



Project Zero

Annual Report 2017 - 2018



PROJECT ZERO



HARVARD
GRADUATE SCHOOL OF EDUCATION



LETTER FROM THE DIRECTOR

I am delighted to share the Project Zero (PZ) Annual Report for FY2018 (July 1, 2017 - June 30, 2018). The goal of this document is to offer a broad overview of our activities with a wide audience of fellow researchers, educators, collaborators and funders.

This past year was a memorable one for Project Zero as we marked our 50th anniversary. We have included a special section in this report to highlight the many ways we celebrated the vast body of work developed over five decades, highlighting the past, present and future of key themes in the field of education with deep and inspirational roots at Project Zero. We are also honored to share a significant outcome of our 50th celebration – raising more than \$1,013,000 to increase access to Project Zero learning opportunities for educators working with historically marginalized students and in under-resourced contexts. Finally, throughout the report, please enjoy the handful of quotes we find inspirational from PZ’s founders.

In the year that PZ celebrated its 50th anniversary, I hope this report offers you the opportunity to learn more about Project Zero’s history along with our current work, and the ways in which our community continues to offer critical insights and new frameworks to effect change in educational settings locally and globally.



Dr. Daniel Gray Wilson
Director, Project Zero

TABLE OF CONTENTS

Quick Facts

page 3

Celebrating 50 Years

pages 4 - 11

Active Research Projects

pages 12 - 17

Research Publications

pages 19 - 22

Other Activities

pages 24 - 27



QUICK FACTS

88 published books, chapters, articles and blogs.

\$1,013,000

raised to support teachers in under-resourced settings to attend PZ professional learning opportunities.

12 HGSE/HU courses taught by PZ researchers, which together enrolled 685 students.

25,200 Twitter followers.

380,000

visits to our website, an 11% increase from FY2017.

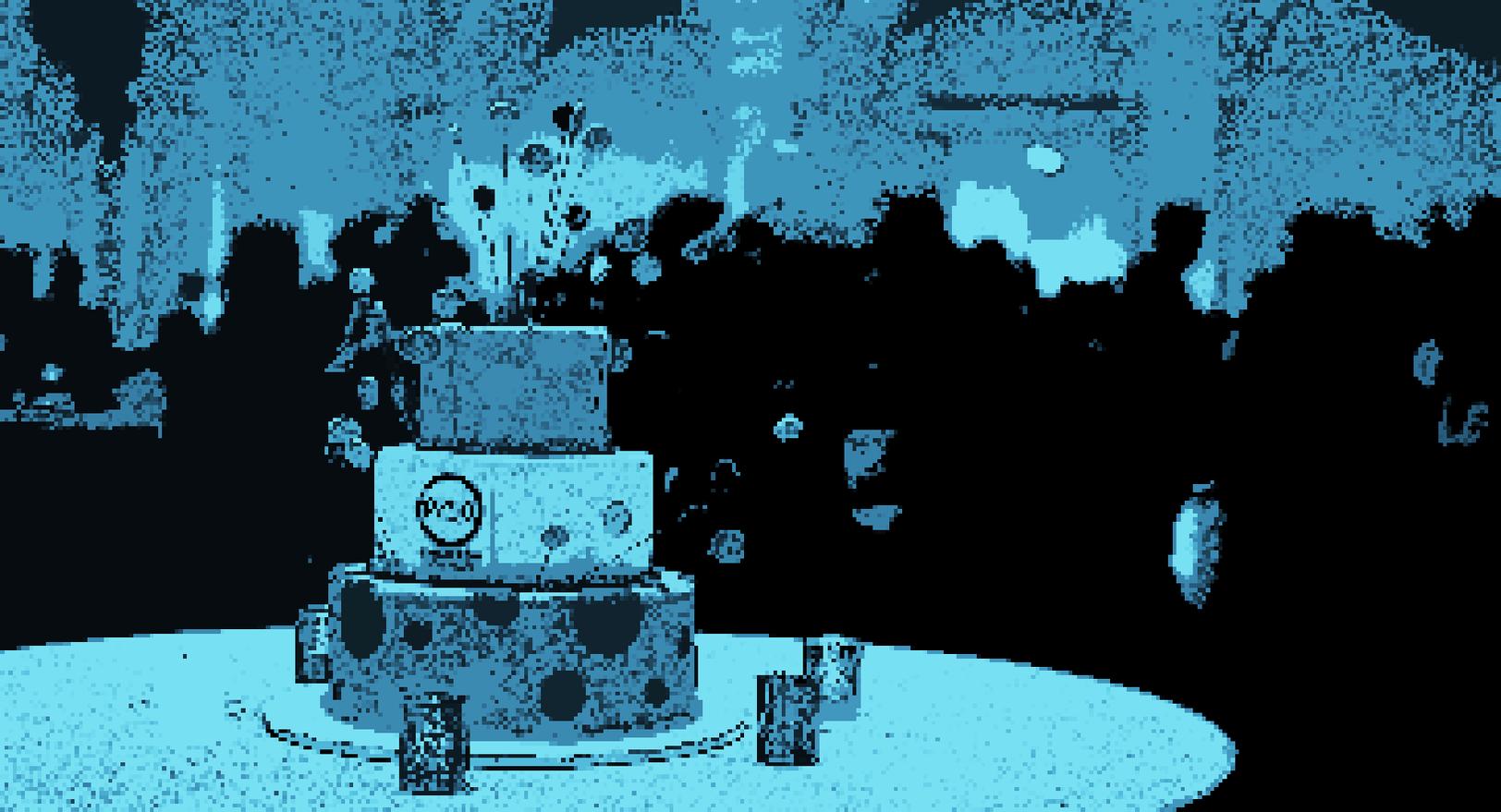
30 active research projects.

640 educators attended our six local professional development sessions.

2,718 educators enrolled in PZ's online courses, with 97% of participants confirming they would use ideas they learned in their classrooms/contexts.

6,735 subscribers to our tri-annual newsletter, *Zero In*.

362 participants in PZ's annual institute, Project Zero Classroom.



CELEBRATING 50 YEARS



To mark this historic milestone of 50 years of research and impact in the field of education, PZ convened celebratory events that involved **1,020 participants in and around Cambridge (and 9,600 participants virtually)**, hosted local professional development events for **640 educators**, and raised **\$1,013,000** to support teachers in under-resourced settings to attend PZ professional learning opportunities.



Askwith Forum *Changes in Mind*: On October 13, 2017, this public event kicked off the year of celebration by offering an overview of discoveries gleaned from a half-century of iconoclastic investigations into changing conceptions of the mind and the implications of these changes for today's teachers, schools, and society. Speakers included Harvard President Drew Faust and Harvard Graduate School of Education Dean James E. Ryan. The forum featured researchers who have been past directors of Project Zero, the current director, and its founding members Howard Gardner and David Perkins. More than 240

guests joined a special Project Zero event in the Knafel Center at Radcliffe and 580 were in Askwith or the overflow rooms. In addition, the virtual livestream that evening engaged 5,600 via Facebook and 1,700 on YouTube, with more than 2,300 viewers watching the recording after that night.



PZ50 Celebration Event: On October 14, a second day of events was convened with more than 200 collaborators, funders, and researchers around Project Zero's nine areas of research to consider the center's past and present, and to wonder about the future. These areas include Arts & Education, Assessment Reimagined, Developing Understanding, Character and Ethics, Civic Agency, Creativity, Thinking Dispositions, Global Competencies, and Intelligences. As part of the gathering, PZ commissioned a team of local graphic facilitators, designers, and artists to capture these nine areas of knowledge and research along with a timeline, creating floor-to-ceiling visually accessible installations. These works are mounted on the walls of our offices in Longfellow Hall, showcasing the 50 years of learning and research.

Fundraising for PZ Reach Scholarships: During the 50th year, PZ launched its first ever public fundraising effort to support teachers to attend PZ professional learning opportunities. The campaign sought to raise \$500,000 to improve PZ reach to, and support of, hundreds of educators in the United States and globally who are working with learners in historically marginalized and/or under-resourced settings and contexts. For too long, PZ's in-person and online learning experiences have not been accessible to educators operating in economically disadvantaged settings. Over the course of the year, PZ raised \$1,013,000 through generous individual donations and one large gift from the Saul Zaentz Charitable Foundation. Beginning in 2019, scholarships to attend PZ workshops, institutes, and online courses will be broadly available.

Six Local Professional Development Events: PZ hosted six Boston-area outreach events that engaged 640 educators in PZ research topics such as global competencies, visible thinking, civic agency, complex thinking, and maker-centered learning. Five of these events were professional development workshops in collaboration with museums including the Museum of Fine Arts, the Isabella Stewart Gardner Museum, the Boston Children's Museum, and the Peabody Essex Museum. Over 50% of participants in these workshops were from local public schools and almost 25% of participants received scholarship support mentioned above.

A Half-Century of Research

At the beginning, PZ's research focused on investigating cognitive processing in the arts. This seminal work led researchers to expand to broader aspects of human potential, including learning, critical thinking, creativity, and intelligence. In the recent decades, PZ research built on these rich traditions by exploring further fundamental questions of human potential as they relate to contemporary issues facing an array of educational settings—schools, families, museums, and businesses. In preparing to celebrate 50 years, PZers looked across the vast body of research and developed an organizing framework that includes nine areas that represent the many facets of the five decades of work. Each of the nine areas is described below along with some provocative questions that are launching PZ into the future.



Arts & Education

The act of producing a work of art, PZ holds, is one of inquiry and exploration: artists make their learning visible in their products. In turn, their works catalyze curiosity and inquiry in others, leading them to deeper understandings. Cycles of inquiry, research, and learning are inherent in all serious artistic experiences.

- Works of art are designed to engage people in consideration of the deep complexities of the human experience and have the power to provoke curiosity and the quest for understanding.
- How can cognitive aspects of engagement in the arts inform human development in other domains?
- How might slow looking inform deeper learning and understanding?



Assessment

We see assessment as an episode of learning. Our re-imagination of assessment involves a number of “shifts” from traditional notions: assessment of process as well as product (when, what); teachers and students as protagonists in the assessment process (who); assessment driven by the most important goals we hold for students, whether numbers capture them or not (why); and assessment as a collective and relationship-building process (how, where).

- While assessment is most often focused on individual performance and achievement, documentation of individual and group learning strengthens and enriches the dialogue between teaching and learning, allowing for powerful discussions of assessment.
- What are the characteristics of authentic, effective assessment? How is this assessment documented?
- How do observing and documenting learning change the nature of learning?



Civic Agency

When we support learners to be effective and reflective agents of positive social change, we expand their notions of the who, what, and where of civic engagement, and prepare them for deep engagement in their communities, and with critical problems facing our world, both offline and online. Civic agency involves listening to diverse perspectives, imagining and advocating for a better world, and building that world.

- Children are not just future or hypothetical citizens, or citizens in training, but rather they are citizens of the here and now, with the right to express their opinions and participate in the civic and cultural life of their communities.
- How does the digital world present positive opportunities and risks for the development and enactment of civic agency?
- What specific pedagogical moves can support the development of civicskills, inclinations, and agency among school-aged children?



Creativity

PZ has explored a variety of perspectives on creativity. We researched creativity as an individual act of human invention. We gained powerful insights from delving deeply into distinct portraits of creativity embodied by creative “giants.” We looked at how breakthrough thinking and cognitive insight operate in the creative processes of artists. We wondered about creativity situated within complex systems. We framed creativity as cultural participation. We explored how creative work shows us that knowledge and cognition are distributed across objects, individuals, artifacts, and tools in the environment.

- Creativity exists at the intersection of the individual, the domain, and the field.
- How might educational practices better support the higher-cognitive processes of creative and critical thinking?
- What will the creativity of the future look like?



Global Competencies

Every generation confronts the challenge of discerning what capacities and dispositions are the most important to nurture among its young people at a given moment in time. Thoughtful cross-cultural inquiry and exchange involves examining our own perspectives, assumptions, and everyday lives as much as it does learning about those of other people. Observing the world and listening to others carefully is a key component of cross-cultural exchange in our informationrich era of social media.

- Global thinking and global competence involve cognitive, socio-emotional, and ethical dimensions as students investigate the world, recognize perspectives, communicate ideas, and take action.
- How can we prepare our youth well for the changing demands of living in a globally connected and disconnected world?
- How can we work deliberately and respectfully to expand opportunities for global and intercultural understanding for all children?



Developing Understanding

Project Zero's research proposes a performance-based conception of "understanding." In other words, understanding is the capability to perform flexibly with knowledge in novel situations. It goes beyond having the correct mental models and is actionable and generative in further learning and in real life.

Understanding includes the capacity for transfer, as well as the ability to restructure concepts rather than just add information. It is an agentic process, an on-going quest carried by the learner.

- What are the challenges to developing deep understanding?
- In what ways can education support the development of deep understanding and adaptive expertise?



Character & Ethics

While examining character and ethics from its development in childhood to its realization in the workplace and broader community, we have learned that Good Work is work that is excellent in quality, personally engaging, and carried out in an ethical way.

A wide sense of responsibility which extends beyond immediate circles to include various communities is associated with greater sensitivity to the ethical implications of decisions. By cultivating a strong sense of ethics through reflection, it is possible to learn from mistakes and approach future dilemmas with greater vision.

- Is 'good character' a role that one can assume or is it a more complex, longer lasting, developmental phenomenon?
- Is character better thought of as part of one's identity or as a set of roles that one assumes, online and offline, throughout life?



Thinking Dispositions

We believe that good thinking is dispositional, visible, and distributed.

Motivations, attitudes, values, and habits of mind all play key roles in good thinking, and in large part, these elements determine whether people use their thinking skills when it counts. Learning is a consequence of thinking, and developing a culture of thinking is critical if we want to produce the feelings, energy, and even joy that can propel learning forward and motivate learners to do what at times can be hard and challenging mental work.

- What does good thinking have to do with good learning?
- How do we best support the development and sustainability of thinking dispositions so they can be exhibited over time across diverse thinking situations?



Intelligences

Perhaps best known is Project Zero's pioneering research that broke with decades of psychological tradition built on innate and unitary concepts of human intelligence. The work challenged the popular view that intelligence is fixed, general, and can be measured by standardized linguistic and logical tests. Led by Gardner & Perkins, PZ put forward to the field of educational psychology a radical view that intelligence is a learned ability to find/solve problems and create products of value in a culture. They revealed a robust set of learnable dispositions that are foundations for intelligent behavior, as well as a set of multiple intelligences that are developed and expressed within and across cultural contexts.

Dispositions play a critical role in human problem finding and solving. The attitudes learners exhibit when performing – whether they are open or closed minded, adventurous or narrow in their thinking, careful or careless – strongly predict the extent to which they engage in and develop intelligent behaviors.

- How is intelligence expressed within and across cultures?
- What if, instead of asking, “How smart am I?” we asked, “How am I smart?”





ACTIVE RESEARCH PROJECTS

Agency by Design • Aligned Programs for the 21st Century • Arts as Civic Commons
Arts Festival Impacts • Creating Communities of Innovation
Creating Communities of Inquiry/Creando Comunidades de Indignacion
Cultures of Thinking • Educating with Digital Dilemmas • Early Childhood in the Making • EcoXPT
Educating Global Citizens through a US and China Lens • The Family Dinner Project
The Global Children Project • Globalizing the Classroom Collaborative • The Good Project
Humanities and Liberal Arts Assessment • Idea into Action • Investigating Impacts of Educational
Experience • Leading Learning that Matters • Learning Innovations Laboratory
Learning to Think, Thinking to Learn • Liberal Arts and Sciences in the 21st Century
Making Across the Curriculum • Making Learning and Thinking Visible
Out of Eden Learn • Pedagogy of Play • PZ Connect • Signature Pedagogies in High School
The World in Washington DC

Agency by Design (AbD)

Exploring documentation and assessment strategies for maker-centered learning.

pz.harvard.edu/projects/agency-by-design

Funder(s): The Abundance Foundation



Aligned Programs for the 21st Century (ALPS21)

Aiming to identify exemplary programs in higher education—courses, programs, and co-curricular activities—that can bridge differences in perspectives among the major stakeholders on college campuses.

pz.harvard.edu/projects/aligned-programs-for-the-21st-century

Funder(s): The Teagle Foundation



Arts as Civic Commons (ArtsC)

Exploring the arts as a civic space for learning, dialogue and action.

pz.harvard.edu/projects/arts-as-civic-commons

Funder(s): Independent Schools Victoria, Australia

Arts Festival Impacts (AFI)

Exploring impacts of a community arts festival.

pz.harvard.edu/projects/arts-festival-impacts

Funder(s): Independent Schools Victoria, Australia



Creating Communities of Innovation (CCI)

Exploring educational innovations through networked inquiry.

pz.harvard.edu/projects/creating-communities-of-innovation

Funder(s): GEMS Middle East/North Africa/South Asia Network

Creating Communities of Inquiry/Creando Comunidades de Indagación (CCI)

Collaborating with Innova Schools Network to develop a culture of inquiry-driven teaching and learning.

pz.harvard.edu/projects/creando-comunidades-de-indagación-creating-communities-of-inquiry

Funder(s): Gabriela Perez Rocchietti and Carlos Rodríguez Pastor

Cultures of Thinking (CoT)

Improving learning and collaboration by honing group and individual thinking processes.

pz.harvard.edu/projects/cultures-of-thinking

Funder(s): Bialik College

Educating with Digital Dilemmas

Conducting new research on the present digital dilemmas youth face.

pz.harvard.edu/projects/educating-with-digital-dilemmas

Funder(s): Common Sense Media, The Germanacos Foundation



Early Childhood in the Making (ECM)

Exploring effective ways to incorporate maker-centered and STEAM learning in the early childhood classroom, a continuation of *Agency by Design*.

pz.harvard.edu/projects/early-childhood-in-the-making-an-initiative-of-agency-by-design

Funder(s): Cheng Yu Tung Research Innovation Fund

EcoXPT

Working alongside EcoMUVE to support experiment-based inquiry in immersive virtual environments.

pz.harvard.edu/projects/ecolearn

Funder(s): National Science Foundation

Educating Global Citizens through a US and China Lens

Enhancing students' understanding of the world and nurturing global thinking dispositions.

pz.harvard.edu/projects/educating-global-citizens-through-a-us-and-china-lens

Funder(s): Weiming Education Group

The Family Dinner Project (FDP)

Teaching families the value of meaningful mealtime interaction.

pz.harvard.edu/projects/the-family-dinner-project

Funder(s): The Poses Family Foundation, The Oread Fund of the Community Foundation of New Jersey



The Global Children Project

Connecting teachers in the US and Japan to nurture global competence in early childhood.

pz.harvard.edu/projects/global-children

Funder(s): Poppins Institute for Child Development, Japan

Globalizing the Classroom Collaborative

Collaborating with PZ to plan and implement educational outreach around the centers' research.

pz.harvard.edu/projects/globalizing-the-classroom

Funder(s): The Davis Center for Russian and Eurasian Studies, through a grant from the U.S. Department of Education; the Harvard University Center for African Studies, through a grant from the U.S. Department of Education; the Harvard University Asia Center; the Center for Middle Eastern Studies at Harvard University; the Harvard Global Health Institute; and the Global Health Education and Learning Incubator at Harvard University

The Good Project

Understanding the nature of various “goods” and promoting their realization in our time.

pz.harvard.edu/projects/the-good-project

Humanities and Liberal Arts Assessment (HULA)

Identifying and illuminating the implicit internal logics of humanistic crafts in order to develop appropriate tools to assess, evaluate, and advance projects and pedagogy in the humanities.

pz.harvard.edu/projects/humanities-liberal-arts-assessment-hula

Idea into Action (I2A)

A quest to translate ideas (principles, plans, good intentions, etc.) into action on the ground.

pz.harvard.edu/projects/idea-into-action

Funder(s): Independent Schools Victoria, Australia

Investigating Impacts of Educational Experience (IIEE)

Exploring the effects of an international school network’s learning model on students, alumni, and society.

pz.harvard.edu/projects/investigating-impacts-of-educational-experiences

Funder(s): United World Colleges



Leading Learning that Matters I & II (LLtM)

Exploring leadership practices to enhance 21st century lives.

pz.harvard.edu/projects/leading-learning-that-matters

Funder(s): Independent Schools Victoria, Australia

Learning Innovations Laboratory (LILA)

Bringing together the leaders of organizational learning to develop a greater understanding of the field's current challenges.

pz.harvard.edu/projects/learning-innovations-laboratory

Funder(s): Annual funding comes from participant fees from 20+ global organizations

Learning to Think, Thinking To Learn (LTTL)

Helping schools create cultures of thinking and learning.

pz.harvard.edu/projects/learning-to-think-thinking-to-learn

Funder(s): Melville Hankins Family Foundation

Liberal Arts and Sciences in the 21st Century (LAS21)

Studying today's college landscape to inform tomorrow's higher education.

pz.harvard.edu/projects/higher-education-in-the-21st-century

Funder(s): Paula and Jim Crown, Thomas H. Lee. The Endeavor Foundation, Jackie and Mike Bezos, The Carnegie Corporation of New York, The Lumina Foundation, The Andrew W. Mellon Foundation, The Spencer Foundation. The Teagle Foundation, The Saul Zaentz Charitable Foundation



Making Across the Curriculum (MAC)

Applying the practices and pedagogies of maker-centered learning across content areas, a continuation of Agency *by* Design.

pz.harvard.edu/projects/making-across-the-curriculum-an-initiative-of-agency-by-design

Funder(s): E. E. Ford Foundation, Washington International School

Making Learning and Thinking Visible (MLTV)

Building cultures of thinking in Italian secondary schools using the MLV and VT frameworks.

pz.harvard.edu/projects/making-learning-and-thinking-visible-in-italian-secondary-schools

Funder(s): INDIRE (Istituto Nazionale Documentazione Innovazione Ricerca Educativa), Florence, Italy

Out of Eden Learn (OOEL)

Exploring our neighborhoods, exploring our world.

pz.harvard.edu/projects/out-of-eden-learn

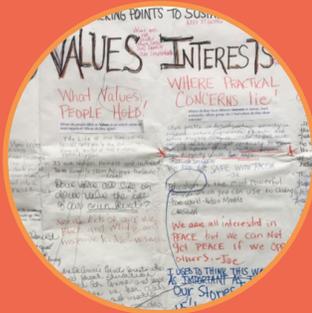
Funder(s): The Abundance Foundation, Global Cities Inc., and the National Geographic Society

Pedagogy of Play (PoP)

Cultivating school cultures that value and support learning through play in two sites—Billund, Denmark and Johannesburg, South Africa.

pz.harvard.edu/projects/pedagogy-of-play

Funder(s): The LEGO Foundation



PZ Connect

Developing brief online professional learning opportunities for small teams of teachers and developing tools to help learners engage with complexity.

pz.harvard.edu/projects/pz-connect-outreach

Funder(s): Independent Schools Victoria, Australia

Signature Pedagogies: High School

Examining how exemplary teachers design signature learning experiences.

pz.harvard.edu/projects/signature-pedagogies-in-global-education

Funder(s): Longview Foundation for World Affairs and International Understanding, Inc

The World in Washington DC

Toward a new approach to locally-grounded global competence education.

pz.harvard.edu/projects/the-world-in-dc

Funder(s): District of Columbia Public Education Fund and D.C. Public Schools

Celebrating 50 Years

“Coming to understand a painting or a symphony in an unfamiliar style, to recognize the work of an artist or school, to see or hear in new ways, is as cognitive an achievement as learning to read or write or add.”

Nelson Goodman (1968)
Languages of Art



RESEARCH PUBLICATIONS

In addition to various white papers, in FY18
Project Zero researchers published
88 books, chapters, articles, and blogs.

- Allen, D. (2017). "What is Education For?" In Boston Review.
- Allen, D. (2018). "Ten questions for the Parkland kids," In Washington Post Opinion.
- Bardige, B., Baker, M. & Mardell, B. (2018). Children at the center: Transforming early childhood education in the Boston Public Schools. Cambridge, MA: Harvard Education Press.
- Boix Mansilla, V. (2017). Educating for Global Competence: Reflecting on the purposes of contemporary education with the whole child and the world in mind. OECD NAEC Seminar Series.
- Boix Mansilla, V. (2017). Interdisciplinary Learning: Cognitive and epistemological foundations. In Oxford Handbook of Interdisciplinarity. UK: Oxford University Press (288-306).
- Boix Mansilla, V. and Chua, F. (2017) Signature Pedagogies in Global Education Understanding Quality Teaching Practice. In S. Choo et al "Educating for the 21st Century: Perspectives, Policies and Practices from Around the World." Singapore: Springer.
- Chen, J., Wang, M., Grotzer, T.A., Dede, C. (2017). Design of a Three-Dimensional Cognitive Mapping Approach to Support Inquiry Learning. Educational Technology & Society, 20(4), 191-204
- Clapp, E. P. (2017). Presenting a symptomatic approach to the maker aesthetic. Journal of Aesthetic Education, 51(4), pp. 77-97, DOI: 10.5406/jaesteduc.51.4.0077
- Clapp, E. P. (2018). La creatividad como proceso participativo y distribuido: Implicación en las aulas. Madrid: Narcea Ediciones.
- Davis, K. and Weinstein, E. (2017). Identity development in the digital age: An Eriksonian perspective. In M. F. Wright (Ed.), Identity, Sexuality, and Relationships among Emerging Adults in the Digital Age. Hershey, PA: IGI Global.
- Dawes Duraisingh, E. (2018) How teens understand the nuance of culture: The promises and pitfalls of intercultural digital exchange programs. Usable Knowledge Website, HGSE
- Dede, C., Grotzer, T., Kamarainen, A., & Metcalf, S. (2017). EcoXPT: Designing for deeper learning through experimentation in an immersive virtual ecosystem. Journal of Educational Technology & Society, 20(4) 166-178.
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- Gardner, H. (2017). "Taking a Multiple Intelligences (MI) Perspective (Commentary on Bukart et al.)" Behavioral and Brain Sciences.

- Gardner, H. (2017). Reflections on Artful Scribbles: The Significance of Children's Drawings. *Studies in Art Education*, (2).
- Gardner, H. and Weinstein, E. (2018). "Creativity: The view from big C and the introduction of tiny c." In Sternberg, R. J. and Kaufman, J. C. (eds.), *The Nature of Human Creativity*. Cambridge, UK: Cambridge University Press.
- Gardner, H., Kornhaber, M., and Chen, J. (2018). "The Theory of Multiple Intelligences: Psychological and Educational Perspectives." In Sternberg, R. J., *The Nature of Human Intelligence*. Cambridge, UK: Cambridge University Press, pp.116-129.
- Gardner, H. (2018). Higher Education: A Platonic ideal. In O. Zlatkin-Troitschanskaia, G. Wittum, and A. Dengel (Eds.), *Positive Learning in the Age of Information*. Berlin: Springer VS, pp. 9-21.
- Gardner, H. (2018). Historiometrics. In J. Brockman (Ed.), *This Idea Is Brilliant*. New York, NY: HarperCollins, pp. 370-373.
- Gardner, H. (2018). Multiple approaches to understanding. In K. Illeris (Ed.), *Contemporary Theories of Learning*. New York: Routledge, pp. 129-138.
- Gardner, H. and Mucinskas, D. (2017, August 7). "Good work: A view from across the pond." RSA Comment.
- Gardner, H. (2017, September). "Good work: Comments on The Taylor Review of Modern Working Practices." The Jubilee Centre for Character & Virtues. Insight series.
- Gardner, H. and Winner, E. (2017, October). "The Arts Have More to Teach Us" Education Week.
- Glăveanu, V. P. & Clapp, E. P. (2018). Distributed and participatory creativity as a form of cultural empowerment: The role of alterity, difference, and collaboration. In A. U. Branco & M. C. Lopes-de-Oliveira, *Alterity, Values and Socialization: Human Development within educational contexts*, pp. 51-64.
- Haste, H. and Gardner, H. (2017). "In Memoriam: Jerome S. Bruner (1915-2016)." *American Psychologist*: 72(7). American Psychological Association: pp. 707-708.
- James, C., Davis, K., Charmaraman, L., Konrath, S., Slovak, P., Weinstein E., & Yarosh, L. (November 2017). Digital life and youth well-being, social-connectedness, empathy, and narcissism. *Pediatrics*. *Pediatrics*, 139 (Supplement).
- James, C. and Lee, A. (2017). Speaking up online: Civic identity and expression in the digital age. In J. Earl & D.A. Rohlinger, Eds., *Social Movements and Media (Studies in Media and Communications, Volume 14)*. Emerald Publishing Limited, pp.119-146.

- Kamarainen, A.M., Thompson, M.M., Metcalf, S.J., Grotzer, T.A., Tutwiler, M.S., Dede, C. (2018). Prompting Connections between Content and Context: Blending Immersive Virtual Environments and Augmented Reality for Environmental Science Learning. In Beck, D., Allison, C., Morgado, L., Pirker, J., Khosmood, F., Richter, J., & Gütl, C. (Eds.). (2018). Immersive Learning Research Network: Fourth International Conference, iLRN. June 24–29, 2018. Proceedings (Vol. 840). Springer.
- Kamarainen, A., Weathers, K., Grotzer, T., Metcalf, S., Dede, C. (2017, August). Learning about Material Cycling Across Scales and Contexts through Mobile and Immersive Technologies. Ecological Society of America (ESA), Conference Proceedings, Portland, OR.
- Mardell, B. (2018). Crossing boundaries. In Cancemi, J. & Akita, K. Gifts from the Children. Houbun Shorin: Tokyo.
- May, S. and Clapp, E. P. (2017). Considering the role of the arts within maker-centered learning. *Studies in Art Education*, 58(4), 335-350, DOI: 10.1080/00393541.2017.1368287
- Moran, S., and Gardner, H. (2018). “Hill, Skill, and Will: Executive function from a multiple intelligences perspective.” In L. Metzger (Ed.), *Executive function in education: From theory to practice*, Second Edition. New York: Guilford Press, pp. 25-56.
- Tishman, S. and Clapp, E. P. (2017). Problem solving starts with agency. *Educational Leadership*, 75(2), 58–62.
- Tishman, S. (2018). *Slow Looking: The Art and Practice of Learning Through Observation*. New York: Routledge.
- Weinstein, E. (2017). Adolescents’ differential responses to social media browsing: Exploring causes and consequences for intervention. *Computers in Human Behavior*, 76,396-405.
- Weinstein, E. (2018). The social media see-saw: Positive and negative influences on adolescents’ affective well-being. *New Media & Society*.

Blog posts

- **14 blog posts** (July 2017-June 2018) authored by PZ researchers Susannah Blair, Elizabeth Dawes Duraisingh, Carrie James, Sarah Sheya, Andrea Sachdeva, and Shari Tishman for PZ’s Out of Eden Learn project, available on the Out of Eden Learn website at <https://walktolearn.outofedenwalk.com>.
- **40 blog posts** (July 2017-June 2018) authored by Howard Gardner and his research team, available via Life Long Learning: A Blog in Education at howardgardner.com; The Professional Ethicist at thegoodproject.org; and multiple intelligences-related posts at multipleintelligencesoasis.org.

Celebrating 50 Years

“Once we realize that people have very different kinds of minds, different kinds of strengths—some people are good in thinking spatially, some in thinking with language, others are very logical, other people need to be hands-on and explore actively and try things out—then education, which treats everybody the same way, is actually the most unfair education.”

Howard Gardner (1997)
*Big Thinkers: Howard Gardner on
Multiple Intelligences*



OTHER ACTIVITIES

Project Zero and its researchers engaged in a variety of learning opportunities that contributed to the Center's mission.



Involving HGSE Students

During the past academic year, **PZ researchers offered 11 HGSE courses, 1 FAS course, and 3 Independent Studies that enrolled a total of 285 students.** Nine of the 14 Principal Investigators at PZ offered the following courses:

- EDU-H614: Truth, Beauty, and Goodness Reframed (Howard Gardner)
- EDU-HT113: Research Practicum for Microschools: Developing Innovative Schools Based on Neuroscience and Cognitive Science Principles (Tina Grotzer)
- EDU-S300: The Arts in Education: Learning in and through the Arts (Steve Seidel)
- EDU-S301: The Arts in Education: Research, Policy, Advocacy, Activism, and Practice (Steve Seidel)
- EDU-S305: Slow Looking: Learning through Observation in Museums and Beyond (Shari Tishman)
- EDU-S316: Art, Design, and Learning in Public (Steve Seidel)
- EDU-S504: Introduction to Qualitative Research (Elizabeth Dawes Duraisingh)
- EDU-S510: Qualitative Research in Practice (Elizabeth Dawes Duraisingh)
- EDU-S999: Independent Study: Reggio-Inspired Practice (Ben Mardell)
- EDU-T543: Applying Cognitive Science Research Principles to Learning and Teaching (Tina Grotzer)
- EDU-T600: Thinking and Learning Today and Tomorrow: Project Zero Perspectives (Edward Clapp & Carrie James)
- GOV-3008, Research Workshop in Political Theory (Danielle Allen w. Michael Rosen)
- EDU-S999: Independent Study: Making for Others (Edward Clapp)
- EDU-S999: Independent Study: On the relationship between playful learning and “Flow Theory” (Ben Mardell)
- EDU-T010D: Education as a Profession (Howard Gardner)

PZ Session at “Discover GSE” Orientation: At the beginning of the Fall 2017 semester, PZ offered an overview of its research and work with educators in the field to students and the wider HGSE community. The 90-minute session offered opportunities for students to hear about PZ projects and the ways they could be involved in work-study and researcher roles. Approximately 175 participants attended this session.

Master’s and Undergraduate Students: Each year, a limited number of research positions are available for HGSE master’s students, many with work-study funds, to be involved in active PZ projects. Last year, PZ projects involved 31 master’s students and one undergraduate student, giving them a variety a professional development opportunities at our research center.

Doctoral Students: Many PZ projects create roles for HGSE doctoral students to hone their intellectual and research skills via active participation in ongoing research projects. In FY18, a total of 11 students were engaged as doctoral researchers at PZ.

Convening Professional Learning for Educators

PZ continues to offer a range of HGSE-based and off-site institutes for local and global educators. In FY18, PZ researchers opted to scale back these offerings to focus on PZ’s 50th celebration activities. PPE and PZ hosted the 22nd annual **Project Zero Classroom** (July 2017), a five-day event, which **enrolled 362** educators from around the world.



Engaging Educators Online

The PZ Reach team reorganized into a cohesive working unit so that all professional learning opportunities, special events, digital strategy, communications, marketing and outreach efforts are now coordinated by one team. Highlights from the year included:

- The PZ communication channels—*Zero In* newsletter, and social media channels (primarily Twitter and Facebook)—supported outreach to many new individuals and organizations.
 - PZ’s website had almost 40,000 new visits for a total of 379,884.
 - Almost 2,800 individuals signed up to receive the newsletter and other updates from PZ for a total more than 6,375 subscribers.
 - PZ’s Facebook likes increased 10% to just over 11,109 and PZ’s Twitter followers increased 15% to just over 25,209.
- In collaboration with Programs in Professional Education, PZ’s instructional teams of more than 65 instructors and coaches facilitated six online courses for 2,718 participants, with a 90% overall satisfaction rate. More than 97% of participants confirmed they will use the ideas they learned in the courses in their educational contexts.



Celebrating 50 Years

*“Learning is a
consequence of
thinking. The mission...
is not only learning to
think but thinking to
learn.”*

David Perkins (1992)
Smart Schools

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Project Zero Online

February 2019

pz.harvard.edu/professional-development/online-courses

Six, 13 week long, coach-facilitated, asynchronous online courses.

Creating Cultures of Thinking · **Making Learning Visible** · **Multiple Intelligences**
Teaching for Understanding · **Thinking & Learning in the Maker-Centered Classroom**
Visible Thinking

Upcoming Events & Institutes

Artful Thinking & Learning: Creative Inquiry Across the Disciplines

April 5 - 6, 2019 | Atlanta, GA

casieonline.org/pz-atl

Project Zero Classroom

July 22 - 26, 2019 | Cambridge, MA