9 IDEAS
that light PZ's way

Inquiry in the Arts & Learning · Assessment Reimagined · Developing Understanding · Character & Ethics · Civic Agency · Creativity · Exploring Thinking · Global Competencies · Intelligences

This academic year, Project Zero is celebrating its 50th anniversary. We formally started the anniversary celebration in the fall with a public forum on October 13, 2017—**Changes in Mind: Five Decades of Insights into Intelligence, Thinking, and Learning,** which offered 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. The following day, we convened more than 150 collaborators, funders, and researchers around Project Zero's nine areas of research to consider the past and the present, and to wonder about the future. This **special edition** of the *Zero In* newsletter reminds readers of these facets of PZ's work and poses some provocative questions that are launching PZ into the future.

As we go forward into our next decade, and in honor of our 50th celebration, PZ has made an organizational commitment to reach hundreds of educators in the US and globally who are working with learners in historically marginalized and/or under-resourced settings and contexts. For too long, PZ and Harvard's in-person and online learning experiences have not been accessible to all. We are grateful to some of our closest supporters who kicked off the campaign with more than $13,000 in individual donations. We encourage readers and PZ enthusiasts to build on this great start and to consider making a donation to "Support PZ's Reach" in honor of our 50 years. Thank you in advance for your support of PZ's ideas and educational impact throughout the world.

*Note: The perspectives below represent the words of many of PZ's lead researchers as well as those who worked on the projects that supported the development of the concepts and frameworks guiding the nine key ideas that follow.

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 Reimagined

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?

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 agentive 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?
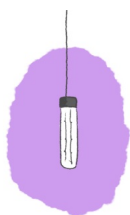
Character & Ethics

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?

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 civic skills, 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?

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?

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 information-rich 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?

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?"