Teaching Teen Co-Design: What Belongs in a Curriculum?

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Abstract
In this position paper for the IDC 2014 "Curriculum or Not?" workshop, we propose key elements for a curriculum and discuss issues encountered in teaching professionals from different sectors internationally how to conduct co-design workshops with teenagers.

Author Keywords
Collaborative Design; Design Thinking; Design Curriculum; Teens; Youth; Refugees; Immigrants

ACM Classification Keywords
C.4. [**Computer Systems Organization**]: Performance of Systems – *design studies.* K.4.0 [**Computers and Society**]: General.

Introduction
How do *you* envision a curriculum, if any, for teaching interaction design with children? Your answer will depend in part on the nature of your own experiences in collaborative design with kids and where and how you have engaged with them. Teen Design Days, developed by the InfoMe Group at the University of Washington, is an experiential, high-energy, portable,

scalable co-design methodology for engaging youth. Teen Design Days theory and methods involve co-designing around everyday life information needs and behaviors (rather than a specific physical object), are held in community settings, are based on youth development principles and carried out in cultural and gender appropriate ways, and emphasize fun. The InfoMe Group uses Teen Design Days to understand how youth—immigrant and refugee youth in particular—serve as information and technical mediaries within communities, including their families, peers, and complete strangers. Our most recent work, in April 2014, was with Seattle-area youth from Burma. Teen Design Days, however, is easily adapted to youth in other contexts, around different concepts or needs, such as environmentalism, recreation and play, etc. Hence, the popularity of Teen Design Days as a methodology in other contexts by professionals in varied sectors. Here, we share elements of how we teach Teen Design Days at Train-the-Trainer Workshops held internationally with youth professionals (educators, librarians, social service staff, etc.), designers, researchers, and university students. We also identify primary issues we've encountered in teaching teen co-design to lay audiences (i.e., those without a design background) from different cultures, disciplines, and professions; around abstract concepts; in short workshops and in non-lab environments. Finally, we draw out possible curriculum elements that may apply to teaching interaction design and children.

Overview of Teen Design Days—What Methodology Do We Teach Professionals?

The Teen Design Days (TDD) methodology and findings are shared in other reports and video [3, 4]. In brief, it is a methodology for engaging youth that is conducted in varied field settings across two or more days, or repeated across weeks, months, etc., in workshop format. Basic TDD components include "light and lively" activities (short games of physical activity that are explicitly constructed/tied to the TDD theme and designed to encourage creative thinking); instruction (e.g., programming); discussion (e.g., concept development, focused data gathering); group design work and hands-on creation of artifacts; youth presentations, performances, stories and art that focus on the youth and their roles in society, as related to the TDD theme; and celebrations joined by family, community representatives, funders, TDD staff and others. TDD are organized in close collaboration with community liaisons and are held in safe and informal community settings, such as libraries, community centers, and churches. Because we conduct TDD under university auspices and are part of a federally-funded research programme, human subjects protection, as well as rigorous data collection and analyses, are part and parcel of our work.

In our TDD, youth co-design technologies and services that would support their roles as InfoMes (a person who helps someone by finding, creating, sharing, storing, or remixing, curating information). For immigrant youth, this typically means, for example, translating for a grandmother at the doctor's office, helping a parent figure out how to pay a bill or navigate immigration laws, helping a stranger with a bus schedule, or helping a newly arrived peer get into the swing of things at school. Because they are immigrants and refugees, many of the youth we work with have a limited grasp of the English language, and the design process is not one that they are likely to have

Train-the-Trainer Syllabus

1. Plan entire activity range a priori: Before—access and clearances (IRB, etc.), agenda, facilities, recruit youth, gathering and producing materials. During—In-take, activities, breaks, homework, celebration. *After*—Team debrief, thank-yous, reports.
2. Identify range outcomes: collect rich data in short time; test concept, theory, instruments, prototypes; bond community partners; learn youth language, behavior, culture; promote higher education with youth and families.
3. Watch short TDD video: http://infome.uw.edu/sample-page/teen-design-days-video/
4. Review TDD agendas.
5. Get hands-on experience with activities: draft co-design agenda; concept formation; Light & Lively activities; data collection; low-tech design using supplied kits.

encountered before, in contrast to, say, making a class presentation in school.

Video-recording, audio and stills are taken of most every TDD activity; these are used for teaching, research, and marketing purposes. Institutional Review Board (IRB) consent forms include recording permissions. With the TDD design elements and complex inclusion of youth, industry, academic, government and other partners, our IRB materials are being expanded to include a Creative Commons license governing intellectual property rights.

Teaching Professionals to Design with Teens

In our Train-the-Trainer Workshops, we teach youth professionals—e.g., teachers, librarians, technologists, health and social services staff—to collaborate with teens to create and re-design technologies and services in their own settings. For example, a librarian might want to collaborate with youth to make her online catalog interface (and library) easier for kids to use. A school counselor might want to revise the way he supports young refugees. A teacher may wish to start after-school academic help for refugee teens.

In our Trainer-the-Trainer Workshops, we identify some basic principles for successful teen co-design:

- *Incorporate developmental assets for teens*: physical activity, competence and achievement, self-definition, creative expression, positive social interaction, structure and clear limits, meaningful participation [2].
- *Make sure you're on the same page.* Especially important is ensuring a shared understanding of concepts and terminology among teens and adults.
- *Keep it real.* Gear activities to the unique and concrete situation of each teen; gather and explore individual narratives of actual incidents in her life.
- *Use stories, pictures, artifacts, & actions as data sources*. These help develop understanding and spark ideas during the TDD and are essential for subsequent data analyses.
- *Foster the right atmosphere*. Encourage playfulness, exploration, openness, and respect.
- *Expect the unexpected*. Embrace flexibility and generate back up plans. Get comfortable with messiness. You never know what will happen with teens in the field.
- *Keep it simple.* Pare back every element of every activity such that the time is turned to youth participation and youths' voices. TDD ≠ School.

At our half- and full-day Trainer-the-Trainer Workshops, held at professional conferences internationally, participants experience the TDD syllabus main elements and learn how to customize the experience to their own setting (see sidebar).

Key Issues and Elements for a Curriculum

We've experienced several issues teaching teen co-design to professionals. From the learners' side, there's a fear of design ("We're not 'real' designers!"), a fear of data ("We're not scientists!"), and institutional defeatism ("My organization would never let me do this! We don't have the resources to do this. Even if we got great ideas from the design work, my institution would never let me implement them.") From the teaching perspective, we've wondered: What different teaching modes and relationships—beyond the type of workshop we've been doing—might suit working

professionals: regular classes, on-site coaching, professionals as participant-observers in teen co-design activities led by experts? We've also spent time thinking about how we can better teach teen co-design around abstract concepts and invisible behaviors, which reflects our focus as information scientists co-designing with youth around their info and tech mediary behavior. Also, we're planning to create a TDD website/toolkit for professionals to use with our assistance, and for us to use, moving forward, with our own youth populations. Reviewing our Train-the-Trainer Workshop activities, issues, and lessons learned, we suggest the following elements for a teen co-design curriculum:

- Teen developmental needs & assets;
- The cultures and life-worlds of teens;
- Current knowledge of the specific design context and goals (e.g., we had to learn about the cultures of different immigrant groups with whom we work);
- Program planning and assessment;
- Basic principles of teen co-design;
- Pedagogy—engaging teaching practices;
- Low-tech prototype design [1, 5, 6];
- Basics of photography and videography;
- Social science data collection and analysis, especially how to produce useful and usable results;
- Social science research ethics, including researcher roles in community-based participatory research, protecting the rights of youth, and managing intellectual property, and;
- Creating organizational change.

The curriculum, based on experiential and situational learning, is successful when participants gain hands-on knowledge of the different elements and are able to intuitively apply them to their own professional context. Reaching this "flip the switch" moment is very rewarding—that moment when participants see how TDD and co-design fit in their context.

Acknowledgements

We wish to thank the U.S. Institute of Museum & Library Services, Microsoft Research, Microsoft Global Community Affairs, King County Library System, Seattle Public Library, YMCA of Greater Seattle, Horn of Africa Services, Northwest Communities of Burma, Vietnamese Friendship Association, and the many youth and professionals who help develop Teen Design Days.

References

[1] Brown, T. Design thinking. *Harv. Bus. Rev. 86*, 6 (2008), 8-92.

[2] Davidson, J. and Koppenhaver, D. *Adolescent Literacy*. 2d ed. Garland, New York, NY, 1992.

[3] Fawcett, P., Fisher, K. E., Bishop, A., & Magassa, L. Using design thinking to empower ethnic minority immigrant youth in their roles as technology and information mediaries. *CHI 2013 Changing Perspectives*.

[4] Fisher, K. E., Bishop, A. P., Magassa, L., and Fawcett, P. InfoMe and Teen Design Days: An intergenerational approach to developing interactive technologies with immigrant communities. [Short paper submitted to *Interaction Design and Children 2014*].

[5] Guha, M.L., Druin, A. and Fails, J.A. Cooperative inquiry revisited*. Int. J. of Child-Comp. Interact, 1*, 1 (2013).

[6] Stanford Design Institute. *D-School Crash Course* [video].

http://www.youtube.com/watch?v=-FzFk3E5nxM