

# Curriculum or Not – Show Us How You Teach Interaction Design and Children!

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## ABSTRACT

In this paper, we present a half-day workshop focused on teaching Interaction Design and Children (IDC). The aim is to bring together researchers, educators and designers, in order to build a community around these issues, and to encourage international cooperation among teachers in IDC. The goal is to facilitate exchange of various experiences, methods, ideas, and best practices, as well as continue a discussion on what literature and focus areas are relevant for a future curriculum.

## Categories and Subject Descriptors

H5.2. Information interfaces and presentation: User Interfaces – Theory and Methods

## General Terms

Design

## Keywords

Interaction design and children, teaching, curriculum.

## 1. MOTIVATION

The workshop intends to bring together educators, researchers, designers, and practitioners to explore issues regarding teaching Interaction Design and Children (IDC), to discuss training needs from different perspectives, to share best practice methods, and to encourage a discussion in the community. There is a growing awareness of the needs of children in design, but less focus on developing teaching modules for design methods and practices aiming at covering their needs. This leads to a risk for a gap between the accumulation of knowledge in the field and the transfer of this knowledge to new generations of designers. The overall aim of the workshop is to find ways to initiate discussions on an emerging interaction design

This workshop aims to contribute to the IDC community in three ways:

- I. Stimulate reflection on “best practices” in teaching IDC
- II. Create an open source library of resources and experiences that IDC instructors can adapt in order to create, update and expand IDC teaching.
- III. Inspire and stimulate the discussion in the community in order to focus on how to transfer our knowledge to future generations of IDC researchers and designers.

## 2. BACKGROUND

Interaction Design and Children (or CCI - Child Computer Interaction) is a growing area in both research and design, and the community has more than quadrupled in size over the last eight years [17]. Despite this extensive growth, there is still no curriculum for what and how to teach the field of IDC to students and practitioners. In HCI, the same discussion has been going on for years, with activities such as workshops, panels and papers [2, 7, 9, 10, 12, 14, 18]. There have been a few attempts in the IDC field, such as the workshop at the IDC conference in 2011 by Gilutz et al [8], a short paper by Ferrarini et al [6], and the workshop paper by Read [16].

To improve the design practice in the IDC area, we believe that it is necessary to not only study and improve methodology in a research context, but also to transfer the gained knowledge to new generations of designers to ensure its use in design. This topic is investigated in the project DEVICE – Design for Vulnerable Generations; Children and Elderly, where a combination of current best practices, design explorations and teaching experiments are used to suggest an approach to teach design for and with children.

Through the project, we have conducted research on what training needs to be fulfilled and what topics to be included in teaching IDC. The main objectives of the DEVICE project are:

- To study current status of research and practices concerning design for children and elderly,
- To study how to involve children and elderly in the design process,
- To elaborate a competencies portfolio and sample educational programs aimed at training designers in the area,

- To test and validate the proposed educational programs in pilot studies covering all the identified competencies.

To fulfil these goals the main phases of the project are (i) survey of existing educational curriculum, projects and best practices (ii) training needs analysis to identify what is needed in design education (iii) development and testing of at least 6 pilot educational programs. The experiences gained from developing the teaching material, and conducting the pilots will be used for discussion in this workshop.

There are different types of courses in IDC being taught around the world, such as conference courses, short university courses (two days to one week), full semesters and a relevant complete master program. Some examples of courses are listed in Gulitz et al [8], such as e.g. a two day course by Read [15] at Tampere University, and one week course by Markopoulos & Bekker [13] and a course on Designing for Children and Elderly by Bekker [1] at Eindhoven University of Technology. Further examples are a full semester seminar course on Children's Information Technology and Policy by Druin [3] at university of Maryland, and a master program in Child Culture at the School of Design and Crafts, University of Gothenburg [19]. In extension to this there are several guest lectures etc happening around the globe. This short overview demonstrates that there are experiences to build on, so there is no need to start from scratch every time a new teaching module should be developed. There are fundamental guiding principles, theories, research methods and applied processes – reflecting the multidisciplinary field of IDC – that should be covered regardless of the orientation of a given course [8]. Of course, these fundamentals must be tailored to fit the disciplinary focus of different schools and educations, to different levels of students, resources, different orientations of both teachers and students, and especially to the length of the course.

As IDC is a relatively young design field based on a variety of disciplines, and so far lack a curriculum for how to teach students and designers in interaction design and children, there might be many obstacles on the way to initiate a new course. Though the field is wide, there are some experiences to build on, so there is no need to start from scratch. There are fundamental guiding principles, theories, research methods and applied processes – reflecting all of these disciplines – that should be covered regardless of the orientation of a given course [8]. Of course, these fundamentals must be tailored to fit the disciplinary focus of different schools and educations, to different levels of students, different length, resources, and to different orientations of both teachers and students.

In the DEVICE project, we have previously organized one workshop in the related area of teaching design for children and elderly [4], published one long [5] and one short paper [6] in order to try to stimulate the discussion. Through these activities, we have encountered a need for support from instructors, but the discussion is still weak in the community.

The goals of this workshop are to:

- facilitate exchange of teaching ideas and techniques;
- provide a forum of teacher colleagues for trying out and refining teaching ideas;
- support reflection about teaching techniques in terms of teaching and learning theories;
- encourage continued international collaboration between IDC teachers

### 3. WORKSHOP FORMAT

In this workshop, the participant's experiences will form the basis for the content. Researchers, practitioners, educators and designers from different disciplines involved and interested in designing for and with children, both practically and methodology wise, are welcome. The expected number of participants is about 15 people. We will consider the scope of issues that might arise when teaching IDC by asking workshop participants to draw on their individual experiences to present a case study or teaching methodology relating to the design of digital technologies (product or service) with children.

In order to reach these goals, we have planned for the pre-workshop activities, the activities that will take place during the workshop, as well as the post-workshop activities.

#### 3.1 Pre-workshop Activities

We invite the submission of 2-4 page position papers offering perspectives on the workshop topics, using the ACM CHI Extended abstract format <http://www.sigchi.org/publications/chipubform/sigchi-extended-abstracts-word-template/view>. In the position papers authors are encouraged to include descriptions of their teaching or techniques they have used or are planning to use in teaching as well as their expectations of the workshop and the specific topics they would like to discuss. The submissions should be sent to the workshop using the Easy Chair system: <https://www.easychair.org/conferences/?conf=workshopidc2014>. The position papers will be published on the workshop web page [http://www.deviceproject.eu/idc\\_workshop.php](http://www.deviceproject.eu/idc_workshop.php). The website will also be used for community building.

#### 3.2 Workshop Activities

The workshop is planned to last for half a day, with the following schedule:

- Welcome and Introduction by organizers
- Ten minutes presentations by participants
- Group Discussions
- Sum up and Future

Interested participants are invited to prepare a ten minute informal presentation describing both theoretically and practically their best teaching method for a specific user group and a case where it has been practiced. The presentations will be gathered and distributed among the participants, so that each participant will return home with several new teaching materials. The goal is to point out the direction in teaching design for and with children, from several perspectives.

Topics to discuss include, but are not limited to:

- experiences from teaching IDC
- best teaching practices/ methods
- essential topics/ literature /exercises / methods to include in IDC teaching
- an IDC curriculum, what is that?
- training needs

### 3.3 Post-workshop Activities

The expected results of the workshop are:

- The participants are expected to understand and be able to use new and diverse teaching techniques.
- The opportunity to discuss problems, content, topics, activities, etc with colleagues is valuable to the participants.
- The discussion will provide a broader understanding of the IDC curricula.

After the workshop, the organizers will arrange a poster for presentation at the main conference poster session. We will also aim for publishing a workshop report in the ACM Bulletin or a similar publication. Both the report and the poster will be published on the workshop website as well. Depending on the interest from the participants, we will try to arrange another special issue in a journal suitable for the workshop topic, such as for instance the International Journal of Child-Computer Interaction, perhaps in cooperation with an extended consortium. Another possibility could be a joint article based on the discussions during the workshop and on the different position papers. It is our intention to use the workshop website for continued work and events, and we will try to keep close contact with interested workshop participants.

### 4. ABOUT THE ORGANIZERS

The organizers are all part of the EU funded DEVICE project, where we for the last three years have focused on investigating existing needs as well as develop new material accessible for all regarding teaching design for children and elderly.

The DEVICE project is supported by the Lifelong Learning Programme (Erasmus) of the European Union. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein. Website: [www.deviceproject.eu](http://www.deviceproject.eu)

### 5. REFERENCES

- [1] Bekker T (2008) Designing for Children and Elderly at Eindhoven University of Technology by Bekker T. [https://venus.tue.nl/owinfo/cgi/owi\\_0695.opl?vakcode=DG305&studiejaar=2008&language=EN](https://venus.tue.nl/owinfo/cgi/owi_0695.opl?vakcode=DG305&studiejaar=2008&language=EN).
- [2] Berkun S. 2002. Workshop: teaching interaction design. In Proceedings of CHI EA '02. ACM, New York, NY, USA
- [3] Druin A (2008) Seminar course on Children's Information Technology and Policy by Druin at University of Maryland [[http://www.umiacs.umd.edu/~allisond/child\\_info\\_tech/](http://www.umiacs.umd.edu/~allisond/child_info_tech/)]
- [4] Eriksson E. & Torgersson O. 'Show me yours, and I'll show you mine' – Teaching design for children and the elderly. DRS / Cumulus - Booklet of the 2nd International Conference for Design Education Researchers. Oslo, Norway.
- [5] Eriksson E., & Torgersson O. (2013) Teaching Interaction Designers How to Design for Vulnerable Generations. In Proceedings of the 10th European academy of design conference: crafting the future. Gothenburg, Sweden
- [6] Ferrarini C., Eriksson E., Montanari R, and Sims R. 2013. The DEVICE project: development of educational programs with a specific focus on design for children. In *Proceedings of IDC '13*. ACM, New York, NY, USA, 360-363.
- [7] Foley J, Beaudouin-Lafon M, Grudin J, Hollan J, Hudson S, Olson J, and Verplank B. 2005. Graduate education in human-computer interaction. In Proceedings of CHI EA '05. ACM, New York, NY, USA, 2113-2114.
- [8] Gilutz S., Bekker T., Fisch S, and Blikstein P. 2011. Teaching interaction design & children within diverse disciplinary curricula. In *Proceedings of IDC '11*. ACM, New York, NY, USA, 257-259.
- [9] Halstead-Nussloch R and Carpenter W. 2002. Teaching and learning ubiquitous CHI (UCHI) design: suggestions from the Bauhaus Model. In Proceedings of CHI EA '02. ACM, New York, NY, USA, 660-661.
- [10] Hewett, Baecker, Card, Carey, Gasen, 1992:1996. ACM SIGCHI Curricula for Human-Computer Interaction, Mantei, Perlman, Strong and Verplank, (1992,1996), retrieved on 08-01-2013 from, <http://old.sigchi.org/cdg/cdg4.html>
- [11] Hourcade JP. 2008. Interaction Design and Children. Found. Trends Hum.-Comput. Interact. 1, 4 (April 2008), 277-392.
- [12] Lazar J., Preece J, Gasen J, and Winograd T. 2002. New issues in teaching HCI: pinning a tail on a moving donkey. In Proceedings of CHI EA '02. ACM, New York, NY, USA.
- [13] Markopoulos P. & Bekker T. 2010. Interaction Design and Children, Eindhoven University of Technology, Module DB310 , P.Markopoulos & M.M.Bekker: [http://www.idemployee.id.tue.nl/p.markopoulos/Course%20Home%20Pages/ID\\_Masters\\_IDC.htm](http://www.idemployee.id.tue.nl/p.markopoulos/Course%20Home%20Pages/ID_Masters_IDC.htm)
- [14] Quinn C., Lowgren J, Gasen J, and Gorny P. 1994. Designing the teaching of HCI. In Proceedings of CHI '94. ACM, New York, NY, USA.
- [15] Read J. (2003) Introduction course to Child Computer Interaction, University of Tampere. <http://www.cs.uta.fi/sthci/Read.html>
- [16] Read J. 2011. Creating a child computer interaction curriculum. In *Proceedings of IDC '11*. ACM, New York, NY, USA, 268-270.
- [17] Read J., Druin A., Markopopoulis P. 2011: A Community for Child Computer Interaction. CHI 2011, May 7–12, 2011, Vancouver, BC, Canada. Available online: <http://chi2011.org/communities/child-computer-interaction/CCL.pdf>
- [18] Sato K and Verplank W. 2000. Panel: teaching tangible interaction design. In Proceedings of DIS '00. ACM, New York, NY, USA, 444-445.
- [19] University of Gothenburg (2013). Child Culture Design MA. HDK. <http://www.hdk.gu.se/sv/programmes-courses/design/child-culture-design-second-cycle/ma-level>