CURRICULUM TOOLKIT FOR A NEW GENERATION OF PUBLIC INTEREST DESIGNERS: HAITIJACMEL CLINIC CASE STUDY

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Abstract
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Keywords
Architecture, community, humanitarian, practice, education

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CURRICULUM TOOLKIT FOR A NEW GENERATION OF PUBLIC INTEREST DESIGNERS: HAITI JACMEL CLINIC CASE STUDY

G. M. ARRAJ¹, A. M. LEDBURY²

ABSTRACT
Students collaborate with professionals on an interdisciplinary competition where the winning student-led design would be fund and build as a new healthcare clinic in Jacmel, Haiti. Summer of 2013 witnessed the launch of REvive Jacmel, an interdisciplinary student-led project to create a new healthcare clinic in Haiti. Students and professionals held a competition and one team won the 1st prize. Through a unique opportunity, a professional firm adopted the students into a practicum and developed the project. After months of extensive work and several grants to send students for site visits in Haiti, the project developed into collaboration from a simple design by students, to a fundraising where professional teams of landscape designers, civil engineers joined hands. In 2015, through further collaboration with students who are now professionals, the clinic broke ground and is under construction.

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KEYWORDS
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1. INTRODUCTION
In early 2013, students from the University of Oregon, University of Portland, and Oregon State University came together to work collaboratively on the design, under the supervision of pro bono professionals from a variety of disciplines in the Portland area. The topic of the collaboration is a healthcare clinic in Haiti. It all started when Dr. Michael Workman, a Portland-area surgeon began volunteering with Restoration Ministries after the 2010 Haiti earthquake. He then returned multiple times with various groups of medical professionals to perform hundreds of life-saving surgeries. In early 2012, Dr. Workman decided to pursue the construction of a small general healthcare clinic to replace their over-extended space in an existing community center. After talking with several stakeholders of the Jacmel community, he envisioned a modern, flexible clinic that would be a permanent home for his work in Jacmel.

The vision for the structure included spaces for exam, surgery, equipment storage, and community outreach. Future campus expansion phases were planned to include infrastructure and housing to support long-term internships for Oregon nursing students and pro bono professionals.

The project is called “REvive Jacmel” and would be throughout this paper referred to as “REvive Jacmel”, “Jacmel health care clinic” or simply “the clinic”.

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In summer 2013, a design competition was held to review ideas for the upcoming project. According to the competition’s website, students’ involvement in the REvive Jacmel Project included 3 phases:

1. A design charrette which is a quick, collaborative process used by designers to generate initial ideas and many potential solutions to a problem. (18 June 2013)
2. A competition which involves several design teams working for weeks or months on refining a single design solution. (June-September 2013)
3. A practicum which provides students an opportunity to work with professionals to further develop a project in a professional office setting. (September 2013-January 2014)

Each of these parts would later prove crucial for testing the model of integrating Public Interest Design education in architectural curriculum for interested students.

The authors of this paper were directly and early on involved in the REvive Jacmel project each at different phases and in different capacities.

Grace Aaraj was at the time of the competition a Fulbright grantee from Lebanon and a MArch student at the University of Oregon in Portland. Along with colleague Jackie Davis, also a MArch candidate at the time and Matt Deraspe a designer experienced in construction management, she submitted an entry for the competition. Their submission later received the first prize award, the people’s choice award and the most constructable scheme award. Davis and Aaraj later proceeded to be immersed for several months in the practicum to further develop their winning scheme.

Annie Ledbury along with other fellow students organized the public charrette, design competition, and practicum for interdisciplinary students to work collaboratively on the design of the health care clinic in Jacmel to recover from the 2010 earthquake. Working in tandem with the
client, the local pro bono surgeon, she developed a fundraising plan, and wrote and presented a successful grant for $70,000 to support the construction costs. She curated funding partnerships that sent the clinic’s designers (including the co-author of this paper) to the site in Haiti in December 2013 for community involvement meetings and materials surveying.

Through the unique perspective of the authors, this paper will present the events that led to the competition, the design and then the construction of the project while examining the learning outcomes that could be applied to structure a public interest design curriculum.

2. HAITI JACMEL CLINIC CASE STUDY

2.1 The status of Public Interest Design (PID) in Architectural Education

The Center for Public Interest Design at Portland State University defines Public Interest Design as the “inclusive design practices that address the needs of under-served communities worldwide through work that is socially conscious, environmentally sustainable, and economically accessible to all”. Architecture schools purpose is to graduate designers and architects who are versatile problem solvers. Yet there isn’t a structure available to prepare students to become public interest designers. Schools are thriving to prepare researchers and designers who adapt quickly to worldwide problems as quickly as our environment - both natural and man-made.

Architectural education has not been so far focusing on reinforcing public interest design in their curriculum, and this is true in a lot of countries. In the United States for example, “Architecture treats its education, internship and exam as separate acts with little overlap” says John Cary (Cary, 2011) who is a connector, writer, speaker, and curator focused on social change, with an emphasis on design for the public good.

The link between education and practice should be getting closer. Amongst the marketization of the architectural practice, it is time for the profession as well as its educational institutions to shift focus towards a socially sustainable practice.

“Public Interest Design is the next frontier of the sustainability movement. Taking a triple bottom line approach, it positions design to more actively consider economic, environmental, and social factors - creating better places, products, and systems for people to live their best lives. Inherently human-centered and participatory, public interest design seeks to improve the quality of life for all people, regardless of their socio-economic background. “. (Jett, 2012)

The Jacmel health care clinic project spanned over several months, from ideation to the operation set to start soon and involved several team-players volunteering their time and knowledge to make this project happens.

In order to reflect on the role of architectural education on public interest design one must first define what skills future public interest designers’ needs that are lacking in their respective curricula. What can architecture schools offer to make designing, not only a holistic intellectual pursuit of designing and building, but also a pursuit of what is right for the public?

Today, this is part of a bigger debate concerning architectural education and its direct applicability to the practicing world. We used and are continuing to use the Haiti Jacmel Clinic as a case study inspiring a curriculum toolkit for a new generation of public interest designers adopting innovative social, political and design innovative framework.

2.2 The charrette: Investigating the design needs

The project kicked off with a design charrette involving students, professionals, and experts in fields ranging from nursing to structural engineering to construction management. A design charrette is a quick, collaborative process used by designers to generate initial ideas and many potential solutions to a problem. In preparation, a group of students volunteered to prepare a research document about Haiti that was made publicly available on the competition
website. The research highlighted Jacmel’s environment and climate, topography, history, social structure and demographics, government structure and its effect on healthcare and education as well as festivals, arts, economy and final the effects of the earthquake followed by efforts of reconstruction.

Figs. 2,3,4,5 Excerpts from the research booklet prepared by students. Content credit: Revive Jacmel

The design charrette was held on June 18, 2013 at the University of Oregon’s White Stag Block in Portland.
The design charrette was held on June 18, 2013 at the University of Oregon in Portland.

The goal of this charrette is to include a full project briefing and presentations on health care design considerations, construction and structural methods, first hand experiences design and building in the region, and Haiti specific cultural issues. Speakers shared their experiences in healthcare, design, and construction in Haiti and formulated initial design concepts for the project. Among the guests were designers who while based in Portland participated in other design-build projects in Haiti, architecture students with a lot of questions concerning the design idea, a nurse who has been working in Haiti for almost three decades, a Haitian man who passionately shared the reality of his country and a general public who is interested in the broader aspect of the topic.

Fig. 7 Intervention from a Haitian national living in Portland followed by Q&A session with the participants.
Participation in the competition was optional for the attendees of the charrette. The large spectrum of experience and interest of participants brought insights to the participants, who while sitting in a building in the United States wanted and needed to better understand the climate, constraints and political complexities of post-earthquake Haiti. They are hoping to help design a building in the public interest of the people of Jacmel, south of Haiti.

This event established interdisciplinary teams of students from the state of Oregon universities who self-organized and worked together for several weeks during the summer of 2013 to submit their competition entry. The event was recorded to be used as a free accessible educational material and a successful case study.

**Innovative pedagogical framework of the charrette:**
- Compiling applicable background research done by student volunteers holding a strong interest in the topic. The research is not paid, and not awarded by credits, thus the feedback of the quality of the research comes directly from the charrette participants.
- Establishing a forum to further the understanding of the needs of the end users,
- Creating unique and interdisciplinary team collaborations that would not have been otherwise possible based on common interests and skills matchmaking,
- Raising students’ interest for public interest design by presenting an opportunity to design for a real-life situation,
- Presenting an opportunity for experienced practitioners who are interested in socially responsible projects to mentor students.

**2.3 The competition: in search of a culturally appropriate and feasible design**

We know that architectural competitions involve several design teams working concurrently for weeks, even months on refining a single design solution. Public Interest Design adopts competitions as well to seek a diverse take on an architectural problem or functional need. In the case of the Jacmel clinic, the competition jury received several applications from interdisciplinary and multinational teams. As per the competition brief, the winning proposal would best answer the following goals & objectives:

1. To build a beautiful, functional, culturally relevant clinic;
2. To foster an interdisciplinary approach to architectural, engineering, and construction management education;
3. To increase awareness in the Oregon architecture and construction community of the complexity of issues surrounding global public interest design.

The advent of the Internet made multi-national collaborations possible. This is good news to public interest designers interested in global problems, but also carries a challenge of distance in terms of understanding the geographical, climatic and social contexts of the project.

For the REvive Jacmel competition, finalists were asked about their research and design strategies, and as many design problems these strategies included literature readings, site studies and diagrammatic ideation. The case of Public Interest Design asks for carefully planning the interventions, especially in fragile places with limited resources.

The competition committee selected the winning design in September 2013. The winning design team selected designed Sant Santé - which is Haitian créole for “Health Center”- in a sensitive and aware manner to Haiti’s situation.

**Innovative pedagogical framework of the competition:**
- Receiving a wide spectrum of design ideas for the same design problematic;
- Gathering a panel of internationally acclaimed jury members with real-life experience around selecting winning design schemes;
- Building partnerships and pro-bono networks of students and experienced that serves the advancement of the project towards completion;
- Educating attendees, including students and faculty members on PID approaches for international problems where architecture could play a role in the solution;
- Testing the traditional academic system and its ability to educate public interest designers by providing them with appropriate tools and networks;
- Getting local and national press coverage about this model. Press coverage, both in printed versions and online allow for raising public awareness about the humanitarian topic and the role of architecture in it.

2.4 The practicum: Implementing teamwork and developing the design

A practicum provides students an opportunity to work with professionals to further develop a project in a professional office setting. The tangible outcome of this process will be a set of detailed architectural construction documents (CDs) that local Haitian contractors will use to build the clinic. Design development continued in the form of a student practicum at Waterleaf Architects, Interiors and Planning, KPFF Engineering, and with the AGC Student Chapter of the OSU School of Construction Engineering Management. The scope of development included structural checking, architectural and design revisions, landscape design and trees selection, construction details, contracting and on-site logistics.

“A final form of education in public interest design emerges from the most historically embedded form of education of an architect: mentoring. Public interest practitioners generously share their time and expertise to mentor their colleagues.” (Feldman, Perkes & Palleroni, 2011)

Table 1. A sample of a brief list of meetings held for design and construction coordination.

<table>
<thead>
<tr>
<th>Documents preparation/updates</th>
<th>Time</th>
<th>Week’s highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 01</td>
<td>8 hours</td>
<td>Setting an organization for the team. On the agenda: design updates and siting</td>
</tr>
<tr>
<td>Week 02</td>
<td>5 hours</td>
<td>Siting, interior partitions and construction system</td>
</tr>
<tr>
<td>Week 03</td>
<td>3.5 hours</td>
<td>Siting and topography clarifications</td>
</tr>
<tr>
<td>Week 04</td>
<td>3.5 hours</td>
<td>Preparing for AHF conference at SF- Siting finalized and discussion of SFIS roof technique</td>
</tr>
<tr>
<td>Week 05</td>
<td>4.5 hours</td>
<td>Preparation for Architecture for Humanity conference in San Francisco</td>
</tr>
<tr>
<td>Week 06</td>
<td>8 hours</td>
<td>Presentation with Annie Ledbury in Architecture for Humanity conference in San Francisco</td>
</tr>
<tr>
<td>Week 07</td>
<td>4 hours</td>
<td>Local techniques: water collection, mechanical systems, ventilation, windows, doors</td>
</tr>
<tr>
<td>Week 08</td>
<td>5.5 hours</td>
<td>Questions about roof systems and landscape</td>
</tr>
<tr>
<td>Week 09</td>
<td>2 hours</td>
<td>Landscape and water as important components for designing in Haiti</td>
</tr>
<tr>
<td>Week 10</td>
<td>5.5 hours</td>
<td>Final meeting and preparation for trip to Haiti with Jackie Davis</td>
</tr>
<tr>
<td>Report</td>
<td>5 hours</td>
<td>Total 56.5</td>
</tr>
</tbody>
</table>
Haiti clinic project becomes collaboration

University students appreciate learning experience involving industry experts

By: Michelle Perrott

When Di Michael Wootton, a Portland engineer, decided to develop a new health clinic in earthquake-impacted Haiti, he wanted the project to benefit local university students as well as residents. Wootton turned to Nanyang Technological University’s Architecture program in Singapore. The collaboration expanded to include 150 students working on their master’s degree in architecture, engineering, and public health.


Clinic: Participants recognize builders’ limitations

With Whirlpool and EPF to develop construction documents for the project, and labor

Fig. 8 Front page of Daily Journal of Commerce, Oregon. 11 September 2013.
Innovative pedagogical framework of the practicum:
- Providing an off-campus opportunity for students to meet architects, designers and engineers who will help them achieve a constructible and economically viable project. This is rewarded with academic graduate level credits;
- Highlighting in addition to regular practicum outcomes, public interest design challenges and solutions;
- Moving the design from the ideation phase to a constructable level;
- Pairing pro-bono professionals with students interested in public interest design. This is a unique format where the professionals, with less available free time can help students who have less experience than them but arguably more time.
- Developing involved students’ skills while promoting a public interest design curriculum;
- Creating a case study to raise awareness among students towards being in charge of their own education specially PID skills development;
- Gaining credibility to move the project forward and apply for funding opportunities.

Fig. 9 Regular weekly interdisciplinary meeting between practicum students and experienced professionals.

2.5 Innovative in academic subjects: Learning by doing
Several initiatives were led by the team members to help the project break ground in March 2015. While the project was being managed similarly to any healthcare project, an extra effort was made to:
- Guarantee better involvement and cultural understanding of the project;
- Make sure that the project is used as a study case to build a curriculum toolkit for new public interest designers.

Briefly after the competition in summer 2013, Davis and Aaraj approached Portland State University (PSU) Professor of Architecture Sergio Palleroni, director of the school’s Center for Public Interest Design, to collaborate on concepts for the clinic. Palleroni then invited Davis and Aaraj to accompany a PSU student group that was traveling to Haiti in December 2013 to assist with the construction and installation of shading structures, water collection
mechanisms, outdoor seating and courtyard landscaping at the Montesinos orphanage in Titanyen. Through 2 separate grants from PSU and UO the designers of the clinic were able to visit the site and meet the community. This is an example of inter-universities collaboration to raise the status of public interest design education as well as the architectural education.

Fig. 10 Sketch from site visit, exploring buildable techniques for rooftop based on available materials and labor skills.

Figs. 11,12 Visiting the community and being inspired by their needs.

During all these events, the written press, both online and printed was interested in this curious model of public interest design. Newspapers and blogs in Illinois, California and Oregon periodically covered news about the project’s development.
Fig. 13 Chicago-based printed and online newspaper writing about the initiative to build a healthcare clinic in Haiti.

In November 2013, the co-authors of this paper Aaraj and Ledbury flew to San Francisco in California to present the clinic’s project during “Design Like You Give A Damn” conference organized by Architecture for Humanity and held at the Autodesk Headquarters. The attendees were architects; engineers and designers who are all interested in humanitarian and public interest design, and came from different countries.

The crowd present was the perfect pool of participants who can contribute to the knowledge of a formal public interest design education. During the presentation and after it, the co-authors conducted a poll and few interviews about skills lacking their architectural education to better prepare them for the public interest design world. The answers were diverse, and are thoroughly presented in the recommendations section.

Fig. 14,15: Excerpts of the result of the interviews and poll during Architecture For Humanity Conference
3. CONCLUSIONS AND RECOMMENDATIONS

We believe that the case study provided is a case where students who lack a certain skillset or experience decided to build it for themselves. In this case, it is students lacking formal education in public interest design, so they build a fostering system of design inputs, grants seeking, site visits and mentorship for themselves.

This experience has showed us that it is also an opportunity where practitioners understand their wider role as architects and facing a social problem join hands with students, exchanging the skills that they amply have with the students’ time and will to learn in order to make a community project - so far a distant dream - a reality.

Fig. 16 Proposed process for a Public Interest Design framework, where the project does not end upon turnover, but extends to achieve its usage as a long-term education example.

“Architects can certainly take it upon themselves to sharpen their skills in community organizing and lobbying. But to really galvanize humanitarian design will require changes outside its ranks. Architecture schools will need to do a far better job at teaching students to navigate political and fundraising mazes, and to think strategically about the connections between design and social policy. Planners will have to either reinvent their own profession or begin to cede some of their responsibilities to others, including architects. Journalists and bloggers will have to think of better ways to describe and judge projects that are more concerned with community development than pure aesthetics.”

Christopher Hawthorne, architecture critic for the Los Angeles Times

We recognize that architectural education systems have come a long way to try to accommodate our society’s changing needs as well as the technological advancement. We conclude, however, that the social (people) and environmental (planet) aspects of the triple bottom line (people, planet, profit) are being overlooked at the expense of profit and other architectural concerns, deemed sometimes more urgent therefore more important to be addressed immediately.

“Imagine if graduates didn’t have to decide between devoting their formative years to serving the public, for example, and obtaining their license. Virtually every leader of
the growing public-interest design movement made that difficult choice, and the public is better off for it, but the profession is missing out — disassociated from their extraordinary work. Further broadening the settings recognized as suitable experiences is a necessary first step. “

Based on the Jacmel case study, the feedback from all involved team members as well as the answers and observations collected by the co-authors of this paper during their participation at the Design Like You Give A Damn conference. DLYGAD conference was the annual conference organized and held by Architecture For Humanity (AFH). DLYGAD 2013 was held at Autodesk headquarters in San Francisco, CA. We suggest that Public Interest Design to be included in academic curricula as an appealing yet voluntary track.

Below are few engaging tools for Public Interest Design:
- Creating educational programs with PID interest;
- Expanding existing programs to include PID into their curricula;
- Providing and encouraging internships and workshops for students;
- Encouraging students to seek local and international PID design-build opportunities;
- Creating new initiatives for public interest design in the practicing realm where the academic realm will have to follow;
- Offering credits, or internship recognition to encourage pro-bono practices among students and companies;
- Finding ways to send designers/builders/students to the site to interact with the users and convey correct construction methods to builders for future projects;
- Seeking accreditation where applicable to programs focused on PID or presenting PID education as a possible focus.

We suggest the courses to include these sections:

Section 1: Architectural:
- Design, Urban context, Sustainability, Vernacular and cultural implications of design,
- Building technology, Post-Occupancy Evaluations.

Section 2: Project Management:
- Leadership, Human resource management.

Section 3: Construction Management
- Cost estimating, Scheduling, Material procurement.

Section 4: Business & Nonprofit:
- Contracts and law, Real estate development, Project financing, Nonprofit management,
- Fundraising, Grantwriting & reporting, Advocacy, Marketing & communications.

Section 5: Community Outreach & Social:
- Community charrette techniques, Working with local governments, Public policy,
- Leadership.

Figs. 17,18 Parts from a presentation prepared for fundraising the project. 40% of the project cost was attained from that meeting.
We also acknowledge the importance of coursework and externship/internship opportunities that develop the following traits, tools, and skills.

**Individual Traits**
- Resourceful, Optimistic realist. Problem solver, Efficient, Self-driven, Creative, Good teammate, Strong network, A good listener, Citizenship

**Technical Tools**
- GIS mapping, Revit/ AutoCAD Drafting, FormHUB, Crowd survey, Website design, Adobe - Graphics & Layout, Microsoft Project

Finally, we suggest that each academic institution can tailor its own program to fit the needs of the immediate circle of citizens who might be in need of a design-build intervention. This case study we presented to you is by no means a universal model by itself; it is rather an application to a generic model where a curriculum is flexible enough to accommodate students’ passions in learning and applying what they learned.

**Fig. 19** Timeline proposed for completion of project including students’ site visit where they have deadline related activities to conduct on site and by meeting the community.

**Personal level**
- Improve appropriate communication skills with colleagues and mentors
- Learn to adapt to modifications in a timely manner
- Improve critical thinking regarding design needs during team meeting
- Gain the ability to professionally present ideas through graphics and communication
- Understand the structure of work in an office

**Team level**
- Apply graphic and architectural newly acquired design skills and envelope details in a professional setting
- Use BIM for project delivery and construction detail
- I learned a lot for details and coordination for a central file
- Learn more about the process of designing, consulting, updating and replying to project’s need

**Cultural level**
- Learn more about construction in the USA in general, and apply adequate methods in Jacmel.
- Understand the nature of architectural interventions as a highly sensitive and reactive practice to the culture it is applied to.
Fig. 20 Original design by Grace Aaraj and Jackie Davis. 1st Prize, People’s Choice and Most Constructible Scheme.
Fig. 21 Breaking Ground, October 2015

Fig. 22 Volunteers and workers working on site

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Amy Miller Dowell, practicum director at the University of Oregon
Yashar Hanstad, Architect at TYIN Architect, Norway
Lisa Lutton Majchrzak, Architect at BAR Architects, San Francisco
Sergio Palleroni, Fellow at Portland State University, Director of the BaSIC Initiative
Steve Malany, President of P&C Construction and incoming AGC President
Craig Totten, Structural Engineer at KPFF
Emily Refi, Architect in Waterleaf Architecture, Interior and Planning in Portland, OR
Richard Aanderud, Partner at Waterleaf Architecture, Interior and Planning in Portland, OR
Graduating class of the Portland program at University of Oregon, 2014.

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