
Design Activism in the HCI Classroom

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Abstract

In HCI, design activism has been practiced but has not been well articulated or discussed. There are examples of activism in the HCI classroom, opening a new avenue of discussion and investigation for the role of design activism in HCI. We present two case studies that show design activism in the classroom as examples from which to learn. We highlight themes and observations to encourage future articulation and practice of design activism in HCI and HCI education.

Author Keywords

Design Activism; Sustainability; Classroom; Education; Sustainable HCI.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction

Design activism has a recognized role in design disciplines such as graphic design, sustainable design and architecture. Yet, it has less prominence within HCI. Although, design activism has been present in HCI work, it has not been articulated as such. For instance, sustainable HCI [3] and Sustainable Interaction Design (SID) [1] are well-known research areas in HCI that involve design activism. Researchers have been using terms such as 'provocative design' [12], and 'persuasive design' or 'persuasive technology' [3, 6] to

describe design research or projects that aim to provoke mainly environmental change, but also institutional or social change. Hourcade et al. have been publishing work on 'HCI for Peace' [e.g. 9, 10] fostering research for promoting peace and preventing war. Kuznetsov et al. [11] introduce an activist strategy called 'citizen science' to engage the public in gathering and visualizing data through balloons with attached air quality sensors. Recently, DiSalvo [2] introduced the concept of 'Adversarial Design' as a practice using design to provoke political beliefs and values. We claim that activism plays a key role in HCI design practices, yet there is a lack of discussion on these implications within our community.

Moreover, we found the theme of activism in educational discussions within HCI [5, 13, 15, 16]. We see promising relations between design activism and the HCI classroom activities and argue it is a worthwhile avenue to pursue. In this paper, we present two case studies of design activism in the classroom. Exploring what we can learn from them, we suggest contributing approaches for HCI and HCI education.

Design Activism

There are two main approaches of defining design activism. Thorpe [17] provides an overview of various prior activist approaches in design and conventional activism, aiming to articulate a definition of design activism. Her goal is to give designers a better idea of the role of activism in design. She presents four criteria to classify design as activism:

- "It publicly reveals or frames a problem or challenging issue.

- "It makes a contentious claim for change (it calls for change) based on that problem or issue.
- "It works on behalf of a neglected, excluded or disadvantaged group.
- "It disrupts routine practices, or systems of authority, which gives it the characteristic of being" [16, p.6].

Thorpe surveys and discusses many design examples using the above criteria and discusses questions that come up in her analysis. She concludes that "almost any instance of design activism has to work as activism, and something else, at the same time" implying that in addition to activist content there are other contents involved, referring to "more traditional design criteria such as function, aesthetic, cost, or usability" [17, p.8]. Moreover, Thorpe uses Rinku Sen's [14] five categories of 'change works' to show that design activism work can be of different types such as: community organizing, service provision, advocacy, mobilization, and solidarity.

Fuad-Luke defines design activism as "design thinking, imagination and practice applied knowingly or unknowingly to create a counter-narrative aimed at generating and balancing positive social, institutional, environmental and/or economic change" [8, p.27]. He also believes design activism is closely connected to collaborative work (co-design). In order to motivate, activate or transform people, we can include them into the design process through "participatory design, meta-design, social design and other design approaches that encourage participation" [8, p.147]. Moreover, designers, like all other activists, need to construct their own identity as change agents. "[B]eing an activist is part of a personal developmental and life



Figure 1. Body Mapping painting: a portfolio representing the growth of a student throughout the semester.

journey to realize a state of being, as well as a desire to contribute to a greater societal good” [8, p.20]. This implies that design activism demands designers to learn, reflect and take on a certain position.

Innovation in the HCI classroom

In the past few years, researchers and educators have reflected on the way we teach interaction design and HCI to students. For example, they have looked at the linkage between design education and experiential learning, which encourages hands-on projects and engagement with real world situations and problems. Obrenovic [13] argues that design has always been taught as an experiential learning course and that it can be looked at through the perspective of the ‘reflective practice’ model developed by Donald Schön, which focuses on the reflective and cyclical characteristics of the design process. He proposes to treat HCI and interaction design as design disciplines and to apply this model of teaching. Additionally, he articulates different goals based on experiential learning principles elevating how we teach interaction design; three of them are:

- Create personally meaningful context for students;
- Prepare some structure to orient reflection;
- Create complex learning structures that can lead to unexpected experiences.

Dukes and Kock [5] present an interaction design course with teens in New York City. They report that the main goals of the class were to instill creative habits, push students to “think and behave with empathy”, and to “understand storytelling and presentation” [5, p.47].

These principles and goals relate to some aspects of activism presented earlier and this research is an indication that activism and similar principles are part of ongoing discussions about how to teach interaction design and HCI. More importantly, this demonstrates that thoughtful teaching allows for reflection and experimentation, two qualities that can lead to activism. A relationship with a real community is also one of the central aspects that are being discussed in more recent approaches to teaching HCI. Sas [15] reveals that for learning to be long lasting it needs to take place in an authentic context that places the student in a real life situation. Shneiderman et al. [16] advocate for in class projects that “Relate-Create-Donate” (p.42) meaning that students choose a cause they relate to, create a project for it, and then give back to the community.

Current research about the HCI and interaction design classroom invites hands-on activities, real context projects, reflection, and unexpected experiences. These guidelines seem to be directly aligned with prerequisites for design activism. We acknowledge that educational research has already evaluated the benefits of hands-on projects and ethically and politically engaged learning (for example, see Freire [7]). However, we believe that we need to specifically discuss the role of design activism in HCI and interaction design education.

Two Case Studies

In this section we present two case studies of senior undergraduate courses as a way to investigate the role of design activism in the classroom. Both courses attempt to use design activism as an approach to teaching. These studies will substantiate our



Figure 2. Collages in a visual journal: Another example of a reflective and creative portfolio.

exploration of what we can learn about design activism in the classroom for HCI education and moreover, inform our first reflections on the role of design activism in HCI.

Change Lab

The first case study explores an interdisciplinary senior undergraduate, experiential, and mostly student-directed class that aims to support students in becoming change agents and creating sustainable solutions on campus. Undergraduate students from all faculties were invited to apply for enrolling in the second attempt of *Change Lab* [4] in fall 2012 and spring 2013. The pilot study of the course was realized in fall 2011 and spring 2012. The course is offered by the faculties of environment and education at a major university in British Columbia, Canada). In our case study, twenty students (majoring in geography, communications, international studies, sustainable community development, health sciences, etc.) were selected from the applicants. As an exception two graduate students (both authors of this paper) were accepted as participants and researchers of the class. Therefore, our method of investigation is an auto-ethnographic case study and we took the role of observing participants in this class.

Change Lab is a two-term course; each term is four months long. The main goal of the first term is to equip students with skills to enable them to design and realize an activist project focusing on sustainability in the second term. In the following, we present two themes that we extracted from our observations in the first term of the course, pointing to the presence of design activism in *Change Lab*.

ACTIVELY REFINE YOUR IDENTITY

In *Change Lab*, students are encouraged to explore their own identities as future change agents. The course starts off with a two-day retreat followed by weekly classes of four hours, which include a student-organized potluck. Activities like the retreat and the potlucks support the building of a strong presence of community-sense among the students, making them feel safe and not being judged. Additionally, the student-led character of *Change Lab* empowers students to be active and engaged participants. For example, we observed several students integrating themselves more and more into class discussions throughout the course. Furthermore, various workshops and tasks in class foster student's examinations of themselves, of sustainability issues and of specific strategies (e.g. public narrative or strategic planning of non-profits) for activist work. Specific tasks include bi-weekly reflections, and the creation of a portfolio at the end of the first term. The portfolios are intended to present personal, professional and philosophical growth throughout the term and can be expressed in any medium preferred by the students. The students in *Change Lab* are not art or design students; hence creating a portfolio is not a common practice for most of them. Students presented deeply reflective and creative portfolio projects including an African-inspired life-sized body-mapping accompanied with a poem explaining its underlying meanings (see figure 1), and a visual journal with many collages to different topics (see figure 2). The portfolio projects demonstrated that within varying degrees students were able to specifically explain who they are, what they want to change in the world, and why they want to do this. The first term creates a profound and strong basis for future

steps to be made in the direction of the activist projects of the second semester.

DEFINING PROJECT IDEAS

Students are free in their choice of project for the second term and are encouraged to come up with their own ideas that fit their personal interests. Although students are supposed to work on a project within a group they are not forced to give up ideas. The instructors of the course – in Change Lab referred to as facilitators – help actively by facilitating merging processes of different ideas.

The only demand by the facilitation team with regards to defining final projects is that they need to address sustainability on campus in some way. However, the students themselves defined the meaning of sustainability. The result was a wide variety of projects. For example, for some students social sustainability was an important factor to focus on in their project. They worked on different event concepts to promote social sustainability on campus. Another group of students wanted to tackle environmental issues regarding food production and proposed the development of a rooftop garden as their final project. Some students planned to design an information system for item swaps, to reduce waste and counter unnecessary consumerism.

Special Topics Course on Sustainable Interaction Design

In our second case, we look at a senior undergraduate “special topics” course on Sustainable Interaction Design (SID) situated in an HCI-related study program of a major university in British Columbia, Canada. All the students were majoring in design. The course was

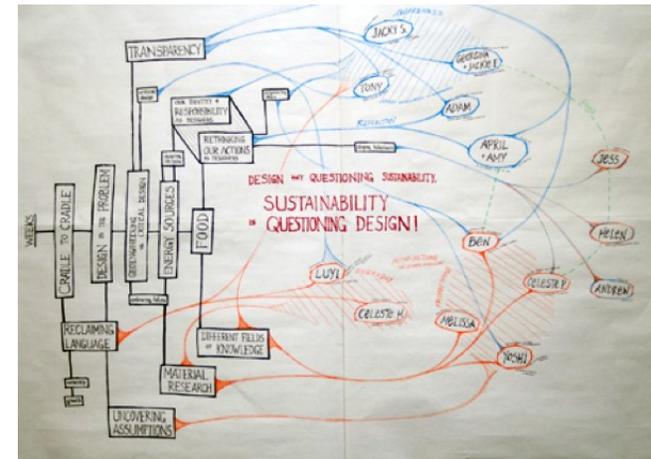


Figure 3. Topic map of Sustainable Interaction Design

exploratory, mostly student-driven and included two major phases: exploration of sustainable interaction design concepts and a design-making phase based on the previous theoretical explorations. Through the first phase, students reflected on different topics within SID and organized their thoughts by pinpointing six themes that were collectively developed. At every class, a pair of students was responsible for selecting, researching and presenting a topic related to SID. They also had to lead a follow-up discussion during the 3-hour class. They were encouraged to make readings available to the rest of the class prior to their presentations in order to prompt discussion on the subjects being reviewed. Through these sessions, themes emerged and students agreed on which ones they wanted to tackle in their design phase. The students created a map representing the chosen SID topics and their interconnection (see figure 3) to guide and orient the second phase of the



Figure 4. Trace lines connecting repairs and broken parts (top) and a tear book (bottom) showing speculative reframing.

course, more specifically their design decisions in the construction of their project.

In this paper, we use the instructor's (author of this paper) reflections and a secondary analysis of peer-interviews the students conducted as a mean to reflect on their learning experience and of the projects created by students. We report on two themes representing the presence and importance of activism in this class.

SHIFTING ASSUMPTIONS

The first section of the course pushed students to rethink what sustainability is and what this entails for interaction design. From there, the theoretical themes of *reclaiming language* and *uncovering assumptions* were established as central issues to address in future projects. The rationale was that certain words like *growth*, *progress* and *ownership* often contain a particular meaning that is not necessarily aligned with sustainability. For example, growth should not only be understood as forward progress and innovation; it can also be achieved through re-appropriating older ways of doing or transferring practices from context to context. Similarly, ownership is often characterized by the newness of objects. However, different models of ownership can be thought of to provide services in a more sustainable way, such as shared ownership, repair, or heirloom objects (that are kept within families for generations). These thoughts on *reclaiming language* inspired a project addressing the question of repair and newness. One student explains: *"I wanted to explore ways we can repair broken things, and at the same time preserve the history and signs of its usage."* This student created a "design repair tool kit" that allows people to repair objects, but also to highlight the breaks and the history of the object: *"I want to*

encourage people to be proud of their imprints on these objects instead of feeling ashamed with their imperfections, because the imperfections are what make each object unique to each individual". This project led to the reflective strategy of *speculative reframing* which consists in reinventing what terms could mean and provoke reflection and dialogue in the viewers or users of the project (see figure 4).

The theme of *uncovering assumptions* did not focus solely on sustainable terms, but also on design process concepts, for instance, on the materials used to prototype objects. One class project focused on exploring different materials, namely food such as yam potatoes, pistachio shells and starch as potential materials for prototyping. The student experimented with different mixtures of various proportions of each ingredient intending to develop a prototyping material that is easily sourced, decomposable, yet strong and easy to work with. In this case, although the project stemmed from similar grounds, the strategy of material studies was used (see figure 5) and revealed the importance of materiality in the design process: *"We assume that whatever we use to prototype has to be in a tactile form [...] we do not bother paying attention to the properties of these materials."*

In both cases, we observed that a reflection on what sustainability and design are, and what they entail, can lead to hands-on projects that trigger further reflection and install change in practices.

TAKING RESPONSIBILITY

While reflecting on the meaning of being an interaction designer, students also realized that responsibilities and ethical values are tied to many decisions throughout the design process. In addition, some projects can have



Figure 5. A yam potato used as prototyping material.

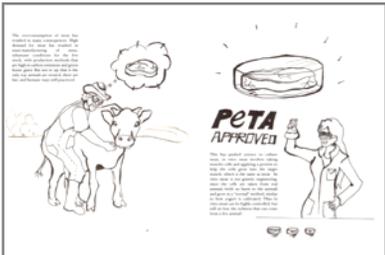


Figure 6. Storyboard showing food dilemmas.

the goal of bringing awareness to sustainability issues. In this case, designers can become advocates for particular ways of living, using design as a medium to convey information. One project in the class was the creation of a storyboard to discuss food dilemmas aiming to create a document that was thought provoking (see figure 6). The student expressed: *"I can't tell people what to do and there are no black and white or easy answers [...] what I want to instill in my project is have people question things and instill in others that sense of curiosity and self-motivation."* In this case, the project relied deeply on the theme of advocacy and activism that was discussed in the earlier weeks of the course.

Challenges in design activism classrooms

Throughout our observations of the two case studies, we uncovered challenges and investigated situations that did not work as planned when teaching with a design activism approach. It can be difficult for instructors to leave opportunities for the students to make decisions themselves and at the same time keep a course structure stimulating but flexible enough to allow student-led initiatives to take place. This balance is crucial to avoid a completely free and open-ended classroom that does not result in concrete projects, and a too structured classroom that is similar to any other lecture. We encourage instructors to try different strategies, some more open and flexible and some tighter, as a way to see how the students respond.

The experience of a student-led course was new to most students in both classes and revealed some issues regarding the role students should take. Students are used to predefined course work without a lot of room for experimentation. In some cases, it seemed confusing to some students and they faced challenges

regarding personal organization, pro-activity and motivation. However, after the familiarization during the first weeks, this issue was mostly overcome and students were able to understand and navigate through this new way of learning. We learned that students need some time to adjust and instructors should make that time available. In both courses, the open scope of a project topic and the corresponding conceptual level that needed to be tackled was partly a challenge to some. In certain cases, without clear constraints or design brief, projects were too ambitious and hence it was hard to leave the conceptual phase to reach a feasible and concrete project.

We observed that activism is not for every student and propose that design activism courses should be electives. Students that come to design activism courses need a personal motivation and individual interests for doing so, since they will need to refine their own personal identity. By making these classes electives, we can make sure that students are not taking the class because they 'have to'.

Discussion

From our two case studies we can learn aspects for implementing design activism in the HCI classroom. We present five themes that are central to creating strong and empowering experiences of design activism in the HCI classroom. We also show how non-designers can be involved in design activism or how they can borrow from this approach.

Define a clear position

We saw how important it is for students to clearly define their positions in terms of values and ethics when working as design activists. In Change Lab, reflections on sustainability and personal, professional

and philosophical growth pushed students to rethink, clarify, and reinvent their identities. In the special topics course, students were encouraged to personally reflect on what sustainability means to them, to share it with their colleagues and to make design decisions accordingly. This differs from other design classes or design practices where the designer accomplishes any project to meet the needs of a client or the constraints of a design brief. As a design activist, it is necessary to define a clear position of values and ethics and let this position be a guide for the activist project.

Foster agency, engagement and responsibility

Both courses we looked at were mainly student-led to foster agency, engagement and responsibility among the students. In Change Lab, students were several times encouraged to design and structure their weekly class themselves. For instance, spontaneous brainstorming sessions with the whole class were organized and archived for further usage. This opportunity turned out to work well and supported initiative and effective work routines. A strong factor in Change Lab was the community feeling created among the students, ensuring respectful and effective treatment among each other and further providing a 'safe' work environment. Moreover, agency and engagement led to critical reflections and explorations. In the portfolio exercise students showed engagement in the process, presenting their personal, professional and philosophical growth throughout the course.

In the special topics course, common readings served as a base for group discussion and the students helping to develop projects further articulated recurring themes. Students created a course map to show the relationships between the themes as the classes went by. Since these themes were chosen and articulated by

the students, their sense of responsibility towards them and their engagement was strong.

Both case studies show that it is important that instructors step back and let students tackle problems, explore issues and create outcomes themselves.

Challenge and debate assumptions

In Change Lab, students were encouraged to question assumptions of what sustainability is. They explored different definitions and tried to share and compare diverse visions. Each student passionately strove to understand each other's perspectives about the topic. Through this approach students expanded their horizon. For some, a broader view of sustainability evolved, encompassing not only environmental, but also social and economic aspects of sustainability. In the special topics course, the reflection was also directed around the assumptions we have about what interaction design is, what its scope is, or what it should be in the future. In this case, tackling a topic that has activist implications also brought up a deeper understanding of people's fields of interest. Students uncovered overlaps and connections and came up with valuable questions. Successful experiences like this, supporting critical reflections about topics, make education more complete and help students to master complex and multifaceted concepts such as sustainability or interaction design.

Real projects promote engagement

The hands-on experiences we observed in our two case studies showed a different way of engaging and learning in the classroom. In Change Lab, we perceived that students were not working towards getting a certain grade but towards achieving a tangible project at their campus based on their interest. This made

them feel proud and excited about accomplishing the project. In most cases, students were able to communicate with different organizations both within and outside the university to partner with or to use as champions for their projects. This assures that projects can possibly carry on once the course is finished or students graduate.

In the special topics course, the complete process of conducting a SID theme analysis and the construction of reflective strategies was a hands-on, student-led, experiential learning experience. Since the projects were based on themes that students felt were important, the motivation for exploring the themes and making the projects was high. We see the power of having hands-on activities for both theoretical and design exercises in the classroom.

Since activism can be seen as a practice consciously performed by its practitioners, a hands-on approach with real engagement is necessary. This was similarly observed by Shneiderman et al. [15] and Sas [14] who argue that real projects provoke real engagement and a real purpose.

Not only designers can perform design activism

Even though Change Lab is not a design course it can be considered as a course fostering design activism. The goal of Change Lab is to provide students with a framework of skills, tools and identity-building triggers, enabling them to make a project that supports sustainability on campus. Although students in the course are not designers or design students, we infer from the development process and the variety of final projects that activist and design content is present and being created in this class. One of the workshops in the first term of Change Lab is a three-hour 'design jam'

mediated by design professionals. Taking on an accelerated design process, this workshop entails idea pitching, brainstorming and sketching sessions in small groups and design idea presentations.

The observations show that design activism projects do not necessarily have to be initiated or performed by professional designers; non-designers can take on a design process and become design activists. However, as observers with a design background, we feel that having more design students in this classroom could only be beneficial. To support this approach we see the need for the creation of a framework on the design activism process for non-designer.

Conclusion and Future Work

In this paper, we present two case studies of university courses that attempt design activism: Change Lab and a special topics course on Sustainable interaction design. We use these examples as a way to highlight important aspects of design activism. We believe that this description can serve HCI and interaction design classrooms by outlining how we can encourage students to become change agents and develop projects as such. Future work will include the creation of a framework to apply design activism as an approach to teaching in HCI and interaction design. Here we have pointed out themes and aspects of design activism, but a more concrete and applicable framework will help foster these kinds of classes and education.

Beyond interaction design and HCI education, we believe that this study also highlights key points that HCI designers and researchers should focus on in order to include more ethical and political values in their work. However, this study can only hint at how design activism can be useful and critical to address in the

larger HCI community. Designers taking a position, making political and ethical decisions, and standing for their beliefs and values are well known in various design disciplines and their projects are often labeled as design activism. In HCI and interaction design, design activism is not articulated as prominent, however, various global and complex issues such as sustainability, peace, and politics benefit greatly from activism approaches within HCI. Concluding, we see a need for a thorough analysis and discussion of the role of design activism in HCI and Interaction Design.

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