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# 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 that can allow for 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 is understood to have a role in other disciplines of design like graphic design and architecture. Yet it to date has less prominence within HCI. Design activism has been present in HCI work, however 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' [11], and 'persuasive design' or 'persuasive technology' [3, 6] to

describe design research or projects that aim to provoke change, especially environmental, but also institutional or social change. Hourcade et al. have been publishing work on 'HCI for Peace' [e.g. 8, 9] fostering research for promoting peace and preventing war. Kuznetsov et al. [10] 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 find the theme of activism in educational discussions within HCI [5, 12, 14, 15]. We see promising relations between design activism and the HCI classroom activities and argue it is a worthwhile avenue for exploring design activism in HCI. We present two case studies of design activism in the classroom and explore what we can learn from them, suggesting contributing approaches in HCI classes.

### **Design Activism**

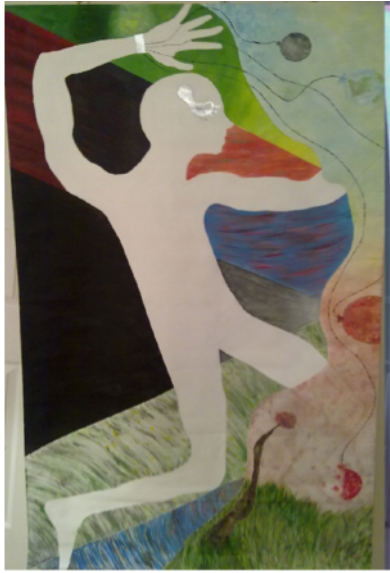
There are two main approaches of defining design activism. Thorpe [16] provides an overview of various prior activist approaches in design and conventional activism, aiming to articulate a definition of design activism and thereby give designers a better idea of the role of activism in design. She presents 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 surveyed many design examples against these criteria and discussed questions that came up. She concludes that "almost any instance of design activism has to work as activism, and something else, at the same time" implying that beside activist content there are other contents involved, referring to "more traditional design criteria such as function, aesthetic, cost, or usability" [p.8]. Moreover, Thorpe uses Rinku Sen [13]'s five categories of 'change works' to show that design activism work can be of different types: community organizing, service provision, advocacy, mobilization, and solidarity.

Fuad-Luke defines, "[d]esign activism is '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'." [7, 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" [7, p.147]. 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 journey to realize a state of being, as well as a desire to contribute to a greater societal good" [7, p.20]. This implies that design activism demands designers to learn, reflect and to take on a certain position.



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

### **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. This has changed over the years and can draw from design or computer science tradition. There has also been some linkage between design education and experiential learning, which encourages hands-on projects and engagement with real world situations and problems. Obrenovic [12] 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 these 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 install 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 would allow 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 the new ways to teach HCI. Sas [14] 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. [15] advocate for in class projects that "Relate-Create-Donate" (p.42) which means that students choose a cause they relate to, create a project for it, and then give back to the community.

In brief, current research about the new 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.

### **Two Case Studies**

In this section we present two case studies of senior undergraduate courses for investigating 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 exploration of what we can learn about design activism in the classroom and our discussion on the role of design activism in HCI.



**Figure 2:** Collages in a visual journal.

### *Change Lab*

The first case study explores an interdisciplinary senior undergraduate, mostly student-directed and experiential, 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 *Change Lab* [4] (offered by a major university in British Columbia, Canada). Twenty students 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. 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 three 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. Change Lab started off with a two-day retreat and after entailed a weekly class of four hours, which included a student-organized potluck. Those activities supported 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 this class empowers students to be active and engaged participants. We observed several students, especially integrating themselves into discussions more

throughout the course. Furthermore, various workshops in class foster student's examinations of themselves, of sustainability issues, and of specific tools (e.g. public narrative or strategic planning of non-profits) for activist work. Lastly, specific tasks are designed to support this process including bi-weekly reflections, and the creation of a portfolio at the end of the first term. The portfolio presents personal, professional and philosophical growth throughout the term and can be expressed to any medium preferred by the students. In a presentation session students presented deeply reflective and highly creative portfolio projects such as an African-inspired life-sized body-mapping accompanied with a poem explaining its underlying meanings (see fig.1), and a visual journal with many collages (see fig.2). All portfolio projects demonstrated that students were able, to various degrees, to more specifically explain who they are, what they want to change in the world, and why they want to do this.

#### DEFINING PROJECT IDEAS

Students are free in their choice of project 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 – facilitators, as the students referred to them – 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 tackle sustainability on campus. However, what sustainability means in that case was defined by the students themselves. The result was a wide variety of projects. For example, for some students social (sustainability)

*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. The course was 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 seemed important to tackle. The students created a map representing the important SID topics and their interconnection (see figure 3). This map set guide and orientation for the next phase of the course.

**DESIGN MY QUESTIONING SUSTAINABILITY**

**SUSTAINABILITY = QUESTIONING DESIGN!**

**TRANSPARENCY**

- CHARLES AND EAVES
- DESIGN IN THE PROBLEM
- DESIGNING A CENTRAL ELEMENT
- INTERNAL COORDINATES
- FOOD
- DIFFERENT FIELDS OF KNOWLEDGE
- MATERIAL RESEARCH
- UNCOVERING ASSUMPTIONS

**RETHINKING OUR ACTIONS**

- DESIGN RESPONSIBILITY TO SOCIETY
- DESIGN RESPONSIBILITY TO INDUSTRY

**Names:** JACKY'S, GEORGIA JORDAN, ADAM, APRIL, BEN, CELESTE, LUCY, MELISSA, NICHOL, ANDREW, HELEN

**Notes:** DESIGN RESPONSIBILITY TO SOCIETY, DESIGN RESPONSIBILITY TO INDUSTRY

## 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*



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

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 to repair objects, but also to highlight the breaks and the history of the object. 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).

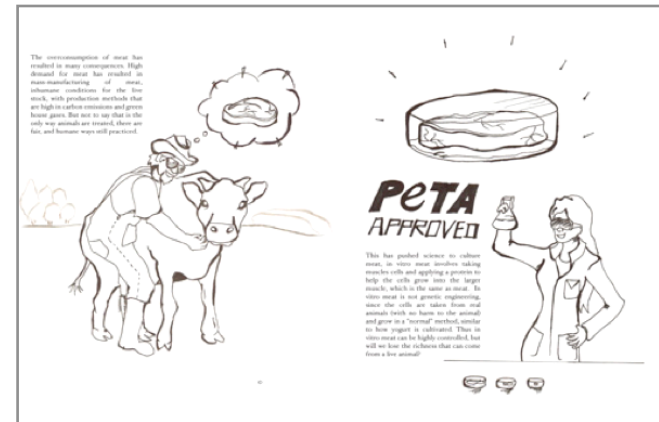
The theme of *uncovering assumptions* did not focus solely on sustainable terms, but also on design process concepts, for instance, on the materials used to prototype objects. One class project focused on exploring different materials, namely food such as yam potatoes, pistachio shells and starch as potential materials for prototyping. In this case, although the project stemmed from similar grounds, the strategy of material studies was used (see figure 5).

In both cases, we observed that a deep 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 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 for the course.



**Figure 6:** Storyboard showing food dilemmas.

#### Challenges in design activist classrooms

Throughout our observations of the two cases, we also uncovered challenges and things that did not work as planned while teaching with a design activism approach. The role the instructor is taking in the classroom is hard to balance between leaving a lot of opportunities open for the student to decide and keeping a structure too tight that can prevent 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





**Figure 5:** Using yam potato as a prototyping material.

structured classroom that is similar to any other lecture.

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 mainly predefined course work without a lot of room for experimentation. In some cases, it seemed confusing to some students and brought up challenges. However, after the familiarization during the first weeks, the work quality was overmastering. In both courses, the open scope of a topic and the corresponding conceptual level that needed to be tackled was partly a challenge. In some cases, projects were dreamed too big and 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. As mentioned, activists need to form a clear position and identity.

### **Discussion**

From our two case studies we can learn aspects for implementing design activism in the HCI classroom. We present four themes that are central to creating strong and empowering experiences of design activism in the HCI classroom. Moreover, we 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 topic

course, students were encouraged to personally reflect on what sustainability means for them and to act 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.

#### *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 able to manage their weekly class many times. 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 also self-initiative of students and effective work routines. A big factor in Change Lab was the community feeling among the students, ensuring respectful and effective treatment among each other. Moreover, agency and engagement led to critical reflections and explorations. In the portfolio exercise students showed engagement in that process, presenting personal, professional and philosophical growth throughout the course.

In the special topics course, common readings served as a base for group discussion and recurring themes were articulated by the students to help further develop projects. A course map was developed by the students to show the relationships between those themes as the classes went by. Since these themes were chosen and articulated by student, their sense of responsibility towards them and their engagement was strong.

Both case studies showed us 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 other perspectives about a 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 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 new 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 pride and be excited about accomplishing the project. In most cases, students were able to communicate with different organizations within and outside of the university to partner with or to use as champions for

their projects. This assured that projects would carry on once the semester is finished and once 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 to develop activism. This was similarly observed by Shneiderman et al. [#] and Sas [#] who said that real projects provoke real engagement, giving projects 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 and that is why we can learn from this case study. 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 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 shows 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**

Designers taking position, making political and ethical decisions, and standing for their beliefs and values are well known in various design disciplines and is often labeled as design activism. In HCI and interaction design, design activism is not as prominent, however, various themes such as sustainability, peace and politics would benefit greatly from activism within HCI. In this paper, we present two case studies of courses that attempt design activism: Change Lab and a Special Topics class on Sustainable interaction design. We used these examples as a way to highlight the most important aspects of design activism. We believe that this description can serve the HCI and interaction design communities by outlining how we can encourage students to become change agents in their future careers, as well as in who they will become.

Future work should 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 can help foster this kind of classes and education. In addition, we can

further explore other areas than sustainability where design activism and HCI can be combined to tackle global and complex issues.

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