Towards a Pedagogy of Play

A Project Zero Working Paper
The Pedagogy of Play Research Team[1]
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Charlotte, Matthew, Else[2], and a dozen other middle school classmates are doing something they have never done before: drawing the map of the world on an orange. Working in pairs, children consult atlases, globes, a large wall map, and Google Earth as they outline the continents. For twenty minutes there is laughter, confusion, discussion and focused attention. Drawings completed, the children peel their oranges and note the surprising changes to their maps as the peels are flattened.

Reflecting on their experiences students write:

Charlotte: It is hard to represent the world as flat. But using the orange makes you[r] mind more awake and you listen more and I am enjoying it.

Matthew: It's messy, untidy, chaotic and weird.

Else: We were drawing and laughing together. It was playful and I learned a lot, too –the size of the South Pole, the island of Bora Bora. Maybe we can use an apple to explore the interior of the earth?

Tue Rabenhøj, their teacher at the International School of Billund in Denmark, embraces the school's mission that children learn through play. For him, drawing on an orange is a playful way to understand the relationship between our three-dimensional earth and two-dimensional representations such as maps. Tue sees the cultivation of his students' playful dispositions as essential in order for them to become collaborative, empowered, and creative global citizens.

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[2] Children's names have been changed throughout this paper

Playful learning experiences such as the one that Tue set up are effective yet elusive practices in many schools. As educators look to develop students' intellectual, social, emotional, and physical abilities, playful learning can be a powerful ally. Charlotte, Matthew, and Else's experiences reflect feelings of delight, surprise, and agency in the process of developing knowledge, skills and dispositions. Through this playful activity they are building disciplinary knowledge, critical thinking skills, and collaborative capacities. They are exploring, wondering, making connections, and laughing.

However, making room for playful learning in school can be difficult. Formidable tensions exist between playful learning and the way teaching and learning are currently structured in most schools. Educators often differ in how they value playful learning practices and their understandings of the nature of play. For, what is playful to one learner may not be experienced as playful by another. To those who view play as a central pathway for learning, resources such as time, space, and materials can seem in short supply. To those who see play as silly and off-task, encouraging playful learning can run counter to educational policies that emphasize efficient coverage of the curriculum. Though educators like Tue bravely embrace playful learning, to convert such efforts into deep and lasting change in and across schools requires more than good will and the commitment of individual teachers.

We believe that a *pedagogy of play*—a systematic approach to the practice of playful learning and teaching—is needed to bridge these tensions. Creating and operationalizing such a pedagogy requires a school culture where playfulness is celebrated, examined, made visible, and better understood as a powerful pathway of learning. Indeed, bringing play into a central role in a school entails creating a culture that values the core tenets of play: taking risks, making mistakes, exploring new ideas, and experiencing joy.

The purpose of this paper is to share ideas that are emerging from a recent research initiative called a *Pedagogy of Play* that explores how playful learning can assume a central role in school. The study is being carried out by Project Zero, in collaboration with the International School of Billund (ISB) in Denmark, and the LEGO Foundation.[3] We begin our discussion by situating our work in the fields of play and learning. Next, we share an emerging model called the *indicators of playful learning,* which describe what playful learning looks like in school. We then outline some of the challenges and puzzles of integrating playful learning into school settings, and conclude by describing the promise of a pedagogy of play for the future.

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[3] Project Zero is a research center based at the Harvard Graduate School of Education. The International School of Billund serves three through fourteen-year-olds. The LEGO Foundation is both funding the project and an intellectual partner in the work.

Play, playfulness and learning through play

What exactly is meant by the terms *play* and *playfulness*? This question has long been a subject of debate among scholars (Barnett & Owens, 2015; Eberle, 2014; Hirsh-Pasek, Golinkoff, Berk, and Singer, 2009; Sutton-Smith, 1997). Depending on the context, the terms carry different connotations. The word play alone can conjure up a variety of images, feelings, and activities: to play an instrument, play house, or play with a fish on the line. Play and playfulness can happen suddenly, as when children (or adults) play with words, or over longer stretches of time, as when dramatic play extends over hours or even days and weeks. Such differences speak to what Sutton-Smith (1997) calls "the ambiguity of play." Yet wherever children are—indeed, wherever people are—there is play. It may be celebrated, ignored, or suppressed, but even under extreme and harsh conditions, play makes appearances (Eisen, 1988). As Schechner (1988) explains,

> [I]t's wrong to think of play as the interruption of ordinary life. Consider instead playing as the underlying, always there, continuum of experience…Ordinary life is netted out of playing but play continually squeezes through even the smallest holes…[W]ork and other activities constantly feed on the underlying ground of playing, using the play mood for refreshment, unusual ways of turning things around, insights, breaks, openings and especially looseness. (p. 16)

The numerous conceptions of play and playfulness share some generally agreed upon features. Play is typically considered a pleasurable, spontaneous, non-goal directed activity that can include anticipation, flow and surprise (Barnett & Owens, 2015; Brown, 2009; Csikszentmihalyi, 1990; Eberle, 2014; Gray, 2015; Hirsh-Pasek et al., 2009). Play is both objective and subjective, comprising qualities of observable behavior as well as qualities of felt experience.

With regard to playfulness, researchers such as Barnett (1990) and Lieberman (1977) suggest that in order to truly play, children need to demonstrate a predisposition to perceive an activity as play. Christian (2012) summarizes, "It is the child's playfulness that renders an activity play. As such, playfulness is recognized as the essence or spirit of play" (p.19). Playfulness can be seen as the disposition to frame or reframe a situation to include possibilities for enjoyment, exploration and choice.

These terms—play, playful, and even learning—are complex and complicated constructs with ambiguous relationships between and among them. For instance, not all play is playful (e.g., professional football). Nor does all that might be considered *playful* (e.g., a conversation) resemble what would ordinarily be called *play*. And although play often supports learning, some kinds of play (described by King (1987) as "illicit play") can also undermine and subvert targeted learning (Sutton-Smith, 1988).

We prefer not to put boundaries around or adhere to strict definitions of these

terms. *Instead, we find it helpful to frame our work around a constellation of features that we call playful learning.[4]* Foregrounding playful learning does not mean that all learning has to be playful, or that every moment of playfulness involves significant learning. What it does mean is that a close look at play and playfulness reveals numerous emotional, social and cognitive features that can powerfully abet learning in many, perhaps most, circumstances. Sometimes these features help to make learning feel playful; sometimes they simply help the learning to proceed in a more engaging and exploratory way, without feeling playful as such (D. Perkins, personal communication, May 8, 2016). A large body of literature speaks to the importance of learning through play; we briefly summarize that literature next.

The benefits of learning through play

Play has long been recognized as a central way children learn (Dewey, 1944; Froebel, 1887; Hirsh-Pasek et al., 2009; Huizinga, 1955; Piaget, 1971; Vygotsky, 1978). In playful learning, children try out ideas, test theories, experiment with symbol systems, explore social relations, take risks, and reimagine the world. Failure is an opportunity to try again. Vygotsky (1978) explains that "a child's greatest achievements are possible in play, achievements that will tomorrow become her basic level of real action" (p.100). In playful learning, children are engaged, relaxed, and challenged—states of mind highly conducive to learning (LEGO Learning Institute, 2013). Children do not stop playing when they enter grade school. While the nature of the play changes as children grow into teenagers—there may be more complex games with rules, advanced physical activity like team sports, programing with computers, and jam sessions with instruments—the active engagement and meaning-making continues (Frost, Wortham, & Reifel, 2012). Playful learning offers a pathway for intellectual, social, emotional, and physical development.

Intellectual development
By fostering engagement and stimulating sense making, play allows learners to build domain-related skills, content knowledge, and creative thinking. When children play with blocks, draw, and engage in dramatic play, they count, classify, and create and examine patterns (Ginsburg, Lee, & Boyd, 2008). Socio-dramatic play involves telling stories, using rich vocabulary and practicing writing (Cooper, 2009; Dickinson & Tabors, 2001; Flewitt, Cremin, & Mardell, in press; Rosko & Christie, 2015). Children who participate in play-oriented early childhood classrooms show long-term academic gains (Marcon, 2002; Lillard & Else-Quest, 2006; Weiland & Yoshikawa, 2013). Studies such as these, as well as examples

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[4] A further illustration of the ambiguity of play, we note that many colleagues use the related term "learning through play" to foreground the combination of learning, play and playfulness. While some in the field see subtle but important differences between the two terms, in this paper we use them interchangeably.

from primary and middle years classrooms, demonstrate powerful links between play and the acquisition of academic skills, deepening content knowledge in the domains of mathematics, literacy, science, and information and computer technology (e.g., Cheng, 2011; Han, Moore, Vukelich, & Buell, 2010; Honeyford & Boyd, 2015; Kangas, 2010; Kennewell & Morgan, 2006). Playful learning is also a wellspring of creativity. Providing children the opportunity to ask "what if?" helps them to imagine new possibilities, identify problems, and work to solve them. They form new connections between people, ideas, materials and the world. It is not surprising that children who are more playful are more creative (Bateson & Martin, 2013).

Social development
When learning through play, children often engage with others and make sense of relationships (Shonkoff & Phillips, 2000). They learn to read cues, listen, and take another's perspective— all key aspects to the development of empathy. They build friendships based on trust and experience the satisfaction of creating with others. As children enter primary school, peers take on increasing importance, and play's contribution to social learning continues. Students learn to share ideas, express themselves, negotiate, and reach compromises (Mraz, Porcelli, & Tyler, 2016). In play they learn to balance autonomy and interdependence. In short, they learn the skills and dispositions of collaboration (Project Zero & Reggio Children, 2001; Paley, 1990; Frost et al., 2012).

Emotional development
As children develop from preschool to middle school, playful learning contributes to emotional growth. In early childhood, a central task is learning to self-regulate—to defer gratification, control impulses, and direct one's attention. In playful learning, children develop the motivation and capacity to follow rules and pay attention. Studies suggest a positive relationship between play and self-regulation (e.g., Elias & Berk, 2002; Berk, Mann, & Ogan, 2006). Self-regulation skills predict important outcomes such as peer acceptance, positive self worth, and college completion (Frost et al., 2012; McClelland, Acock, Piccinin, Rhea, & Stallings, 2013). Learning through play also contributes to children's sense of agency –the capacity and wherewithal to influence, manipulate, and shape one's world. This sense of agency enables children to recognize and act on opportunities for change, and empowers them to make choices about their lives (Clapp, Ross, Ryan, & Tishman, in press). When children play, they are in charge; they set the agenda; they construct and deconstruct the rules. It is the children who determine how (and when) to conform, when to deviate (or become deviant), and when to lead (or follow). In sum, playful learning engages children in exploring and making sense of the world, while developing self-regulation and agency.

Physical development
Children's physical health and well-being lay the groundwork for learning in other spheres (Copple & Bredekamp, 2009; Dotson-Renta, 2016; Pica, 2004), and play

supports this development. At its core, much of play is physical, as children often choose to play with and through their bodies (Wennerstrand, 1998). In such play, a child develops strength, muscle control, coordination, reflexes, and gains a sense of her own body's abilities and limits (Frost, 2015; Manning, 1998). Furthermore, play, whether climbing a tree or playing tag, is often about pushing limits and trying new things—activities that that can motivate children to take these risks.
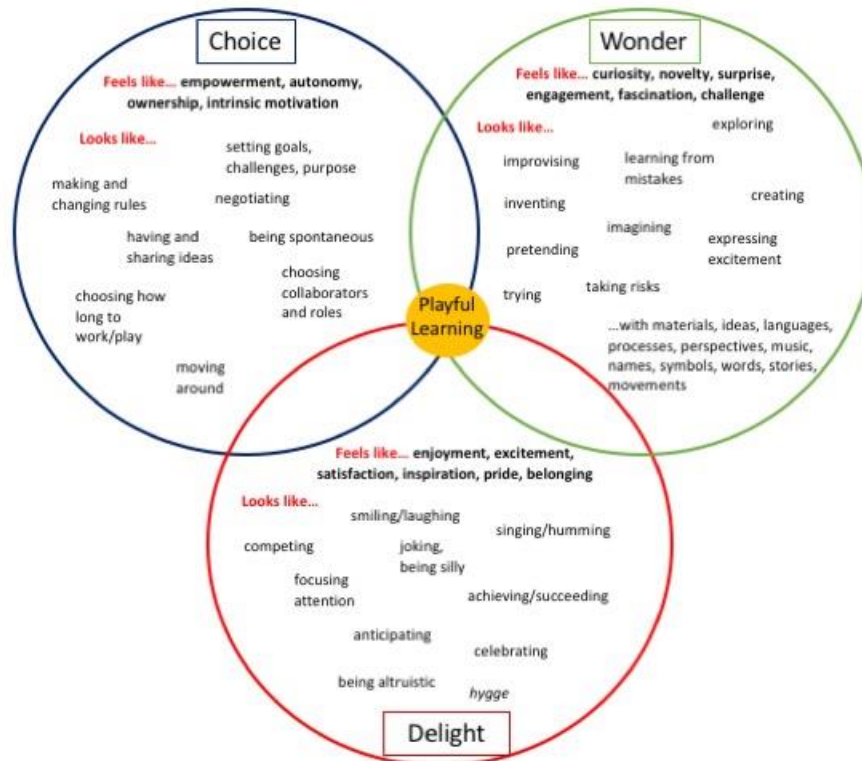
Indicators of Playful Learning

As one of our first steps toward creating a pedagogy of play, we felt the need to understand and have some clarity about what playful learning looks like. Working closely with teachers at ISB and other playful learning thought partners, we are developing a tool we call the *Indicators of Playful Learning*. Ultimately, we envision that this tool may be used for educators to plan for, assess, and reflect on playful teaching and learning.

The development of the indicators has been informed by the field (e.g., theories and positions from relevant literature) as well as activities that we have been engaging in. The opening vignette in this paper is just one of many documented examples—along with teacher and student interviews, teacher surveys, documentation of moments in school (e.g. video and photographs from classrooms, transcripts of conversations among children and teachers, etc.), and classroom observations—that supply data about what playful learning looks like in classrooms. For example, during school visits to ISB, members of the Project Zero research team used a draft of the indicators tool to focus classroom observations, and then discussed these observations with teachers and students. We have also solicited feedback from teacher and researcher colleagues in workshops, meetings, and graduate level courses.

While the articulation of these indicators will continue to be an evolving process, what is emerging is a model of playful learning with indicators in three overlapping categories: delight, wonder, and choice. These categories aim to describe the quality of learners' experience as they build understanding, knowledge, and skill. Because playful learning includes both subjective and objective dimensions, the indicators represent psychological states as well as observable behaviors. When all three categories are "in play," represented by the intersection of the circles, playful learning is most likely occurring.

Choice

Feels like... empowerment, autonomy, ownership, intrinsic motivation

Looks like...

setting goals, challenges, purpose

making and changing rules

negotiating

having and sharing ideas

being spontaneous

choosing collaborators and roles

choosing how long to work/play

moving around

Wonder

Feels like... curiosity, novelty, surprise, engagement, fascination, challenge

Looks like...

exploring

improvising

learning from mistakes

inventing

creating

imagining

pretending

expressing excitement

trying

taking risks

...with materials, ideas, languages, processes, perspectives, music, names, symbols, words, stories, movements

Playful Learning

Delight

Feels like... enjoyment, excitement, satisfaction, inspiration, pride, belonging

Looks like...

smiling/laughing

singing/humming

competing

joking, being silly

focusing attention

achieving/succeeding

anticipating

celebrating

being altruistic

hygge

For the playful learner, **choice** includes a sense of empowerment, autonomy, ownership, spontaneity, and intrinsic motivation. Learners may experience these feelings individually or as part of a group. Collectively making choices, and the accompanying sense of being part of something bigger than oneself, can enhance feelings of empowerment and ownership. To an observer, learners demonstrating choice are setting goals, developing and sharing ideas, making and changing rules, and negotiating challenges. They are also likely to be choosing collaborators and roles, how long to work or play, and when to move around.

In the orange activity, Charlotte, Matthew, and Else make choices. They choose who they want to work with and how to research the earth (with an atlas or on Google Earth). Having choice does not necessarily mean that there are no external boundaries or constraints influencing an activity. The activity itself, the goals of the activity, and the time allotment were determined by the teacher; however, Charlotte, Matthew, and Else had many opportunities for making their own decisions within these constraints. The reality for children (and often adults) is that they rarely have complete choice. As we shall see, tensions between children's interests and adult learning goals can arise in schools. What is perhaps most important about the experience of choice is that children feel autonomy and ownership; that they feel they have opportunities to do what they want to do.

Wonder entails the experience of curiosity, novelty, surprise, and challenge, which can engage and fascinate the learner. To an observer, a sense of wonder involves improvising or exploring, creating or inventing, pretending or imagining, and taking risks or learning from trial and error. Wonder can emerge from the ordinary to the extraordinary. A sense of wonder might be experienced through play with materials, ideas, perspectives, music, symbols, words, languages, stories, movement, or other modes of expression.

Being asked to draw the map of the world on an orange was certainly new to Charlotte, Matthew, and Else. It seemed to elicit surprise and challenge. Charlotte explained that it made her "mind more awake." But as mentioned, experiences of playfulness are subjective, and Matthew found the activity "messy, untidy, chaotic and weird." Although Charlotte and Else seemed to be engaged by the activity, this was less true for Matthew.

Feelings of **delight** include excitement, joy, satisfaction, inspiration, anticipation, pride, and belonging. Learners who feel delighted may smile, laugh, joke, or perhaps be silly. They might sing or hum or dance, and they could feel a sense of *hygge,* a Danish term that reflects sharing a cozy time with good friends. Their attention may be focused. Delight may also be experienced through playful competition, celebration, or engaging in an altruistic act.

The laughter Else mentions, Charlotte's enjoyment, and Else's anticipation of future playful experiences (using the apple to explore the Earth's interior) are all indicators of delight. Teachers, too, can experience delight in their work. Tue thought up the orange activity over his morning coffee, and, in anticipation, "couldn't wait to see what would happen."

Suggesting that delight has its place in school does not mean that we do not take learning seriously. We do. However, one should not confuse taking schooling seriously with removing fun, joy, and pleasure from the process of learning. Unfortunately, a sense of delight is often missing in schools.

Some caveats about the Indicators of Playful Learning model are worth noting. Because some of the indicators are subjective in nature, it is important to reflect on and talk with learners about their experiences. Each category contains multiple indicators; some indicators show up across categories. For example, "excitement" is listed as part of delight, but it could be related to feelings of "surprise" in wonder. The indictors should not be seen as binary constructs. One might experience wonder, delight, or choice to a stronger or lesser degree, depending on the setting, the activity, and one's personality. A child might feel extremely delighted running outside on the playground, and a more subdued sense of delight when listening to a story. These experiences of delight might be qualitatively different from each other, but both are experiences of delight nonetheless. When children experience choice, this does not necessarily mean that teachers are uninvolved in the activity. In fact, some teacher moves can help

children navigate self-direction. Creating the conditions in which playful learning flourishes is influenced not only by educators in the classroom, but also by larger forces that shape the context.

Forces influencing learning through play in school

Taking inspiration from field analysis in the social sciences (Lewin, 1951), we find it useful to think of school as a *playing field* in order to understand the conditions that have an effect on learning through play. Schools are complicated systems, comprised of multiple shifting and interdependent parts and interactions. Every learning experience that takes place in a classroom, on a playground, during afterschool time, or in the staff room is shaped by innumerable forces that can either support or suppress playful learning.

Forces that influence the school playing field include the materials available in the classroom, time, opportunities for learners to interact with each other, and classroom and school norms. Are children encouraged to show curiosity, take risks, express joy or other emotions, and make choices? The environment itself (light, acoustics, layout, furnishings) affects the quality of activity and a playful disposition. In our research with ISB, we are tracking and exploring these and other forces. Here we highlight three systemic challenges: the fundamental tension between the nature of play and the nature of school; the presence or absence of alignment among adults about the role of play in learning; and the current educational policy climate.

Paradoxes of play and school

Play is fluid, unpredictable, and at times scornful of authority, so it is not surprising it can seem at odds with the goals and structures of school. The spontaneous and non-utilitarian nature of play can make it an uneasy fit with the social and cultural contrivance of school. As Kuschner (2012) argues, a series of "unremitting contradictions" arises between play and school. In play, the players lose their sense of time; schools are governed by timetables. Play can be chaotic, messy, and loud; schools aspire to be places of order. In play, children take risks (physical and psychological); schools are places where children should be safe. Play is unpredictable and full of surprises; school has a clear agenda (M. Karlsen, personal communication, May 26, 2016). Play emerges from children's desires and vitality—the child is in charge; at school, the adults set the agenda often based on standards created by authorities distant from individual children and their teachers. It is important not to gloss over these contradictions and find it useful to frame them as "paradoxes"—two goods that are seemingly at odds—to be recognized, studied, and constantly renegotiated. However, the paradoxes can be more easily navigated when the adults in a school share a common vision of the role of play in learning.

Alignment about play

Playful learning has a complex subjective nature—as we have noted, what is playful learning for some is not playful learning for others. This is made all the more complicated by the cultural and pedagogical beliefs and values of educators and families. The ways in which any of us understand the nature of playful learning, the adult's role in supporting it, and its place in school are heavily influenced by culture. Although children in all cultures play, such play may be accepted, cultivated, or curtailed (Whitebread & Basilo, 2013). Cultures differ widely in their beliefs about gender and play, the age one should stop playing (if at all), and whether and how adults should participate in children's play. In an increasingly globalized world, where educators from different backgrounds are working side by side, achieving alignment about play's role in school is an immense challenge. Yet, without a unified view of the role of play in learning and what it looks like, educators may be working at cross-purposes and sowing confusion. Such alignment is even harder to come by given the current educational policy climate's focus on standards.

The educational policy climate

Play is inherently resistant to the perhaps unintentional standardization resulting from many education reform movements. Historically, numerous educators from Plato to Dewey have extolled the virtues of play and playfulness in learning; however, playful learning has rarely been a prevalent approach in primary or secondary education. This is certainly the case in the last 150 years in Europe and the US, with the dominance of the industrial model of school. Play has little place in a factory. The exception is early childhood education. Yet even in early childhood, the current educational policy climate has narrowed the space for play in school. In two of the largest public school districts in the United States, New York City and Los Angeles, an investigation found that kindergartners spent more time preparing for tests than playing (Miller & Almon, 2009). Another US study (Bassok, Latham, & Rorem, 2016) tracked kindergarten practices from 1998 to 2006, the eight-year period when the standards movement came to the fore. The research found a clear move towards direct instruction, a focus on curriculum involving literacy and numeracy and a decrease in child-initiated activities. Throughout the world, desks have replaced dollhouses and blocks, and direct instruction has replaced child-directed activities in early childhood classrooms (LEGO Learning Institute, 2013).

In the older years, the Programme for International Student Assessment's (PISA) 'league tables' (aimed at comparing and rating schools and countries by way of test scores) have resulted in a proliferation of high stakes tests and externally determined standards. Many countries have responded with highly prescriptive curricula that cater to test results, consequently diminishing space for playful learning in schools (Ball, 2013; Moss, 2009; Wohlwend & Peppler, 2015; Sahlberg, 2011). In elementary and middle schools, students have less to time explore, experiment, inquire, and take risks during formal learning times. With pressures to cover mandated curricula, teachers feel obliged to cut engaging

activities such as debates and group projects. Even in domains where students have historically engaged in inquiry, such as the arts, social studies, and the sciences, standards have forced teachers to focus on convergent thinking and right answers. Rather than becoming critical and creative thinkers and communicators, an important concern is that children are becoming passive spectators skilled at following directions.

The Promise of a Pedagogy of Play

We believe a pedagogy of play—a systematic approach to the practice and study of playful learning and teaching in school—will help to build a shared language and understanding of how to support learning through play. We are in the process of articulating key structures and practices which we hope can help fulfill the potential of learning through play in schools. Hope and inspiration for a pedagogy of play come from the International School of Billund (ISB) and other pockets around the world where administrators and teachers are valuing, supporting, and making visible learning through play.

With the ISB educators, we are developing a research approach we are calling "playful participatory research." The approach builds on action research models in which educators collaboratively and critically identify questions, and develop and document emerging hypotheses.[5] The opening vignette illustrates one teacher's efforts to support children's learning through play and to create the conditions for delight, choice, and wonder.

A pedagogy of play can help educators in a school to align practices so they are all rowing in the same direction based on a shared understanding of when and how play can support learning. A pedagogy of play also offers the possibility to reframe Kuschner's "contradictions" as paradoxes to acknowledge, examine, and perhaps even embrace. As the Danish physicist Neils Bohr would say, *How wonderful that we have met with a paradox. Now we have some hope of making progress.* The promise of such a pedagogy is that it will enable self-directed learning to thrive within the constraints of a schedule, honor children's interests and passions within a context of targeted learning goals and standards-based curriculum, and provide schools with structures that encourage healthy risk-taking while keeping children safe.

Charlotte, Matthew, and Else are growing up in an increasingly interconnected and complex world. They and their contemporaries will be directly confronted by the challenges of mass migration, climate change, and the problems and possibilities that accompany technological innovations. As their teacher Tue

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[5] For more information on our research methods and collaboration with ISB, see our companion paper, *Playful Participatory Research,* http://pz.harvard.edu/resources/playful-participatory-research.

realizes, the cultivation of playful dispositions will enable them to be creative and collaborative contributors to the world's challenges. These playful dispositions are needed not just in Tue's school, but around the world. A pedagogy of play will help us look to the future by providing a framework, tools, and pictures of practice to better understand, document, and support playful learning for all children.

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