SpringerBriefs in Computer Science

More information about this series at http://www.springer.com/series/10028

Krystina Madej

Physical Play and Children's Digital Games

Springer

Krystina Madej
Georgia Institute of Technology
Atlanta, GA, USA

ISSN 2191-5768 ISSN 2191-5776 (electronic)
SpringerBriefs in Computer Science
ISBN 978-3-319-42874-1 ISBN 978-3-319-42875-8 (eBook)
DOI 10.1007/978-3-319-42875-8

Library of Congress Control Number: 2016947441

Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

For the countless of my students who accepted the challenge to create physically engaging games for young children and soared past the boundary of the digital screen. One day all of your games will be out there, moving us past click and point. Thank you for your commitment and your inspiration.

Acknowledgements

I'd like to extend my warmest thanks to Jim Budd, Chair of the School of Industrial Design, and to Wayne Li, Director of the Innovation and Design Collaborative, at Georgia Tech, for facilitating an interdisciplinary class on the design of young children's physically engaging digital games, Fall 2015.

Like many undergraduate classes in the School of Literature, Media, and Communication (LMC), mine are a mixture of students who have a lot of experience with technology and those who do not. Over the years, as I have challenged students to create physically engaging or somatic games in my media courses, this mix has had surprisingly successful results. The blue-sky approach I advocate has resulted in students both familiar with technology and not, trying new things and achieving some delightfully innovative results. It seemed, however, sensible, to provide students with a level playing field. After seeing a presentation by Intel on the School of ID's Interactive Product Development Lab, I proposed a joint class between LMC and the School of Industrial Design through the sponsorship of the Innovation and Design Collaborative. The Lab focuses on smart technologies and "is equipped to teach designers how to use technology." Students would spend part of their class time learning about child development, play, and game theory, playing and designing analog children's games, and designing digital games, the content I normally teach in my classes. The remainder of their time would be in the Lab where they would learn how to work with technologies such as Arduino, capacitive sensors, and soft circuits that would allow for physical interaction with objects in the real world. The first class ran successfully during the Fall 2015 semester and is featured on the IDC website at http://www.designcollaborative.gatech.edu and on the beta site students are building for somatic engagement at http://somaresearch.lmc.gatech.edu.

Thanks go to Lisa Yaszek, Director of Graduate Studies at the time, now Associate Chair in LMC, who supported and encouraged the idea, Eric Trevena and Kenya Devalia, for steering a smooth road through the finances, Troy White and J.C. Reilly, for scheduling, finding me space, and promoting the course, Wes Kirkbride, for

encouraging Computational Media students to attend, Catherine Denny, for facilitating with grace under pressure too many things to itemize, and Richard Utz, the Chair of LMC, who supports me in all new ideas.

In particular, I'd like to thank Clement Zheng, a student in the Industrial Design Masters program, and my TA in the course, who took on the challenge of helping my students learn about ways to work with sensor technologies and inspired them to create above their skill level.

Finally, thanks go to all the students who have created extraordinary children's games for my past media classes and, especially, to those who participated in the experimental interdisciplinary class, for their interest and hard work. The work you have done will be a model for our "media future" in the development of games for young children: one based on technological innovation and grounded in knowledge about how children develop through play.

Contents

List of Figures