

IDC methods into industry and innovation

Read, Janet C.; Fitton, Dan; Sim, Gavin; Giannakos, Michail; Van Mechelen, Maarten; Bjorklund, Martha; Clarke, Suzanne; Borum, Nanna; Perry, Steve

DOI

[10.1145/3311927.3325164](https://doi.org/10.1145/3311927.3325164)

Publication date

2019

Document Version

Final published version

Published in

Proceedings of the 18th ACM International Conference on Interaction Design and Children, IDC 2019

Citation (APA)

Read, J. C., Fitton, D., Sim, G., Giannakos, M., Van Mechelen, M., Bjorklund, M., Clarke, S., Borum, N., & Perry, S. (2019). IDC methods into industry and innovation. In F. Jerry (Ed.), *Proceedings of the 18th ACM International Conference on Interaction Design and Children, IDC 2019* (pp. 676-680). (Proceedings of the 18th ACM International Conference on Interaction Design and Children, IDC 2019). Association for Computing Machinery (ACM). <https://doi.org/10.1145/3311927.3325164>

Important note

To cite this publication, please use the final published version (if applicable).
Please check the document version above.

Copyright

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

Please contact us and provide details if you believe this document breaches copyrights.
We will remove access to the work immediately and investigate your claim.

IDC Methods into Industry and Innovation

Janet C Read, Dan Fitton, Gavin Sim

University of Central Lancashire
Preston, UK
jcread@uclan.ac.uk
dbfitton@uclan.ac.uk
grsim@uclan.ac.uk

Michail Giannakos

Norwegian University of Science and
Technology (NTNU)
Trondheim, Norway
michailg@ntnu.no

Maarten Van Mechelen

Delft University of Technology
Delft, The Netherlands
Aarhus University
Aarhus, Denmark
mvanmechelen@cc.au.dk

Martha Bjorklund

Palm Beach Day School
Palm Beach, FL
mjbjorklund@pbday.edu

Suzanne Clarke

BBC
Salford, UK
SuzanneClarke01@bbc.org

Nanna Borum

Creative Play
Lego Systems, DK
Nanna.borum@lego.com

Steve Perry

Kano Computing
London, UK
sperry@kano.me

Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the owner/author(s).

IDC '19, June 12–15, 2019, Boise, ID, USA

© 2019 Copyright is held by the owner/author(s).

ACM ISBN 978-1-4503-6690-8/19/06.

<https://doi.org/10.1145/3311927.3325164>

ABSTRACT

The Interaction Design and Children (IDC) Community has a long history of innovating methods and techniques for the design and evaluation of technologies for children. Many innovations have been reported in the academic literature but the uptake of methods by industry has been slow and the community has hitherto failed to seriously consider how best to develop, present and promote their methods beyond academia. The aim of the workshop is to weave together IDC researchers and IDC key personnel coming from the industry, with genuine interest in industry-academia collaboration, into a community interested in building a coherent, high-impact collaboration channel. The goal of the workshop is to encourage a critical discussion and debate about how IDC methods can be further adopted, modified or even extended by the IDC related industry. This workshop is expected to reinforce IDC industry-academia collaboration with an ultimate goal to increase understanding and develop a community of interest that is going to co-develop ideas and novel design approaches that can bring IDC methods closer to the industrial practice

KEYWORDS

Methods; Industry; Children; Innovation

INTRODUCTION

This workshop will explore the current practices of the community, will explore how the community might be able to change practice in order to have a greater impact on industrial practice, and will suggest new publication models that will help get methods into industry.

BACKGROUND

Since the first IDC conference in 2003, there have been a wealth of papers describing methods and techniques for use in the evaluation and design of products for children. There have been tools for gathering children's opinions [16], [21], [10], tools to record engagement in use [3], expert methods for evaluation [2], and design methods for structuring design sessions [20], [12] and for gathering specific contributions [7], [19], [9], [17]. Many of these innovations have been tested and re-used by the community but few have found their way into industry.

The IDC Community has not been unwilling to work with industry, there have been notable collaborations with Lego [11], [18], [13] the BBC [5], [15], Sesame Street [6], and CBC [1] but these are typically organizations with a willingness to engage in research-led inquiry. Much less common is the engagement with small to medium sized companies who are working on cutting edge, fast-to-market, products and services for children.

These companies are often working to tight deadlines, with restricted budgets and in highly competitive environments [4]. Methods suggested by researchers may not fit well into their development lifecycles which are typically Agile, iterative and seldom involve end users (children) in active input to the product design / build [8]. An exception to this is possibly the games industry where playtesting has been a feature for several years. The recent review by Rajanen et al. [14] demonstrated that in North American, and European games companies, playtesting followed by observations of play, were the most used methods. Other methods were traditional UX and usability methods including surveys, interviews and walkthroughs.

ORGANIZERS

The workshop organizers represent a selection of IDC and industry experts from research groups, large corporations, education and small companies. The main contact is Prof. [Janet C Read](#) from UCLan. As a primary author of the textbook, 'Evaluating Interactive Products with Children', Prof. Read has worked with industries including Vision Objects, France, SAPO, Portugal and the BBC, UK in the design and evaluation of products for children. The Fun Toolkit is known to be used by industry. [Dan Fitton](#) and [Gavin Sim](#) work with Janet Read and have both written method papers for IDC and have worked with the BBC. [Maarten Van Mechelen](#) has focused on involving children in the early stages of technology design, resulting in multiple IDC papers and a workshop at IDC '17 on analyzing children's contributions and experiences in co-design activities. Throughout the years he has collaborated with a variety of industry partners in nationally funded CCI projects.

Michail Giannakos has long experience in the area of learning technologies and children, he has previously hosted IDC and organized several workshops and tutorials in the area of Ed Tech. He is known for his work with the IT industry, public sector and various stakeholders (e.g., museums) in Norway. Suzanne Clarke is a member of BBC R&D team and previously worked in UX with the CBBC, Nanna Borum is a Design Researcher at Lego in Denmark, and Steve Perry is the research lead at the innovation company Kano Computing. Martha Bjoklund is head of Lower school at Palm Beach Day Academy and so has responsibility for purchasing and procuring IT products for children as well as having a wealth of knowledge on educational technology design.

PRE-WORKSHOP PLAN

Once the workshop is accepted, the organizers intend to email the IDC mail list to invite participation in a pre-workshop blog discussion on means to get the IDC methods into industry. Organizers of the workshop will carry out video interviews with company representatives to determine what methods they currently use and what are the barriers to taking on new methods. These videos will be shared on the website and used in the workshop, In addition, prior to the IDC conference, the three UCLan organizers are carrying out a scoping study to explore how methods can be used by UX developers in a large UK organization. This process will be used in the workshop as a point to reflect.

WORKSHOP STRUCTURE

The workshop is planned for half a day as it has been previously noted that full day workshops at IDC are difficult to facilitate. Given that, the timings and activities for the day are as follows:

0–30 minutes: Introductions

30–75 minutes: Choose my method, sell my method; practical activity at selling methods to industry

75–90 minutes: What industry say – invites to industrial attendees, and videos to inform debate

90–120 minutes: Sell my next method; practical activity at selling a different method than earlier one

120–180 minutes: Discussion and Plenary – to result in advice for the community

POST-WORKSHOP PLAN

The aim will be for a special edition of IJCCI on industry engagement. This will be a collection of cases, best practice and reflective pieces associated with the workshop aims. We will also deliver an article for the Interactions magazine.

CALL FOR PARTICIPATION

This half-day workshop on IDC Methods into Industry and Innovation aims to explore the barriers to, and methods for, getting IDC research derived methods into use in industry, with a special focus on getting such methods into small innovation companies. The workshop will explore IDC methods and consider how they could be packaged for industry.

Participants are invited from academia and industry and participation is by submission of a one-piece position paper, outlining your views on the workshop topic, or by a case study paper (max four pages CHI EA format). Papers should be submitted via the workshop website which is at www.chici.org/industry.

At least one member of any submitted paper must attend the workshop and register for the IDC conference. The submitted papers, cases and position papers, will be gathered into an edited volume and there will be an opportunity to extend the papers for a special edition of IJCCI after the workshop.

WEBSITE

The workshop website is www.chici.org/industry

REFERENCES

1. Antle, A. *Case Study: The Design of CBC4Kids' StoryBuilder*. in *IDC2003*. 2003. Preston, UK: ACM Press.
2. Baauw, E, M. M Bekker, and W Barendregt. *A Structured Expert Evaluation Method for the Evaluation of Children's Computer Games*. in *Interact 2005*. 2005. Rome, Italy: Springer.
3. Barendregt, W, M.M Bekker, and E Baauw, *Development and evaluation of the problem identification picture cards method*. *Cognition Technology and Work* (10) pp.95-105., 2008. **10**: p. 95 - 105.
4. Bergman, Johanna, et al. *An exploratory study on how Internet of Things developing companies handle User Experience Requirements*. in *International Working Conference on Requirements Engineering: Foundation for Software Quality*. 2018. Springer.
5. Clarke, Suzanne and J McGhee, *Understanding Accessible Gameplay at the Children's BBC*, in *BHCI*. 2017, BCI: Sunderland.
6. Cole, Charlotte. *The world's longest street: how Sesame Street is working to meet a diversity of children's needs across the globe*. in *Proceedings of the 7th international conference on Interaction design and children*. 2008. ACM.
7. Fitton, Daniel and Janet C Read. *Primed design activities: Scaffolding young designers during ideation*. in *Proceedings of the 9th Nordic Conference on Human-Computer Interaction*. 2016. ACM.
8. Flora, Harleen Kaur, *Adopting an agile approach for the development of mobile applications*. 2018.

9. Guha, Mona Leigh, Allison Druin, and Jerry Alan Fails. *Designing with and for children with special needs: an inclusionary model*. in *Proceedings of the 7th international conference on Interaction design and children*. 2008. ACM.
10. Kano, Akiyo, Matthew Horton, and Janet C Read. *Thumbs-up scale and frequency of use scale for use in self reporting of children's computer experience*. in *Proceedings of the 6th Nordic Conference on Human-Computer Interaction: Extending Boundaries*. 2010. ACM.
11. Karoulis, A, *Evaluating the LEGO-RoboLab Interface with Experts*. *Computers in Entertainment*, 2006. 4(2).
12. Kelly, S Rebecca, et al. *Bluebells: a design method for child-centred product development*. in *Proceedings of the 4th Nordic conference on Human-computer interaction: changing roles*. 2006. ACM.
13. Oestermeier, Uwe, et al. *LEGO music: learning composition with bricks*. in *Proceedings of the 14th International Conference on Interaction Design and Children*. 2015. ACM.
14. Rajanen, Mikko and Juho Tapani, *A Survey of Game Usability Practices in North American Game Companies*. 2018.
15. Read, Janet C, et al. *Touching Base on Children's Interactions with Tablet Games*. in *Extended Abstracts Publication of the Annual Symposium on Computer-Human Interaction in Play*. 2017. ACM.
16. Read, Janet C and Stuart MacFarlane. *Using the fun toolkit and other survey methods to gather opinions in child computer interaction*. in *Proceedings of the 2006 conference on Interaction design and children*. 2006. ACM.
17. Van Mechelen, Maarten, Bieke Zaman, Lizzy Bleumers and Ilse Mariën, *Designing the Internet of Toys for and with Children: A Participatory Design Case Study*. 2019. In: Mascheroni G., Holloway D. (eds) *The Internet of Toys*. Palgrave Macmillan, Cham.
18. Virnes, Marjo. *Robotics in special needs education*. in *Proceedings of the 7th international conference on Interaction design and children*. 2008. ACM.
19. Walsh, Greg, et al., *Layered elaboration: a new technique for co-design with children*, in *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. 2010, ACM: Atlanta, Georgia, USA. p. 1237-1240.
20. Yip, J, et al., *Brownies or Bags-of-Stuff? Domain Expertise in Cooperative Inquiry with Children*, in *IDC2013*. 2013, ACM Press: New York. p. 201 - 210.
21. Zaman, B and V.V Abeele. *Laddering with young children in User eXperience evaluations: theoretical groundings and a practical case*. in *IDC '10*. 2010. ACM Press.