

THOMAS HILLMAN

Department of Education, Communication & Learning
University of Gothenburg
Box 300, SE-405 30, Göteborg
thomas.hillman@gu.se

Education & Academic titles

- 2016 **Docent** – cf. Associate Professor, Reader, Habilitation
Faculty of Education, University of Gothenburg
- 2011 **PhD in Education** – Teaching, Learning & Evaluation
Faculty of Education, University of Ottawa
Re:design for learning - A study of the co-construction of a technological tool for mathematical learning
Supervisor: Professor Barbara Graves
Faculty opponent: Professor David Pimm, University of Alberta
- 2006 **Master of Arts in Education** – Psychopedagogy
Faculty of Education, University of Ottawa
The physical context of hands-on interactive museum exhibits: Identification and categorization of pedagogically relevant concepts
Supervisor: Associate Professor Mariette Th  berge
- 2003 **Bachelor of Industrial Design** (with high distinction)
School of Industrial Design, Carleton University

Further pedagogical training

- 2016 Validation of qualifications in teacher and learning in higher education
2013 Teaching and Learning in Higher Education (HPE101 - 5 ECTS)
2012 Supervision in Postgraduate Programmes (HPE201 - 5 ECTS)

Positions Held

- 2016-cont'd **Associate Professor**
Dept. of Education, Communication & Learning, University of Gothenburg
- 2014–2016 **Assistant Professor**
Dept. of Education, Communication & Learning, University of Gothenburg
(2014-07-01–2015-01-20 Parental leave 90%)
- 2012–2013 **Postdoctoral Research Fellow**
Dept. of Education, Communication & Learning, University of Gothenburg
- 2006–2011 **Doctoral Student**
Faculty of Education, University of Ottawa
- 2004–2006 **Exhibit Design Consultant**
Canadian Museum of Nature
Developed overall conceptual plans for two major exhibitions and detailed designs for a wide variety of interactive exhibits
- 2003–2004 **Museum Exhibit Designer**
Design+Communication Inc
Designed interactive exhibits for a variety of international science centre and museum clients
- 2002–2003 **Museum Exhibit Designer**
Canada Science and Technology Museum
Designed traditional and interactive museum exhibits
- 1996–2002 **Human-Computer Interaction Designer**
Nortel Networks
Participated in the development of a variety of telecommunications technologies including telemedicine and distance-education platforms

Research Funding Awarded

- 2016–2019 **EU COST Association** (520,000 EUR)
Citizen science to promote creativity, scientific literacy, and innovation throughout Europe
Secondary proposer (Dr. Katrin Vohland main proposer)
- 2016–2019 **Marcus and Amelia Wallenberg Foundation** (4,792,000 SEK)
Online instructional videos and the learning of manual skills
Co-applicant (Dr. Oskar Lindwall principle investigator)
- 2015–2018 **Swedish Research Council** (5,418,000 SEK)
Emerging communities of professional development for IT in schools: Teachers' engagement in the flipped-classroom movement
Co-applicant (Dr. Mona Lundin principal investigator)
- 2014–2018 **Marianne and Marcus Wallenberg Foundation** (9,093,000 SEK)
Taking science to the crowd: Researchers, programmers and volunteer contributors transforming science online

Co-applicant (Dr. Dick Kasperowski principal investigator)

2012–2014 **Swedish Research Council** (280,000 CAD)
Developing together: Unpacking the mutual transformation of technology and educational practices in diverse learning settings
Postdoctoral research fellowship

Teaching

(WHRS: working hours)

Graduate courses (as course leader)

PDA684 Introduction to a research environment in information technology and learning
Dept. of Education, Communication & Learning University of Gothenburg (Fall 2015 – 15 ECTS, 108 WHRS)

Understanding and designing for social media practices
LinCS-DSES, University of Gothenburg (Spring 2014 – 5+5 ECTS, 96 WHRS)

The Cyborg Learner: Living and learning with digital technologies
ICO International Research School (Fall 2012 – 3 ECTS, 48 WHRS)

Introduction to Research in Education
Faculty of Education, University of Ottawa (Fall 2010 – Equivalent to 7.5 ECTS, 117 WHRS)

Graduate courses (as instructor)

Video-based research methods
Dept. of Teacher Education, University of Helsinki (Fall 2015 – 15 ECTS, 36 WHRS)

Applied methods and design for information technologies and learning
Dept. of Applied IT, University of Gothenburg (Spring 2014 – 15 ECTS, 32 WHRS)

Literacy in a digital world
Dept. of Education, Communication & Learning University of Gothenburg (Fall 2014 – 15 ECTS, 8 WHRS)

Analyzing video recordings in the learning sciences
LinCS-DSES, University of Gothenburg (Fall 2012 & 2013 – 5+5 ECTS, 8 WHRS)

Ethnography, education and the social web
LinCS-DSES, University of Gothenburg (Spring 2013 – 5+5 ECTS, 20 WHRS)

Learning and information technology
LinCS-DSES, University of Gothenburg (Fall 2012 – 5+5 ECTS, 24 WHRS)

Undergraduate courses (as instructor)

Pedagogisk psykologi [Educational Psychology]
Dept. of Education, Communication & Learning, University of Gothenburg (Spring 2012 – 15 ECTS, 8 WHRS)

Beteende- och socialvetenskap [Behavioral and social science]
Department of Systems Sciences, Stockholm University (Fall 2011 – 7.5 ECTS, 12 WHRS)

Didactique de la Biologie au Cycle Supérieur [Teaching Biology at the Secondary Level]
Faculty of Education, University of Ottawa (Fall 2007 – Equivalent to 7.5 ECTS, 26 WHRS)

Teaching Primary / Junior Science and Technology
Faculty of Education, University of Ottawa (Spring 2006 – Equivalent to 7.5 ECTS, 38 WHRS)

Mathematical Thinking Across the Curriculum
Faculty of Education, University of Ottawa (May, 2010 – Equivalent to 7.5 ECTS, 9 WHRS)

Industrial Design Studio 1A
School of Industrial Design, Carleton University (Fall 2003 – Equivalent to 15 ECTS, 14 WHRS)

Computer Applications for Industrial Design
School of Industrial Design, Carleton University (Fall, 2001 – Equivalent to 7.5 ECTS, 20 WHRS)

Lectures and invited scientific seminars

Indsamling af besøgsoplevelser i museer gennem brug af foto på mobiltelefon – set fra de besøgendes perspektiv [Collecting visit experiences in museums through mobile photo sharing – seen from a visitor perspective]
Danish Landsforeningen til bevaring af fotografier og film, University of Southern Denmark (January 2014 – 8 WHRS)

Analysis of classroom video data
Dept. of Mathematics and Science Education, Stockholm University (November 2012 – 9 WHRS)

Kvalitativ forskningsmetodologi [Quantitative Research Methodology]
Faculty of Education, Åbo Academy University (October, 2012 – 8 WHRS)

Mobile learning in museums
Department of System Sciences, Stockholm University (September, 2012 – 4 WHRS)

Educational technology co-construction
Technology Mediated Knowledge Processes Doctoral School, Dalarna University (October, 2011 – 12 WHRS)

Using Transana for qualitative analysis of video data
Mathematics Education Group, Karlstad University (September, 2011 – 12 WHRS)

The relationships between mathematics and art
Math Education Research Unit, University of Ottawa (February, 2010 – 4 WHRS)

Computer aided qualitative data analysis
EDU7190 Qualitative Research Methods, Faculty of Education, University of Ottawa (November, 2009 – 12 WHRS)

Supervision

- 2015–cont'd **Anne Solli**, Dept. of Education, Communication and Learning
Main supervisor, doctoral dissertation (60 WHRS per year)
Technoscience, evidence and decisionmaking: making sense of controversial issues in a digital landscape
- 2012–cont'd **Beata Jungselius**, Dept. of Applied IT
Assistant supervisor, doctoral dissertation (20 WHRS per year)
Social media literacy: Understanding the implications of mobile social media use in everyday life
- 2014 **Erica Blom**, Dept. of Applied IT
Supervisor, master's thesis (25 WHRS)
QR-kod och videoinstruktioner: ett mobilt lärande i industrin [QR Codes and Video Instructions: Mobile Learning in an Industrial Setting]
- 2013 **Tiina Lindell**, Dept. of Education, Communication & Learning
Supervisor, master's thesis (25 WHRS)
“Det är jag som har mobilen”: Ungas meningsskapande med mobil teknologi och multimodala representationsformer [“It's me that has the mobile”: Young peoples' meaning making with mobile technology and multimodal representations]
- 2012 **Linda Thelin**, Dept. of Education, Communication & Learning
Supervisor, bachelor's thesis (15 WHRS)
Matematikundervisning – hur mycket kan man som lärare påverka elevers matematikkunskaper [Mathematics teaching – how much can a teacher influence students' mathematics knowledge]

Pedagogical studies and development projects

Course design

PDA684 Introduction to a research environment in information technology and learning
Dept. of Education, Communication & Learning University of Gothenburg (Master's level – 15 ECTS)
Course leader responsible for the course design

Understanding and designing for social media practices
LinCS-DSES, University of Gothenburg (PhD level – 5+5 ECTS)
Course leader responsible for all aspects of the course design in collaboration with Dr. Alexandra Weilenmann

Ethnography, education and the social web
LinCS-DSES, University of Gothenburg (PhD level – 5+5 ECTS)
Contributed to the course design in collaboration with course leader Dr. Russell Francis

The Cyborg Learner: Living and learning with digital technologies
ICO International Research School (PhD level – 3 ECTS)
Course leader responsible for all aspects of the course design in collaboration with Dr. Russell Francis

Introduction to Research in Education
Faculty of Education, University of Ottawa (Master's level – Equivalent to 7.5 ECTS)

Course leader responsible for the course design based on the adaptation and further development of an earlier course developed by Prof. Barbara Graves

Pedagogical material development

In Your II – An online learning resource on issues of digital privacy for use in secondary schools developed as a result of the *On the Identity Trail* research project
Faculty of Law, University of Ottawa

A series of manipulative materials for mathematics learning in elementary and middle school developed as a result of the *CRYSTAL* research project
Faculty of Education, University of Ottawa

Pedagogical activities outside the university

I worked for several years as an exhibition designer developing museum exhibitions for a wide variety of museums and science centres. This work required the development of pedagogical approaches for providing visitors' opportunities for learning about the theme of an exhibition. As a specialist on both physical and digital interactive exhibits, I developed many individual exhibits on a very wide variety of topics and was responsible for the overall conceptual design of several major exhibitions. The following is a list of the major exhibitions that I contributed to:

Birds Gallery – Canadian Museum of Nature

Mammals Gallery – Canadian Museum of Nature

Ice Age Mammals – Canadian Museum of Nature

Where Are We! – Science Centre of Iowa

Science is Where You Find It! – Science Centre of Iowa

What on Earth! – Science Centre of Iowa

Vivre en Nouvelle France – Canadian Museum of Civilization

Our Lives – Smithsonian National Museum of the American Indian

Connexions – Canada Science and Technology Museum

Administrative & Leadership Activities

- | | |
|------------|--|
| 2015–2019 | Management committee substitute, <i>Citizen science to promote creativity, scientific literacy, and innovation throughout Europe</i>
EU COST initiative |
| 2014–2016. | Program leader, <i>International Master's programme in IT & Learning</i>
Dept. of Education, Communication and Learning in collaboration with Dept. of Applied Information Technology, University of Gothenburg |
| 2014–cont. | Co-coordinator, <i>Video Lab</i>
Linnaeus Centre for Research on Learning, Interaction and Mediated Communication in Contemporary Society (LinCS) |
| 2013–cont. | Coordinator and steering committee representative, <i>Studio3 research group</i>
University of Gothenburg Learning and Media Technology (LETStudio) |
| 2013 | Program committee member, 2013 <i>Network of design and digital heritage</i> (NODEM) conference |
| 2013 | Member of social sciences advisory panel, <i>Europeana Cloud</i>
EU Information and Communication Technologies Policy Support Programme |
| 2013 | Faculty reviewer, <i>doctoral position in pedagogy</i> |

	University of Gothenburg
2012–2013	External reviewer, <i>four lecturer positions in computer science</i> Chalmers University of Technology
2012	Faculty reviewer, <i>doctoral position in applied information technology</i> University of Gothenburg
2012	Jury member, <i>integration of ICT in schools prize</i> (Torghandelspris) City of Gothenburg
2011–2012	Member, <i>working group for reorganisation of university wide information and communication processes</i> University of Gothenburg
2009–2010	Graduate student representative, <i>Faculty of Education board</i> University of Ottawa
2009	Organising committee member <i>Methodological Issues in Mathematics Education Research Colloquium</i>
2008	Coordinator <i>Jean-Paul Dionne Symposium on Educational Research</i>
2007–2009	Working group member <i>Canadian Math Education Study Group</i>
2006	Organising committee member <i>Canadian National Arts and Learning Symposium</i>

Reviewing for journals and conferences

Learning, Media and Technology; Learning, Culture and Social Interaction; Personal and Ubiquitous Computing; Journal of Computer Assisted Learning; Digital Creativity; Mobile Media and Communication; MobileHCI; Network of Design and Digital Heritage (NODEM); Swedish Society for Mathematics Education (MADIF); Nordic Conference on Human-Computer Interaction (NordiCHI); Computer Supported Collaborative Learning (CSCL)

Duties as discussant at doctoral dissertation seminars

2016-04-20	Katka Cerna, Dept. of Education, Communication and Learning, University of Gothenburg Planning seminar
2014-03-04	Sofia Serholt, Dept. of Applied IT, University of Gothenburg Planning seminar

Collaboration with practitioners

2013	Worked with the Gothenburg Museum of Natural History on two projects involving mobile technologies and social media. The first was to develop a strategy for encouraging visitors to post photographs on social media from exhibitions and then have that visitor produced content displayed within the museum. The second project involved working with the education department at the museum to find
------	---

ways that the mobile technologies that school students bring with them on field trips could be used as part of education programmes.

- 2012 Worked with a team of mathematics teachers at the city of Mölndal as they implemented various ICT strategies in their classrooms and researched their own practices. Funded through a collaboration between the city of Mölndal and the University of Gothenburg.
- 2011 Supported 11 teams of teachers in elementary schools across the province of Ontario as they performed action-research projects on a variety of topics ranging from writing support in immersion second-language programs to the introduction of learning analytics systems. Funded by the Ontario Ministry of Education.

Publications

(*published before qualification as docent)

Papers in peer-reviewed journals

- *Hillman, T., & Säljö, R. (2016). Introduction to the special issue - Learning, knowing and opportunities for participation: Technologies and communicative practices. *Learning, media and Technology*, doi: 10.1080/17439884.2016.1167080.
- *Holmberg, C., Chaplin, J., Hillman, T., & Berg, C. (2016). Adolescents' presentation of food in social media: an explorative study. *Appetite*, 99, 121-129, doi: 10.1016/j.appet.2016.01.009.
- *Hillman, T., Jungselius, B., Lindell, T. L., & Weilenmann, A. (2015). Narrative making practices with smartphones on a field trip to a museum. *Learning, media and Technology*, doi:10.1080/17439884.2015.1064443.
- *Wallerstedt, C. & Hillman, T. (2015). "Is it okay to use the mobile phone?" Student use of mobile technology in pop-band rehearsals in Swedish music education. *Journal of Music Education and Technology*, 8(1). doi: 10.1386/jmte.8.1.71_1.
- *Hillman, T. (2013). Supporting students' innovative practices with educational technology: Shaping the nature of technology in a classroom context. *Learning, Media and Technology*, 39(2), 169-183. doi:10.1080/17439884.2013.803256.
- *Hillman, T. (2012). A geography of connections: Networks of humans and materials in mathematics classrooms using handheld technology. *Forum: Qualitative Social Research*, 13(1), Art. 12.
- *Hillman, T. (2011). The inscription, translation and re-inscription of technology for mathematical learning. *Technology, Knowledge and Learning*, 16(2), 103-124. doi:10.1007/s10758-011-9182-1.

Papers in peer-reviewed conference proceedings

- Rensfeldt, A. B., Hillman, T., Lundin, M., Peterson, L., & Lantz-Andersson, A. (2016). The 'politics of sharing' in a large teacher professional Facebook group: Links, topics and discourses entangled with policy. *Proceedings of Internet, policy and politics 2016*, Oxford: OII.
- *Ponti, M., Hillman, T., & Stankovic, I. (2015). Science and gamification: The odd couple? *Proceedings of CHI Play 2015*, New York: ACM Press.
- *Ponti, M., Hagen, N., Hillman, T., Kasperowski, D., Kullenberg, C., & Stankovic, I. (2015). Designing Futures for Learning in the Crowd: New Challenges and Opportunities for CSCL. In O. Lindwall, P. Häkkinen, T. Koschman, P. Tchounikine, & S. Ludvigsen (Eds.),

Exploring the Material Conditions of Learning: The Computer Supported Collaborative Learning (CSCL) Conference, Gothenburg: ISLS.

- *Hillman, T., Weilenmann, A. (2015). Situated social media use: A methodological approach to locating social media practices and trajectories. *Proceedings of the SIGCHI conference on Human factors in computing systems*, New York: ACM Press.
- *Kilhamn, C. & Hillman, T. (2014). Structural and pedagogical diversity in Swedish grade six algebra classrooms. *Proceedings of the ninth annual conference of the Swedish Society for Mathematics Education Research (MADIF)*, Umeå.
- *Weilenmann, A., Hillman, T. & Jungselius, B. (2013). Instagram at the museum: Communicating the museum experience through social photo sharing. *Proceedings of the SIGCHI conference on Human factors in computing systems*, New York: ACM Press.
- *Hillman, T., Jungselius, B., & Weilenmann, A. (2013). "In just three hours I got like 22 likes on a pancake picture": Dealing with temporality in social media use and research. In W. E. Mackay, S. Brewster & S. Bødker (Eds.), *CHI'13 Ext. Abstract on Human Factors in Computing Systems*, New York: ACM Press.
- *Lundberg, A., & Hillman, T. (2013). Student-driven proportional reasoning approaches to an early algebra task. Lindmeier, A. M. & Heinze, A. (Eds.). *Proceedings of the 37th Conference of the International Group for the Psychology of Mathematics Education*, Vol. 5. Kiel, Germany: PME.
- *Hillman, T., Weilemann, A., & Jungselius, B. (2012). Creating live experiences with real and stuffed animals: The use of mobile technologies in museums. In E. Kristiansen (Ed.), *Proceedings of The Transformative Museum*, Roskilde, Denmark: DREAM.
- *Hillman, T. (2012). Examining the ongoing development of educational technology through an ANT lens. In C. Storni, P. Linde, T. Binder, & D. Stuedahl (Eds.), *Proceedings of the 12th Participatory Design Conference: Exploratory Papers, Workshop Descriptions, Industry Cases - Volume 2*. New York: ACM Press.
- *Hillman, T. (2011). Repositioning the relationship between the design and use of technology for mathematical learning. In M. Bylund, O. Juhlin & Y. Fernaeus (Eds.), *MobileHCI'11 Ext. Abstracts on Human Computer Interaction with Mobile Devices and Services*. New York: ACM Press.

Peer-reviewed conference presentations

- Hillman, T. & Mäkitalo, Å. (2016). Considering external resource use in forum discussions as an indicator of citizen scientist learning. Paper presented at the annual meeting of the *European Citizen Science Association*, Berlin.
- Rensfeldt, A. B., Hillman, T. Lundin, M., Peterson, L., & Lantz-Andersson, A. (2016). Powers forming the digitized teacher subjectivity: Self-technologies and social media surveillance. Paper presented at the *Foucault at 90* conference, Ayr, UK.
- *Holmberg, C., Chaplin, J., Hillman, T., & Berg, C. (2016). Adolescents' communication of high calorie low nutrient food items in image-based social media. Paper presented at the *European Obesity Summit*, Gothenburg, Sweden.
- *Holmberg, C., Chaplin, J., Hillman, T., & Berg, C. (2016). Adolescents' Photo Food Presentation in Social Media. Paper presented at the conference of the *International Society of Behavioral Nutrition and Physical Activity*, Cape Town, South Africa.
- *Jungeselius, B., Hillman, T., & Weilenmann, A. (2014). Fishing for followers: Using hashtags as like bait in social media use. Paper presented at the meeting of the *Association of Internet Researchers (IR13)*, Daegu, Korea.

- *Hillman, T. (2011). Where's the math? Locations of mathematical activity in classes with handheld technologies. Paper presented at *the meeting of the European Association for Research on Learning and Instruction*, Exeter, UK.
- *Hillman, T. (2010). The role of teachers in co-constructing educational technologies for mathematical learning. Paper presented at the annual meeting of the *American Educational Research Association*, Denver, CO.
- *Hillman, T. (2010). The role of designers in co-constructing technologies for mathematical learning: Examining the development and use of Texas Instruments TI-Nspire. Presented at the fourth international conference on *Design Principles and Practices*, Chicago, IL.
- *Hillman, T., & Graves, B. (2009). The role of multiple representations in intermediate mathematics. Paper presented at *the 2009 meeting of the Canadian Society for the Study of Education*, Ottawa, ON.
- *Hillman, T. (2007). Learning science through arts activities: Art at the science centre. Proceedings from the *National Arts and Learning Symposium*, Ottawa, ON.
- *Hillman, T. (2007). Pedagogically relevant concepts in the design of hands-on interactive science centre exhibits. Proceedings of the meeting of the *European Science Education Research Association*, Malmö, Sweden

Book chapters, books & reports

- *Hillman, T., & Weilenmann, A. (In press). Curating visual experiences through mobile phones. In J. Kuipers & J. A. Bell (Eds.), *Linguistic and Material Intimacies of Cell Phone Communication*. New York: Routledge.
- *Weilenmann, A., & Hillman, T. (2016). Social media souvenirs: Expanded experiences through visitor photography. In T. Sylianou (Ed.), *Museums and visitor photography*. Edinburgh: MuseumsEtc.
- *Hillman, T., & Säljö, R. (2014). Tankeredskap i matematikklassrummet: Hur digitala teknologier formas i undervisning [Thinking tools in mathematics classrooms: How digital technology forms through teaching]. In R. Säljö & A. Lantz-Andersson (Eds.), *Lärare i en uppkopplad tid: Möjligheter och utmaningar* [Teachers in a connected time: Opportunities and challenges], Malmö: Gleerups.
- *Hillman, T. & Koch, M. (2011). *Using Technologies in Intermediate Classrooms*. Report for the Ontario Ministry of Education, Toronto, ON: Queen's Printer for Ontario.
- *Hillman, T. (2008). Hands-on interactive museum exhibits: A conceptual framework for examining the physical context from a pedagogical perspective. In A. Landry, & A. Meunier (Eds.), *La recherche en éducation muséale : actions et perspectives / Research in Museum Education: Actions and Perspectives* (pp. 179-187). Montreal, QC: Multimodes.

Popular-scientific articles & presentations

- Weilenmann, A., & Hillman, T. (2016). Från sälar till selfies: Vilken roll har mobilt foto och sociala medier bland dagens museibesökare? [From seals to selfies: What role do mobile photography and social media have among today's museum visitors]? Presented at *Digikult*, Gothenburg.
- *Hillman, T. (2012). Vad påverkar elevers sätt att använda teknologi i skolan [What affects students ways of using technology in schools]? Presented at *Skoldagarna Malmö*, Malmö.
- *Hillman, T. (2012). Lärarens betydelse för elevernas teknologianvändande i matematiken [The role of teachers in students technology uses in mathematics]. Presented at *Framtidens Lärare*, Stockholm.

- *Hillman, T. (2008). Canadian curriculum spaces for issues of online privacy. *Our Schools/Our Selves*, 17(4), 97-101.
- *Hillman, T. (2007). In Your I !: Developing an online educational program for digital privacy education. Presented at the *International Conference of Data Protection and Privacy Commissioners*, Montreal, QC.
- *Hillman, T. (2007). The state of digital privacy education in 2007: Moving forward. Presented at the *International Conference of Data Protection and Privacy Commissioners*, Montreal, QC.