and labels
Water and strainer
Scale
Dirt

Wheelbarrow
Camera
Tripod
Day 12
April 27, 2012

Daily Goal
Develop first initial design concepts

Exercise

Urban Garden Shed Design Charette

Step 1
Mindmapping and Collaging
15min
Begin mindmapping what an Urban Garden Shed was, is, and could be. Reflect on collages.
What was the purpose of the first Urban Garden Shed?
How have Urban Gardens/Sheds changed?
What else could be associated with Urban Garden Sheds?
How can Urban Garden Sheds be changed/updated?
Establish key themes for design

Step 2
Review
10min
Students will review initial homework design assignment with mentors.

Step 3
Sketching and Modeling
25min
Start to develop sketch models and drawings for new/updated designs.

Homework

{Examples of site influenced designs- Slope & Security}

Materials

Popsicle Sticks  Foil
Pipe Cleaners  Chipboard
Scissors  Trace Paper
Duct Tape  Construction Paper
Clay  Paper, pencils,
Glue  pens, markers,
String
Day 13

**Daily Goal**
Show how elements from precedents can be applied to previous designs

**Exercise**

**Precedent Analysis**

**Step 1**
Introduction
20min
Show examples of precedents and how elements can be used to influence a design. (Walk through an example precedent)

**Step 2**
Sketching and Modeling
25min
Work with mentors to begin analyzing precedents and applying elements into new drawings and modelling.
1.) Materiality/Form- Perspective Drawing
2.) Spatial Size- Floor Plan Drawing

**Step 3**
Reflection/ Discussion
10min
Discuss progress made and directions to take.
What elements of a past example are most successful?
What elements are most interesting?
Are certain elements more appropriate for your own design?
How can you build upon past examples to make a better design?

**Homework**
Work in groups to complete second precedent example, complete with model and sketches.

**Materials**

Popsicle Sticks
Pipe Cleaners
Scissors
Duct Tape
Clay
Glue
String

Foil
Chipboard
Trace Paper
Construction Paper
Paper, pencils,
pens, markers,

Worksheet
Day 14

**Project: spARCH**

Day 14
May 2, 2012

**Daily Goal**

Understand the effect a specific user group can have on a design project

**Exercise**

**Target User Influence**

**Step 1**
Introduction
15min
Show examples of how target user can influence a design, both in terms of aesthetics and functionality.

**Step 2**
Sketching and Modeling
25min
Work with mentors to begin analyzing previous “Urban Gardener” activity video and applying insight to develop new sketch models.
- How does a person’s mobility change a design?
- What other user restrictions would change a design?
- Can you design a truly universal project?
- Are there other aspects besides height and mobility that would affect a design?

**Step 3**
Reflection/Discussion
15min
Discuss progress made and introduce new target user (handicap) and how students might apply new requirements

**Homework**

Work in groups to complete model and sketches for new target user. Diagram, floor plan, and interior elevations new model.

**Materials**

User Group Video
Worksheets
Wheel Chair
Day 15

**Exercise**

**Daily Goal**
Understand the effect external site forces can effect the overall design project.

**External Site Influence**

**Step 1**
**Introduction**
10min
Describe general environmental influences and how they can influence a design.
Show a built example influenced by site elements (security, shading, slope, etc.)

**Step 2**
**Site Specific**
20min
Show site model and describe more specific information about site, external influences, and how these will effect design.

**Step 3**
**Worksheet**
30min
Take students outside to complete worksheet that focuses on:
1.) Slope-Water, foundation, materiality
2.) Security-visibility, surrounding influences, branding

**Homework**
Diagrams of security requirements (views in/out, vandalism prevention, storage)
Diagrams of slope (sections)
*(Google SketchUp Tutorial and Worksheet)*
*(Final Presentation Requirements Sheet)*

**Materials**
Worksheet
Camera
Day 16

project: spARCH

Day 16
May 7, 2012

Daily Goal
Unite research design information into a single group design direction

Exercise

Group Collaboration

Step 1
Review
30min
Gallery discussion about past week’s work.

Step 2
Discussion
20min
Start to sketch new designs from voted upon design. Mentors will have students include elements of materiality, slope, security, user, precedent, and program requirements. Begin to discuss main themes and concepts.
What is the central theme of design?
How does this design meet the user needs?
What elements from precedents are used?
How does this design reflect site influences?
Can this design only be used at Hughes High School? Why?
How can other research design aspects be combined into one design?

Homework

Build exterior model with floorplan, perspective, diagrams, and interior elevation of new design.

(Final Design Templates- 11x17)

Materials

Past models
Post-it Notes
Day 17

Exercise

Step 1
Introduction
15min
Biography and introduction
How is design thinking used in your profession?
How architecture design process can be applied to other life aspects.

Step 2
Discussion
40min
Guest visitor moving amongst groups offering opinions and insights into design development.
Continue design and information gathering for final presentation.

Step 3
Critiques
Mentors will focus on identifying 3 specific elements of group’s design to further develop and continue to work on

Homework
Finish re-designing the 3 specific elements identified by mentor.
Include model, drawings, floorplans, and diagrams.

{Research Category Templates for Final Presentation}
{Documentation of first 2 weeks of studio}

Materials
Popsicle Sticks
Pipe Cleaners
Scissors
Duct Tape
Clay
Glue
String
Foil
Chipboard
Trace Paper
Construction Paper
Paper, pencils, pens, markers,
Day 18

project: spARCH
Day 18
May 11, 2012

Daily Goal
Continue to develop group design projects

Exercise

Review and Progress

Step 1
Digital Tutorial
35min
Introduction to Google SketchUp and assign digital model requirements

Step 2
Discussion
20min
Mentors will help further develop design and identify final presentation requirements.

Homework

{Verbal Presentation Sheet for Final Presentation}

Materials

Popsicle Sticks
Pipe Cleaners
Scissors
Duct Tape
Clay
Glue
String

Foil
Chipboard
Trace Paper
Construction Paper
Paper, pencils,
pens, markers,
Day 19

project: spARCH
Day 19
May 14, 2012

Daily Goal
Continue to develop group design projects

Exercise
Final Design Development

Step 1
Digital Tutorial

- Mini design critique with mentors (2-3 students)
- Final Model development
- Documentation
- Final Drawings/SketchUp models

Homework

Three 11x17's final designs (Research Category Sheet, Architectural Drawing Sheet, Perspectives and General Information Sheet)

Materials

- Popsicle Sticks
- Pipe Cleaners
- Scissors
- Duct Tape
- Clay
- Glue
- String

- Foil
- Chipboard
- Trace Paper
- Construction Paper
- Paper, pencils, pens, markers,
**Daily Goal**
Identify essential storytelling and presentation needs for design projects

**Exercise**

**Storytelling with Visiting Guests**

**Step 1**
Introduction
15min
Biography and Introduction
How is design thinking used in your profession?

**Step 2**
Presentation
10min
Short presentation on the power of story-telling.
How it assists in the branding, marketing, and overall impact of a design project.

**Step 3**
Critique
30min
Guest visitors walk between groups giving opinions and insights and offering expertise to help develop final presentation and design of project's story

**Homework**
Three 11x17's final designs
Final Model development
Documentation
Final Drawings/SketchUp models

**Materials**
Popsicle Sticks
Pipe Cleaners
Scissors
Duct Tape
Clay
Glue
String
Foil
Chipboard
Trace Paper
Construction Paper
Paper, pencils, pens, markers,
Day 21

**Daily Goal**
Complete Final Presentation Materials

**Exercise**

**Presentation Fine Tuning**

**Step 1**

Finalization

Complete verbal presentation worksheets describing
1. Teammates
2. Concept
3. Inspiration
4. Research
5. Elevator Speech

**Step 2**

Hand In
Hand-in all complete presentation materials to instructors

**Homework**

*Final Gallery Show Layout*

**Materials**

Flashdrives
Presentation
Worksheets
“Welcome to the Jungle”

“Welcome to the Jungle” is an urban garden shed that takes you from the streets of Clifton and places you on the trails of the Amazon. Using light, water, and plants, our Urban Garden Shed is set into the earth so it as much a part of the school as it is a part of nature. The curved roof allows for vegetation to grow as well as providing a space for visitors to relax and enjoy the surroundings.

Questions Students Will Address

1. What is the main idea of your design?
2. What are the main inspirations of your design?
3. Which site did you chose and why? (Sun, view, slope)
4. Name 2 major design features of your design.
   How do these relate to your main idea?
5. How does your design meet the needs of the urban gardener and your hero?
6. What were some of the obstacles your team had to overcome?

Remarks

Suggestions
Student Worksheets

In an effort to help simplify exercises and activities that were familiar to students, various worksheets were developed that coordinated with daily activities. The worksheets were seen as a welcoming option for those students who were more introverted by nature as well as help focus those students who typically had shorter attention span and were more extroverted. The worksheets also helped visiting guests understand specifically, the daily goals and their role. Each worksheet was meticulously planned and potential instructors should give ample time to develop them effectively.
Day 7-9
Intercession Worksheet

Exercise

Project: spARCH
Intercession
April 16-20, 2012

Daily Goal
Understanding how specific users interact, influence, and relate with their surroundings.

Intercession Assignment

Step 1
People

Using a disposable camera, photograph 8-12 people at work and at play. Answer the following questions using words and photos:

What kind of tools do they use?

________________________________________________________________________

________________________________________________________________________

What kind of rooms do they use?

________________________________________________________________________

________________________________________________________________________

Where do they sit/stand/work most of their day?

________________________________________________________________________

________________________________________________________________________

What else do they need or could they use to make their jobs easier?

________________________________________________________________________

________________________________________________________________________

Step 2
Environment

Photograph 8-12 exterior/interior environments focusing on specific things people interact with. Answer the following questions using words and photos:

Is there enough space for them to work?

________________________________________________________________________

________________________________________________________________________

What are some materials and objects that are in the room?

________________________________________________________________________

________________________________________________________________________

What type of place/rooms are close by?

________________________________________________________________________

________________________________________________________________________
Day 13
Precedent Analysis: Spatial Size

Airstream

Airstream is a brand of luxury motorhome (RV) offering living accommodations for 2-8 people. Most RVs have sleeping accommodations, kitchenette area, washroom, dinette area, and lounge areas which can rotate, swivel, pull out, or unfold to maximize space and be able to convert one area into another. Airstream trailers are recognized for their distinctive rounded aluminum bodies, sleek form, and overall comfort.

Study the images below and text above to try and identify what makes this example unique and special.

Main Idea

Sketch and write the main theme or idea about the example above.

Sketch the Main Idea

What's happening in your drawing?

Interpretation

Sketch and write how the main theme or idea from the above example can be reinterpreted with the design for your garden shed.

Sketch of your NEW design idea

What's happening in your drawing?
A cleaning station is located near a body of water and fishing location. Fishermen use the station to wash, clean, gut, dry, weigh, package, store and preserve fish before either bringing them to market or home to cook. A typical station has several separate, but specific tools and pieces of equipment to aide fishermen in efficient and speedy fish preparation.

Cleaning Station

Study the images below and text above to try and identify what makes this example unique and special.

Main Idea

Sketch and write the main theme or idea about the example above.

Sketch the Main Idea

What’s happening in your drawing?

Interpretation

Sketch and write how the main theme or idea from the above example can be reinterpreted with the design for your garden shed.

Sketch of your NEW design idea

What’s happening in your drawing?
Day 13
Precedent Analysis: Spatial Size

Project: spARCH

Precedent Analysis

Transformer

This 344 square foot apartment can change 1 room into 24 different rooms by using sliding walls and unfolding panels. The kitchen is behind the TV, the guest bed is above the bathtub, and the bed folds into the wall. Everything slides, folds, or moves in order to maximize space while making each “room” the largest it possibly can.

Study the images below and text above to try and identify what makes this example unique and special.

Main Idea

Sketch and write the main theme or idea about the example above.

Sketch the Main Idea

What’s happening in your drawing?

Interpretation

Sketch and write how the main theme or idea from the above example can be reinterpreted with the design for your garden shed.

Sketch of your NEW design idea

What’s happening in your drawing?
Day 13
Precedent Analysis: Materiality & Form

**Project: spARCH**

**Precedent Analysis**

The house was designed to act like a tree that captures energy with its solar “leaves” and sends it down to its roots, where is stored, shared, or returned to the house to produce the fruit of electricity. The inside is made up of a lounge area with a bedroom, kitchen, a small workshop, a bathroom and a small room for guests. The curved wood structure makes the house light, comfortable, and eco-friendly.

**FabLab House**

Study the images below and text above to try and identify what makes this example unique and special.

**Main Idea**

Sketch and write the main theme or idea about the example above.

**Sketch the Main Idea**

What's happening in your drawing?

**Interpretation**

Sketch and write how the main theme or idea from the above example can be reinterpreted with the design for your garden shed.

**Sketch of your NEW design idea**

What's happening in your drawing?
Day 13
Precedent Analysis: Materiality & Form

Buildings can use recycled materials to help make them more sustainable, more beautiful, and more usable for people. The rubbery walls of the first building is made out of used car tires help make the building water and winter-proof. The design of the second building is meant to look like a chapel using recycled bottles as stained glass windows that also serve as insulation for the building.

Recycled Design
Study the images below and text above to try and identify what makes this example unique and special.

Main Idea
Sketch and write the main theme or idea about the example above.

<table>
<thead>
<tr>
<th>Sketch the Main Idea</th>
<th>What's happening in your drawing?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interpretation
Sketch and write how the main theme or idea from the above example can be reinterpreted with the design for your garden shed.

<table>
<thead>
<tr>
<th>Sketch of your NEW design idea</th>
<th>What's happening in your drawing?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
The TWA Flight Center was designed to capture the “spirit of flight.” By doing so, the building took the form of a huge bird with wings spread out in flight. The large windows were designed so that passengers could see departing and arriving jets so people could begin their flight experience before setting foot onto their airplane. The building was designed to create excitement about flying and also to provide a feeling of upward soaring.

**TWA Terminal**

Study the images below and text above to try and identify what makes this example unique and special.

**Main Idea**

Sketch and write the main theme or idea about the example above.

**Interpretation**

Sketch and write how the main theme or idea from the above example can be reinterpreted with the design for your garden shed.
In the chapel, light enters from behind the altar from a cross cut in the concrete wall that extends vertically from floor to ceiling and horizontally from wall to wall. The chapel is defined by light & the strong contrast between light and solid. At this intersection of light and solid, the occupant is meant to become aware of the division between the spiritual and human part of himself or herself. Finally, the emptiness of the church creates a sense of serenity & peacefulness.

**C. of the Light**

Study the images below and text above to try and identify what makes this example unique and special.

**Main Idea**

Sketch and write the main cultural icon from the example above.

<table>
<thead>
<tr>
<th>Sketch the Main Cultural Icon Used</th>
<th>Why did the designer use this icon?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**Interpretation**

Sketch and write how your cultural icon can be used within the design for your garden shed.

<table>
<thead>
<tr>
<th>Sketch of your NEW design idea</th>
<th>Name the cultural icon you used.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(school, city, family, neighborhood, etc.)</td>
</tr>
<tr>
<td></td>
<td>How did you use this icon in your drawing and why?</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>
Day 14
Precedent Analysis: Cultural Influence

Inspired by the lotus flower, the design for the Hindu House of Worship in New Delhi is composed of 27 free-standing marble clad "petals" arranged in clusters of 3 to form 9 sides. The 9 doors of the Lotus Temple open onto a central hall. The lotus is the official flower of India. It represents long life, honor, good fortune, and triumph, since the lotus grows in the mud and still produces beautiful flowers. The lotus is also a symbol of God in Hinduism.

Lotus Temple

Study the images below and text above to try and identify what makes this example unique and special.

Main Idea

Sketch and write the main cultural icon from the example above.

Sketch the Main Cultural Icon Used

Why did the designer use this icon?

Interpretation

Sketch and write how your cultural icon can be used within the design for your garden shed.

Sketch of your NEW design idea

Name the cultural icon you used.
(school, city, family, neighborhood, etc.)

How did you use this icon in your drawing and why?
In the heart of ancestral North America, the new Southern Ute Cultural Center and Museum in Colorado, captures the spirit of the Southern Ute Indian Tribe. The main entrance is in a traditional tepee form that also makes reference to the tribes’ intricate beadwork and basket weaving. The tepee was the structure the Southern Ute Tribe lived in for over a millennium and is a symbol of “home” for these Native American people.

S. UTE Museum

Study the images below and text above to try and identify what makes this example unique and special.

Main Idea

Sketch and write the main cultural icon from the example above.

Sketch the Main Cultural Icon Used

Why did the designer use this icon?

Interpretation

Sketch and write how your cultural icon can be used within the design for your garden shed.

Sketch of your NEW design idea

Name the cultural icon you used.
(school, city, family, neighborhood, etc.)

How did you use this icon in your drawing and why?
Day 14
Precedent Analysis: User Influence

At the Hazelwood School for the Blind, special consideration had to be made for children without sight. All of the walls, floors, and ceilings were designed so that a person without vision could navigate through the building. By using different material on the floors, walls that were warm to touch and had bumps & depressions, and using windows and lights, students are able to walk through the building on their own without the fear of hurting themselves.

Hazelwood School
Study the images below and text above to try and identify what makes this example unique and special.

Main Idea
Sketch and write the main principles from the example above.

Sketch the Main Principles Used

How did the designer make this design specific to the target user?

Interpretation
Sketch and write how to incorporate the main principles used above into the design for your garden shed.

Sketch of your NEW design idea

How does your new design incorporate the principles from the example?
In the Boston Children’s Museum, special attention was spent on creating a place that was specifically for children. Making the entire building interactive, engaging, and educational was a key principle in its design. By using lower tables, smaller doors, as well as large words and images on walls and displays, the museum is designed specifically with children in mind.

Children’s Museum
Study the images below and text above to try and identify what makes this example unique and special.

Main Idea
Sketch and write the main principles from the example above.

Sketch the Main Principles Used

How did the designer make this design specific to the target user?

Interpretation
Sketch and write how to incorporate the main principles used above into the design for your garden shed.

Sketch of your NEW design idea

How does your new design incorporate the principles from the example?
Day 14
Precedent Analysis: User Influence

People in wheelchairs have special requirements besides not being able to climb stairs. Things such as the height of a cabinet or the amount of space to turn around in their wheelchair, as well as ramps, need to be taken into consideration so that every person can be comfortable and have the same experience. The example below show how ramps can be used as a main idea so every person can have a memorable and exciting experience.

Handicap Experience
Study the images below and text above to try and identify what makes this example unique and special.

Main Idea
Sketch and write the main principles from the example above.

Sketch the Main Principles Used

How did the designer make this design specific to the target user?

Interpretation
Sketch and write how to incorporate the main principles used above into the design for your garden shed.

Sketch of your NEW design idea

How does your new design incorporate the principles from the example?
Slope is the change in elevation between two points. It is expressed as a percent change in elevation per unit of distance. When designing a building, the percent slope of the site determines the amount of soil you will have to move from the upper slope and fill in the lower slope to create a flat bottom. Less than 4% slope is relatively flat. 5-7% slope is average. 8-12% slope is fairly steep. More than 12% slope is very steep.

**Calculation**

For each site, determine the percent slope using the formula given below.

The easiest way to determine the percent slope of an area is to measure the change in height (elevation over a measured distance), then calculate the percentage of slope.

Use the following formula to determine slope: \[\text{Rise} \div \text{Run} \times 100 = \text{Slope} \%\]

**Comparison**

Draw the relative slope for each site labeling the rise, run, and slope %

<table>
<thead>
<tr>
<th>Site</th>
<th>Rise</th>
<th>Run</th>
<th>Slope %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>10 ft</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>10 ft</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>10 ft</td>
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There are several different ways to handle a change in slope. Below are a few examples of how to possibly deal with the slope of the land. Study the images below and choose a solution you think would best resolve the slope of your chosen site. Below, sketch out one of the solutions onto your chosen site, making sure you have a strong argument why your team should follow your recommendation.

**Examples**

- Weekender
  Switzerland

- Balancing Barn
  England

- Elemental Pilgrim Lookout
  Mexico

- Villa Vals
  Switzerland

- House 108
  Spain

**Recommendation**

On the left, choose a site and draw its relative slope in the box. On the right, choose a solution from the examples above or something new & sketch what the solution would look like on your chosen site.

**Location**

**Solution**

**Why did you choose this location?**

**Why did you choose this solution?**
A lot of direct sunlight is the most important thing in a vegetable garden if it is to produce abundantly, so planning its location is critical. Sunlight is not only important for photosynthesis but also for a number of other physiological functions of the plants. Ideally a vegetable garden should get no less than eight hours of sunlight in a day. For this reason, the location of your urban garden shed is important so it does not cast a lot of shadow over the garden.

**Identify**

Using findmyshadow.com, determine the relative shadow length and direction for each site. On the map below, draw and color the shadow for each site for **8am, 12pm, and 4pm.**

**Analysis**

What time of the day casts the LONGEST shadows? ________________________________
What time of the day casts the SHORTEST shadows? ________________________________
Which site casts the MOST shadows on the garden? ________________________________
Which site casts the LEAST shadows on the garden? ________________________________

**Recommendation**

Based on the shadow information above, which site would you recommend and why?

__________________________________________________________________________
__________________________________________________________________________
Views into and from a site are some of the most important concerns when developing a design. Often times designers will use photographs to determine the best views from a particular location by taking a panoramic photograph, which is a series of pictures placed side by side in order to see an unbroken view of an entire area.

Photograph

Tips to taking a good panoramic photograph:

1. Hold the camera still and level.
2. Review the images before leaving the scene.
3. Avoid taking photos of people walking in front of the camera.
4. Do not use the flash.
5. Be sure each photograph in the series overlaps the previous.
6. Slowly rotate for each photo, make sure the camera is the same height.

Views Out

Which SITE location (1,2,3) has the BEST views? Why?

Which SITE location (1,2,3) has the WORST views? Why?

Views In

Which STREET location (A,B,C) has the BEST views? Why?

Which STREET location (A,B,C) has the WORST views? Why?

Recommendation

Which site would you recommend? Why?

Which site would you recommend? Why?
### Daily Goal
Create a succinct and well informed presentation

Please Provide a Short, Well-Written Answer (no more than 2 sentences each) for Each Question

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<td><strong>What is the main IDEA of your design?</strong></td>
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<tr>
<td><strong>What are the main INSPIRATIONS of your design?</strong></td>
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| **Which SITE did you chose & why?**  
*Be sure to talk about Sun, View, & Slope* |
| **Name TWO major design features of your design. How do these relate to your main idea?**  
1.  
   2. |
| **How does your design meet the needs of the URBAN GARDENER & your HERO?** |
| **What were some of the obstacles your team had to overcome?** |
# Day 22

**Final Presentation: Sign In Sheet**

---

**project: spARCH**

Final Presentation

*Sign In Sheet*

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**Thank You for Coming!**

Please provide the information below so we know who to thank!

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In an effort to help simplify exercises and activities that were familiar to students, various worksheets were developed that coordinated with daily activities. The worksheets were seen as a welcoming option for those students who were more introverted by nature as well as help focus those students who typically had shorter attention span and were more extroverted. The worksheets also helped visiting guests understand specifically, the daily goals and their role. Each worksheet was meticulously planned and potential instructors should give ample time to develop them effectively.
A Project with a Soul...

"He who chooses the beginning of the road chooses the place it leads to. It is the means that determines the end."

This quote by American clergyman, Harry Emerson Fosdick illustrates one of the most important steps towards the beginning of anything; choice. As I begin to type this first entry of what will hopefully become a collection of my thoughts, feelings, frustrations, shortcomings and successes in this endeavor I am about to embark on, it is hard not to reflect on the choices which have brought me to this point.

Before I begin, however, I would just like to thank those people who have been with me since before this blog series started. Without you, I would still be contemplating over my sketchbook what it is I was truly passionate about.

Starting at the beginning sounds very cliche, so instead, I will start at the "end." As T.S. Eliot once said, "What we call the beginning is often the end. And to make an end is to make a beginning. The end is therefore where we start from."

{SIDE NOTE: If you haven’t already noticed, I am a fan of quotes, and also of side notes, so expect to see a number of both in my entries.}

So pushing forward into the past, the beginning of this project starts as I was ending my Undergraduate degree in architecture in early 2010. Frustrated with situation, lack of direction, and overall shortage of passion in what I was doing, my final quarters of my undergraduate studies were anything but easy, although not for the reasons typically associated. Feeling that what I was currently doing was of little value and impact to the greater good, I began searching for what it was that drove me. What it was that “got my juices flowing.” What it was that diluted my pupils and made me have to catch my breath.

A good friend once told me that the greatest question he has ever heard was this: "What Gets You Excited?"

That question is so simple, but how many people have thought about it, let alone have a true answer to it?

Regardless, this was the question I was trying to answer for myself. What was it that I get excited about? And then, in the midst of all the questions came an answer in the form of a friend and an idea. In New York City, the School of Visual Arts determined it was time to extend the impact that design could have on the world by introducing a new course entitled Impact! Design for Social Change. One of the first of its kind, Impact!, is a 6-week intensive studio workshop in which a group of designers from around the world come together to determine how their design skills can be used to help local nonprofit organizations. Without delving too much into detail about the program (as that could easily continue for a page or two) check out the website, as it is now entering its third year:

http://impact.sva.edu/

{SIDE NOTE: The project I worked on was the IOBY Story Telling project, FY}

The experienced changed my life and gave me such a new perspective on design. It opened up my world to something I knew I wanted to be a part of and something that truly did “excite” me. So upon returning to school to begin my Masters program in Architecture.

{SIDE NOTE: I know if you have looked at the project I worked on, you have realized that it was not at ALL
A Project with a Soul...

Friday, February 3, 2012

architecturally related and are probably curious as to why, if I decided this was what I wanted to do, would I continue on into a Masters program in architecture. The answers are simple. 1.) The skills I have learned/am learning in architecture are invaluable and can be adapted to several other fields of design. 2.) A person’s attractiveness in the design world has a direct relation to their experiences as it does their technical background. and 3.) I just needed more time]

Moving on and skipping ahead about 15 months, through the countless conversations, reflections, sketches, pages of writing and countless late nights trying to merge an architectural thesis with my passion, something finally clicked. Always having a respect for the design process and the impact designers can have on the world, the “light-bulb” moment came while working in studio one weekend and feeling that something was “missing” from my current project that prevented it from being “real.”

Inspiration came from a graphic design capstone entitled “Consider,” in which a student spent three months in OTR observing, interviewing, and researching what it was that people wanted to see changed in the neighborhood.

In the project, the designer was able to interact and talk with community members in a way that made the project as much his project as it did the community’s project.
The impact and meaning this project took on could be seen in the eyes of the people in the photographs and in the voices of those interviewed.
In short, to quote a friend, “It was a project with a SOUL.”

After taking a deep breath and talking with the founders of the Tread Project, I threw out everything but the essential principles I was working under and dove in. I began to develop a curriculum for an Architecture Design Studio at Hughes STEM High School just up the street from the University of Cincinnati.

In the studio, 25 junior-level students will learn the critical thinking skills, problem solving techniques, and creativity through the architectural design process. Students will learn how design thinking can be applied outside the realm of design to help solve problems and issues in their own lives and communities.
The studio will meet three times a week during the day and will teach design skills and techniques through a series of hands-on activities, demonstrations, and guest appearances from professional architects from local architecture firms, as well as UC DAAP professors. In this way, students will gain exposure from a variety of perspectives in a way that will introduce and expand their view of design and its potential.

So this is it. This is the project that will consume my life for the next 5 months (maybe more).
I invite all of you to follow my progress as I travel down this path towards something I hope will be inspiring, exciting, influential, and so much more.

I will be publishing my blogs as regularly as possible with program updates, interviews and meetings, and also curriculum and schedule. As well as the occasional successes and frustrations. Hope you all enjoyed reading this first entry and continue to check back to see how things are progressing. Here is a final quote from F. Scott Fitzgerald to leave with I thought was pretty fitting,

“Vitality shows in not only the ability to persist but the ability to start over.”
The Week That Was...One

Sunday, February 5, 2012

The Week that Was...One

So as promised, I am writing once again to update all who are interested on the happenings of my high school design studio.

Every Sunday, I plan on giving a recap of the week’s events and a preview of what is upcoming this next week as far as meetings, interviews, goals, etc.

Jumping right into this past week, it was pretty exciting as I have really begun to dive into the logistics of getting the design studio up and running.

On Wednesday, I met with a Mr. Liam Ream, who is the undergraduate architecture co-op advisor for DAAP in order to speak with him about possibly adding my design studio to the co-op list as an option for employment.

{SIDE NOTE: For all of you who are not familiar with the term "co-op," or cooperative education. It is a program that was invented in Cincinnati as way of introducing students to the professional environment. The program is designed to integrate the academic curriculum with on-the-job experience to provide students with an outstanding education.
You can learn more here: UC Co-op}

After meeting with the founders of the Tread Project, one of the biggest needs they had was having enough bodies during class time to be able to give the appropriate attention to each student. Even with three consistent people and a handful of rotating volunteers, Tread still struggled with the number of students in the class. Compared with only 1 person, I realized early on that I was going to need some help...

After speaking with Liam after only a few minutes, he agreed to add the studio as a new employer under Architecture for Humanity: Cincinnati, who I am using as support for the program. Liam’s interest in design for social good stems from his studies of homelessness at Miami University Oxford as well as his development of Co-op for Causes. COC is an option for students to work on non-profit building design for disaster relief victims in Haiti and other cities around the world.
Along with Liam’s interests, the school is converting from quarters to semesters at the start of this next school year and as a result is having both sections of students out on co-op next quarter. This will essentially DOUBLE the number of students applying for jobs for Spring quarter. With this amount of competing students, the chances for each student becoming employed decreases which will result in more students working for non-profit
organizations or accepting unpaid internships. Which is good news for me ironically! As students will be working as unpaid interns for myself and the design studio. Students will be choosing their job choices in a week and a half in which Liam will introduce and promote my studio program!

Moving on...

My next meeting came on Thursday with Mr. Andries van der Bent, who is the engineering teacher at Hughes STEM High School who's class I will essentially be "taking over" to teach my studio.

[SIDE NOTE: STEM stands for Science, Technology, Engineering and Mathematics. Hughes STEM High School takes a interdisciplinary, project-based approach to education in order to better prepare students for higher education and professional life after high school. Hughes STEM High School]

With a degree in Civil Engineering and in the process of obtaining a Masters in Biology, Andries is an energetic teacher who loves to challenge his students through creative, innovative project-based curriculum. Much like my meeting with Liam, Andries' enthusiasm was off the charts and he couldn't wait to begin the process.

Picking his brain, I was able to discover a few potential ideas for projects for the students.

1. A garden/food production structure for the high school's community garden.
2. A athletic storage and locker room for the high school's practice field
3. A senior gift for the high school
4. A solution for the acoustic problems in the high school's classrooms.

Each of these can be scaled down and adapted for a high school design studio while also benefiting the school at a larger scale. As I continue to meet with my education advisers and develop the curriculum for the class, these ideas may develop or fall away for new suggestions. So if any of you reading has any ideas for simple design projects for high school students, please let me know.

Later that evening, I met with Anthony Tran of Trippy Tran Films, an independent movie and documentary producer based in Cincinnati.

[SIDE NOTE: Anthony is also a Karaoke DJ at Arlin's Bar and Grill and other local Cincinnati bars.]

Due to the lack of supplies available at Hughes (and lack of dollar bills in my bank account), it was suggested by Tread to begin searching out some other means of funding. Suggesting uploading a video to a micro-funding website such as Kickstarter or Indie-GoGo, I thought it would be wise to call upon my friend Anthony to help me develop and/or shoot the video to give it more of a professional feel, thus obtaining the funds I need for supplies, equipment, etc.
The Week That Was...One

Sunday, February 5, 2012

So along with his videographer, we were able to meet for a few hours and lay out a rough timetable and video outline which hopefully sees the video completed by March. By that time, we will hopefully be ready to upload a finished video to help fund the project. So keep on the lookout for updates for that one! ;-)

---------------

Finally,

my final meeting came on Friday morning with Elizabeth Bartley and Kim Burke who I met through architecture for humanity

Jenna Hudson and Architecture for Humanity.

{SIDE NOTE: For labels sake, I am going to refer to Elizabeth and Kim as my ‘academic advisers’ since I will be mainly meeting with them to discuss the studio’s schedule and curriculum.}

Both Elizabeth and Kim are well acquainted with teaching, both students and adults, about design, art, and the idea of design thinking. They have taught several seminars and brainstorming charrettes as a way of opening up people’s minds to new perspectives and possibilities.

As Elizabeth said in our meeting, you need to encourage the students to

‘Let your brain GO’

In the meeting, we were able to zero in on the true goal of what this design studio is going to focus on that will benefit the students the most. Half way through the meeting we decided that the best thing to do was not to necessarily focus on teaching the architectural design process, but rather to

Teach design thinking through architecture.

In this way, we will be able to expose students to a new ways of thinking and introduce creative problem solving techniques while using the architectural design process as a vehicle to get them to be able to apply the principles to other aspects of their lives.

As it has always been, the goal is to help inspire the students to reach beyond what they can grasp and push themselves to achieve something greater. This studio is meant to show them that just because they are in a certain situation currently, that doesn’t mean they have to STAY in that same situation.
"Questions in a Coffee Shop"

I feel as if Mondays always seem to set the tone of the week. What is said or occurs on this day always seems to influence whether it is going to be a "good" week or a "bad" week. Whether the week will "drag on" or "fly by," While it’s true that your attitude about the day's events has a direct impact on the perception of the day, nonetheless, Mondays always seem to have a certain "power" that other days of the work week seem to lack.

As I began my week with a visit to Hughes High School to shadow the two engineering classes of Andries, I found my perception of what my studio needed to be being drastically altered… The two classes were as different as night and day. The first, which was evenly split between boys and girls, held some of the most rambunctious group of students I have ever seen. Constantly talking, constantly moving around, and almost never listening. As I sat observing and taking notes on what the students took an interest to and what they ignored, it occurred to me now more than ever that the activities and lessons taught in my studio need to be exciting, engaging, and frequent!

On another point, just as Kim had mentioned in our meeting last Friday, the dynamics between high school boys and girls is an enormous obstacle to overcome in terms of taking risks, something that is essential for coming up with creative solutions. The students at Hughes are the same as every other typical high school student; concerned about appearance, saying the right thing, being "cool" and of course, trying to not look "foolish." At this age, I understand, as I'm sure everyone else who went through those somewhat "traumatic" years, that feeling comfortable in your own skin was sometimes difficult and "fitting in" was sometimes the best option.

While somewhere down the line we begin to realize that being "different" is not necessarily a bad thing, but actually makes us special and unique, the students in these classes aren't there yet, nor should they be. Yet there in lies the first and somewhat most important question:

How do you convince students to not be afraid of looking foolish?
“Questions in a Coffee
Tuesday, February 7, 2012

That having "dumb" ideas are the building blocks to creative problem solving and hits at the CORE of design thinking and the ideation process!

If this studio is meant to open the minds of these students in order to get them thinking in new, more Creative ways, then it is imperative that the studio environment is conducive to encouraging idea sharing.

Which leads me into my next "coffee shop questions":

While I don’t think it is imperative to transform these students into devoted design and architecture followers, I feel the activities and lessons need to pertain to them in some way or at least be something that seems "cool" enough to get excited about and invest time into.

SO what are the answers?

What are the projects or activities that will stir their passions and get them pumped up?

What hobbies and interests should I try and appeal to?


Questions to ponder...
An Autotuned Friday

It's Friday already?!

It's amazing how fast the week goes by sometimes and how quickly things can cross the line between huge success and utter disaster.

Throughout this week, I have moved back and forth between the two extremes more times than I care to admit. Yet as I begin to calm myself down once again, I am humbled by those people who remind me of the importance of what I am doing and the steps I have already achieved in accomplishing this benevolent task I have set for myself. "It gives me the confidence to push forward and take everything one day at a time."

Since my Questions in a Coffee Shop I have begun to rework several aspects of my project including the curriculum, schedule, studio name, and most recently, the guiding principles of the studio.

Beginning with the schedule and curriculum, I have separated the studio into four parts (introduction, ideate, research, refine) and have outlined the overall goal I hope to accomplish for each week in each of the phases.

I have also sketched out an assignment series for the ideation and research phase of the studio that will help excite students while progressing them through a process built on a series of activities.

[Click to Enlarge]

The goals with these assignments were to:

1. Excite students by actively engaging them in projects that are fun and interesting to them.

2. Break down the barrier students have of looking "foolish" in front of their peers in order to free their ideas.

3. Introduce various ways of generating, expressing, and refining ideas based on research and new information.
Within each phase, the assignment is based on building from *day to day*, exposing the students to *new ways* of coming up with ideas based on a *different set of parameters*. By walking them through each step individually and building on the end result of the previous step, *the goal is to begin to open their minds a little at a time*. Also, by neglecting to tell the students what the overall end result of the assignment is (to create a three dimensional space) I am attempting to avoid students thinking about the end product but rather thinking about the short term within the overall process. It is within this structure that I will then be able to introduce the to the methods of design thinking and how to move from idea to final product.

I have already sent this new schedule and curriculum out to my "academic advisors" Kim and Elizabeth, but *please*, for all of you who are reading, I would love to hear comments as I continue to refine and redevelop each.

*Moving along, I was beginning to research who else has tried to initiate a form of design thinking into an academic environment and I happened upon this article in the Stanford Magazine entitled: Sparks Fly. The article talks about the creation of d.school, the brain child of none other than David Kelley, founder of the infamous IDEO.*

While I won't go into too much detail concerning the school, one quote from the article spoke to me about concerning the overall goal of the school/studio which was,

*"Rather than credentials, students are imbued with a mindset."*

This sums up pretty nicely what it is I hope to leave these students with, the ability to see the world in a new way and develop a passion for creating new ideas that can impact their world. This studio will hopefully become the *spark* to their mythical "light-bulb."

**Spark.** [spärk]

verb

* provide the stimulus for (a dramatic event or process)

SpArk------>SpARCH

* providing the inspiration for design thinking through Architecture

**Project: SpARCH**

*Inspiring Design Thinking Through Architecture*
Finally, while meeting with Craig Vogel, Associate Dean of the School of Design at DAAP and President of the Live Well Collaborative, he asked me the question of what were the "Design Thinking Pillars" I was going to focus on?

To be perfectly honest, I had **no idea**.

I knew that I wanted to teach the students how to develop, express, and refine their ideas but I had not thought of the main elements of Design Thinking.

While researching, I came upon this blog: Planting Ts, in which the writer began to define his "pillars" of design thinking. Using his pillars as a starting point, I expanded and reworked some of them to begin to establish a set of guiding principles I can use in the studio.

_My 6 Pillars of Design Thinking_ are as followed:

1. Be Young: _Think Creatively_
2. Be Foolish: _Take Chances and Experiment_
3. Be Kind: _Empathize and establish a Human-Centered Purpose_
4. Be Open: _Be flexible and collaborate_
5. Be Strong: _Stay determined and optimistic_
6. Be YOU: _Follow YOUR passion_

So these are what I have so far. I'm sure they will begin to change and morph as the weeks go on, so please all, don't hesitate to criticize, tear apart, or offer some alternatives! **I CAN'T do this alone!**
The Week That Was...Two

Sunday, February 12, 2012

The Week that Was...Two

Another Sunday evening. Another week gone by.
I feel like I have barely enough time to blink before another week has past and it is one more week closer to April.
It is amazing the progress that can be made in a single week while at the same time feeling like that progress is only a single step in an entire marathon.

Regardless, as I look back on this past week from the redesign of the weekly curriculum, weekly goals, ideation and research activities, and studio name, I am proud at what I have defined and refined this week.

I do feel however, that most of my accomplishments have been internal, whereas the end result has not exactly been things I can necessarily share visually, but rather verbally. I think for this upcoming week, I would like to try and reverse that by producing more visual or physical representations for my project.
Not necessarily producing "stuff" to produce it but beginning to design aspects of the studio that can be critiqued and I can get some feedback on.

For this next week, these are the items I am going to be concentrating on:

1. Logo design
2. Curriculum development
   Inspiration Days: Cincinnati Core Change/ Meeting with professors
   Work Days: Daily activities, goals, and required materials
3. Video development

Speaking of video development, this Thursday we will be filming the promotional and funding video at Hughes High School. It will be a morning and afternoon shooting with Anthony Tran from Trippy Tran Films that will include visiting Andries' class, capturing cut-away scenes of the school, and interviews with Andries (teacher), Virginia Rhodes (principal), and William (director). It should be an exciting day and I will be sure to post some of the videos at the end of the week or early next week. So look for those to come!

Also, I wanted to explain my barista video interviews I mentioned last week. So as I have been working on my project, I have noticed that I have been doing most of my work in local coffee shops around campus. Pair that with the fact that I have been itching to put my new Flip Camera to work. I thought it would be a fun little side project (and something to help take a mental brake from thesis) to create some videos of coffee shops around Cincinnati.
I have only recorded one coffee shop, Rohs Cafe, thus far. But I have a list of about 20 different coffee shops around campus, downtown, and the Greater Cincinnati Area I am planning on visiting over the next few weeks.

Don't expect to see any of the videos anytime soon though. I may be ambitious and somewhat out of my mind, but I realize I could not possible record, edit, and produce 20 videos on Cincinnati's coffee scene. So for now, I'm just going to record and do all the back-end stuff after I graduate.

The videos will be pretty quick, probably only 2-3 minutes in length with the interviews and shots of interior and exterior to give a good perspective of each coffee shop.

Here is the first interview I did at Rohs Cafe. This was one take and I must say he was spot on with his answers. Did you catch that thoughtful pause on the last question? Awesome!
The Week That Was...Three

SUNDAY, FEBRUARY 19, 2012

The Week that Was...Three

I know, I know... I haven't kept my word this week. But HEY! It's been a pretty busy week and it's not like I was on vacation or anything.

So here it is, the week that was, number three...

The week started off with a meeting with a Dr. Milligan who is a Professor of Music and Associate Director of Wind Studies at the College Conservatory of Music (CCM). More importantly rather, he is professor of an honors seminar course entitled Music and Architecture. In the course, Dr. Milligan shows the correlation between music and architecture, in terms of construction, design, and emotional appeal. He emphasizes how the artist (be it composer or architect) seeks to elicit an emotion through his/her work, whereas the medium is the only true difference between the two. In our conversation, Dr. Milligan mentioned how through rhythm, structure, and story-telling, we can begin actively listening to a piece of music and begin to understand its sometimes surreal content. The moments, or the time, place, and state in which we listen, either actively or passively, evokes a ethereal memory at times which connects us to a moment beyond what the composer could anticipate but nonetheless hoped for.

These moments of extreme connection, whether a song from a wedding, funeral, celebration, etc., stimulates an emotional attachment that is similar to a space within a building. Here, Dr. Milligan emphasizes, lies the true correlation between music and architecture, in that, through a combination of active participation and structure, the story and emotions that goes along with that story, can begin to be identified and truly connect us with the work. "Architecture is frozen music."

My goal in speaking with Dr. Milligan was to see how he connected music to architecture to students who knew very little about both subjects.

From our conversation, Dr. Milligan emphasized the concepts of

Rhythm,
Motif (story or theme), and
Structure (Place, Path, and Portal)

and by identifying each in a piece of work, you are able to begin to obtain to understand.

This deeper understanding is something I would like to demonstrate to the students at Hughes as a way to not only be more invested in their world, but take an active and participatory role in shaping and changing it as well.

THIS is the point I feel the concept of Design Thinking can help to open students’ minds to new possibilities.

---------------------------------------------------------------------------------------------------------------------------------------
Thursday was the day of the promotional video shoot at Hughes with Anthony Tran, Josh, and Luke.

The day was a blur that was both exhausting and exciting.

Here are some of the highlights:

[A somewhat dreary day, we might have to get some better exterior shots on a nice day.]

[It just so happened that the Cincinnati Enquirer was here the same day, interviewing and taking photos of students for the annual Tech Olympics that some of the engineering students in the class are participating in.]

[First interview of the day...]

[Thanks to Anthony and Josh for making this movie look as professional as it can be. Amazing!]
Finally, this weekend was the Cincinnati Core Change Summit. A three day event, the conference focused on identifying major issues in Cincinnati, designing potential solutions, and beginning the conversation for change and a better tomorrow.

I was able to meet a lot of motivated and like minded people at the conference and was introduced to Dr. Victor Garcia who was one of the head organizers of the event and an avid design thinker proponent.

The event was a great opportunity to see how people outside the design profession are explained and led through the design process. It was also a great way to see some potential problems that might arise during the brainstorming and prototyping sessions that might come up during the sessions with Hughes.

All in all, it was just nice to be in a room that is full of positive and motivated people who are working hard to achieve something they truly believe in.

As this next week begins, my main focus is going to be on detailing out the daily curriculum and starting to establish what exactly each day will consist of. I have a meeting with Andries van der Bent on Thursday to discuss the schedule and curriculum in order to get his approval and feedback.

But as I begin to put pen to paper and press forward towards the end of February, it continues to amaze me how things connect in mysterious ways. Be it music and architecture, coming into contact with perfectly skilled people or simply finding like minded people who share your ambition and passion.

Regardless, I hope I continue to become more and more actively aware of those moments when things connect so I am able to take advantage of them. Everything I have done, I owe in part to those people I have come into contact with who have helped move my vision from my mind to reality.

Until next time, may everyone participate a little more in their own lives and seize the moments that matter!
Scared, Stupid, & Selfish

It’s strange how things, for one reason or another, sometimes just happen to fall into line. Whether it happens in an instant or over a period of months or years, sometimes things just fall in line.

Over the past weeks, I have talked to a number of different people from all types of backgrounds and professions, each offering me a piece of information that has helped shaped my project and my perspective. So far, there have been 3 pieces of advice that have really resonated with me.

1. Do it Scared.
2. Be Stupid.
3. Act Selfish.

Although these all sound very negative (and it most typical settings, they probably are) but as I will explain hopefully, you’ll begin to see just how positive these things can be.

When I first started this journey, before I was even sure I wanted to pursue it, a friend of mine gave me a piece of advice that her professor had once gave to her. He told her one day, that whenever you are beginning something, whether it is a new project, class, job, or even relationship, if you are ever slightly unsure about it or start to feel those butterflies in your stomach, then you’re probably onto something great. So when you get those feelings, don’t tiptoe in, LEAP in.

Because it’s those moments when you are most nervous and most unsure that end up being the moments you grow the most.
The next piece of advice came to me through a Ted Talk I happened upon a few weeks ago. In this talk, Armin Vit talks about the importance of "thinking stupid." In his talk he illustrates how being "stupid" in its typical sense, is neither a gain for oneself or for others, but in essence a complete loss.

However, in terms of "stupid" ideas, if we can begin to embrace and build upon those ideas, we can begin to transform them from utter losses to positive gains for everyone. In that sense, being "stupid" isn't a negative attribute, but something that everyone should hope to be called at one time or another.

Being "stupid" is about pushing the boundaries and coming up with something unexpected.

Take any great invention; the television, or the telephone for example. Do you think when Philo Farnsworth or Alexander Bell first spoke about their ideas that there wasn't at least one person that looked at them and thought that those were crazy or even stupid ideas? To think they weren't told that at some point by some person could be also be considered "stupid."

So if being "stupid" is about pushing the limits of what we think is possible, then we should all not only embrace it, but should work towards it with as much passion and energy as we possibly can!

The final point derives from the previous "stupid" piece of advice. It also continues the alliteration, which most people seem to enjoy and remember more often than not.

The last piece of advice is to Act Selfish.

Keeping with the examples of Philo Farnsworth and Alexander Bell, there will always be people who think whatever idea you come up with is crazy or impracticable or ridiculous or that this idea could never work. In the end however, it is up to YOU to determine if you believe those naysayers and decide to abandon your idea.

If you don't believe them however, and in the end you think they are the crazy ones, then you will have to ignore them. In the end, you will have to be somewhat selfish, because there will always be people who tell you that what you are doing can't happen. Being selfish, in this context, means digging your heels in a little bit more and pursuing what it is you are truly passionate about.

For it is at this moment, when you begin to grow and expand beyond your known world and prove that your idea, or job, or relationship is not only worth your time and effort but can actually improve the lives of others.

So for all of you who have ever felt scared, jump in.
For all of you who have ever been called stupid, keep pushing.
And for all of you who have ever been put down, or told you can't do something, or have doubted yourself, stand firm.
For “nothing was ever achieved with enthusiasm.”
Nor was it achieved by careful planning.

Sometimes, it is better to simply
embrace the unknown,
lead with your heart, and
follow your passion where takes you.

Scared. Stupid. Selfish.
The Week that Was...Four
Sunday, February 26, 2012

"In the long history of humankind, those who learned to collaborate and improvise most effectively have prevailed." - Charles Darwin

Collaboration is an amazing thing.
As the quote from Darwin emphasizes, the concept of the lone genius (or designer) toiling away in his studio is both superfluous and, at times, fruitless.

Rather, the initiation of others has proven time and time again what may result from the effective collaboration.

While there are, indeed, risks and drawbacks from working in succinct harmony with others, often times the outcomes, as well as the journeys, are far more insightful and sincere.

In alignment with this notion, I decided I would take a moment and lay out a mind map of all of the people I have met in the past month and a half because of this project.

It really is quite amazing how a single idea can extrapolate a person’s network in such a short amount of time.

For that I am truly grateful.

This week was a week of Meetings, Connections, and Insights.

The first meeting was with Vanessa Melendez, one of the founders of Tread Project. I was initially introduced to Vanessa through my good friends Charley and Jince, the other part of the Tread trio.

I had met with Vanessa earlier in the quarter to get her insight about her experience and what Tread Project meant to her. This time, I met with her to pick her brain again, get some more detail, ask some follow-up questions and giving her the shimmy on what I have been up to.
Although working full time at P&G, Vanessa is still asked to speak about the Tread Project and was asked by Phyllis Borcherding to come talk to her senior class of Fashion students. Vanessa graciously invited me to attend and it was amazing to see her talk to the class because you could still hear the passion in her voice when she spoke about Tread, even a year after it's completion.

Afterwards, we went to Hughes so Vanessa could deliver some of the final posters. She introduced me to Danielle Battle, the teacher she worked under, and who's freshman class we spoke to about design and careers. Because of the nature of the STEM program, students are required to decide, pretty early on, what track they would like to pursue. Regardless of that however, I was still amazed at how focused some of the students were in identifying what kind of career they were interested in. Truly remarkable.

**Meeting:** Vanessa Melendez  
**Connection:** Danielle Battle and Phyllis Borcherding  
**Insight:** Potential of Hughes students and class speaking practice

My next meeting during the week was set up through Frank Russel, a past professor and director of the Niehoff Studio, a interdisciplinary studio focused on addressing urban issues within the city of Cincinnati.

After talking with him about project: spARCH, and explaining the lessons I hoped to teach the students at Hughes, he recommended I speak with Flávia Bastos. As assistant professor of Art Education at DAAP, Frank thought it might be a good opportunity to pair with a class of prospective teachers.

In the meeting with Flávia, she invited Vicki Datiello who is currently teaching a Field Experience course that, as the name implies, is focused on getting real-world experience. In the past, students went to various grade schools, high schools, and after school programs in order to teach younger students techniques and various theories associated with art.

This upcoming quarter, however, Vicki has been looking for a new partnership that was in need of help and geographically nearby.

Hughes High School fits both of these needs.

As it turns out, because of the transition to the STEM program, Hughes will be downsizing the art program and it's various classes beginning next school year.

So my studio, provides an opportunity to provide an artistic outlet for students, while still remaining in line with the STEM mission and overall scope.

In working with Vicki and her students, it will provide the opportunity to utilize the skills and knowledge that they hold, while also building a partnership between UC and Hughes, and between programs in DAAP. A truly cross-disciplinary collaboration.
Meeting: Flávia Bastos

Connection: Vicki Dalello

Insight: Art education outreach class and Hughes' Art troubles

My final meeting was with the graphic designer turned chef turned writer, Courtney Tsitouri.

I was first "introduced" to Courtney through her newest project entitled Cincinnati:deconstructed. I then began following her food blog at epi-ventures.com before happening across her interview with Steve Kayser on the Expert Access Radio Show.

In her interview, Courtney spoke about her progression from getting her degree in graphic design, to her desire to go to culinary school, and finally to her current position as copywriter at Cincinnati’s Strat-G Advertising.

Her non-linear path to finding what she loved to do was something I thought aligned perfectly with part of the lesson I am trying to instill in project: spARCH; the need to put yourself out there in order to find what you love.

So I reached out to Courtney through email, talking about how much I loved her video, blog, and interview and told her a little about the project I was working on at Hughes High School.

As it turned out, Courtney actually worked as a graphic designer for Cincinnati Public Schools and said she would be happy to meet with me and talk more.

We met at Coffee Emporium (my suggestion, as a way to continue my Coffee Shop Confessions project) and we were able to speak for an hour or so about her path, how design has helped her, and finally about what it was I was doing.

Her story is as amazing and inspirational as it real.

Her story was not a linear progression from point A to point B, but a non-linear, eclectic journey that took her from point A to point Q, to M to D and then finally to the point she is at right now.

Both her and I agreed though, it is ALWAYS about the journey rather than the destination. And the only way to find out where that journey will lead you is to get out there and walk a path, even if it might not be the path you stay on for the entirety of the journey.

Meeting: Courtney Tsitouri

Connection: Possible Visiting Mentor

Insight: The adventure is in the journey, not the end goal.
The Week that Was...Five

End of the Week. End of February.
Oh what a month it has been!

First off, let me apologize for the lack of posts this week.
With my final presentation of the quarter this past Friday, my efforts were focused on production, production, production!

And sadly, my blogging fell to the waste side. But fear not! For all those avid readers (aka: Mom and Dad) I am back!

SO, like I said this past week was pure production mode, from finalizing the promotional/funding video, to visitor profile assembly, to assignment trial runs.
My goal for this presentation was to synthesize all of the individual pieces that I have been working on and refine them into a coherent, illustrative presentation.

All in all, I felt it was a pretty good presentation with very helpful feedback from professors and some of my outside advisers, who I would like to take a moment to thank. Again, your guidance and feedback was amazing and I am so thankful for all of your help.

If you would like the chance to relive my presentation, I have added some photos for your viewing pleasure!

For this upcoming week, besides the continued development of the curricular assignments, I am meeting with Vicki Daelillo to discuss the potential partnership with her Art Education students. I will also be meeting with Bobby Rebholz, who is a Foundation Drawing Professor at DAAP who also teaches break dancing (awesome combo, right?)

I am very excited about both meetings, as the partnership with Vicki will potentially provide terrific instructors and fresh perspectives who students who have worked in grade schools and high schools around the greater Cincinnati area.
Likewise, Bobby’s teaching background and breakdancing enthusiasm will offer students a dynamic learning experience that I am anticipating being one of the highlights of the studio.

In all, with only a month left before the studio begins, I am pleased with where the project is at this moment in time and optimistic that the necessary refinement to the curriculum and assignments can be flushed out.

I hope everyone has a great week and be sure to stay tuned for the launch of the promotional/funding video on IndieGoGo.com by the end of Tuesday!!!

(Detailed perspectives of the presentation)
"When you want to succeed as BAD as you want to breathe, THEN you will be successful."

What is success?

This quote by Eric Thomas, also known as the "Hip-Hop Preacher," comes from a sermon he gave to a group of middle school and high school students.

In his talk, he tells a story of how a man sought the help of a well-known guru in order to determine how to become wealthy and successful.

The guru agreed to help the man and requested the man meet him on the beach early in the morning. Upon arrival, the guru told the man to follow him into the ocean, continuing until the water is neck deep. At that moment, the guru held the man under the water until he almost passed out. The guru then picked him up and spoke those words,

"When you want to succeed as bad as you want to breathe, then you will be successful."

Thomas continues to talk about various accomplished persons all with the emphasis of how determination, perseverance, and passion determine how successful a person becomes. His lesson teaches that while there are many who hope to become successful, there are only a handful who are able to handle the hardships that may arise from following a path towards success."
Passion, Self-Confidence, Conviction, & Success

Wednesday, March 7, 2012

Trying to define 'success' is not only difficult, but somewhat superfluous however, in the sense that 'success' is more a state of mind than it is a nominal, calculable amount. Furthermore, the degree in which 'success' varies from something such as winning the lottery to finding a dollar in a pair of old jeans. While some DO measure success in terms of the amount of money in their bank account, to me, 'success' is being able to talk about what you do, what you've done, and why you are on the path that you are with passion, self-confidence, and conviction.

Passion to direct you.
Self-confidence to follow.
Conviction to stand up for it and inspire others.

Although I realize how cliche this must sound, and I don't condone even the most 'successful' villain, I do think how a person expresses their story says a lot about the 'success' they have as an individual.

As the English writer William Hazlitt once said, "A strong passion for any object will ensure success, for the desire of the end will point out the means."

As this school quarter ends and Spring begin to emerge, I am convinced the best path towards 'success' relies NOT on how much money I am able to raise or how 'cool' the end result is.
Rather, I will gauge my 'success' on how many people are inspired by my efforts to take it upon themselves to tell others my story.

To me, THAT is success.
The Week That Was...Six

Sunday, March 11, 2012

Well, this was a very important week between the launching of our IndieGoGo campaign, to the second to last meeting with Andries, to getting the chance to interview some potential new team members.

So first starting with the IndieGoGo.

It is official!
If you haven’t checked it out yet, take a minute before continuing reading and take a look:

**project: spARCH -- IndieGoGo**

Not terrible, right?
I know, I know, the titles for the incentives are a little cheesy, but would you expect anything less from me?

Anyways, I just want to thank again all those who were involved in the making of the video. Check out Anthony Tran and the rest of his work he has done, it was great working with him on the video, and I’m sure we will be seeing more of his work soon!

So if you liked the video, and more importantly, if you like our cause,

**please consider supporting project: spARCH**

and making a contribution so we can really make it a great experience for the students at Hughes.

And don’t forget, you get some pretty nifty gifts as well. :-)
There is definitely a lot of excitement coming from Andries and other faculty members of Hughes High School. The quarter is just about wrapped up for the high school, which means there is added anticipation for what next quarter entails, namely **project: spARCH.**

Andries especially is really looking forward to giving his students a new perspective on problem solving and mentioned how this studio is just what some of his students need.

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**Lastly,**

Jenna and I had the opportunity, thanks to **Liam Ream and the Co-op office,** to interview some students who will be co-oping next quarter who are interested in teaming up with us.

**One of the biggest needs the members of last year’s Tread Project was the number of bodies they needed in the room.** Even with 3 of them, it was difficult to be able to give enough attention to each of the students in their class.

So realizing the necessity early on, as I had mentioned in a previous post, I approached **Liam** to see if there was anything he and the Co-op office might be able to do. More than happy to help, we were able to get project: spARCH up as a EEP (Experiential Education Project?) which is used in case students are interested in an alternative co-op experience.

With **double** the amount of students going out next quarter for co-op due to the semester conversion, **we had high hopes that students would be interested in an EEP like ours.**

As it turned out, **7 students** were interested in working **WITH** us. I emphasize using the word **WITH** instead of **FOR,** because in order for this project to be a success, it is going to require a **total team effort.**

Working with some of these students is going to make **all** the difference from **development of the curriculum and assignments** to **mentor and guiding the Hughes students towards a final design.**

I am really excited for the chance to work with a group that I can tell are just as passionate about **opening the minds of younger students to new possibilities.**

With that said, hopefully by the next blog post, I will be introducing 2 or 3 new people to the project: spARCH team.

Until then all, here is the next installment of the **Coffee Shop Confessions**

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**Coffee Shop Confessions:**

**1215 Tazza Mia**
Two Wrongs Never Make a Right...Sometimes

Consider what it means to be wrong for a moment...

We spend most of our lives trying desperately NOT to be wrong. But what if trying not to be wrong is wrong in and of itself? Is being wrong REALLY so wrong then?

While this might seem like a contradiction, consider the amount of inventions Thomas Edison patented (1,093 in the United States).

Now consider how many inventions he did NOT patent.

Those inventions that FAILED.

DIDN'T work. That were WRONG.

Imagine Edison, one of the greatest inventors of all time, being told he was wrong...

In an article I read (somewhere, some time) I recall it saying that when asked how many times he failed attempting to invent the light bulb, Edison responded,

"I never failed. I just found 10,000 ways that won't work."

As Kathryn Schulz, a journalist, author, and leading 'wrongologist' stated in her TED talk "On Being Wrong," being wrong is a mindset.

If you never knew you were wrong, then you would feel like you were always right. So if being wrong, feels like being right sometimes, why are we so afraid of it?

In her talk, Schulz uses a childish example of the class cartoon of the Coyote and the Roadrunner. In almost every episode, the Coyote tries feverishly to catch the Roadrunner, often using elaborate traps that almost always fail.
Two Wrongs Never Make a Right...Sometimes

At times the Coyote chases the Roadrunner off of a cliff and, while the Roadrunner is completely fine because it is a bird, the Coyote eventually falls.

But the key word, as Schulz states is EVENTUALLY.

Although it is indeed a cartoon, it is a perfect analogy for being wrong.

While running off a cliff for the Coyote is wrong, for a split second, he continues running as if NOTHING is wrong, as if everything is "right". It is only when he looks down that he realizes just how VERY wrong he is and inevitably falls.

As I watched the rest of her talk, I realized that this is exactly what I am trying to show the students of Hughes High School through project: spARCH.

I am attempting to open their minds so they can express their ideas, no matter how silly, foolish, or WRONG they might appear. Because it is those ideas, the ones that are the most ridiculous and out-there, which will more often times than not, lead to the creation of innovative and successful ideas.

The world THRIVES on being wrong, because it is human nature to be wrong.

We make a mistake, learn from it, and then try something new the next time.

Do you really think that the Founding Fathers could have really predicted internet copyright infringement and put it in the Constitution? Not a chance!

Which is why we continuously vote on new laws, establish new guidelines, and add new requirements. Something happens, which, unfortunately, is sometimes something that harms other people, and we create new regulations to prevent it. We got something WRONG.

So if being WRONG is considered naïve, idiotic, or foolish.

Then I hope all of us can feel content being

The most naïveté person.
The most ignorant idiot.
And the most ridiculous fool we possible can.
The Week that Was...Seven

With only two weeks until the start of studio at Hughes High School.
This past week has been about securing assets that will essentially make or break the studio.

In this past week I met with Dr. Victor Garcia, who is an associate surgical director and professor of pediatric surgery at Cincinnati Children’s Hospital. Dr. Garcia as been an avid proponent of design thinking since the mid 90’s when he first began at CCH. His interest in understanding the reasoning behind the increase in gunshot victims in Cincinnati’s youth led to his desire to solve the problem in a non-traditional way by understanding the problem before the problem emerged.

His investigations introduced him to the methods of people such as Tim Brown, Roger Martin, and Victor Papanek. This information eventually transpired in the creation of CCH’s Trauma Services and the newly developed Core Change initiative. Dr. Garcia’s interest in helping create a new mindset for Cincinnati’s youth will be a tremendous asset to project: spARCH.

On Tuesday, I met with Shanke Meeker who is an Associate Design Fellow at Proctor and Gamble’s Design Function. Working within the Corporate Design Function, Shane helps to develop new and unique innovation methods and processes that are used in the storytelling, brand identity, consumer loyalty in almost every brand at P&G.

Shane’s love and expertise in the art of storytelling as a means to evoke emotion and reaction will help show the students of project: spARCH the power of telling your story in a provocative and empowering way.
Finally, I am proud to announce the newest members of the project: spARCH team.

**Emmy Jensen** *(BSARCH Class of '14)*

**Joe Russell** *(BSARCH Class of '13)*

**Tyler Gentry** *(BSARCH Class of '13)*

These three students will be helping Jenna and myself through the development of the curriculum, schedule, marketing and PR, brand identity, and finally the teaching of the studio. These three students were chosen because of their interest in project: spARCH and the power of design thinking can have.

*Their desire to make a difference in the lives of the Hughes' students will help make the studio a success.* It is really an honor to be able to be working with this amazing team, and I have only high hopes come April!

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**Coffee Shop Confessions:**

**Highland Coffee House**
So as the Final week before the start of studio progresses, I would like to reflect a little on the journey thus far. I have always enjoyed a good metaphor, whether it be a classic "life is like a box of chocolates" to a more meaningful "relationship is like a good book," each has its significance to people in various and unique ways. For me, I would like to compare my journey thus far as a Cliff Diver.

This metaphor came to me after my friend Jenna, who has been with me since day 1, told me as we both reflected on what was to come, that when she first met with me after I told her about what I was thinking of doing, that she thought she would meet me to essentially talk me down off of a ledge. She thought I was just having second thoughts about my current thesis topic and needed confirmation and reassurance. A good friend right?

Little did she know (this is where the metaphor begins) that I would instead take her hand and pull her off the ledge with me. Since that leap, we have been falling and scrambling to piece together a makeshift parachute so we don’t land flat on our face. Luckily we have come across other people who have taken similar leaps who have been able to provide us with the tools to help us land safely.

Our journey, much like cliff diving, has been anything BUT boring.

Exciting at some points.

Nervous at others.

But ALWAYS ready to see what’s next.

Through all of this, we have never stopped tucking our chins, clutching on for dear life, and diving head first faster and faster towards the ground.

As we enter into the first day of studio next week, we will have the first chance to see just how well our makeshift parachute works.

Chances are, there will be a few holes. Some soft spots. But hopefully in the end we will make it safely to the ground, limbs and sanity intact with a few great stories and memories to share with others.

So thank you Jenna, for taking this leap with me. And thank you to all those who have provided the tools to make this journey possible.

We couldn’t have done it without you!
The Week that Was...Eight

project: spARCH

SO with the end of the eighth week begins the ninth week and the start of project: spARCH!!

It's been an unbelievable journey thus far and the beginning of this next chapter is sure to be a memorable one. All of the planning, late nights, meetings, printings, and second guessing has all led up to this point.

The story continues with today's first day and it was everything I hoped it would.

It barely feels like it happened.

All of the preparation and it ended so fast it's almost hard to remember it.

The day started with an early morning workout to help myself wake up and get energized. Heading up to the school and walking in the front doors, I could feel the butterflies in my stomach. I was so nervous that it was hard to say hello to my team and Andries when I walked in. All I could do was keep going over the first thing I was going to say to the students.

How I would say it? Where I would put my hands? Would I stand? Would I sit?

All of these minute details kept repeating themselves inside my head until I was finally introduced by Andries to the class.

And then...

Nothing.

My mind went blank and I just did what felt natural.

It's really bizarre how that works.

I'm sure we have all read about that somewhere, watched that interview of someone, or have felt that once in their life. I know I have. But no matter how many times it happens, it is still amazes me.

The first day started and ended in a blur and before I knew it, we were walking outside having just completed our first day. The Hughes students were excited, engaged, and invested in the exercise. They talked, they listened, they laughed, and they built off of the thoughts of others and came up with some really great ideas/prototypes.

It was a fantastic start that will hopefully continue through the rest of the studio!
RECAP: {Week 1}

Thursday, April 12, 2012

What an amazing first week!
I have to say that for as much planning and preparation, NOTHING could have prepared me for how awesome the students are.
The conversations and discussions we had as a studio and as a small group were great!
I don't know if it's because of the activities we had prepared, or it was because the students are juniors at a STEM school (we'll say its because of the activities ;-) )
None the less, the students were really engaged and excited about all of the activities we had them do. It was great!
If this first week is any indicator of how the rest of the studio is going to be, then I think we are going to a fantastic studio.

I think the Tele-pictionary activity was my favorite from this past week.
It really seemed to get the students out of their shell. Especially when they had to try to act out a sentence without using any words. It becomes very difficult to describe "The pig is happy when he is rolling in the mud" or "The octopus is swimming away from danger" when you can't talk. The students loved it and what's more important, they started to see the difference between the different types of idea expression and why it is important to be as clear as you can to get your idea across to others.

All in all, it was a great week and I can't wait to see how the students react to next week!
RECAP: {Week 2}

Sunday, April 15, 2012

Week 2 is OVER?!
It’s unbelievable how fast these first 2 weeks have gone by!
This past was pretty exciting. We started the week by introducing our Song to Object exercise.

The exercise was based off of a freshman architecture exercise in which a song was provided and interpreted into a 8 ft by 8 ft box. That exercise walked through various levels of model making, collaging, and sketching iterations until a final direction was selected.
In our exercise we used similar principles of design iterations through models and collage, but we also introduced dance as a form of idea expression/ideation. The overall goal of the exercise was to show the students how ideas can be expressed and refined through a variety of mediums (i.e. Sketching, collaging, model-making, and even dance).

The songs:
Azad - Kopfschuzz
Skrillex "First Of The Year"

These songs were chosen for their layers of rhythm and instrumental, as well as their lack of understandable vocals and contrasting melodies throughout the song.

We wanted to provide songs the students would be interested in listening to, but also required a higher level of active listening to be able to understand things such as theme, emotion, structure, and the overall story of the song. What was extremely rewarding came on Wednesday during the break dancing class taught by Bobby Rebholz.

In this class, Bobby, who teaches at Foundation Drawing at UC DAAP and has been a breakdancer for the past 12 years, came and taught the students about the history of break dancing, some basic essential moves, and some of the common nomenclature of the B-boy culture. During this session, Bobby emphasized the importance of listening and reaction.
Too many people, he said, begin to dance without truly listening to what is being played. Leading to poor interpretations and missed opportunities during a routine.
This part STUCK.
As the class progressed, more and more of the students begin to really start listening and reacting to the music. To the point that they were calling each other out on paying closer attention to what was being played. This ACTIVE listening, as I said before, was one of the main principles behind this entire week and as we moved into the Friday session of actually creating a three dimensional object, you could begin to see a better understanding of the song being interpreted through their models.
Truly Amazing!

As confident as I was that this exercise was a good idea, I could have never anticipated the success it would have.

May the happy surprises continue...
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