Playful Participatory Research

An emerging methodology for developing a pedagogy of play

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The Pedagogy of Play Research Team[1]
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Nine teachers at the International School of Billund (ISB) in Denmark are gathered in the school conference room, ready for their monthly session of the Playful Language Learning Study Group. They are a diverse group, teaching subjects ranging from first grade to library to middle school Spanish. Ben and Megina, researchers from Project Zero (PZ), are facilitating the session via Skype from the Project Zero office in Cambridge, MA, U.S.A, in collaboration with Mette, one of the ISB teachers.

"Ready for Hypothesis Charades?" Ben asks, and Mette passes out a handout listing the group's working hypotheses about what playful language learning looks like in classrooms. The activity is designed as a way to re-engage the teachers with these big ideas that have been co-constructed over the course of several sessions together. The first team acts out the hypothesis, "In playful activities, participants are more comfortable taking risks, and risk-taking can lead to more learning," pantomiming leaping from a height and cheering upon a successful landing. Giggles and smiles erupt all around.

After the game, the group turns to a more serious conversation about the hypotheses, discussing classroom artifacts that offer additional food for thought. Watching a short video of Mette's first graders reflecting on a playful story-writing activity sparks a conversation about the role of reflection in playful learning. Marisa, the school librarian, comments that the reflection seemed to helped students think about next steps in their learning. Jenna, a third-grade teacher, asks Mette if the reflection might "feed forward," informing her next steps in teaching writing, and Mette agrees. Inspired by this conversation, the group agrees to add a new sentence to their hypotheses on reflection: "Reflection can 'feed forward,' informing next steps for teachers and students".

The vignette above paints a picture of Playful Participatory Research, a methodology borne out of a research collaboration between Project Zero, the International School of Billund, and the LEGO Foundation.[2] Called Pedagogy of Play, the initiative aims to understand how learning through play can assume a central role in school.[3] The

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[2] Project Zero is a research center based at the Harvard Graduate School of Education. The International School of Billund serves children aged three years through middle school. The LEGO Foundation is the project's funder and also an intellectual partner in the work. For more information about the project, please see our companion paper *Towards a Pedagogy of Play,* at http://pz.harvard.edu/resources/towards-a-pedagogy-of-play

[3] In this paper we use the terms learning through play and playful learning interchangeably. See our companion paper for a discussion of play and learning related terminology.

purpose of this paper is to unpack this methodology, and to share some of the ideas that have emerged from the first year of the ISB-PZ research partnership[4].

Project Purpose and Research Questions

The Pedagogy of Play project aspires to change the way that educators, family members, and policy makers think about play and playful learning, and to offer tools and resources for those wishing to systemically bring more playful learning to schools. This endeavor requires both a solid understanding of what is meant by play, playful, and playful learning, and an exploration of the structures, strategies, and systems that encourage (and sustain) the integration of ideas around play into the school experience. To these ends, the Pedagogy of Play research initiative is centered around four core research questions:

- What is the relationship between play, playfulness and learning through play?
- How can a pedagogy of play be adapted to address different disciplines, age levels, and cultural contexts?
- What are the aspects of a school culture that promote learning through play and the experiences, rituals, tools, and spaces (e.g. celebrations, documentation, maker spaces) that support a culture of learning through play?
- How can school leaders empower teachers to increase playfulness and learning though play?

We address these questions through the Playful Participatory Research process. Below we describe this research approach and situate it in the wider field of education research.

Situating Playful Participatory Research

The Pedagogy of Play project employs a research paradigm best described as a partnership between university-based researchers and school-based educators. What do we mean by *playful participatory research*? Numerous examples exist of research that has followed a similar approach (e.g. Goodwin et al., 2014; Newman & Mowbry, 2012; Simon, Campano, Broderick, & Pantoja, 2012). This participatory approach is congruent with a family of research known broadly as the practitioner inquiry approach (Cochran-Smith & Lytle, 2009)— research that is conducted by educators, administrators, and other practitioners working in school settings. It is also congruent with participatory action research traditions (Noffke & Somekh, 2009; Reason & Bradbury, 2008), which place an emphasis on conducting research *with* rather than *on* communities. These approaches are distinct from other examples of educational research in which external researchers may conduct studies within school settings, but without engaging with school-based practitioners as partners in the research.

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[4] It is worth highlighting the emergent nature of this research, and the likelihood that ideas presented here will continue to iterate.

Knowledge construction in a playful participatory approach is a democratic process in which the whole school community (e.g., teachers, children, administrators, families) act as co-researchers (in varying roles and situations), engaging in both the consumption and production of knowledge. This is similar to what Cochran-Smith and Lytle (1999) refer to as *knowledge-of-practice.* In developing a Pedagogy of Play, we believe that it is essential not only to delve into existing literature related to play and playful learning, but also to draw upon the knowledge of school-based practitioners. In our partnership with ISB, we develop questions that are explored together. Teachers and other school faculty act as researchers by documenting children's learning in the classroom, and sharing this documentation with their colleagues and the Project Zero research team, who join in interpreting and synthesizing the research. As in Loris Malaguzzi of Reggio Emilia's metaphor of teaching and learning as a game of ping-pong, participatory research involves a lively back and forth of ideas (Hall et al., 2014).

Linking "research" and "playful" is somewhat unusual, but not unprecedented. Bateson and Martin (2013) describe a number "famously playful scientists" (p.58), including several Nobel prize winners, who attribute their creative research successes to a playful mindset. In our work, we intentionally adopt a playful stance for three reasons. First, given the profound benefits of playful learning, engaging in participatory research in playful ways can enhance the learning experience for the adults involved. Play involves envisioning the future and imagining possibilities. It involves, as Sutton-Smith (1997) explains, a sense of optimism and persistence in the face of adversity. This envisioning of possibilities, for example theorizing about what education can be, is at the heart of our endeavor. Thus, even as we strive to understand and articulate a Pedagogy of Play for children and adolescents, the act of staying playful in our research may enable us to be more creative and generative in our work. In planning for our limited time to work with the ISB teachers, we found that playful experiences (where learning objectives and outcomes may not be linear) were often the first to hit the cutting room floor. Naming a focus on playfulness in our research helps ensure that play is kept on the table.

Second, in previous Project Zero research we have found strong parallels between the adult and child learning environments (Project Zero et al., 2003). So if we want a school that is playful for children, we believe that we need a playful learning environment—one that is engaging, joyful, creative, and satisfying—for the teachers. In playful participatory research, teachers act as agents of play and playfulness. They "play with" their role as teachers, using the classroom environment, materials, and curriculum to test out new ideas for playful learning.

Finally, a playful participatory approach is appropriate when children, including young children, are invited into the research process. We aspire for teachers to engage children as co-researchers in their own classrooms, eliciting their feedback about playful learning experiences and approaches. Since play is a core resource through which children learn[5], a playful approach naturally engages children in the research process.

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[5] For more about play and learning, see our companion paper *Towards a Pedagogy of Play,* at http://pz.harvard.edu/resources/towards-a-pedagogy-of-play.

We are still developing this research approach; our understandings of what it means to carry out playful participatory research will change over time as we learn with the ISB teachers how to create a Pedagogy of Play.

Playful Participatory Research Processes

During the first year of the Pedagogy of Play project, Project Zero (PZ) and the International School of Billund (ISB) have engaged in the following research activities:

- **Semi-structured interviews.** PZ researchers conduct periodic interviews with ISB teachers and administrators, in order to better understand their perspectives (personal and professional) on play and playful learning, and to elicit their feedback about the Pedagogy of Play project.
- **Study groups.** Each month, teachers and university-based researchers engage together in groups of 8-16 members to explore a particular aspect of play and playful learning. The practice of documentation (see description below) frames and drives these sessions, enabling educators to share and analyze practitioner inquiry questions and data together.
- **Semi-structured observations.** During visits to ISB, PZ researchers conduct observations of playful learning in kindergarten, primary and middle school classrooms and during academic subjects, guided play sessions (e.g. Center Time), specialist classes (e.g. art, music, physical education) and unstructured playtime or recess. Initial observations were open-ended. Later observations have been guided by different iterations of the *Indicators of Playful Learning* observation tool.[6]
- **Collaborative data review and analysis.** During meetings with teachers and administrators, documentation of playful learning observations is analyzed collaboratively in order to better understand the phenomenon of playful learning and also to develop tools that may support educators in enhancing playful learning in school contexts. The *Indicators of Playful Learning* tool emerged from such analysis.
- **School-wide celebrations of learning.** At the culmination of the school year, ISB hosted a celebration of learning to highlight the work conducted in study groups. In preparation for the celebration, study group members prepared exhibits to share their practitioner inquiry work with colleagues. During the celebration, the whole school community used thinking routines to make analytical connections across exhibits and reflect on next steps in the research.

These research activities are ongoing and we anticipate that they will continue to evolve and develop as the playful participatory research process unfolds. Having introduced this approach, we turn now to describing the current context of our research, at the International School of Billund in Denmark.

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[6] For more information on the development and content of the *Indicators of Playful Learning* tool, please see our companion paper, "Towards a Pedagogy of Play."

The ISB-PZ Partnership

Many school reformers and scholars have documented how hard it can be to change educational systems; systemic change does not come easily (Argyris & Schön, 1978; Gauntlett & Thomsen, 2013; Hargreaves & Shirley, 2012). Yet examples of change at the school level are more promising (e.g. Knoester, 2012). For this reason, the Pedagogy of Play project is starting with a focus on one school: the International School of Billund. We anticipate that future work will extend to other contexts, and aspire for the framework and resources developed through the Pedagogy of Play to be used towards systemic change in schools.

The International School of Billund was founded in 2013 and has adopted the International Baccalaureate (IB) Primary and Middle Years Programs' inquiry-oriented curricula. Roughly 70% of the children at ISB are either non-Danish or dual nationality. English is the primary language of instruction, with Danish taught for both native and non-native speakers. Of the approximately 80 staff members, fewer than half are from Denmark; the remainder come from some thirty countries in Europe, Asia, Africa and North and South America.

ISB is well situated to conduct this research, with influencing factors conducive to creating a pedagogy of play along with realities that many schools face. Part of a larger community that values creativity, the school's mission includes a commitment to learning through play. As an international school, faculty and students bring a wide range of perspectives and backgrounds to the table. And parents are naturally concerned about their children's mastery of skills, and are aware of the pressures of growing up in a global society. Teachers working with the IB curriculum confront questions about the relationship between playful learning, inquiry, and external standards on a daily basis.

At ISB, the Pedagogy of Play initiative is school-wide. This means that all pedagogical staff members—administrators, classroom teachers and assistant teachers, afterschool teachers, specialists, and librarians—are part of the research team. Our project is not just about supporting individual teachers and improving instruction in isolated classrooms. Rather, we see schools as dynamic systems, and believe that a school-wide supportive culture is necessary for a Pedagogy of Play to flourish.

In our first year of work together, we conducted research in study groups, small research communities comprised of school staff and Project Zero researchers. Each study group focused on a particular aspect of playful learning, with teachers pursuing lines of inquiry related to this topic but grounded in their work in the classroom. In monthly study group sessions, ISB staff and PZ researchers looked closely at documentation as a means of exploring shared and individual questions around learning through play. We employed the practice of gathering and looking closely at documentation, in line with previous work that demonstrates the power of these

practices for teacher learning (Carini, 2001; Cox Suárez, 2006; Project Zero & Reggio Children, 2001). Each study group had a particular focus that was sustained and explored over several months, with the expectation that the focus may continue over several years. The practice of pedagogical documentation, developed by educators in Reggio Emilia, Italy (Rinaldi, 2006), has been central to the study groups' work. We define documentation as, "The practice of observing, recording, interpreting, and sharing through different media the processes and products of learning in order to deepen or extend learning" (Krechevsky, Mardell, Rivard, & Wilson, 2013).

From Documentation to Hypotheses: Learning in Study Groups

During the first year of collaboration, we launched five study groups at ISB to investigate different aspects of a pedagogy of play: Classroom Environments, Language Learning, Creator Space (the ISB maker space), Play and Academics, and Playful Mindsets. Each study group gathered monthly to share and discuss documentation, engage in "playful provocations" around topics of inquiry, and co-construct emerging hypotheses about play and playful learning relevant to the topic of the study group. An online platform supported group communication between these monthly meetings. In addition, the study group facilitators at Project Zero acted as a sixth group, meeting regularly to share documentation of adult learning in the study groups.

Each study group developed a set of hypotheses based on teachers' documentation of play and learning across different age groups and school contexts. Hypotheses from each of the study groups are presented in Figure 1 (below). We see these hypotheses as emergent and in flux; future study group work will continue to test, explore, and change them. Nonetheless, they do provide food for thought about how play and playfulness can support learning in school contexts. Ultimately, these study-group-specific hypotheses will contribute to larger understandings about what a Pedagogy of Play looks at ISB and potentially beyond. To illustrate the process through which these hypotheses emerged, we offer several examples below.

Figure 1: Study Groups and Hypotheses

Study Group	Overarching Question	Examples of Emerging Hypotheses
Classroom Environments	How can classroom environments support learning through play?	When children have agency and choice about the classroom environment and materials, they engage in more developed play and deeper learning. This requires teachers to respect children's ideas and take risks in their teaching. Play materials and spaces for play in the classroom can create a more cohesive learning experience for children as they transition from kindergarten to primary. In particular, role play materials/areas can encourage purposeful play that enables children to make connections with units of study.
Creator Space	What does playful, making-centered learning and teaching look like in the Creator Space (*a school-wide maker space at ISB*)	Being flexible, taking intellectual risks, modeling playful learning and making, and celebrating process and product are teaching moves that can support and deepen playful learning in making-centered activities. Playful, making-centered activities encourage and accentuate the social nature of learning when students are exploring ideas together, working on a project together, or engaging in peer-to-peer instruction and critique.
Play and Academics	How can play and playfulness support children's academic learning and understanding?	If what is playful to one person is not necessarily playful to another, then educators should be playful in different ways, e.g., by… • Introducing novel materials connected to the learning goals • Modeling playful learning in the classroom • Sharing one's own planning process for playful learning with learners • Turning things over to children when you might not otherwise • Making mistakes and using playful trickery or secrecy Play invites a transfer of knowledge between the classroom and life outside the classroom, potentially extending and deepening learning.

Playful Language Learning	How can learning language skills be playful?	Playful learning is more effective when the content is genuinely interesting to the learner, the learning environment feels safe, and it is accompanied with reflection. Reflection can "feed forward", informing next steps for teachers and students. Play/ playfulness can be brought to language learning experiences in multiple ways, including: pretend and fantasy, having an authentic purpose (or "authentic pretend"), and establishing rituals or traditions.
Playful Mindsets	What does a playful mindset look like?	A playful mindset for **primary/elementary children** helps them engage in formal learning where they are creative, accepting of mistakes, taking risks, and open to trying out something new. It can often lead to creating their own games and activities. Importantly, pretend and fantasy continue to have a role. Peers take on a greater role in influencing primary children's mindsets. A playful mindset for **administrators** involves asking "what if?"; being innovative in their thinking and having a vision for the school. At the same time, for the day to day running of the school, it involves: an openness to explore, inquire and tinker with ideas and possibilities: a collaborative, solutions oriented approach; and some smiling, laughing and a sense of humor.
Project Zero Facilitators	What does learning through play look like in ISB Study Groups?	Embedding fantasy, role-play, or humor in the exploration of ideas and materials increases engagement in learning. What's playful learning for one is not necessarily playful learning for another. Therefore, asking learners to reflect on learning and playfulness can inform designing future playful learning experiences.

Example 1: The Classroom Environment Study Group

In the classroom environment group, a key hypothesis emerged during the first year of work: ***When children have agency and choice about the classroom environment and materials, they engage in more developed play and deeper learning. This requires teachers to respect children's ideas and take risks in their teaching.*** This hypothesis was generated through looking at numerous examples of teacher documentation from classrooms. For example, the K3 kindergarten teachers documented as their class brainstormed and designed an "insect shop" in their classroom to support their Unit of Inquiry: Change. As children studied the processes of metamorphosis and development in insects and other animals, they applied and deepened their knowledge through play in the insect shop. For example, as Bella and Aiko created currency for the shop, they engaged in the following dialogue:

> *Bella: We need to make pretend water so the*
> *frogs won´t die.*
> *Aiko: Yes, and put a price. I can write that.*
> *Bella: We can say it is 1 kroner.*
> *Aiko: You know what...I think it should be more*
> *expensive because "alive" things are*
> *important. What about 5 kroner?*
> *Bella: Yeah, you are right. 5 kroner is good.*

Through creating the shop themselves, children experienced a sense of agency in the classroom environment. In Bella and Aiko's exchange above, they were tapping into their developing knowledge about what living things need in order to survive, while also surfacing their ideas about valuing living things. Additionally, they were engaging in literacy and numeracy work as they wrote text and numerals on the currency for the shop. Later on, the children were deeply engaged in role-playing as salespeople and customers in the shop, furthering their knowledge about unit-related topics as they discussed care and feeding of butterflies, and the stages of metamorphosis. The teachers in the Classroom Environment Study Group acknowledged that they had taken a risk in turning over the design of the dramatic play area to the children, but agreed that the aspect of agency and the emphasis on dramatic play were crucial to fostering deep engagement in focused, unit-related play. Of note, when the unit ended and the role-play area was no longer available, the teachers observed that the children continued to role-play, but their play became focused on acting out familiar media roles (princesses from Disney's *Frozen,* or Ninja play) rather than the unit-related play that emerged in the Insect Shop.

Example 2: The Playful Language Learning Study Group

Our next example focuses on older children. Mario, the teacher in this example from the Playful Language Learning Study Group, was interested in learning from the students in his middle school Spanish language class what they found to be playful. This example is in the form of a "mini-poster" – a format study groups used to share their documentation and learning with each other during a school-wide celebration at the end of the school year.

Mario's Question
How can I use feedback from my students to implement a more playful approach to language learning?

Class/Grade: M6, M7
Children: Spanish class
Activity: All year I have tried to create opportunities for my students to learn through play. In early May I surveyed them to learn what activities were playful for them (and why). Surveys were applied before and after playful and non playful lessons. The lessons included worksheets, role play, Kahoot (an online learning game), outdoor activities and Jeopardy.

Write what playfulness means in your own words
Benjamin: Playfulness means that you are having fun with your friends.
Elias: To be playful is to have fun and enjoy yourself.
Linnea: I think playfulness means laughing and happiness.
Ella: When you have fun but can also be serious in a fun way.

Name three playful activities we do in class:
Kahoot (11 students)
Jeopardy (7 students)
Outdoors (5 students)
LEGO bricks (1 student)
Games (1 student)
Videos (1 student)
Music (1 student)

What did you find playful about the lesson?
(unexpected answers)
Anna: Communicating, working with a person of my choice and fun.
Elias: It was playful because we went outside and did a survey.
**Mats:** Not really anything but I learned something.

Reflection: In the survey most students agreed on what is playful. They tended to describe and identify playfulness in terms of experiences that generate immediate fun and enjoyment, and that are connected to physicality, competition and laughter. However, I was surprised that students reported finding lessons playful that were not anticipated or designed to be. I think some students underestimate their capability to experience playfulness through thoughtful or contemplative experiences such as exposure to ideas and sharing their own ideas and identity. In early May I surveyed them in an attempt to achieve a comprehensive understanding on what playfulness means to them. Their reactions helped me readjust the way I approach my lessons and the way I connect with them. I think we all could benefit from understanding what the students really find playful, as opposed to letting our own assumptions or their initial reactions guide our judgements about playfulness. Apparently, neither they nor we know what is playful by simply inquiring or guessing, instead we shall experience first and then ask.

This documentation, along with related pieces from other members of the Language Learning study group, contributed to the development of the following hypothesis: ***Playful learning is more effective when the content is genuinely interesting to the learner, the learning environment feels safe, and playfulness is accompanied with reflection. Reflection can "feed forward," informing next steps for teachers and students.*** In Mario's case, the students' reflections informed his next steps in teaching, and both he and other members of the study group intend to continue inviting student reflections on playful learning experiences as a way to both deepen learning and inform future instruction.

Example 3: Facilitator Hypotheses

As mentioned above, the Project Zero researcher/facilitators also engaged in a process of documentation, reflection, and hypothesis generation, paralleling the experiences of teachers in the study groups. The purpose of this group was to explore the question: *What does learning through play look like in ISB Study Groups?* Mara and Katie, the facilitators of the Play and Academics study group, documented a study group session in which they presented content playfully (through a video wearing silly hats demonstrating how to generate hypotheses) in order to see how it would affect the group's learning. Below is an excerpt from the group's conversation after viewing the video.
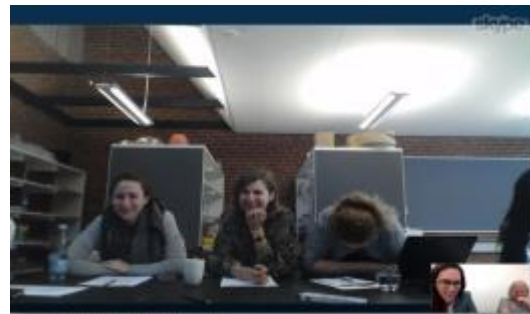
Katie: What did you learn?

Sonia: You definitely got my attention when I saw you with the hat…It was a really relaxed way to explain what the hypothesis is, like it made it look more relaxed and enjoyable.

Grace: ...it made you want to listen to you more, rather than if you two were sitting here and you just decided to tell us what a hypothesis is...I'm more prone to listen to the video with you wearing that silly hat and stuff because it's eye catching…I'm more inclined to listen, too, when you're fooling around and being silly... and Mara's laugh just killed me.

Sorina: I haven't been listening to the message, really, because you had all my attention because I was looking to the hat, and you [Mara] were so laughing. I was so focused on what you are doing, more than what you are saying. So I haven't got the message really.

Grace: That's funny, that that happened. It is the exact opposite.

Reflecting on this (and related) documentation, the PZ facilitators developed a hypothesis about adult learning in study groups: ***What's playful learning for one is not necessarily playful learning for another.*** Grace and Sorina's reflections here, which capture the diversity of responses to an intended "playful" teaching move, remind us of the need to consider playful teaching and learning as nuanced experiences influenced by personal and contextual factors. As Mario found with his Spanish students, it is important to ask the learners about the playfulness of the learning experience.

Looking Ahead: Next Steps for Playful Participatory Research

The discussion and examples provided in this paper offer a window into the research approach being employed in the Pedagogy of Play project. Although not arguing that a school needs to adopt the exact structures that we are establishing with ISB, we do believe that elements of the methodology—particularly the collective analysis of documentation to look carefully at teaching and learning in order to inform future teaching and learning and the infusion of playfulness into the adult learning environment—are essential in creating a school-wide understanding of how to leverage play in the service of learning.

In the coming year, we will continue the partnership between ISB and PZ, using the study group structure as a platform for shared meaning-making about playful learning supported by the process of documentation. Reflecting on the year's work in study groups, teachers described what they had learned through this process:

> *"I have been pushed to think about playful aspects when teaching language. I had to think of new ideas and ways of teaching… I have also liked the fact that being pushed into a playful mindset made it easier and easier to come up with ideas to use in class."*

> *"I am a better risk-taker. I dare to try out new things. And appreciate what I already do too."*

> *"I have been better at stepping back and observing the students, and seeing more aspects in the students' process/learning."*

These comments suggest that change is taking place at the school level with regard to playful learning, for both adults and children. As ISB teachers take more risks in their teaching, observe children more deeply, become more reflective in their practice, and play around with ideas in their study groups, they are learning. They are learning through playing with their role as teachers, through playing with the content of their lessons, and through sharing multiple perspectives in their relationships with colleagues. Here, teachers are not mere consumers of research and theory developed

by others, but contribute to the production of new hypotheses and theories. As a result, children are experiencing more opportunities for playful learning at school, and at times, these ideas are bubbling up into the adult learning environment – as in Mario's example of asking the children for their conceptions of playfulness. As the co-construction of a Pedagogy of Play moves forward, we will continue to promote a democratic process in which teachers, children, school leaders, and university-based researchers collaborate to envision and understand what it means to teach and learn with play at the heart of a school.

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