

A PEDAGOGY OF PLAY

Supporting playful learning
in classrooms and schools



by
Ben Mardell,
Jen Ryan,
Mara Krechevsky,
Megina Baker,
Savhannah Schulz,
Yvonne Liu Constant



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classrooms and schools*

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This book is dedicated to the teachers and school leaders worldwide who gave so much to care for and educate their students during the Covid-19 pandemic.

Appreciations for *A Pedagogy of Play*

This is a joyful book to read. It is probably the most comprehensive book available to guide educators (teachers and school leadership) on how to use a pedagogy of play in varying contexts. Its strength lies in how it manages to convincingly combine a strong theoretical underpinning presented in an engaging and accessible way with the practice of how to support playful learning in classrooms and schools. The pictures of practice draw the reader into education spaces where learning through play is evident. The comprehensive toolkit brings together a variety of tools and resources that teachers can draw on for designing and implementing a pedagogy of play.

Sarah Gravett, Professor of Teacher Education and Development and former Dean of the Faculty of Education at the University of Johannesburg, South Africa

With the vast majority of education in schools predictably revolving around a specific set of curricular objectives and tests, many teachers have become used to focusing their efforts on traditional learning and repeating the same curriculum, lessons, and activities year after year. This book is a refreshing and inspiring “must-have” for understanding how to create the conditions for playful learning that allow children to reach their developmental milestones. The co-authors show this through simple, yet heartfelt and practical, strategies inviting children to experience learning in a different way, navigate uncertainty, and understand the power of play as a vehicle for discovering and embracing the world around us. It is simply one of the best tools any member of the educational community can rely on to transform the learning experience into a joyful, meaningful, and motivating journey.

Maria Adelaida Lopez, visual artist, early childhood educator, and Executive Director of aeioTU, a social enterprise committed to developing comprehensive solutions for the early childhood ecosystem in Colombia

There's so much to love about this book! It's both visionary and practical; it contains both research as well as lesson plans. The Picture of Practice interludes take us right into classrooms to hear students and teachers in the midst of what the authors define as playful learning. These classrooms demonstrate the work of transformation – what learning is supposed to be! The rest of the book helpfully breaks down and describes the practices that undergird these classroom interactions. The appendix includes a wealth of tools teachers and leaders can use right away in classrooms and schools to build a playful learning culture where adults and children thrive academically and socially.

Sarah Fiarman, educational leadership consultant, author, and former principal and National Board Certified public school teacher, U.S.

Play is an incredibly powerful learning strategy that is child-led and fueled by curiosity, exploration, and joy. Children know how to do it from the moment they are born. A Pedagogy of Play explores how this power can be unleashed in schools and classrooms and introduces the science on the relationship between play and learning. With many examples of children of all ages from a variety of cultural contexts, this book showcases how educators can recognize and support playful learning as it unfolds in well-designed classroom activities. A Pedagogy of Play is a wonderful book that will be of great value to teachers, school leaders, and communities everywhere to support playful learning in the classroom and transform school culture.

Marc Malmdorf Andersen, play scholar and Associate Professor in Cognitive Science at Aarhus University, Denmark

Contents

Acknowledgments.....	1
A Playful Introduction.....	4
Why we wrote this book	7
Our perspective on playful learning.....	8
The organization of the book.....	9
An invitation to play	10
Picture of Practice: Debating the Nature of Facts.....	12
Chapter One: Why Do Educators Need a Pedagogy of Play?	16
Key definitions	17
Six principles of playful learning	18
Picture of Practice: Facilitating a Student-Composed Schedule.....	24
Chapter Two: What Is the Relationship Between Play and Learning?	30
Five characteristics, and a drawing, of people playing and learning.....	30
The research on play and learning.....	37
Play as a strategy for learning.....	40
Picture of Practice: Creating a Restaurant	44
Chapter Three: What Does Playful Learning in Schools Look and Feel Like?	48
Cross-cultural indicators of playful learning	49
Variations among cultures	54
A word on teaching that supports playful learning.....	55
And now.....	56
Picture of Practice: Exploring Soil Types and Plants	58
Picture of Practice: Investigating Policing.....	62

Chapter Four: How Can Educators Support Playful Learning in the Classroom?	66
Empower learners to lead their own learning	68
Build a culture of collaborative learning	72
Promote experimentation and risk-taking	74
Encourage imaginative thinking.....	76
Welcome all emotions generated through play	80
The role of documentation in making playful learning visible.....	83
Practice the practices.....	84
Picture of Practice: Too Many Rules on the Playground	86
Chapter Five: How Can Educators Create a Schoolwide Culture of Playful Learning?	92
Build shared understandings about playful learning.....	93
Leverage school structures to support playful learning.....	96
Provide playful professional learning opportunities	99
Foster playful community connections	104
Lead playfully	107
Creating a schoolwide culture of playful learning.....	108
Picture of Practice: Playful Learning Online.....	110
Picture of Practice: More Than One Way to Tell a Story.....	116
Chapter Six: Concluding Thoughts—Playful Learning for All	120
Challenges to playful learning and some “What ifs” to face them.....	121
More than one way	124
PoP Educator Toolbox (see next page for details)	128
Endnotes.....	184
References	194
Appendix A: Research Methods.....	206
Appendix B: Meet the Authors.....	220

PoP Educator Toolbox



- ▷ Getting to Know Your Learners.....130
 - ▷ Making Learning Meaningful.....132
 - ▷ Involving Learners in Decision-Making.....134
 - ▷ Say Yes to the Mess136
 - ▷ License to Hack Cards138
 - ▷ Playful Learning Reflection Planner140
-



- ▷ Selecting a Thinking Routine142
 - ▷ Expert Books144
-



- ▷ Selecting and Facilitating a Design Challenge146
 - ▷ Creating a Culture of Risk-taking148
-



- ▷ Storytelling and Story Acting for Older Learners150
 - ▷ Play Kits152
 - ▷ Questions Worth Playing With154
 - ▷ Imaginative Sparks Generator156
 - ▷ Moving to Learn158
-



- ▷ Supporting Learners with Conflict and Frustration160
 - ▷ Using Play to Explore Complex Issues162
-



- ▷ Playful Learning Planner164
- ▷ Creating Playful Learning Indicators for Your School166
- ▷ Playful Participatory Research Guide176

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The playful learning that resulted in the *Pedagogy of Play* was a collaborative effort. We wish you the gift of similarly wise, supportive, and playful colleagues.

A Playful Introduction

In schools around the world, children are learning through play.



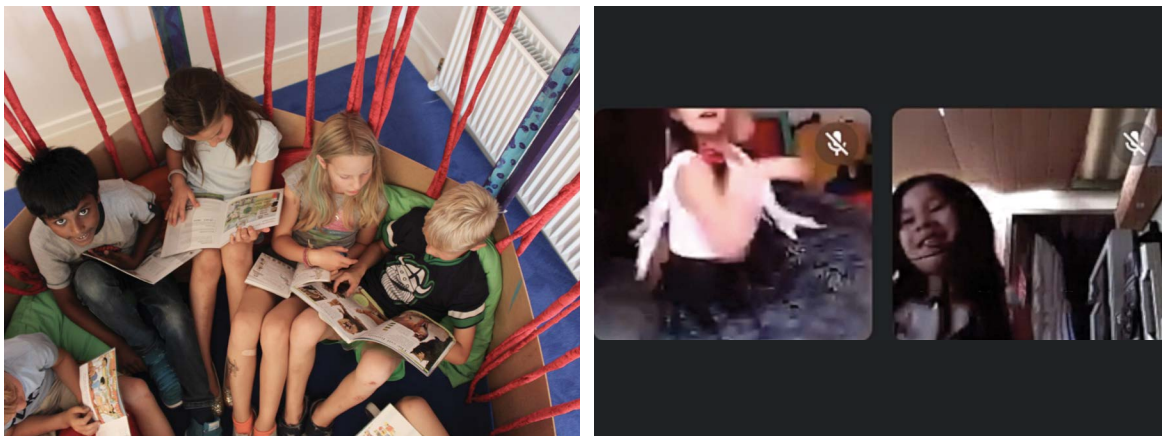
They are 4-year-olds, 4th graders, and 14-year-olds.



They are learning about math, science, geography,



literature, and dance.



Around the world children are leading their own learning,



exploring the unknown,



encountering challenges,



and finding joy in learning.



Why we wrote this book

We wrote this book because we want more children around the world, like those in the classrooms depicted above, to lead their own learning, explore the unknown, and find joy in school. Why? Because such playful learning can help students learn fundamental concepts and skills, as well as develop their abilities to collaborate, solve problems, and navigate uncertainty. Because using play as a strategy for learning—asking “What if” in order to explore, adapt, and create—is vital in addressing complex local and global issues. And because we want to support you—educators and others concerned with education—to build cultures of playful learning in classrooms and schools.

Though the idea that playful learning should have a central role in schools is gaining traction,¹ the reality—apart from early childhood and recess—is that learning through play is not available to most children, particularly in lower-resourced schools.² A false dichotomy is partially to blame, positioning play, enjoyment, and emotions to be at odds with learning and rigor. Creating powerful learning experiences for students means breaking down this distinction. It means bringing children’s natural way of learning through play together with the teaching of important skills and mindsets that children need to be contributing members of their communities.

Since 2015 the Pedagogy of Play team at Project Zero, a research center at the Harvard Graduate School of Education, has been collaborating with the LEGO Foundation (a foundation dedicated to making learning through play a priority for children around the world) and colleagues around the globe to reimagine learning in schools. In this book, we share a comprehensive framework for guiding practice and decision-making about playful learning in early childhood, primary, and secondary education—in other words, we share a pedagogy of play. We also share examples and other resources to help you and your colleagues build classroom and school cultures where playful learning thrives.

You might be wondering: Why a pedagogy of *play*? Why not a pedagogy of inquiry, making, tinkering, or discovery learning? Why not a pedagogy of collaboration, creativity, and critical thinking? Such pedagogies would indeed be useful and, in many cases, already exist. A number of powerful approaches to teaching and learning—active learning, inquiry-based learning, learner-centered pedagogy, rights-based education, and project-based learning—are close cousins to a pedagogy of play and have inspired some of the ideas presented in this book.³ Each of these pedagogical approaches aims to foster student agency, creativity, and collaboration, along with essential literacies and disciplinary knowledge. Each is designed to help learners see new points of view and imagine a more just world. Each rejects the industrial model of schooling and the transmission image of learning, where children are seen as empty containers to fill with knowledge. We draw on these pedagogies⁴ and highlight *play*, a wonderful part of humanity’s evolutionary heritage, because of its unique characteristics that foster learning.

You might also wonder: Why a *pedagogy* of play? Why not a curriculum of play? Although curriculum is important and many curricula are compatible with playful learning, our aim extends beyond specific lessons, units, and content to foster classroom and school cultures that support playful learning. Creating such cultures requires a comprehensive and collaborative approach to teaching and learning—a pedagogy.

We wrote this book for teachers and leaders who want to leverage playful learning to advance learning goals in their classrooms and schools. We wrote this book for teacher candidates who want to explore why playful learning is an essential ingredient to teaching and learning. We wrote this book for family and community members and policy makers who want to learn more about playful learning and advocate for it.

We wrote this book because we know there are challenges in bringing more playful learning into schools. These challenges exist on multiple levels of the education system, from teaching practices to national policies. This book focuses on the challenges teachers and school leaders face, including bringing together play and learning goals in classroom activities; building school cultures that support playful learning; changing perceptions of families and others about the connection between play and learning; and navigating policies (e.g., curriculum, evaluation systems, and resource allocation) that can undermine playful learning. We wrote this book because we believe all children have the right to learn through play in school.

Our perspective on playful learning

The ideas in this book are based on the literature about learning and play, insights from educators and researchers around the globe, and collaborative research conducted with teachers and school leaders in Denmark, South Africa, the U.S., and Colombia. In Denmark, we conducted observations, interviews, and focus groups with educators at the International School of Billund (ISB), an independent school with learning through play at the center of its mission. We also supported the school's adult learning community in a variety of ways. In South Africa, the U.S., and Colombia, we worked with local researchers who observed in classrooms, recorded video, and interviewed teachers, school leaders, and students. In all four countries, we strove to conduct research with rather than on our educational partners and their communities. We touch on aspects of our research process throughout the book. You can find an in-depth explanation of our research methods in Appendix A.

Our perspective on playful learning is grounded in socio-constructivist theories of learning and development, in which higher-order thinking is built through experience and reflecting on that experience, often with other people.⁵ In addition, we embrace the view that although there are universal aspects of development, learning is also shaped by culture. Our perspective is also influenced by our values and beliefs. We believe children of all ages and abilities are creative and curious—driven to make sense of the world. We believe there are multiple ways of knowing and learning. We see the arts as a powerful way to develop, express, and communicate thinking and feelings. We see the purpose of education as supporting children in developing disciplinary understanding and agency, acquiring skills, collaborating with others, and learning about topics that will prepare them to participate in the wider society. At the same time, we believe schools should be places where children are active citizens in the here and now.⁶ Finally, we believe that a pedagogy of play is only possible when both children and educators are part of a school culture that fosters trust and safety. Without psychological safety and trust, playful learning will not thrive.

Although we come from different backgrounds (you can learn more about each of us in Appendix B), we are mainly based in the U.S. To broaden our perspective and create a framework useful to educators across cultures, we received feedback from colleagues from around the world. Our book is not the final word on playful learning. We invite you to interpret, question, and adapt our ideas, creating new knowledge about playful learning in schools.

The organization of the book

This book is organized around answers to three questions regarding the why, what, and how of playful learning:

- Why do educators need a pedagogy of play?
- What does playful learning look and feel like?
- How can educators promote playful learning?

In Chapter 1, we share six core principles of our work to explain *why* a pedagogy of play is needed. Aware that communities and family members, and even some educators, may not understand why play should be a part of schools, in Chapter 2 we explore the relationship between play and learning, and share research that can inform advocacy for playful learning.

An essential step in promoting playful learning is clarity about what you are trying to promote. Although playful learning is universal, it is also culturally specific. In Chapter 3, we address the question of *what* playful learning looks and feels like. Our answer is shared in what we call “cross-cultural indicators of playful learning.” We describe the research through which these indicators were developed and expand common notions of what playful learning involves.

Chapters 4 and 5 address the question of *how*. In Chapter 4, we discuss creating classroom cultures that support playful learning. We describe five core teaching practices that promote playful learning across grade levels and content areas and introduce the process of *documentation*⁷. Documentation makes playful learning visible in order to shape and deepen learning. Chapter 5 highlights schoolwide and adult-focused practices that support playful learning. We share five practices for school leaders—administrators and teachers—that foster a culture of playful learning.

In Chapter 6, we offer concluding thoughts on how to bring playful learning to all learners. We identify potential challenges when promoting playful learning, along with some “What if?” possibilities for addressing them. We also explore the idea of *more than one way* as a key ingredient for considering how to bring playful learning to more classrooms and schools.

We end the book with the PoP Toolbox—eighteen tools and resources to support playful learning in classrooms and schools and two guides to support your and your colleagues’ explorations of playful learning. We also include Endnotes with traditional references as well as some playful musings, and two appendices about our research methods and the PoP team.

Throughout the book, you will find eight Pictures of Practice that address adult and student learning. These examples come from schools in the four countries that collaborated in this

research and portray playful learning in kindergarten through secondary school in a variety of subject areas.⁸ The contexts of the examples vary in terms of geography, cultural values, and levels of resources in each school. In these Pictures of Practice, we lean into what can be described as teacher-guided experiences both because examples of children learning in “free play” are widely available and because such teacher-guided experiences are closer to what is possible in many schools. We refer to these Pictures of Practice throughout the book to illustrate our answers to the why, what, and how of playful learning.

An invitation to play

We invite you to read this book with a playful mindset and to view the ideas, examples, and tools as opportunities to ask, “What if?” We invite you to engage with the book with a sense of possibility—to use our ideas to experiment, collaborate, and engage in the joy of learning. We believe playfulness helps set the conditions for significant learning and suspect that reflecting on your playful learning will help you create those conditions for your students.

An invitation to play does not mean we do not take teaching, learning, and school seriously. We do. How to improve schooling is a vital and urgent topic, and we are deeply committed to education as a means of empowering young people to create and shape the kind of world they (and we) want to live in. However, school and learning need not be dull and unpleasant. Learning can be fun.⁹ Play is a strategy for learning.¹⁰ This is true for adults as well as children.

There is more than one way to read this book. Feel free to read the book sequentially. Or you can read the Pictures of Practice first and then circle back to read the chapters, or look at the tools and then read about the related practices and strategies—it is up to you.

There will be some who question the value of making school more playful. This book provides the information and resources to engage such skeptics. We hope it also provides the courage to experiment with new practices as you join educators worldwide engaging in similar endeavors.





Debating the Nature of Facts

10- and 11-year-olds

Nova Pioneer Ormonde

Johannesburg, South Africa

Firdous Ismail Karolia has several key learning goals for her thirty-one students. Following the Cambridge International Curriculum, Firdous's content goals include teaching about the different genres of writing. As part of the Nova Pioneer network of independent schools, Firdous aims to foster her learners' creativity, critical thinking, ability to collaborate, and joy of learning. She also wants them to have fun, not because she sees school as a form of entertainment, but because she knows that playing with a purpose will support her students' learning. These learning goals guide the following two-part lesson on informational texts.

A writers workshop on informational texts

Firdous's reading and writing goals in this lesson are for students to: a) gain familiarity with informational texts—to be able to locate information confidently and efficiently, and b) create informational texts that provide material in a clear and engaging way. In addition, Firdous is always on the alert for opportunities to foster her students' creativity, critical thinking, and collaborative abilities. An opportunity arises when students become interested in the nature of facts—the basis of informational texts.

Previously, Firdous provided her learners with examples of informational texts such as building airplanes and the habits of bears. To relaunch the conversation, rather than provide an official answer, Firdous asks small groups of students to construct their own definition of informational texts.

Is it a fact that Spiderman fights crime?

During a conversation earlier in the year, several learners expressed reservations about sharing their ideas, worrying that classmates would disagree with—and even ridicule—they. In response, Firdous had helped students develop conversation norms, which she now reminds them about; for example, *It is good to disagree respectfully*. She then invites learners to share their definitions of informational texts with the whole group.

She calls on one learner who, after sharing, calls on another, and so on. The definitions include: *gives you more information on the subject; a step-by-step description; and about something or someone*.



A small group discussing their definition of informational texts



Abdullah sharing his opinion about Spiderman and the ensuing Spiderman debate

Students know that in these discussions, they are expected to provide examples to support their statements. A passionate argument arises when Abdullah supports his definition with the example of Spiderman, the comic book and movie superhero. According to Abdullah, it is a fact that Spiderman can spin webs from his wrists. He argues, “Even though Spiderman is not real, it is still a fact that he fights crimes.”

Mbali disagrees. She maintains that this is not a fact because Spiderman is fictional, and fiction does not give “correct information.” Lots of hands pop up, and a spirited debate ensues.

Firdous lets the conversation unfold for a few minutes and then asks the group, “Do all facts have to be true?” Focused on this broader question, the conversation continues.

During a break later in the day, learners use a dictionary to look up the word “fact.” Bringing definitions back to the whole class leads to new questions for debate, including:

- If a fact is “something that actually exists,” is fear a fact?
- If the definition of a fact is “things known to be true,” what about religious beliefs that are true for some but not others?

“Making it a little more complicated”

The lesson continues with learners creating informational texts about a fictional species of their own devising. The Spiderman debate is wonderful serendipity. Along with providing a bridge to the assignment, Firdous uses it to normalize the reality that learning involves moments of confusion, uncertainty, and risk-taking. She tells her learners, “I am loving what is coming out of this conversation. A lot of you seem a little confused. Some of you are now unsure. You were sure, and now you are unsure. And I’m going to make it a little more complicated.” Her learners groan good-naturedly.

Firdous explains the assignment: Create a species and write an informational text about it. She asks her learners to imagine:

You are the scientist; it’s your discovery. You can draw or write the facts first. It’s okay to think of real-life plants and animals to get inspiration. It’s okay to look at one another’s work because this enables you to share ideas and to give each other feedback. However, make the creature your own.

Tadiswa
considering
the globe



Playing with ideas and finding something with “that little touch”

Tadiswa has a question: “Ma’am, may I please use the globe? I want to see where my animal will be from.” Firdous agrees. Tadiswa fetches the globe from the bookshelf and brings it to her table.

There she studies it. Looking at it intently, she spins it slowly. Tadiswa explains:

I don’t want it to come from South Africa. I want to go somewhere where nobody has ever been to. Or somewhere that is very rare. Something new, like having an ice cream flavor for the first time...I just want to find something that is really exciting...It will stand out. It will be a little different. It will have that little touch.

After five minutes, Tadiswa starts to write. Abdullah asks to borrow the globe so he can find a home for his animal. Tadiswa gladly hands it over, sharing a good idea rather than guarding it as her own. Tadiswa decides her creature will be a sea animal but will also spend time on land.

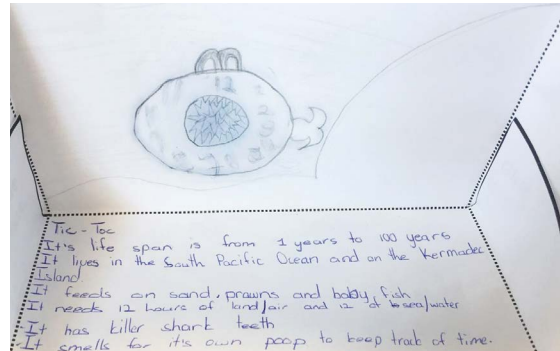
Meet the Tic Toc

Writing continues the next day in a forty-five-minute workshop period. Tadiswa builds on her previous day’s work. She writes, gets feedback from friends, and writes some more. In the end, she names her animal the Tic Toc (note the numbers one through twelve proceeding clockwise around the creature’s body).



Tadiswa thinking and then writing (Abdullah on the left)

Tadiswa's informational text about the Tic Toc describes its anatomical features, diet, and habitat (the waters around Kermadec Island, New Zealand). Abdullah, taking on the persona of a zoologist, imagines calling in colleagues to help study his discovery. He places his creature "in the depths of the Pacific Ocean." Tadiswa and Abdullah explain that the isolated locations are, in part, to protect their creatures from human interference.



The Tic Toc

Tadiswa empathetically explains, "You need to consider your creature's needs. You would not want your creature to feel afraid." True to the nature of play, it is not "anything goes" here. The decisions learners make about their creatures have intellectual integrity.

Tadiswa feels she is learning a lot during this lesson: about informational texts and the nature of facts and also habitats and geography. She also feels the lesson has helped her writing skills. Sharing her feelings about the lesson, she says:

It was fun that we got to do this. Well, everything is fun about it because like we get to invent something that is different. We get to create. It's just like really exciting. They are ours.

Continuing the conversation on the nature of facts

Over the next few weeks, the students continue to discuss the nature of facts. They note how novelists use facts to create imaginary worlds and make them believable and relatable. Children from Muslim, Hindu, and Christian families and families who do not affiliate with a faith tradition share thoughts about the question, "If a fact is a 'thing known to be true,' what about religious beliefs?" Tadiswa, Abdullah, and their classmates consider whether they would call what they wrote about their fictional creatures factual. They discuss whether facts are subject to change. During an "Exhibition Day" for families, they discuss their understanding of facts with parents, grandparents, and others—a useful exercise in a world where the nature of facts is often contentious.

Chapter One: Why Do Educators Need a Pedagogy of Play?

In a U.S. preschool, four girls and their teacher are sitting around a table with a letter bingo game in the middle. As Lilly takes a card with the letter S and a drawing of a snake from the pile, the following conversation unfolds:

Lilly: S. Snake. Eww. I hate snakes.
Emma: Me too. I hate bugs too.
Ilana: Spiders start with S. That's a bug.
Lilly: Eww. Spiders make me scream!
Teacher: Let's keep playing, friends.
Emma [taking a card from the pile]: I got H for horse. I want a horse for Christmas!
Abby: Duh! We all know this!
Emma: Horses are my favorite animal.
Teacher: Girls, please. More playing and less talking.

This novice teacher is in a confusing situation. She wants to help children learn through play—hence a game rather than a worksheet. At the same time, she has specific, government-mandated literacy goals to cover. Unsure how to proceed, and without the support of colleagues, she struggles to navigate the tension between reaching her learning goals and allowing the girls to lead their own learning (an essential part of playful learning).

This situation contrasts with Firdous's classroom featured in *Debating the Nature of Facts*. Firdous knows that play supports learning and uses play to serve her learning goals. Believing that a playful mindset is an essential ingredient in playful learning, she encourages students to take risks and use their imaginations, skillfully guiding them to lead their own learning toward the Grade 5 content learning goals. Firdous is part of a larger school culture that supports playful learning for adults as well as children. She has a pedagogy of play to guide her decisions about teaching and learning.

This chapter begins with definitions of five key terms: *play*, *playful*, *learning*, *playful learning*, and *culture*. We then focus on our first question of why educators need a pedagogy of play and the six core principles that constitute our answer:

- Play supports learning
- Playful learning in school involves play with a purpose
- Paradoxes between play and school add complexity to teaching and learning
- Playful learning is universal yet shaped by culture
- Playful mindsets are central to playful learning
- Supportive school cultures enable playful learning to thrive

Key definitions

Play, playful, learning, playful learning, and culture—all are complex terms that can be interpreted in multiple ways. Because they are central to conceptualizing a pedagogy of play, here we propose some working definitions.

Play

There are many kinds of play—dramatic play, online play, play between people and their pets, the rough and tumble play of young mammals, and more. People from every corner of the earth play. Because of this diversity, play defies a precise definition. Indeed, play scholars have long debated the meaning of the word.¹¹ At the same time, there is some consensus about what play involves.¹² In broad terms, we see play in humans as chosen and directed by the players (and thus meaningful to them), involving the imagination (where players envision new possibilities and ask “What if?”), actively engaging (players can “lose themselves” in play), often social, and generally enjoyable (though this does not mean easy; challenge can create enjoyment). Although people seek novelty in play, play often has a repetitive or iterative quality, where players try out ideas and activities again and again until they feel satisfied with the results. Play is often understood as an activity (e.g., playing checkers, playing house), but it also involves a mindset, which leads us to the word *playful*.¹³

Playful

Playful refers to a mindset in which one is inclined to see situations and activities as containing possibilities for leading, exploring, and enjoying. A playful mindset is the active ingredient that turns activities and other experiences into play.¹⁴ But what is playful for one is not necessarily playful for all. For example, participating in a soccer game is the height of play for some. For others, it is terrifying. For some, sitting in front of a piano is playful. For others, practicing the piano is drudgery. The difference is whether the activity is experienced as playful.

Learning

We believe learning entails the processes and outcomes involved in solving problems or creating products that are considered meaningful in a culture.¹⁵ Learning is not just the transmission of a defined body of knowledge. Rather, it is a consequence of thinking. For learning to occur, learners need to think *about* and *with* the content of what they are learning.¹⁶ A fundamentally social endeavor,¹⁷ learning is a complex process that needs sustained opportunities for support, challenge, and feedback from the outside. Learning is not only cognitive; it involves emotions. Based on her research, neuroscientist Mary Helen Immordino-Yang concludes, “It is literally neurobiologically impossible to think deeply about things that you don’t care about.”¹⁸ Because a common sticking point in promoting playful learning is the comment, “I see they are playing, but what are they learning?”, we discuss learning further in the Endnotes.¹⁹

Playful learning

Playful learning in schools—the subject of this book—occurs when the learning goals of adults and the interests and curiosities of students align. In these situations, learners are leading their own learning, exploring the unknown, and finding the joy of learning (though the specific terms for describing these feelings and behaviors vary based on the cultural context). Put another way, playful learning in school occurs when what students want to be doing is the same as what their teachers want them to be doing. Because the learners care, the result is often deep learning. By bringing together cognition and emotions, and the physical and social dimensions of learning, playful learning is a powerful strategy for supporting learning in schools.²⁰

However, play, and by extension playful learning, does not mean that anything goes. In play, there are both literal and metaphorical rules of the game. In soccer, you cannot pick the ball up and run with it unless you want to be kicked out of the game. In dramatic play, if you are pretending to be the mother, you cannot start meowing like a cat—unless you want your friends to tell you to stop or switch roles. In writing a creative essay, you cannot abandon the rules of spelling and grammar unless lack of clarity is the point of your communication. Play sets up boundaries in which experimentation can take place.²¹ Playful learning does not indicate chaos, but rather adults and students deciding together about the direction of learning.

Culture

Humans are social creatures. People operate in groups—families, unions, businesses, religious institutions, online communities, classrooms, and schools. We define culture as *the shared values, practices, norms, and understandings of a group*. These practices and understandings are based on what is important to a group and guide members on how to act and relate to one another. These groups can be large, operating at a national level (e.g., Italian culture), or small—the size of a school or even an individual classroom. Throughout the book we discuss how culture—the cultures of countries, schools, and classrooms—impacts playful learning, and how you can shape the culture of your classroom and school to promote playful learning.

Like any definition, our definitions can only go so far in explaining the meanings of these terms. We hope the examples and explanations in the rest of the book will provide greater clarity. With these definitions in mind, we now turn to the six principles of playful learning that address why a pedagogy is needed to support playful learning in school.

Six principles of playful learning

Based on the research literature about learning and play, insights from educators and researchers around the globe, and conversations with teachers and school leaders in Denmark, South Africa, the U.S., and Colombia, along with hours of debate among the PoP team, we developed the following six principles. The principles are theoretical rather than empirical, and represent our answer to why a pedagogy of play is needed.

Principle One: Play supports learning

When people play, they are engaged, relaxed, and challenged—states of mind highly conducive to learning. Through play, children and adults try out ideas, test theories, experiment with symbol systems, better understand social relations, take risks, and reimagine the world. As they lead their play, players develop agency. Exploring the unknown, they cultivate their imaginations and learn to deal with uncertainty. Joyfully playing with others, they develop empathy. While not all learning has to be playful, nor does every moment of play involve significant learning, a close look at play and playfulness reveals numerous emotional, social, and cognitive features that powerfully aid learning. These features help make learning feel fun and enjoyable, and proceed in engaging and exploratory ways.²²

The notion that play supports learning may come as a surprise to some. Play is sometimes seen as frivolous and lacking purpose, while learning is associated with seriousness and hard work. Yet there is solid and growing evidence regarding the importance of play in learning.²³ In the next chapter, we take a detailed look at the theory and research about the relationship between play and learning and how play supports learning.

Principle Two: Playful learning in school requires play with a purpose

Schools are places where young people learn to become contributing members of their communities. As you read in *Debating the Nature of Facts*, Firdous identifies clear learning goals for her students—from being able to understand and create informational texts to thinking critically and creatively. The good news is that her students are not opposed to these learning goals. As you will read in all the Pictures of Practice, children want to learn. We have never met a 6-year-old who did not want to learn how to read, giving them entry into a world of words and books. We have never encountered a 16-year-old who was not curious about something, whether cars, computers, cosmetics, cartoons, or calculus. When students understand the purpose of school tasks and see that these tasks are meaningful, they are far more willing to engage in the hard work of learning.

This does not diminish the challenge that educators face when supporting learning through play. Playful learning entails straying from a straight line between classroom activities and learning goals. Deep, significant learning does not always unfold in a linear fashion. Classrooms should be places of surprise for students *and* teachers. There should be room to pursue questions that arise, explore occasional rabbit holes, and learn in more than one way. Playful learning situates curricular goals, content, and experiences with a larger purpose of helping learners understand, explore, and shape their world.

Playing with a purpose does not mean that child-directed “free-play” has no place in schools. Such play offers windows into children’s interests and strengths²⁴, helps students form relationships, and provides needed breaks from teacher-guided activities.²⁵

Principle Three: Paradoxes between play and school add complexity to teaching and learning

The physicist Niels Bohr wisely noted, “How wonderful that we have met a paradox. Now we have some hope of making progress.” By “paradox,” Bohr meant two logical and sensible ideas that, when put together, seem contradictory or even absurd. Paradoxes cannot be solved or eliminated, but they can be navigated.

As you attempt to foster playful learning, several paradoxes between the nature of play and the nature of school will arise²⁶:

- Play is timeless; players lose themselves in play. School, on the other hand, is timetabled.
- Play can be chaotic, messy, and loud. Schools aspire to be places of order.
- Play involves taking risks. Schools aim to keep children safe.
- In play, children are in charge. At school, the agenda is generally set by adults.

Both parts of these statements are true. Children should lose themselves in learning *and* follow predictable schedules that are reassuring to many and essential to some. Children’s explorations should be a bit loud and messy *and* sometimes students need quiet to focus. Children should explore and experiment *and* not get hurt. Children need to develop agency *and* learn important mathematical, scientific, and artistic concepts. Identifying these paradoxes is the first step in navigating them. They can then be turned from “either/or” choices into “yes, and...” situations. Yes, it is possible to allow (and encourage) children to take risks and to keep them safe. It is possible for children to be in charge—to lead their learning—and to meet learning goals.

As you navigate the paradoxes between play and school, it can be helpful to think about classroom experiences on a continuum regarding the level of adult involvement. At one end of the continuum is free play, involving little or no adult involvement. At the other end is adult-led activities, with little room for student choice. In the middle is guided play, where students can explore and direct their learning while educators provide scaffolding and direction in service of learning goals.²⁷ Determining the right amount of adult involvement in learning experiences—providing learners guidance and choice—is part of the art of supporting playful learning in schools. In Chapter 5, we suggest one way to organize study groups to help you and your colleagues experiment with your practice and navigate the paradoxes between play and school.

Principle Four: Playful learning is universal yet shaped by culture

People around the world play and can learn from their play. They play in cities and in the countryside. Even in harsh and difficult circumstances, people play.²⁸ Play is universal. At the same time, whom people play with, how they play, where and when they play, and at what age they should stop playing (if ever!) is culturally determined. The research volume *International Perspectives on Children’s Play* catalogs some of the diverse expressions and meanings of play from around the globe and illustrates how play is shaped by culture.²⁹

What is true for play is true for playful learning: playful learning is universal (all humans can learn through play), and how (and even if) playful learning appears in classrooms and schools is shaped by culture. For example, our work illustrates that on the four continents where we

conducted research, in different subject areas, and across ages, playful learning takes place. This playful learning has similarities and variations across contexts. It is shaped by the goals, beliefs, and experiences of the teachers, school leaders, students, and families in school communities. This conclusion aligns with other research. Recent studies from Bangladesh, Colombia, and Uganda³⁰, and Germany and Hong Kong³¹ confirm that playful learning occurs around the world and has unique cultural features.

What this means for you and your colleagues is captured in a story from the International School of Billund (ISB). When we began our research at ISB we found a wide range of perspectives about the meaning of playful learning. Some of the educators believed playful learning meant “free play.” Others thought it meant games and game-like activities, while still others thought it meant playing with ideas. Without a shared understanding of what they were trying to promote, teachers’ efforts were sometimes at cross purposes. We worked with the teachers to create a schoolwide definition of playful learning. In order to plan for, implement, and assess, you too need to decide on what playful learning means in your context.

In Chapter 3 we share our answer to what playful learning looks and feels like based on our research in Denmark, South Africa, the U.S., and Colombia. In Chapter 5 and in the Playful Learning Indicator Research Guide in the Toolbox, we discuss how you might create a shared, culturally relevant understanding of what playful learning looks and feels like at your school, by drawing on our research and even conducting research of your own.

Principle Five: Playful mindsets are central to playful learning

Mindsets—the attitudes and beliefs that influence how people approach situations—are not fixed by personality. Rather, they can be activated in different contexts and cultivated over time. Earlier in this chapter, we defined *playful* as a mindset that entails finding opportunities for leading, exploring, and enjoying in different contexts. Activating and cultivating playful mindsets in which teachers and students view school as a place to lead learning, explore the unknown, and find joy in learning is central to playful learning.

In *Debating the Nature of Facts*, Tadiswa brings a playful mindset to learning about informational texts. Recall her comments that she is trying to create an animal that is *something new...will stand out...will be a little different...will have that little touch*. And that, *Everything is fun about it... It’s just really exciting. They are ours*. What if the opposite was the case? What if Tadiswa had approached the challenge of creating and describing an animal as “too hard” or “boring” or simply an assignment to complete? It is unlikely the results would have been as creative, or that Tadiswa would have described the experience with as much joy. Firdous also brings a playful mindset to planning and facilitating the lesson on informational texts. She searches to find engaging ways for her students to explore informational texts, by trying a new activity and exploring the unknown. When the Spiderman debate arises, she follows her students’ interests.

Tadiswa and Firdous’s playful mindsets are not a matter of chance. Playful mindsets are activated (or deadened) by how learning experiences are structured. In an experiment using six LEGO bricks, participants were asked to make ducks, thinking of it as either work or play. When the experience was framed as work, the participants tried to make the “right” duck and found the

situation stressful. When framed as play, participants enjoyed themselves, made a greater variety of ducks, and were interested in continuing to make ducks even after the experimenter said it was fine to stop.³² A playful mindset had been activated.

Mindsets can be cultivated over time.³³ Recall that at the start of the school year, some students in Firdous's class were hesitant to take part in whole-class discussions. Such hesitancy had been forgotten by the time the students were debating whether a fact had to be true. Over time, classroom and school culture can foster playful mindsets for students and teachers. The importance of school culture in promoting playful learning, and in particular the need for a sense of trust and safety, is discussed in our sixth principle.

Principle Six: Supportive school cultures enable playful learning to thrive

You may have had this experience visiting two schools in the same city. Despite being near each other and answering to the same government mandates, the two schools have very different “feels.” In one school, you are greeted by the receptionist with a smile and perhaps an offer of water. The classrooms are buzzing with purposeful activity. The children and teachers are smiling. When they are not in the halls or classrooms (which is often), school leaders sit at round tables, engaging in lively conversations with staff, family members, and students. In the second school, the receptionist seems haggard and, after asking you to wait on an uncomfortable bench, forgets (or maybe just ignores) you. There is tension in the classrooms, with teachers talking sternly to students. School leaders spend most of their time in offices behind large desks, summoning staff to receive instructions. The feelings in the two schools are manifestations of what we defined above as culture—the shared values, practices, norms, and understandings that guide interactions in a group.

Supportive school cultures are essential for playful learning to thrive. For adults and children alike, such cultures provide the sense of trust and safety needed to activate playful mindsets. For adults, a supportive school culture encourages risk-taking and professional growth—colleagues collaborating and challenging each other to experiment and explore. This is also true for students. As Jodi Kraus, the teacher in the final Picture of Practice explains, “It is critical for children to trust school” in order for them to try, experiment, and be playful. This is particularly important for children for whom school has previously not been a place to be playful. For playful learning to thrive these students need to feel that their ideas and identities are valued and that they can be their authentic selves. A school culture that values playful learning also provides students with a coherent experience as they move up the grades. Over time, students learn how play can support their learning.

In the settings of each Picture of Practice, the administrators and teachers provide a safe space for children to be vulnerable, take risks, and share their feelings and thoughts. The educators at these schools recognize the importance of culture, know that changing culture takes time, and understand that once a healthy culture is in place it must be tended to. A robust literature exists around creating strong school cultures of learning for adults and children.³⁴ Chapter 5 describes how school leaders—principals, department heads, and teacher leaders—can change and then maintain school cultures that create the conditions for playful learning.

These six principles explain why educators need a comprehensive and collaborative approach to playful learning. Play supports learning, so play should have a role in schools. Because this principle is foundational to our approach to education, we look more closely at the relationship between play and learning in the next chapter. Yet, the implication that play supports learning extends beyond telling children to go play. It is more than a call for gamification—adding game-like properties into school activities³⁵, and more than an individual teacher adopting a few of the Pedagogy of Play (PoP) practices.

For playful learning to thrive, students and teachers need to be in playful mindsets. Playful mindsets are promoted by supportive classroom and school cultures. Such a culture is apparent in our second Picture of Practice, *Facilitating a Student-Composed Schedule*. It can be read as a case study of why a pedagogy of play is needed.

The Middle
School Teachers
Study Group



Facilitating a Student-Composed Schedule

Teachers of 11–15-year-olds

International School of Billund

Billund, Denmark

“What if?”

Science teacher and coordinator Ole Jørgensen cannot sleep. His mind is occupied with thoughts of “What if...?” What if middle school teachers dropped the traditional timetable for a bit? What if students were free to schedule their own learning? After all, student choice is a central indicator of playful learning at the International Baccalaureate school where he teaches. Ole runs his idea by his study group—seven middle school teachers who meet regularly to discuss ideas and practices related to playful learning. All respond with enthusiasm.

Embarking on an ambitious experiment, the teachers decide to get rid of the timetable for two weeks, allowing students the freedom to design their own schedules. Teachers write up instructions for the assignments, including estimated timeframes, and make themselves available for support.



Ole and Lene

“Frankly, it’s a gamble”

Lene Christensen, co-facilitator of Ole’s study group, is particularly interested in the experiment. The two team up. The first step they take is to ask students their opinions about the idea.

Their questions to the M8 (13-year-old) students receive a range of responses:

How do you feel about designing your own schedule?

*I feel great!! No more useless lessons. I feel like there is a bit more freedom in life.
I think this is a great idea. (Willy)*

[I’m] nervous, apprehensive, unsure, and unprepared. It could be interesting. (Emil)

What positive effects do you see in designing your own schedule?

We can turn down on our stress and make our schedule fit how we want it to fit. (Marc)

What negative effects or difficulties do you see?

*I could get distracted or if I’m the only one doing that lesson, it could become a little lonely.
Some people might think they can just relax or play games, and then they won’t work as well.
(Angie)*

The students’ sentiments are best summed up by Amit’s quip:

Frankly, it’s a gamble.

Planning for playful learning

The students’ responses reveal significant self-knowledge about study habits. They mention a desire to learn with friends and the importance of blocking out times to meet with teachers. They also identify potential challenges: stress, loneliness, distraction, and procrastination.

In response to these concerns, the teachers allot collective planning time for students to coordinate schedules and create a structure for daily reflections so they can regularly check in with students. The teachers decide to give the younger students more time to plan their schedules and fewer assignments than usual. They also mix grade levels in the reflection groups so that older students might support younger ones.

Students
planning the
schedule for their
first SCS week



To solicit parent input and address potential concerns, Ole facilitates an informational session after school. Some parents express concern that the students will misuse their freedom and “waste away the week.” However, after looking at a sampling of student responses, parents note that the students seem excited and eager for the challenge.

As one parent says,

He will maybe be a little bit out of his comfort zone, but that is good once in a while.

The Nitty-gritty: Seventy-six students, thirteen teachers, ten reflection groups, eleven subjects, two weeks, and ninety-five time slots

A lot of conversation and preparation yield a plan for a student-composed schedule (SCS). A few days before the experiment begins, students are given ninety minutes to design their schedules. Most students plan collaboratively with friends, parsing out ninety-five fifteen-minute time slots across four subjects. Some students want to work hard for a long time and save their breaks; others want to divide things equally. Each student also identifies a “personal project”—an interest or skill to develop if they finish their assignments early.

Teachers write up assignments and learning outcomes along with time estimates online so the tasks can be carried out with limited or no direct instruction. They are also available for consultation.

Students leading their learning

The middle school teachers and students embark on their experiment. For several students, week one gets off to a rocky start. They ask questions like, “What should I be doing now? When should I take my break?”—answers usually determined by teachers.

For other students, the week starts more smoothly. 13-year-old Anna explains,

Day one went pretty well. I followed my plan. I was surprised by how serious people were taking it. I didn't see teachers, just Ole for science. I was close to seeing Merete [maths teacher], but I figured it out with my friends.

Amit says,

In the morning when I came to school, it didn't feel like school. Before, everything was so quiet. Now there is no silence. A lot more people are around. It's busier ... and better to have no silence because it gives you a feeling of doing something.

Week two is more stressful for some, due in part to the number of summative assessments. Still, students take responsibility for the assessments, persisting with figuring out task instructions *without* turning to the teacher. Students seem to enjoy teaching each other to a degree their teachers had not anticipated.

In the science room, 11-year-olds work side-by-side with 14-year-olds. In Danish and English, students help each other across grade levels. Lene (who teaches Danish) says she had not anticipated that students with a different first language would be called on to help each other. This gives students who often struggle with traditional academics an opportunity to help their peers.

Students discover a great deal about their time management abilities. As Amit says,

I get distracted very easily, but this took it to a whole new level... a personal low... I was lost. What did I do? How could I spend so much time doing nothing? I'm not used to this much freedom!

Students also discover the advantages and disadvantages of learning in a group. One student chooses to sit alone, saying,

Yesterday, I didn't do anything because I got distracted all the time, so today, I'm alone.

Students also appreciate the freedom to choose where to work. Anna muses,

I think the fact that I can sit wherever I want, that it makes me feel more calm, ... [it helps me] focus more than I would sitting in a classroom.

In one classroom, three 14-year-old students start to build an office space out of some tables. Throughout the morning, the structure turns into the “Bastille” and ultimately “Versailles.” (They have just finished a history unit on the French Revolution.) The students challenge themselves to add something new to the palace each day.



One of the quiet rooms



Versailles

“Versailles” elicits a range of reactions. Some students feel that the palace excludes them from the classroom since it uses most of the chairs. Others think it is a creative act and do not mind the lack of seating. Tue, the Head of Middle School and IB Coordinator, wonders whether students should be offered more materials for creating their own study spaces.

Asking students to plan and review their days each morning and afternoon does not prove as generative as the teachers had hoped. Teachers realize that reflection should not be considered separate from content learning, but rather a critical part of the learning process.

Throughout the week, Tue observes another kind of reflection during transition times when students converse about what had just happened in lessons, sharing new knowledge and discoveries. Tue dubs this type of reflection “corridor learning.”

One unexpected benefit of the SCS for teachers is that they experience a rare opportunity to work one-on-one with students for longer than the typical schedule allows. Teachers can spend more time getting to know students—especially those who struggle in their subjects—and their unique learning strategies. Interactions with students are more relaxed because fewer students are waiting for their attention. The relationships and information are invaluable when returning to the regular schedule because teachers are more aware of each student’s strengths and weaknesses. Math teacher Merete finds talking to students about their learning process especially revealing.

Student reflections: “Queen of your own kingdom”

The SCS experiment challenges students to discover their own identities as learners outside of the typical “student role.”

As Amit says,

I stopped looking at school like school. [SCS] is very different from school... [It's] pretty fun.

Ella is even more enthusiastic:

You were the queen of your own kingdom ... which was really cool because you were in charge of yourself, and you learned and enjoyed a lot.

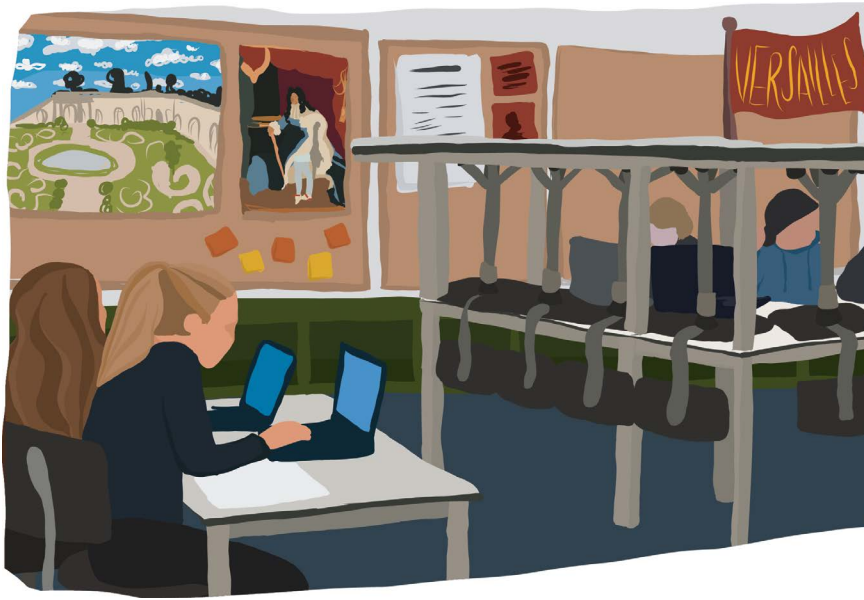
Her classmate Paula adds,

It was like a university. I felt like I was a higher age and ... we're so smart!

In a sense, the SCS weeks engage students in role-playing college students or adults. Though reactions vary, many students embrace these new roles and navigate the unexpected freedom and responsibility that comes with it.

Teacher reflections: Lessons learned for now and next time

The SCS experiment also enables teachers to play with their practice. Back in the middle school teachers’ study group, Ole, Lene, and their colleagues discuss documentation of the two-week SCS (observational notes, short videos, and student surveys). They decide that as they move



back to the regular schedule, they will repeat instructions less and trust students more to take responsibility for knowing what to do. Lene explains,

Sometimes less is more when it comes to teacher control, directions, and guidance.

They will also be more open with regard to students choosing their own work setting and create more opportunities for individual support for students needing extra attention. And while acknowledging that the first run of the SCS was not perfect, they discuss what the next time might look like, and that there will be a next time.

Chapter Two:

What Is the Relationship Between Play and Learning?

You might have heard a teacher say to a group of students, “We are here to learn, not to play.” Or perhaps more sympathetically, “Sorry, we don’t have time to play now.” For some, learning and playing seem unconnected. As you strive to bring more play and playfulness into your practice, you are likely to be asked, “Why should children play at school?” We have certainly been asked this question. Our answer: *Play supports learning.*

In this chapter we take a step back from classrooms and schools and focus on this relationship, providing a three-part explanation of how play supports learning:

- In the first part of our explanation, we reference a drawing of a city we created (pictured on pages 32-34) to illustrate five central characteristics of play that support learning.
- The next part of our explanation provides a review of the literature on play and learning, exploring what the evidence says and what play researchers agree on regarding the relationship between play and learning.
- The third part of our explanation draws on the historical and anthropological record to illuminate how play can be a strategy for learning, particularly for adults seeking to answer big questions and solve complex problems.

We conclude this chapter by proposing that understanding the connection between play and learning will be useful for your conversations with colleagues, administrators, families, and the broader community.

Five characteristics, and a drawing, of people playing and learning

What are the characteristics of play, and how do they support learning? We answer this question by turning to a framework created by leading practitioners, researchers, and policymakers from around the world.³⁶ The group, convened by the LEGO Foundation, reviewed the literature on learning, play, and neuroscience, and asked children their views on play and learning. While there is certainly more than one way to describe the characteristics of play, we use this framework because it articulates the links between play and learning and highlights the social and active nature of learning processes. The framework outlines these five central characteristics of playful experiences:

- Joyful
- Meaningful
- Actively engaging
- Iterative
- Socially interactive

We begin our examination of these five characteristics of playful experiences in a way we hope you will find playful. On the next few pages, we share a drawing of people engaged in playful activities. Though set in an imagined city, the drawing is based on real situations: the architecture is inspired by buildings from our four research sites (Denmark, South Africa, the U.S., and Colombia). The activities, too, are drawn from real situations (a group of friends playing Pokémon Go; the PoP research team exploring materials in our offices).³⁷ In this city, citizens have the resources to play and value spending time playing. Their activities are inspired by play around the globe. The drawing depicts play among children, play between children and adults, play among adults, and play between people and other animals. People are playing in groups and alone. There are games with rules, pretend play, play in nature, play that involves computers, play with materials, and play with ideas. Although the drawing captures many types of play, of course not all forms of play are represented (e.g., there is no rough and tumble play or extreme sports).

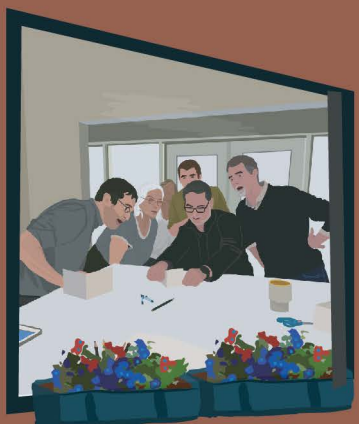
When you turn the page, you will first see a neighborhood and business district with apartments, offices, and street life. Here you will find families, friends, neighbors, and colleagues playing together. You will find the South African artist Esther Mahlangu painting on the side of a building and the physicists Niels Bohr and Wolfgang Pauli discussing the spin of electrons. There is also a carnival parade led by the Blaumeier Atelier, an inclusive art collective from northern Germany. On the double pages that follow, you will see a school, field, and forest. You will find students and educators engaged in playful activities, many inspired by this book's *Pictures of Practice*. If you look closely, you will find that the drawing has some fanciful elements (you'll see a playful mascot in the attic). And we have left a classroom empty so you can imagine your classroom as part of this school where playful learning is occurring. In the Endnotes, we annotate the drawing, providing an explanation of each activity represented.³⁸

We frame our discussion of the drawing around the characteristics of playful experiences (joyful, meaningful, actively engaging, iterative, and socially interactive). As you look over the drawing, we invite you to notice where people are having joyful experiences, are socially interactive, and are actively engaged. And then reflect on how these experiences might help them learn, develop skills, gain information, and think more critically, creatively, and collaboratively. We hope that you enjoy exploring the drawing.



choice. wonder. delight.





LA COSMICA







Joyful

The city in our drawing is a joyful one. We see dancers in front of the apartment building, a student examining the globe in her classroom, and children playing in the puddles in front of their school. We see adults and children laughing, smiling, and connecting. In some cases, joy comes from engaging in a task itself, like the artist who is painting the side of the apartment building. In others, joy is the result of sharing meaningful experiences with friends. In other instances, it comes from something surprising, as when the cat in the second-floor apartment unexpectedly jumps to catch the yarn. Yet joy is more than feeling good. Sometimes, the greatest joy comes from overcoming a challenge, which some educators call “hard fun.”³⁹

How does the joy found in play support learning? You likely remember the excitement and the ease of learning about something you really enjoyed. Joyful experiences involve the heart and mind—emotions and cognition. Joy promotes motivation and interest, which furthers learning.

Meaningful

The people in the illustration care about what they are doing. The activities interesting and meaningful to them. The participants have chosen to take part, intrinsically motivated by the activities. This is the case for Bohr and Pauli, playing with tops in order to better understand the spin of electrons, a phenomenon they are passionate about understanding.

How do meaningful activities support learning? When something is meaningful, people attend carefully. They relate their new experiences to what they know and make connections that allow for further and deeper learning. Based on what they know, they explore what is unknown.

Actively engaging

Players often lose themselves in play. They enter what some describe as a state of flow⁴⁰—total immersion in an activity. So, it is not surprising that in our picture of play, people are active and engaged. From the climbers in the rock gym to the children in the tree to the girl participating in the online dance class at home, they are immersed in what they are doing. For some, the engagement is hands-on, such as the children playing hide-and-seek in their kitchen. For others, the engagement is more cerebral, such as the classroom conversation about policing. In all cases, there is full engagement in the activities.

How are the qualities of actively engaging connected to learning? Consider the difference between using signs, landmarks, and a map to walk your way through a new city versus following directions as dictated by a GPS voice. If you follow the voice, you are relieved of the responsibility of making observations about or understanding where you are in relation to city features or layout. Sure, you might pay attention at the start of the trip, but it is likely that your attention will fade. Someone else is telling you when to turn. If you are the navigator, you have to pay attention. You might find you get lost. That is part of the learning process. You will likely learn your way around the new city much faster. You learn much more when your mind and body are actively engaged; they are inherently linked.

Iterative

Many of the people in our city are iterating; trying something out and, after considering how it went, trying again. In the Project Zero offices, a group of researchers is trying out an activity as they make another draft of a workshop to support teacher learning. The skateboarders have tried, experimented with, and practiced their moves countless times. The daughter/father cooking team has used this recipe before, but this time around, they are trying a new “secret ingredient” and are excited to see how it goes.

Children do not play because it is easy. They often play because it is hard, because of the challenge.⁴¹ This motivation to play supports children’s tendencies to try and try again. If something is challenging, they will often continue to try until they get to a point that satisfies them. Iteration is fundamental to learning. As a child, how did you learn to write your name? To ride a bike? As an educator, how did you learn to lead an engaging group conversation? You tried and tried and tried again. You iterated. Through iteration, people experiment, revise, explore different strategies, and discover their next question—they learn.

Socially interactive

Our playful city is a social city. In-person and online, people are playing in pairs, trios, and larger groups. Even play that does not seem social has social aspects—although she is working alone, the painter Esther Mahlangu has the patterns of her Ndebele ancestors in mind as she paints the wall.⁴² People like to play together—social connections are part of the fun. Play provides meaningful ways to explore the world with others.

Social connections promote learning. Indeed, the most powerful resource available to support learning is other human beings. When people interact, they often learn from and with one another. They communicate and articulate ideas. They are apprenticed into ways of thinking.⁴³ Similarly, in play, participants learn how to negotiate and take the perspectives of others. Even in competitive games, it is crucial to be able to understand what your opponents are thinking (e.g., in poker, deciding whether someone is bluffing or not).

The research on play and learning

Using the drawing of a city, we have just described how learning is supported by experiences that are playful—that are joyful, meaningful, actively engaging, iterative, and socially interactive. But educators aiming to bring more playful learning into their classrooms and schools are often asked: What is the *evidence*? What does the research say? To address these questions, the second part of our explanation of how play supports learning shares a review of the research literature.

To start, a word on what research evidence provides. Anthropologist and neuroscientist Andreas Roepstorff describes research as the process of mapping out parts of the world which tells us what we can and cannot say about certain phenomenon.⁴⁴ Taken together, research from a variety of disciplines on play and learning has created a map that tells us that we can no longer say that play is frivolous and has no impact on learning. Rather, the map shows that play supports

learning. As Junyi Chu and Laura Schulz explain, “In all of modern psychology, perhaps few claims are so uncontroversial [...]. Parents, educators, and researchers alike believe that play in early childhood supports learning.”⁴⁵

This does not mean that everything is known about play and learning, or that there cannot be an improvement in the methods used to create this map.⁴⁶ What we offer here is an overview of what the current research says.⁴⁷ Using English,⁴⁸ Spanish,⁴⁹ Chinese,⁵⁰ and Arabic⁵¹ databases that catalogue a range of disciplines (ethology, evolutionary biology, neuroscience, developmental psychology, and education), we have organized the research on play and how it supports learning into two broad categories: research on non-human animals and research on people.

Research on animals

What do we know about the relationship between play and learning from research on animals? First, we know that lots of animals play. Evolutionary biologists who study play have created a range of criteria for categorizing what animal behavior can be considered play. Using these criteria, they have identified a long list of species that play: cats, pigs, otters, Komodo dragons, octopuses, bears, horses, parrots, and more.⁵² Moreover, animals seem to *want* to play. Like human children who have been made to sit still and listen to their teacher for too long, when deprived of the opportunity to play, animals will then play more when given a chance.⁵³

Which raises the question: Why do animals play? When evolutionary biologists consider the *why* of any animal behavior or trait, they search for a link between the behavior or trait and the benefits it provides to the animal’s survival, such as finding food, reproducing, or adapting to the environment. Polar bears have long, white fur to help them survive the arctic cold and provide camouflage as they hunt. Male long-tail partridges have long, colorful tail feathers to attract mates.

At first blush, play is a mystery. Why would an animal spend energy, and even risk injury, on behavior with no direct benefits for survival? Over time, a widely embraced hypothesis has emerged: animals play to train for the unexpected.⁵⁴ In other words, they play to learn.

The answer to how play helps animals learn depends on the animal. When the New Caledonian crow plays with sticks and twigs, it learns about their uses as building materials and tools. Young crows will pick up sticks, shake them, and toss them around. Adult crows will even throw twigs to their young to play with. When they grow up, these crows use twigs to build nests and dig insects out of deep cracks in trees.⁵⁵ Other animals learn other skills in play: lion cubs learn how to hunt, rabbits learn how to hide, and rats learn how to socialize (more on this below).

Recently, researchers have begun to measure specific learning benefits animals gain through play. Rats, a relatively clever species whose brains bear similarities to humans, have been a popular subject of these laboratory experiments. Much of young rats’ play involves play fighting. Juvenile rats, deprived of opportunities to play fight but not social interactions, fail to learn the social strategies needed to navigate life in rat colonies. Rats deprived of play in their early development show higher stress levels in new situations and lack strategies to reduce this stress. Play in rats also results in specific organizational changes in their brains, which suggests there is a physical component in how play impacts social learning and decision-making.⁵⁶

It is no surprise that biologists have found that the more intelligent an animal is, and the more time it takes to mature into adulthood, the more it plays.⁵⁷ Rats, a highly adaptive species, play more than mice. While most birds do not play much, New Caledonian crows, who are super-smart by bird standards, play a lot. Primates, along with their mammalian cousins, dolphins, and whales—all very clever—play more than most species. And human beings, who have come to dominate the earth despite not being the strongest or fastest animals, seem to play the most.

Human research

There are similarities between the way people and certain animals play. Watching a pair of 4-year-olds wrestle, it is hard not to think of puppies. In play, people test, explore, and advance their physical abilities⁵⁸; they build social skills; and they learn to regulate their emotions.⁵⁹ It is not surprising that depriving humans of play, like in rats, causes problems. Research in the U.S. found alarmingly high expulsion rates in preschools that limit play-related activities.⁶⁰ Other investigations suggest a link between play deprivation and anti-social behavior.⁶¹

Human play differs from other animal play in that it includes a unique feature: pretense.⁶² As far as we know, among all the animals that play, humans are the only ones who pretend. By fostering the human capacity to imagine, play supports the development of the complex set of skills and mindsets young people need in order to take part in adult society. The developmental psychologist Alison Gopnik explains that, much like scientists investigating the world, play is children's way to test hypotheses about how the world works.⁶³ Pretense is the basis of symbol systems—math, reading, and music. You need to use your imagination to understand that the symbol "5" stands for five objects, that the letter "A" stands for the sound "ah," and that the note ♩ stands for a quarter beat.

In play, children ask, "What if," experimenting and imagining—the essence of creativity. A review of data from hundreds of thousands of American children argues that a decrease in children's abilities to imagine and see things from different angles over the last thirty years might be related to fewer opportunities to play.⁶⁴

Further evidence that play supports human learning is that children play when it challenges them and stop when it becomes easy.⁶⁵ In other words, they play when they are learning, and they stop playing when the learning possibilities have ended. Laboratory studies have also shown that when children get to play with a new object, as opposed to being instructed on how to use the object, their explorations are longer, and they make more discoveries.⁶⁶

Studies from classrooms point to the learning benefits of play. In early childhood, when children play with blocks, their abilities to count, classify, and create patterns expand.⁶⁷ Socio-dramatic play builds vocabulary and the ability to tell stories, with important links to literacy.⁶⁸ Playful lessons and experiences promote creativity and help children understand abstract concepts, including environmental phenomena.⁶⁹ Indeed, children who participate in play-oriented early childhood classrooms show long-term academic gains.⁷⁰ Research in primary- and middle-years classrooms also demonstrates links between play and the acquisition of academic skills, deepening content knowledge in the domains of mathematics, literacy, science, and computer technology.⁷¹

New research suggests another link between play and academic success: enjoyment of school in the early years leads to academic achievement in high school. A study of 10,000 young people in the United Kingdom found that students who like school when they are young go on to perform better in academic tests in high school, regardless of ethnicity, social class, or gender.⁷² What determines whether young children enjoy school? Not surprisingly, interviews reveal that kindergarteners' enjoyment of schools is the result of getting to play (and activities related to play—making and creating, having choices, being with friends and teachers, and learning).⁷³ Importantly, once children stop liking school, it is hard to get them to like it again.⁷⁴

Neuroscience provides another contribution to the map of play and learning. While there is still much to learn about brain development and play before conclusive statements can be made, it appears that good things happen in the brain when people play. When a person has experiences that are joyful, meaningful, actively engaging, iterative, and socially interactive—in other words, playful—areas of the brain are activated, and chemicals are released, that are related to focused attention, memory, and movement from effortful to automatic learning.⁷⁵ Cognitive scientist Marc Malmdorf Andersen has formulated a provocative hypothesis: Play is not just rewarding behavior in itself; the underlying goal in play is gaining new information about the world. Children experience play as enjoyable because it allows them to seek out or create the ideal circumstances for information gain—it allows them to learn.⁷⁶

There is no one study that “proves” play supports learning. However, research from fields as diverse as ethology, developmental psychology, education, and neuroscience has helped create a map. With this map, we can no longer say that play has no purpose. Play offers a motivating and efficient place to learn. Motivating because learning certain skills helps keep the play going, makes it more interesting, and offers more opportunities to connect with friends. Efficient because in play, children learn in many different directions at once—gaining information, understanding disciplinary concepts, developing skills, thinking critically and creatively, and collaborating to build knowledge. Play is a good place to get some thinking done.

Play as a strategy for learning

Recall an adult you know or know about who is particularly good at identifying and solving problems. The nature of these problems can vary—a dispute between neighbors, a stubbornly leaky sink, or how to explain a difficult concept. We have a hypothesis: The person you are thinking of when faced with puzzles and problems is predisposed to ask, “What if?” They imagine different and new possibilities. They test and try. They invent, often with others. They use play as a strategy for learning.⁷⁷ The third part of our explanation about how play supports learning focuses on adults, highlighting play's role in the creativity of people who make a difference for their families, communities, and the wider world.

The research on adult play confirms what you likely experience. Perhaps because of expectations about adulthood, adults play less than children. Still, adults play to enjoy themselves, make social connections, and learn about the world. For adults, play continues to support learning; specifically learning something new.⁷⁸

The sciences provide abundant examples of play and playfulness, supporting discovery, creativity, and learning. Returning to the physicist Niels Bohr pictured in our playful city, in the 1920s–40s, Bohr led a research center at the University of Copenhagen where he worked on one of the knottiest problems of 20th-century science: the inner workings of the atom. The atmosphere of Bohr’s lab has been described as playful intensity or intense playfulness. Bohr himself was famous for his curiosity and playfulness.⁷⁹ On walks in the woods, on skiing trips, and over glasses of wine, Bohr would ask, “What if we tried that, and what if the atom worked like this?” Along with members of his lab, he would, for example, get out tops and play with them in order to better understand the spin of electrons. The results of this playful learning were important contributions to the development of quantum theory—the theoretical foundation of smartphones, GPS, and MRIs.

Bohr and his colleagues are far from unique. In his book *Wonderland: How Play Made the Modern World*, science and technology writer Steve Johnson describes how, throughout history, adult play has led to groundbreaking innovations.⁸⁰ From rubber, first created to make balls for play (now a critical component in a wide variety of products) to probability theory, invented to more successfully play games of chance (now used to design apps and predict the weather), to computers, play has been critical for learning.⁸¹

Marie Curie, the two-time Nobel prize-winning physicist and chemist, described the childlike (and playful) nature of her work:

*I am among those who think that science has great beauty. A scientist in his laboratory is not only a technician, he is also a child placed before natural phenomena, which impress him like a fairy tale.*⁸²

Alexander Fleming, who discovered the life-saving properties of penicillin, called the playful nature of his work “play with microbes.” He explained how he used play as a strategy for learning:

*There are, of course, many rules in this play, and a certain amount of knowledge is required before you can fully enjoy the game. But when you have acquired knowledge and experience, it is very pleasant to break the rules and to be able to find something that nobody had thought of.*⁸³

The creative possibilities of play extend beyond science to politics, how groups of people—big and small—organize themselves, solve problems, set priorities, and distribute power and resources. An inspiring example of using play as a strategy for learning comes from an unexpected setting: the prison set up by the apartheid government of South Africa on Robben Island. Robben Island was designed to break freedom fighters’ spirits; on arrival on the island, they were told, “You will die here.” Yet Nelson Mandela, who would become the first president of a democratic South Africa, and his colleagues turned the island into what came to be called “the university.” They asked themselves, “What if we taught our comrades who can’t read literacy skills? What if we gave seminars on history and political theory during our short breaks in the limestone quarry?” Despite meager rations and isolation from their community, the prisoners on Robben Island led their own learning, found joy in being together (how else could they have persevered?), and explored the unknown, creating something seemingly unimaginable: a training ground for the future leaders of their country.

In their book, *The Dawn of Everything: A New History of Humanity*, David Graeber and David Wengrow describe how, throughout history, people have “played with” social structures, experimenting and iterating to find solutions that worked for their communities.⁸⁴ They describe a large prehistoric settlement in present-day Ukraine that showed evidence of “constant innovation, even playfulness” of social organization. Despite the general uniformity of resources among households, excavations found differences in the physical layouts of homes with a “dazzling variety” of artistic expression. They share evidence from the Greek Isles suggesting the use of clay icons to envision and play out social structures.

Synthesizing the archeological and anthropological records from around the world, they note the particular value of the festival as a “laboratory of social possibility” out of which were created new ways to organize societies. They conclude that, “time and again in human history, the zone of ritual play has also acted as a site of social experimentation—even, in some ways, as an encyclopedia of social possibilities.” These possibilities include monarchy (it seems people played king before there were kings with real authority), private property, and the democratic procedures of elections and sortition (the random selection of political officials from a pool of qualified candidates—a way to avoid factionalism).

When considering current global issues and a general sense of inevitability and pessimism about finding solutions—for example, the feeling that the scale of modern societies makes hierarchy, bureaucracy, and inequality unavoidable—Graeber and Wengrow wonder how humankind got stuck, asking, “At what point did we forget we were playing?” Rather than being prisoners of our own creations, they suggest the possibility that we might play our way out of current problems.

Along with scientists and political leaders, the importance of asking “What if?” is also true for educators (where complex and seemingly unsolvable problems exist). Growing up, Debbie LeeKeenan was part of a loving, complicated, playful Chinese American family in which she was encouraged to play games, read books, and use her imagination. When she was 8 and at a new school, she was a victim of racism. A classmate sneered, “Last year, we had a Mexican. What do we have now?” No one did anything about the outrageous behavior. As an adult, Debbie wondered, “What if someone—a teacher or classmate—had come forward to support me?” She has spent her professional life asking, “What if we help young children learn how to spot and stand up against discrimination?” And “What if we use materials to create a playful space where educators can explore and take the risks needed in social justice work? How can we create the joy needed to sustain such work?” As a classroom teacher, school director, author, and lecturer, LeeKeenan’s work has inspired numerous teachers and had an impact on countless children.⁸⁵

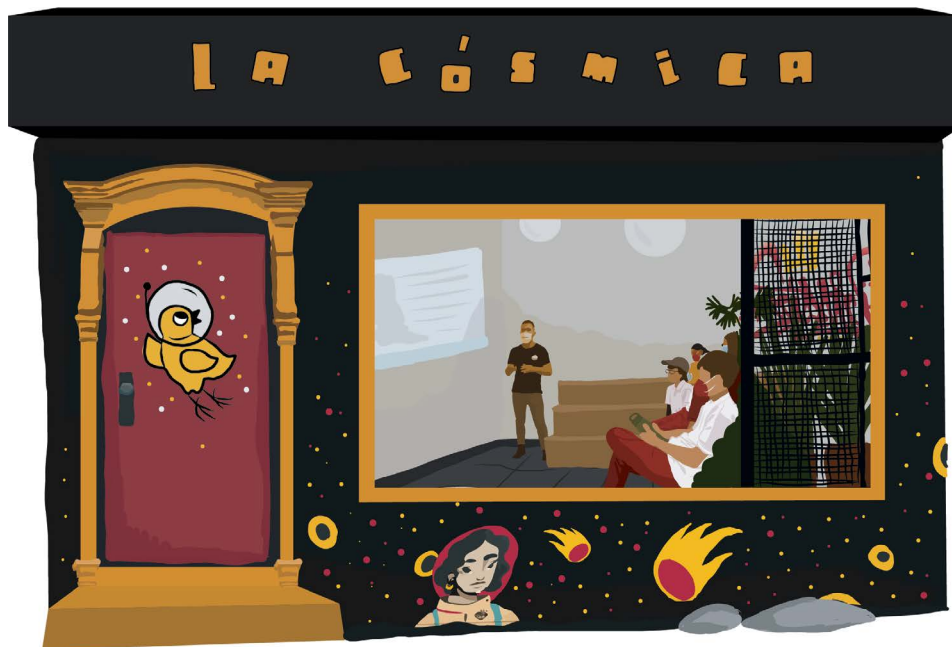
A discussion about educators brings us back to the International School of Billund, the site of the *Facilitating a Student-Composed Schedule* Picture of Practice. Here a group of teachers asked, “What if we let students create their own timetable?” At the same time, teachers in other study groups asked other “What if?” questions about their practice:

- What if there were whole days when students could follow their passions?
- What if we ask students to decide how to practice their skills?
- What if we have fewer rules on the playground?

What if schools helped students to learn to ask “What if”—to use play as a strategy for learning? Students would be better prepared to take on the essential and difficult problems the world faces.

Leveraging the evidence

In this chapter, we offered three approaches to explore how play supports learning: a survey of specific characteristics of play and their relationship to learning; a review of the research providing evidence from a variety of disciplines; and an exploration of the role of play (experimenting, exploring, testing) in adult learning and innovation. These explanations not only provide a foundation for our research (and this book), but they also can serve as a helpful tool for you. When faced with comments such as “School is for learning, not for play” or “We do not have enough time to play,” you can draw on these ideas to explain the importance of playful learning to families, colleagues, and supervisors. Having more than one way to explain how play supports learning is useful—certain explanations are more effective for certain individuals. We also hope our three-part explanation supports your understanding of this complex relationship, providing a multi-faceted picture of the connections between play and learning.



Creating a Restaurant

9- and 10-year-olds

Colegio Unidad Pedagógica

Bogotá, Colombia

During the first month of school at Colegio Unidad Pedagógica, an independent pre-kindergarten through 8th grade school, the students in each primary grade class identify a topic of investigation for the year. In Carol Triveno's 4th grade, half the children are curious about gastronomy and the other half favor technology. A few are also interested in art. Students try unsuccessfully to convince each other about the merits of their preferred topic, leading to much frustration. After extended negotiations, the children reach a solution that is satisfactory to all: restaurants.

Over the course of their inquiry students research:

- Food production and consumption around the world
- The history of the spice trade
- The sugar content of processed and non-processed food
- Budgeting to purchase ingredients at a local market
- The school community's preferences for potential "secret ingredients" for dishes in the restaurant the students create

At the end of the year, the children transform their classroom into a restaurant with coordinated decorations, a varied menu, and flavorful food that they cooked using recipes they created.

In addition to gaining disciplinary knowledge (e.g., conducting experiments in the school's chemistry lab, comparing data in fractions and percentages in their “secret ingredient” survey), the restaurant inquiry engages students in leading their own learning, exploring the unknown, and finding joy in learning.

La Cosmica Polleria [Cosmic Chicken]

Here we zoom in on a pivotal moment in the children's inquiry: a trip to a working restaurant. Carol schedules a trip to La Cosmica Polleria, an establishment specializing in sandwiches and *papas a la francesa* (French fries). Her learning goal for the visit is to propel her students' inquiry forward. Although she wants students to see that a restaurant involves not just preparing food but also sourcing ingredients, developing customer relationships, and more, she also wonders which aspects of the visit will interest her 4th graders.

To prepare for the trip, students role play the different jobs they will encounter (chef, cashier) and generate questions to ask during the visit. They also research the restaurant online. Ready, if a bit nervous, Carol's twenty students board a bus for the ninety-minute trip to the heart of Bogota, along with a class of 2nd graders with a related inquiry project on food.



Cristin explaining aspects of the restaurant

The concept and a riddle

The visit begins with Carol reviewing the purpose of the outing, explaining, “Every restaurant has a narrative and an ambiance, and those things have to be coherent. They are called the concept.... We will get inspired [from the concept at Cosmic Chicken] and make our own restaurant.”*

She then introduces Cristin, who oversees food production and testing at the restaurant. He shares the history of Cosmic Chicken and explains the processes from buying the ingredients to serving the customers, sprinkling in some stories about the restaurant.

Listening with great interest, Antonio asks a question about raw ingredients and food safety.

Cristin then tells the children he has a riddle for them. Showing an image of the restaurant's mascot—a chicken wearing a space helmet—he asks why the mascot is named Neil. As children call out hypotheses, Antonio makes a connection to a documentary he has seen about the first trip to the moon. When Antonio's suggestion of Neil Armstrong, the first person to walk on the moon, is confirmed, he and his friend Eskban celebrate.

* Unless otherwise noted, conversations have been translated from the original Spanish.

Left: Antonio
listening to
Christin's
presentation

Right:
Eskban and
Antonio
celebrating
solving the riddle



Small group tours and the secret ingredient

Mercedes, the 2nd-grade teacher, asks the students to organize themselves for a tour of the restaurant in mixed groups. She explains that group members

should share ideas and learn together. Carol adds that the 4th graders can be role models for the younger children.

With a sense of camaraderie, Antonio takes the lead and invites two 2nd graders to join his and Eskban's group. Putting on hairnets like the restaurant workers wear, they go off to the first stop on the tour, the cash register. One of the teachers pretends to be a customer and jokingly orders roasted chicken. The cashier patiently explains that only fried chicken is on the menu and takes his order. The students observe how the cashier welcomes customers, processes their orders, and gets paid.

A tour of the kitchen is next. Antonio and his group ask lots of questions about how food is cooked. The final stop is the chicken-breading station. There are containers of egg, chicken, and a mixture of flour and spices. Antonio asks about the spices and learns there is thyme, cumin, bay leaves, and a secret ingredient. A secret ingredient! Of course, the children want to know what it is. Unfortunately, because it is a secret, the cook cannot share this information. Frustrating and fun.

Left: At the
cash register

Right:
Breading
chicken



The children do, however, get to bread pieces of chicken which are then fried up. Antonio names this as his favorite part of the visit because he could participate in the actual cooking process. The children plate the results and eat the chicken for lunch. Uma's favorite part of the visit is the feeling of achievement of getting to eat what she and her classmates have made. As part of the Cosmic Chicken visit, children also make a logo for the restaurant and place it in a gallery near the seating area. Creating something that other visitors to the restaurant will see makes this Antonio's favorite part of the visit.

Food for thought

As Carol had anticipated, seeing a restaurant in action and learning about its story propels the children's inquiry forward. The children are especially eager to include a secret ingredient in their restaurant. But what to include? After much discussion, the children decide the secret ingredient should be something people like, so they survey the entire school community about their food preferences. Analyzing the data, the children create charts, bar graphs, and pie graphs, displaying the responses in raw data, percentages, and fractions. They discuss the concepts of *mean* and *medium*. They learn that potatoes are far more popular than onions.

The children also embrace the idea that a restaurant needs a concept and debate what the concept should be, ultimately deciding on a video game restaurant: *Restaurante Game Animation*.

Restaurante Game Animation

The children transform their 4th-grade classroom into a restaurant. In line with their concept, they plan a menu, create pamphlets and posters, and make tablecloths with images from different video games. Models of video game characters hang from the ceiling.

Children also divide into cooking teams and receive a budget to buy ingredients during a field trip to the market. Each team is assigned a day to prepare a meal using the recipes they created. Some teams request support from Carol, while others, who have practiced at home and feel more confident, proceed independently. Over the course of the week, children eat Pasta Bologna, nachos, burritos, and brownies—each dish containing a secret ingredient.

During a week in November, visitors come to Restaurante Game Animation for a meal. They receive a trifold pamphlet titled *The video game restaurant: Enjoy a sensorial experience that is colorful and fantastic*. The pamphlet explains that at the restaurant, the staff “cook food with love” and urges readers to “follow us on social media.” There is a QR code that an IT expert helped the children link to the restaurant's menu—a Covid-19—era innovation that is now common practice in restaurants in Bogota.

Musing on the yearlong process, 4th-grader Uma observes, “At first I thought it was impossible, but then we did it.” She says this with a smile and with much pride about her and her classmates' achievements.



Shopping for and preparing food for the restaurant

Chapter Three:

What Does Playful Learning in Schools Look and Feel Like?

To help educators begin thinking about what playful learning looks and feels like in their school, we often engage them in a word association exercise. We name a series of words and ask them to share what comes to mind when they hear each term. “What comes to mind when you read the word Cat? What about Coffee or Running?” You get the idea. We next ask, “What comes to mind when you think about playful learning?”

Figure 3.1 shows a word cloud of the typical responses we get when asking educators for their associations with playful learning (the size of the words reflects the number of people who responded with that word). “Fun” is often the top choice, followed by “creativity,” “preschool,” and “laughter.” Across sessions, these are some of the most common words, along with “kindergarten,” “playground,” and “recess.” While these associations make sense, playful learning involves more than young children and being outside. The ideas in this chapter may confirm, expand, and even challenge your associations with playful learning. Our goal is to lay the groundwork for you and your colleagues to come to a shared understanding of what playful learning involves in your school.

Figure 3.1:
Word cloud
for “playful
learning” word
association



The second central question of our research is, “What does playful learning in schools look and feel like?” Remember the fourth PoP principle (see Chapter 1), *Playful learning is universal yet shaped by culture*. Understanding what playful learning looks and feels like in a particular setting—in your classroom and school, for example—can be informed by what research has discovered about its general features as well as the specific goals and beliefs of your learning community. This understanding is a critical step in developing a pedagogy of playful teaching and learning because it provides a shared reference point as you plan for and assess playful learning in your context.

In this chapter, we present research findings that can support your efforts to reach this shared understanding—the “cross-cultural indicators of playful learning.” The cross-cultural indicators are a generalized explanation of playful learning based on our research in schools in Denmark, South Africa, the U.S., and Colombia. After describing the research process that led to these indicators, we unpack the indicators, noting variations across the research sites. We conclude with thoughts about the type of teaching that supports playful learning and the implications of the cross-cultural indicators for your classroom and school. In the toolbox at the end of this book, we also include a Playful Learning Indicator Research Guide to assist your community in defining what playful learning looks and feels like in your community.

Cross-cultural indicators of playful learning

Playful learning occurs when a learner is:

- *Leading learning*—exercising choice, ownership, empowerment, and autonomy regarding their learning
- *Exploring the unknown*—experiencing wonder, curiosity, and learning that is meaningful
- *Finding joy*—experiencing feelings of delight and enjoyment

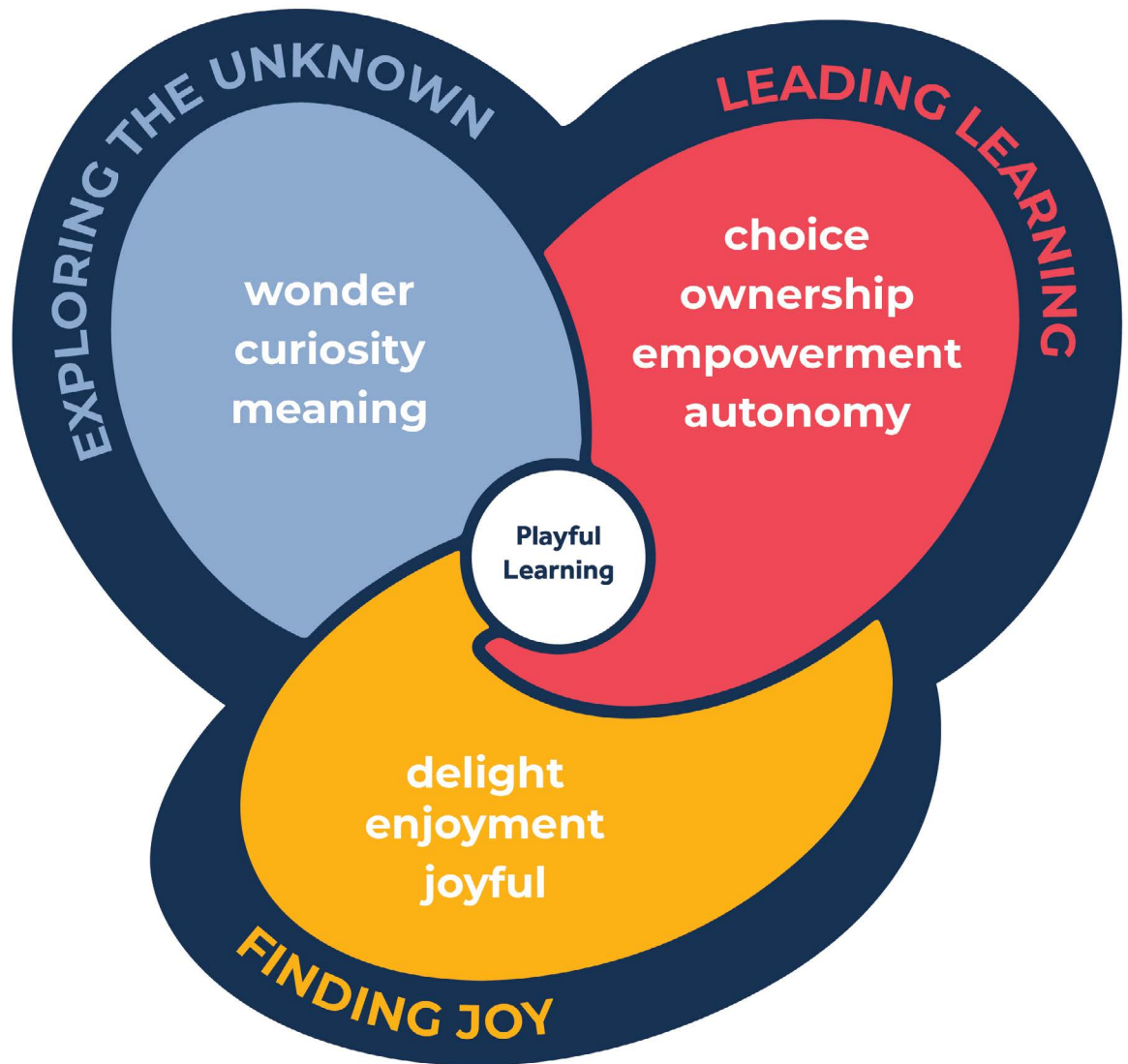
These findings are represented in the cross-cultural indicators of playful learning in Figure 3.2 below. In the figure, playful learning is in the center. When all three indicators are present, playful learning is likely occurring.

The cross-cultural indicators are the result of research that began in Denmark, and then continued in South Africa, the U.S., and Colombia. We reviewed the literature on play and learning, observed in classrooms, and interviewed teachers, school leaders, and students to co-create models that describe what playful learning looks and feels like in each context. We then conducted a meta-review, looking for similarities and differences across the four research sites. Revisiting and reanalyzing the data and getting feedback from educators involved in creating the original models resulted in the cross-cultural indicators (see Appendix A for detailed information about our research methods).

Figure 3.3 shares the playful learning indicators from the International School of Billund in Denmark; three schools in Johannesburg, South Africa; six schools in Boston, MA; and five schools in Bogota, Colombia.

Each set of indicators is based on specific markers that provide more detail about what playful learning looks and feels like. We differentiate between what playful learning feels and looks like because what is playful for one person isn’t necessarily playful for another. Thus, the markers include both behaviors and feelings. For example, for teachers at ISB **wonder** includes the markers *engagement*, *fascination*, and *surprise* (feels like) and risk taking, pretending, and asking questions (looks like). You can find the four sets of indicators, with markers included, in Appendix A. We do not claim that the cross-cultural indicators are universal. Rather, they synthesize commonalities across four cultural contexts. Next, we unpack the three cross-cultural indicators of playful learning—leading learning, exploring the unknown, and finding joy.

Figure 3.2:
Cross-cultural
indicators of
playful learning



Leading learning

In play players are in charge. They choose what to play, whom to play with, and how long to play. They experience agency. Learners *leading learning* is a key element of playful learning, described by educators and students in Denmark, South Africa, the U.S., and Colombia as **choice, ownership, empowering, and autonomy**, respectively.⁸⁶

Bringing learning through play into schools is complicated because the learning goals educators have for students can seem at odds with learner agency (remember the paradoxes between play and school). Yet students leading learning and adult goals learning can co-exist. The feeling of leading learning was articulated by Tadiswa in the first Picture of Practice, *Debating the Nature of Facts*, when she describes the creatures she and her classmates created: “They are ours.” Ella conveys a similar feeling when she says “You were in charge” about her experience during the student-composed schedule.

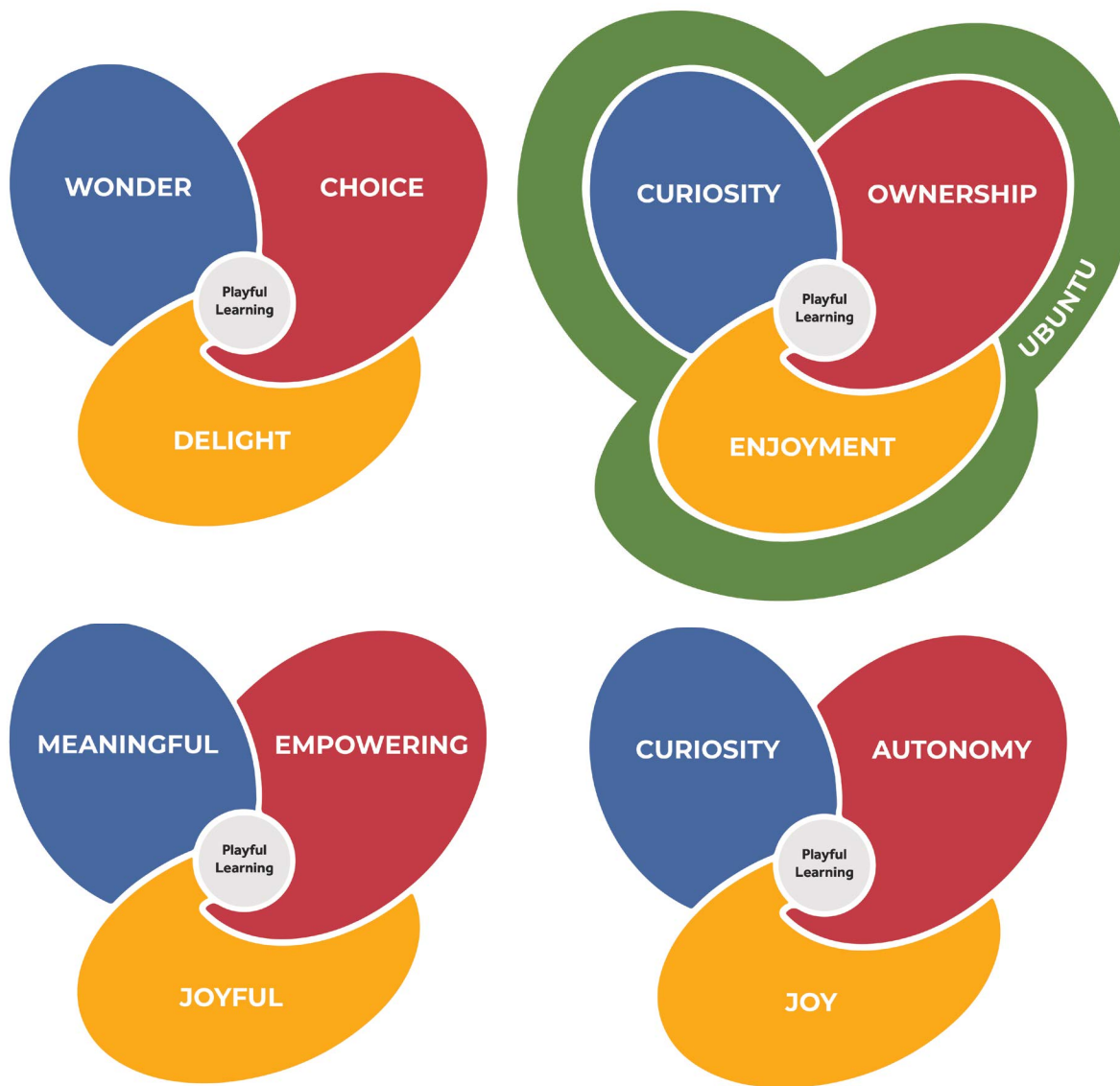


Figure 3.3:
Indicators of
Playful Learning
from...

Top Left:
Denmark

Top Right:
South Africa

Bottom Left:
the United States

Bottom Right:
Colombia

Learners leading learning can look like students creating an imaginary creature that has, as Tadiswa explained, “that little touch,” or middle schoolers at ISB building a cozy place to study and naming it Versailles. It can look like a 5-year-old declaring, “I can teach them” when his teachers ask if young children can learn certain rules (you will read about this in the *Too Many Rules on the Playground* Picture of Practice).

When students are leading learning, children and educators in the four research sites describe feelings that include:

- Commitment (Colombia)
- Confidence (U.S.)
- Courage (South Africa)
- Freedom (South Africa, U.S.)
- Intrinsic motivation (Denmark)
- Pride (South Africa, U.S., Colombia)
- Responsibility (South Africa)

Educators in these same contexts use words like the following to describe what leading learning look like:

- Asking for help (U.S.)
- Collaborating (Denmark, South Africa, Colombia)
- Discussing and debating/dialogue (U.S., Colombia)
- Leadership (U.S., Colombia)
- Moving around (Denmark, U.S.)
- Making/co-constructing rules (Denmark, U.S.)
- Negotiating (Denmark, Colombia)
- Setting goals (Denmark)
- Voicing opinions (South Africa)

From kindergarten to high school, supporting learners leading learning is key to cultivating lifelong learners. Helping learners gain the confidence and courage to ask for help, set goals, and voice opinions are all central to playful learning.

Exploring the unknown

A key ingredient of play is uncertainty: not knowing what will happen when the dice are tossed, which way a ball will bounce, what will happen when children begin acting out pretend scenarios, or who will win a pickup soccer game. Players try things out and investigate because they do not know what will happen and because it matters to them. *Exploring the unknown* is a central part of playful learning, described as **wonder**, **curiosity**, **meaningful**, and **curiosity** in Denmark, South Africa, the U.S., and Colombia respectively.

Exploring the unknown is the backdrop for the student-composed schedule experiment at ISB. In discussing the experiment beforehand, students express excitement and apprehension. Amit's comment that "Frankly, it's a gamble" captures the feeling of the group as it embarked on exploring the unknown. In reflecting on investigating policing in a Picture of Practice you will read next, Jibra highlights the importance of explorations feeling meaningful. She notes, "I know a lot of times with students it's like, 'When am I ever going to use this in real life?' This is...real life."

Exploring the unknown can look like students going off to read the dictionary to find out more about the definition of facts. It can look like the 4th graders in Bogota creating a survey to discover food preferences of potential restaurant patrons in order to determine a secret ingredient to include in recipes.

Students and educators describe the feeling of exploring the unknown with words like:

- Engagement (Denmark, South Africa)
- Fascination (Denmark, South Africa)
- Focus (U.S.)
- Inspiration (South Africa, U.S.)
- Interest (U.S., Colombia)
- Purpose (U.S.)
- Surprise (Denmark, Colombia)

Educators use words like the following to describe what exploring the unknown looks like:

- Asking questions (Denmark, South Africa, U.S., Colombia)
- Creating/creativity (Denmark, South Africa, U.S., Colombia)
- Experimenting (South Africa, U.S.)
- Imagination (Denmark, South Africa, U.S., Colombia)
- Iteration (U.S.)
- Huddling (South Africa)⁸⁷
- Pretending (Denmark, U.S.)
- Reflection (Colombia)
- Reflecting on/learning from mistakes (Denmark, South Africa)
- Risk-taking (Denmark)

Educators often strive to make school predictable, with clear learning goals, discrete lessons, and rubrics for success. Some predictability is needed to support learning. At the same time, education needs to prepare students for a world that is increasingly unpredictable. In play children iterate and adapt, a major reason why exploring the unknown is a central part of playful learning.

Finding joy

Joy is a key element that connects play and learning. Joy promotes motivation and interest. Educators and students in the four research sites see *finding joy* as central to playful learning, describing it as **delight**, **enjoyment**, **joyful**, and **joy**.

As noted at the start of this chapter, “fun” is often educators’ first association with playful learning, and fun is certainly part of joy. As Tadiswa shares regarding her experience creating the Tic Toc, “It was all fun.” Yet finding joy is more than fun. Joy is a complex phenomenon, often the result of challenge and struggle.⁸⁸ As Sydney Chaffee, a 9th grade teacher at Codman Academy in the U.S. explains, “Joy can come from being recognized. Joy can come from having fun. There is joy in discovery and there is joy in having an idea. There is joy in being part of the learning community.”

Many of the photographs of students in this book illustrate what students finding joy in their learning looks like. If you return to the introduction, you’ll see students smiling, celebrating, and working through challenges.

Students and educators describe the feeling of finding joy as:

- Anticipation (South Africa, U.S.)
- Belonging (Denmark, U.S., Colombia)
- Challenge (U.S.)
- Excitement (Denmark, South Africa, U.S., Colombia)
- Figuring it out (U.S.)
- Happiness/Fun (Denmark, U.S.)
- Satisfaction (Denmark, Colombia)
- Safety and trust (South Africa, U.S., Colombia)

Educators use words like the following to explain what finding joy looks like:

- Buzz of activity (U.S.)
- Camaraderie/friendship (Colombia, U.S.)
- Celebrating (Denmark, South Africa, U.S., Colombia)
- *Hygge*/coziness (Denmark, U.S.)⁸⁹
- Competition (U.S., Colombia)
- *Ludica* (Colombia)⁹⁰
- Silliness/joking (Denmark, South Africa, Colombia)⁹¹
- Singing (Denmark, South Africa, U.S.)
- Smiling and laughter (Denmark, South Africa, U.S., Colombia)
- Working through a challenge (Denmark)

The link between working through a challenge and the feelings of satisfaction and joy merits explanation. Playful learning can encompass a wide range of activities, including those that address emotionally difficult issues and would not be considered fun. The Pictures of Practice show children undertaking challenges appropriate to their age. For 5-year-olds, this can involve children co-creating rules with their teachers to keep everyone safe (see *Too Many Rules on the Playground*). For 10-year-olds, it can involve creating a restaurant, an endeavor that Uma initially thought was impossible, but then felt pride when “we did it” (see *Creating a Restaurant*). For 18-year-olds, this can involve investigating the very real and important question of racial bias (see *Investigating Policing*). In all these situations, playful learning creates a space where children and young people can explore, experiment, and learn about complex and pressing topics.

In our efforts to describe playful learning we do not want to create the impression that leading learning, exploring the unknown, and finding joy are unrelated. For example, students leading learning can create the conditions where students feel empowered to explore the unknown. Finding satisfying answers in such explorations can result in joy. Similarly, it seems likely that in a school where students regularly find joy in learning, they will be more likely to take the risks involved in leading learning and exploring the unknown.

Variations among cultures

In addition to similarities, we also found variations in what playful learning looks and feels like across the four research sites. The analogy of soup helps explain the nature of these variations along with the commonalities expressed in the cross-cultural indicators. Soup is common in cuisines all over the world. Yet, soup is also context-specific—the type of liquid base used as well as the kinds of solid food added are different from culture to culture, region to region, and recipe to recipe. It is impossible to make soup without ingredients and cooking methods rooted in natural environments and cultural practices, yet the generalized concept of soup is well understood. Likewise, playful learning is common to learning experiences all over the world. Yet what it looks like and how it’s experienced differs from culture to culture.

Some of these variations across contexts are reflected in language choices. For example, in describing learners *leading learning*, educators and students in Denmark, South Africa, the

U.S., and Colombia use four different terms respectively: **choice**, **ownership**, **empowering**, and **autonomy**.

Other differences reflect cultural goals and values:

- In Denmark, where education is seen as central to maintaining democratic traditions in communities and government, making and changing rules, choosing collaborators, and choosing how long to work/play are often part of leading learning.
- In South Africa, the philosophy of *ubuntu* (often explained as “I am through others”) underlies all three indicators; the support of other people makes leading learning, exploring the unknown, and finding joy possible.
- In the U.S. exploring the unknown (involving curiosity, focus, and imagining) requires learning experiences that are meaningful: connected to family, personal interests, and/or imagining a more just future.
- In Colombia, where educators see part of their role as supporting young people learning to live together to help the country heal from a decades-long civil war, finding joy includes affection and camaraderie.

This does not mean that these qualities are excluded from the other contexts, just that they are emphasized by educators in one of the contexts.

A word on teaching that supports playful learning

Teachers play a central role in shaping children’s learning experiences. And while we hope you now have a good understanding of what playful learning entails, you might be asking, “What does it mean to teach in a way that supports playful learning?” As we move to considering how to promote playful learning, this is a good question to ask.

Based on interviews and interactions with educators throughout our research process, we have a preliminary answer. Our hypothesis is that *teaching that supports playful learning roughly aligns with the cross-cultural indicators just presented*.

Teachers who support playful learning lead their own teaching and learning. They are intentional in navigating the paradoxes between play and school, having well-defined learning goals for their students and clear reasons to deploy play. They explore new terrain with their students based on spontaneous ideas and questions that come up in class.

These educators explore the unknown. They are curious—always learning alongside their students. They are flexible, comfortable with ambiguity and embracing the unknown. They recognize that there is more than one way to teach, play, learn, and understand. They are imaginative and introduce creativity into the classroom in service of learning.

Teachers supporting playful learning also find joy in their work. They trust and are trusted by their learners and colleagues, showing affection and respect and creating a sense of belonging for all members of the school community. They bring a positive energy to the classroom and staff room; their joy is contagious.

The teachers in the Pictures of Practice embody this way of teaching. Immediately following this chapter you will meet Kabezwane Chezi and Ntombifuthi Chiloane from the Esikhisini Primary School in South Africa. With their colleagues, Kabezwane and Ntombifuthi intentionally experiment with new ideas and practices to bring playful learning to their students and fill their classrooms with joy.

And now...

You have our answer to the second research question: *Playful learning looks and feels like learners leading learning, exploring the unknown, and finding joy in learning*. Sharing an understanding of playful learning can ground conversations about incorporating a playful pedagogy into your classroom and school. The cross-cultural indicators provide a starting point to develop this shared understanding. Or, if they resonate with your context, the indicator models that can be found in Appendix A from Denmark, South Africa, the U.S., or Colombia can serve the same purpose in developing your community's definition of playful learning. If you want to develop your own indicators, see the Playful Learning Indicator Research Guide in the Toolbox at the end of the book.

The answer to *what* playful learning looks and feels like naturally leads to our third research question: *How* can educators promote playful learning? We address this question in the next two chapters. In Chapter 4, we explain how educators can support playful learning in the classroom—through playful *teaching* moves. In Chapter 5, we discuss how school leaders can create schoolwide cultures of playful learning through practices, policies, and routines.





Exploring Soil Types and Plants

7- and 10-year-olds

Esikhisini Primary School

Pretoria, South Africa

Kabewwane Chezi teaches 2nd grade at the Esikhisini Primary School, a government school in Atteridgeville, Pretoria. During a well-attended family event about playful learning, Kabewwane serves as emcee. She begins by apologizing to the audience (some of whom are former students): “When you were in school, I didn’t teach this way. I now know how to make school more fun.” Her colleague Ntombifuthi Chiloane, who teaches natural science and technology to students in grades 4 through 7, then shares a story from her classroom illustrating what playful learning in school can look like. The evening ends with Kabewwane facilitating an amicable conversation among families and educators about how they all can support their children’s learning.

According to Ntombifuthi, what makes Esikhisini special is “The unity. We are like brothers and sisters we argue, we fight, but we are like family. We support each other.” Indeed, Kabewwane and Ntombifuthi and their colleagues work together to support a pedagogy of play characterized by educators leading their teaching, exploring the unknown, and being joyful in their work.

Despite teaching up to fifty children per class, and the requirement to follow the K–12 national curriculum (which educators describe as “packed and rigid”), Kabewwane and Ntombifuthi provide their students ongoing opportunities for playful learning. The two examples that follow highlight this kind of teaching—teaching that promotes ownership, curiosity, and enjoyment—a marked difference from the typical pedagogy in South Africa.

Exploring soil types in Grade 2

The national curriculum for Grade 2 includes lessons on the uses and properties of different types of soil. To help students get into a playful mindset, Kabezwane opens the lesson on sand, clay, and loam with song and dance. As the children move and sing, smiles appear on their faces. Dancing over, the children return to their seats, sitting in groups of four to six at clusters of desks.

Kabezwane first focuses the lesson on the sand, asking, “What is sand used for?” Students’ answers include planting vegetables and building sandcastles. She then asks students to help distribute small piles of sand to each small group. As the material is shared, Kabezwane encourages her learners to “touch and play” with the sand. This sensory experience produces conversation and smiles, with students discussing where sand is found, its properties (its feel, its weight), and what it can be used for.

Having satisfied some curiosity and made some discoveries about sand, the students move to considering clay. Their learning follows a similar pattern. The class first discusses what clay might be used for before receiving a small piece of clay to explore. Again, Kabezwane asks the students to consider how the clay feels in their hands and to describe its qualities. They consider similarities and differences between the clay and the sand. She then challenges the children to fashion a nose out of the clay.

Animated conversations and laughter erupt as children place their creations over their actual noses and discuss what it is like to work with clay.

Continuing to explore how the material holds its shape and can be manipulated, Kabezwane offers a new challenge: creating a shoe. The children share their creations and seek feedback from Kabezwane and each other, inspiring questions and observations such as “Do you want to add a heel?” and “There is no place to put a foot!”

Next, Kabezwane offers a collaborative challenge, expanding and pushing their “playing” with the material. “Put your clay together, and let’s see what group can make the best shoe.” She provides criteria for the model: to have a heel and an opening for the foot—and encourages the children to work together. The small groups debate how to create their shoes.



Starting with song and dance



Exploring sand



Modeling a collective shoe

The finished shoes



Judging the shoes



The winning group



the children have returned to their seats. They look up attentively, ready to learn about a third soil type: loam.

Kabezwane's decision to make the collective shoe-making a contest is motivated by an English vocabulary learning goal. The children need help learning ordinal numbers in English, so she decides to include talking about first, second, and third in the lesson. She explains that a visitor to the classroom, PoP researcher Kgopotso Khumalo, will be the judge of the best shoe and that she will "pick the first shoe, the number one."

Kgopotso approaches the situation with much drama and seriousness. She carefully examines each shoe, making close observations of what she sees. Fascinated, the children gather around to watch and listen. Kgopotso explains she will pick the first, second, and third place shoes. She examines the shoes and announces, "I'm choosing." But then she sighs, "Oh, this is so hard." She pauses amidst nervous laughter from the children. She points at a shoe and says, "This one is almost the first!"

Finally, Kgopotso announces the first-place shoe, and a celebration breaks out as the winning group comes forward to applause. The winners' faces have big smiles—they fist bump each other and hold up the first-place sign. The second and third places are announced to further the celebration.

The scene is a bit chaotic. Kabezwane begins to chant, "five, four." By the time she reaches one,

Investigating the parts of plants in Grade 4

As part of the national curriculum, Grade 4 students are expected to learn about the four parts of a plant: roots, stems, leaves, and flowers. In many classrooms, this lesson begins in a textbook, with the teacher asking students to read the pages about the parts of plants. Next, the teacher will draw and label the four parts of a plant on a blackboard. Students will be asked to recite the information as the teacher points to different parts of the plant. In Ntombifuthi's class, the lesson on parts of plants begins similarly, as she asks learners to look through their textbooks.

But after a few minutes, Ntombifuthi surprises her learners, saying, "Plant scientists, in order to study the four parts of plants, we need to collect specimens." She asks students to form small groups and go outside to find a plant to study. After she repeats this information in Tswana (many

of her learners' home language), the students excitedly go off searching for a plant to study.

A handful of children soon return to the classroom, explaining that they cannot find “real plants”—that the plants they found lack flowers. Ntombifuthi suggests they draw on their experience, asking, “Do the plants that you know have flowers all the time?” Answering “no,” the students continue their search. After ten minutes, all the groups return to the classroom with a plant.

Ntombifuthi asks students to describe their specimens to each other. They are proud of their plants as they point out the leaves, stems, roots, and flowers (some in the bud stage). Some playfully brag that they have the most attractive plant.

Ntombifuthi poses several questions to the class and asks them to discuss in small groups:

- What do you notice about these plants?
- What do all these plants have in common?
- Looking around the room, where do you see similarities and where do you see differences in your neighbors' plants?

Ntombifuthi moves around the classroom while students chat, listening in on conversations. Learners are eager to share their observations with her.

Ntombifuthi tells the class that plant scientists often make observational drawings of the specimens they collect. Observing closely, the students make careful drawings of their plants.

At the end of the lesson, as in all good scientific communities, students present what they have learned about their plant, pointing out the color of the flowers, the strength of the stems, the veins in the leaves, and the lacy structure of the roots.

When examination time comes a month later, Ntombifuthi is pleased that her students recall far more about plants than previous classes, who had only learned from the book.



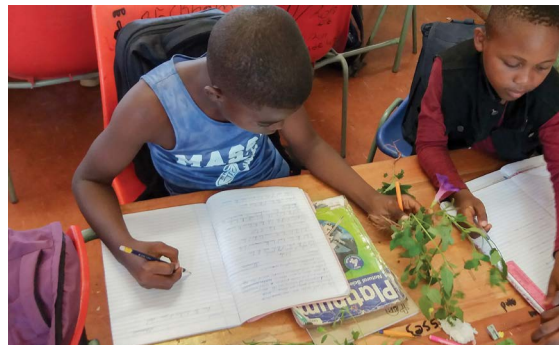
Ntombifuthi's students reviewing the four parts of a plant in their textbooks



A student sharing observations about his plant



Students making observational drawings of their plants



Investigating Policing

17- and 18-year-olds

Codman Academy Charter Public School

Boston, United States

This Picture of Practice is based on Blair Baron's blog "Empowering students to become agents of social change," the video "Policing in America: Using powerful topics and texts to challenge, engage and empower students" by EL Education, and interviews with Codman Academy faculty who were part of the PoP U.S. research.



In high schools across the U.S., students discuss issues of race, inequality, and injustice—including questions about the police. Cafeterias, hallways, and social media are venues for this discourse that, for many, stem from everyday experiences. In the final months of the school year, 12th grade humanities teacher Blair Baron brings this conversation into her classroom at Codman Academy Charter Public School. Blair and the academic dean plan a unit of inquiry entitled Successes, Challenges, and Possibilities of Policing in the United States. As Blair explains, “[This is] an unbelievably compelling topic to my students. Almost all of my kids are kids of color growing up in the inner city. This topic affects them every day.” She continues:

Once you have found a topic that kids really care about and that is supported with great texts, [it] inspires students to work very hard. They will read deeper. They will question each other. They will push themselves, they will push each other, and they will be completely invested in the work of understanding the topic.

Discussing race, policing, and injustices do not intuitively conjure an opportunity for playful teaching and learning, and the unit is not designed to be entertaining or fun. However, for educators like Blair’s colleagues Thabiti Brown and Sydney Chaffee, playful learning is characterized by experiences that are empowering, meaningful, and joyful—experiences that activate positive emotions for students as they master and understand complex topics that are meaningful and important.

As you read the story below, you will encounter students who are leading learning—feeling confident and empowered—and who are exploring the unknown—feeling that their inquiry matters. You will also find students who are finding joy in their learning, not manifested in laughing or joking but in feelings of challenge, trust, safety, and the satisfaction of having mastered new skills and reached new understandings (markers named by Codman educators to describe playful learning).

It may feel risky to engage in inquiries of topics that create powerful emotions. What if the students come to wrong conclusions? Yet even with such pressing topics, students have the right to explore and try out ideas in ways that activate playful mindsets, allowing them to consider new possibilities and making it easier to engage in serious topics.

An empowering and meaningful discussion

The unit on policing unfolds over two months, involves several case studies, and is supported by a range of texts. During one session, the class reads out loud portions of the U.S. Department of Justice's report on police practices in Ferguson, Missouri, written after the police killing of an unarmed 18-year-old African American, Michael Brown. Blair's goals for the discussion (and the unit as a whole) include helping students know that they can do something about problematic police practices, are capable of delving into complex texts, and are academically ready for college.

The passages are discussed in small groups, and students use a variety of note-taking strategies to make sense of the dense text. The following day Blair facilitates a discussion about this and other readings.

The discussion about the report begins by reviewing conversation norms. Aisha reads from a list on the wall,

Talk to each other, not to me (the teacher); Listen and respond to each other rather than just stating your opinion.

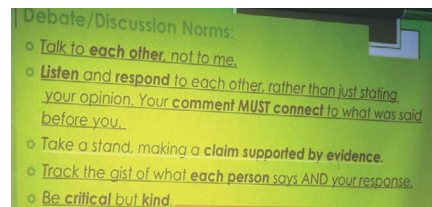
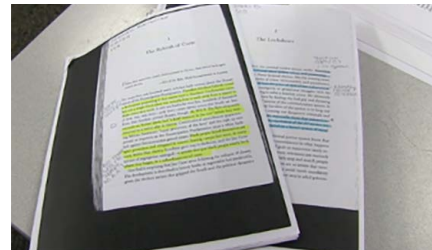
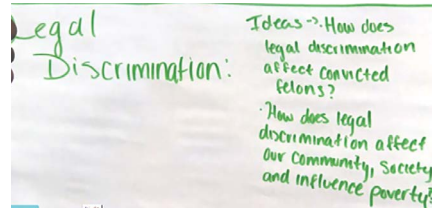
Blair reminds the class of the sentence starters they learned, how to politely agree or disagree, and generally have productive conversations. As in play, the rules are agreed upon and then followed.

Oliver begins his comment with one of the sentence starters:

I really want to respond to what Phinix was saying. If you turn to page 71 of The New Jim Crow ... it says you can get pulled over by basically acting too calm. Acting too nervous. Dressing casually. Wearing expensive clothing or jewelry. Being one of the first to deplane. Being one of the last to deplane.

Marquis offers a different viewpoint:

I know I'm going to be jumped on and you all are going to get upset. But I don't feel this is a problem ... They [police departments] were created to protect us as citizens of America.



Students' note-taking strategies

Conversation norms

Aisha immediately disagrees:

I think that our country is in a national crisis. And I think that it's because people like you don't feel connected to it. I feel like that's the problem.

In a quiet voice, Marquis responds:

How can we get connected?

“Let's pause...”

There is tension in the air. Blair takes a breath. Wanting to help her students understand the power of listening and the value of taking time to process before responding, she says:

Okay. Let's pause. I want you to disagree with each other. You've been doing so respectfully. Continue that please. And a lot was just said, so everyone should take two minutes to jot down what was said.

Blair then suggests students use graphic organizers to identify topics they want to come back to and discuss.

After a few minutes of solo reflection, the conversation restarts. Students talk about the difference in media responses between “Black-on-Black” crimes and crimes committed against whites.

Aisha asks her classmates,

Have you ever posed the question to yourself, why there isn't a value on African American lives by African Americans?

Jibria responds,

In the article, The Ghost of Dred Scott Haunts the Streets of Ferguson, Prof. John A. Powell from the University of California, Berkeley wrote, 'We have still not come to full recognition of Blacks and other people of color as full citizens. As full people.'

As the class time ends, Blair notes that a number of topics have been raised that could be pursued further, perhaps as part of the students' final papers.

Feelings of connection, challenge, and confidence

Let's assess Blair's learning goals by way of what her students think.

With regard to meeting the goal of empowering students to address problematic police practices, Robert takes away a practical lesson:

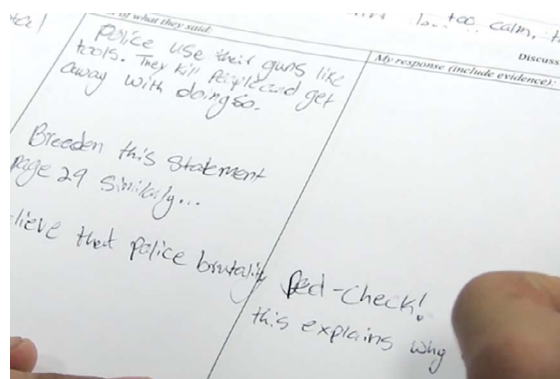
Eventually, because of my race, I will be stopped by the police. And in that case, it is very important for me to know what to say and what not to say. I don't want to be part of that statistic where I'm already going to be sent to jail before the age of 18.

Jibria's take-away is more activist:

If you're not out there letting your voice be heard, then the odds aren't in your favor.

As for feeling capable of analyzing complex texts, Aisha explains her thinking about the Department of Justice report:

It's not written like a narrative. It's kind of difficult to read. But when you read it out loud and have discussions after, you really understand what it's saying.... I feel like I am prepared to read things that are difficult. And I might not understand it the first time I read it. But I have built tools where I can reread certain things or look up certain things that will help me understand it. It has made me learn how to dig deeper. I understand what I will be encountering when I go to college and even beyond college.



Student notes about the discussion

The inquiry clearly creates feelings of connection between the students, their communities, and the topic. It is, as Blair explains, “an unbelievably compelling topic.” As Jibria observes:

I know a lot of times with students, it's like, “When am I ever going to use this in real life?” This is something we are [not just] learning about. It is real life. You can be stopped on the street as you are going home. As you're walking to the bus. It's things we're experiencing every day.

Delving into this complex topic with its dense and complicated texts is challenging. Yet, along with the challenge come feelings of confidence. Aisha is astute in observing that participating in this inquiry—with its conversations and complex readings—is preparing her and her classmates for college, only months away. School head Thabiti Brown agrees. To Thabiti, playful learning (and education in general) should be in service of students' connections, challenges, and confidence—he considers this students' agency. He explains:

In working in a community that has not been valued by society in terms of voice, ownership of materials, and political power, agency is what can break this logjam. Knowledge is power. The more you know, the more you can do and drive and change. If we can get our students to believe that they have the power to make a change in the world, then we have done our jobs.

We cannot imagine a more joyful feeling than the power to change the world.

Chapter Four:

How Can Educators Support Playful Learning in the Classroom?

So far, you have read about why a pedagogy of play is needed and what playful learning in schools looks and feels like in different cultural contexts. We imagine you are now wondering how you might support playful learning in the classroom. Or more precisely, following the insight of Loris Malaguzzi, founder of Reggio Emilia (Italy) preschools that, “The aim of teaching is not to produce learning, but to produce the conditions for learning,” how might you go about creating the conditions for playful learning to thrive in your classroom?

In the Picture of Practice *Investigating Policing*, Codman Academy high school teacher Blair Baron uses a range of teaching practices to support her humanities students’ playful learning during a two-month unit on policing in the U.S. She empowers students to lead their own learning by investigating a compelling topic about justice and injustice, asking them to identify issues of particular interest, and facilitating discussions about their roles as agents of change. She builds a collaborative learning culture by introducing discussion norms, sentence starters for how to agree and disagree, and by facilitating small-group, text-based discussions. Blair also welcomes the emotions her students experience by accepting the tensions emerging in a discussion, encouraging students to disagree respectfully, and pausing for students to reflect in writing.

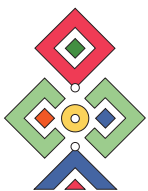




This chapter highlights these and other core practices and strategies for promoting a playful learning culture in your classroom. We identify five key *practices* to foster playful learning in the classroom. Each practice includes several *strategies*—different ways to enact the practice—many of which overlap (see Table 4.1). We reference the Pictures of Practice found throughout the book and share classroom examples from other teachers in the schools we worked with. We conclude with a note describing the role of documentation in making learning visible and shaping the learning that takes place. All of these practices have a role in setting up the conditions that allow students to lead learning, explore the unknown, and find joy in learning.

Refer to Table 4.2 to determine which tools in the PoP Toolbox can help you with each of these practices.

The practices are the result of our qualitative research carried out with educators around the globe. We also draw on some of the “close cousin” pedagogies named in the Introduction, especially inquiry- and project-based learning and active learning. The practices and strategies are also informed by Vivian Paley’s storytelling/story acting approach⁹² and related Project Zero research projects such as Inspiring Agents of Change⁹³ and Making Learning Visible.⁹⁴ Additionally, conversations with experienced teachers, teacher-educators, and our own teaching experiences⁹⁵ help shape the strategies. We make no claim that we invented these practices and strategies, but rather are combining ideas with findings from our research to highlight ways to create the conditions for playful learning. For more information about our methodology, see Appendix A.

The practices and strategies generally apply across age ranges and areas of knowledge. We invite you to adapt them for your own settings (see the PoP tool Playful Learning Planner on page 164 to help plan playful learning experiences).

TABLE 4.1: Playful Learning Classroom Practices and Strategies

Practices	Strategies
 Empower learners to lead their own learning	<ul style="list-style-type: none"> ▷ Get to know your learners ▷ Involve learners in decision-making ▷ Reflect on learning with learners
 Build a culture of collaborative learning	<ul style="list-style-type: none"> ▷ Use play to build relationships ▷ Facilitate purposeful conversations to build knowledge ▷ Foster a culture of feedback
 Promote experimentation and risk-taking	<ul style="list-style-type: none"> ▷ Design open-ended investigations ▷ Encourage risk-taking as a strategy for learning
 Encourage imaginative thinking	<ul style="list-style-type: none"> ▷ Share stories to engage and enhance learning ▷ Use role-play and pretend scenarios ▷ Provide materials and experiences that engage the senses and the body ▷ Ask questions that invite curiosity and imaginative thinking
 Welcome all emotions generated through play	<ul style="list-style-type: none"> ▷ Design for joy ▷ Use play to explore complex issues ▷ Support learners in working through frustration



Empower learners to lead their own learning

The first playful learning practice, Empower learners to lead their own learning, tips the balance of responsibility for learning away from you and toward the learners themselves. Consider sharing responsibility for decisions about the learning space, the daily or weekly schedule, the design of curriculum units, or the types of assessments you give students. Following the students' leads requires flexibility and a willingness to modify—and sometimes set aside—teaching plans. If you are prepared for serendipity, inviting learners to help shape parts of their education can give them a sense of ownership, autonomy, and intrinsic motivation. Of course, not all learners will bring a playful mindset or desire to take responsibility for their learning. Here are three strategies you can use to encourage learners to lead their own learning:

- Get to know your learners.
- Involve learners in decision-making.
- Reflect on learning with learners.

Get to know your learners

Learning is not an abstract phenomenon; it entails making sense of the world based on prior knowledge. Learning that is connected to students' lives becomes more meaningful. Such connections are easier to make if new information can be linked to already existing frameworks. Atrium School⁹⁶ math teacher Liz Caffrey (U.S.) designs lessons that draw on her students' experiences and connect them to the social and political world around them. On the first day of school, Liz asks her 6th, 7th, and 8th grade students to share their responses to the question "What is math?" by posting the responses on a large whiteboard. Liz also asks students to write her a letter about their lives, posing questions like, "As a math learner, how do you learn best? What do you do for fun? Tell me a math story from your life. Talk about a teacher who supported and helped you learn math." Liz draws on this information to shape her teaching. For example, she is sensitive to students' preferences for music or silence when working. Once a week, Liz leads "Math News," in which she shares a current event that involves math—a graph, percentages, statistics—to teach her students how to be critical consumers of data in the world around them. Her choice of news items is informed by students' interests, from baseball to baking to bluegrass music.

Understanding the strengths, knowledge, and interests students bring to the classroom also empowers them to lead their own learning because they are more likely to play an active role in the process.⁹⁷ It can be helpful to think of these qualities as *funds of knowledge*⁹⁸ that learners can contribute to the learning community. Funds of knowledge can include home language(s), cultural background, family traditions or celebrations, favorite activities, or household responsibilities.

An example of drawing on funds of knowledge comes from Kabezwani Chezi's class at Esikhisini Primary School in South Africa. Dakalo is a 2nd grade student in Kabezwani's class. He is reserved and often reluctant to participate in learning experiences with his peers. When Kabezwani finds out that Dakalo's father plays the drums and is teaching Dakalo how to play, she finds a drum in the school's music room to try to engage Dakalo in learning. Kabezwani decides to use chanting and movement to review the sounds of different letters she is teaching. She asks

Dakalo to play the drum while the class claps out the syllables to six words that begin with the letter C. To demonstrate the word “calling,” Kabezwanzi asks Dakalo to beat the drum and call to his friend, Linda. She tells Dakalo to step out of the room while Linda hides under a desk. When Dakalo returns, he dashes around the room, beating the drum, and calling his friend. When the lesson moves to print words, Dakalo, using the drum as a chair, gets right to work finding words that begin with C. Afterwards, Kabezwanzi notices Dakalo more engaged in classroom life.

Here are some other ideas for getting to know your learners:

- Observe and listen to your learners—talk to them about their lives and interests at lunch, on the playground, or during transition times. See Getting to Know your Learners in the PoP Toolbox for suggested questions and conversation starters. Create a note-taking system to help you keep track of what you learn about each student.
- Ask learners to write you a letter about their lives, or contact their families to learn more about the students’ activities outside the classroom. Keep in mind which kinds of sharing are culturally appropriate in your context.
- Students also appreciate getting to know you. Young children like hearing about their teacher’s family, pets, and other parts of their lives outside of school. Older students enjoy hearing about your passions, hobbies, and tales from your secondary school or university experiences. When you share a story, there is a greater chance of getting a story from your students and fostering relationships.
- Survey local events, exhibitions, and civic or cultural initiatives in your community to identify possible ties to student interests and your curriculum (see Making Learning Meaningful in the PoP Toolbox for additional suggestions for connecting learners to the community).

Involve learners in decision-making

Engaging learners in decisions about the curriculum, assessment, and classroom environment is another way to elicit their interest and investment. Students can participate in making decisions both large (what topics to study, how to assess or demonstrate that learning has taken place, and how to arrange classroom furniture and space) and small (where to sit, what words to learn, how to spell, and with whom to partner). You can think about the types of decisions and choices to turn over to students in at least three ways: the learning *content* or topics of study, the learning *process* or how the content is being learned, and the *products* of learning or how learners show what they know.⁹⁹

With regard to the *content* of learning, learners are often able to choose a specific focus when studying topics like countries, historical figures, or artists. Blair at Codman Academy asks her students to use a graphic organizer to identify specific themes they would like to discuss that could become potential topics for their final papers. Similarly, in the Picture of Practices *Debating the Nature of Facts*, primary school teacher Firdous Ismail Karolia asks her 10- and 11-year-old students to create a fictional species of their choosing and write an informational text about it.

In *Facilitating a Student-Composed Schedule*, middle school teachers at the ISB give learners a great deal of choice around the learning process. Students choose where to work, with whom,

which academic tasks to complete when, and whether to seek help from teachers or their classmates. Involving students in shaping classroom norms and expectations increases their investment in the learning community.

Finally, you can give students a choice regarding the *product* of learning, or how to show what they know. ISB middle school teacher Tue Rabenhøj used to ask his students to write and perform a play as the summative assessment for a study of the Black Plague—an experience he thought was engaging for all. When Tue decides to open up the format for students to choose, he is surprised that some students choose to write an essay *and* that they describe the experience as playful! The Primary Years Programme (PYP) of the International Baccalaureate¹⁰⁰ culminates in a capstone project on a local or global issue in which students are actively involved in planning, presenting, and *assessing* their learning. Students choose the topic to study, identify the learning goals and criteria for success, and co-design strategies and tools to document and self-assess their learning with their teachers and peers.

Other ideas for involving learners in decision-making include:

- Inviting learners to spend time figuring out which dimension(s) of a topic they are interested in studying.
- As long as you and your students agree on the criteria for choosing content (e.g., connection to learning goals or standards, manageability, etc.), many decisions can be opened up to learners in consultation with you. Younger children can be invited to help make decisions about class rules and norms¹⁰¹ or routines, such as classroom set-up, line-up procedures, and the clean-up music or routine.
- See Involving Learners in Decision-making in the PoP Toolbox for ways to engage learners in decisions about what and how they learn.
- The License to Hack Cards in the PoP Toolbox gives learners of any age permission to change the learning process to deepen learning or make it more meaningful.
- Take a risk and say “yes” to learners’ playful ideas in unexpected contexts. See the Say Yes to the Mess tool for considerations when responding to learners’ suggestions.

Reflect on learning with learners

Learning—and playful learning in particular—is not a linear process. Playful learning is full of serendipity and surprises, making it a particularly apt occasion for reflection. To learn through play, learners need to reflect on their learning. The reflection can take many forms—it can be formal or informal; it can take place before, during, or after the learning experience; it can be completed individually or with others; and it can be carried out in different media such as writing, drawing, video, audio recording, or acting. However, the most important question is *why* you are asking students to reflect in the first place¹⁰². What kind—and whose—learning do you want to support by asking students to reflect? Do you want students to consolidate or extend their subject matter knowledge or skills? Do you want them to understand themselves better as individual and group learners? Or do you want feedback on the learning experience?

Since John Dewey's¹⁰³ first publication on reflection in the early 20th century, a large body of research has underlined the key role of reflection in learning. Yet the term “reflection” has been interpreted in many ways. For our purposes, we define reflection in schools as *thoughts or questions that result from thinking critically about a learning experience to strengthen current or inform future learning*.¹⁰⁴ When learners take the time to reflect on playful learning experiences, it makes their thinking visible to themselves and others. This can deepen learners' understanding of concepts and content and strengthen their understanding of how to learn. They can reflect on their feelings as well. This allows learners to play a bigger role in the learning process.

Another goal of engaging students in reflection is to create a classroom *culture* of playful learning, where students and teachers enjoy thinking about thinking (metacognition)—where they come from and how they change. Recall the Spiderman debate about whether facts must be “true” in Firdous's class. Or the informal exchanges between students during *Facilitating a Student-Composed Schedule* at ISB. At the beginning of a unit on the Middle Ages, ISB social studies teacher Will Henebry asks students to post notes on a wall about: 1) the most important thing they think they know about the Middle Ages, 2) what they are unsure about, and 3) what they are interested in learning more about. Will leaves the notes on the wall as a reference point throughout the unit, and students continue to add their thoughts on new notes.

Here are some other ideas for supporting reflection:

- Do not underestimate the challenge of coming up with a good reflection question! Word choice matters. Keep in mind the distinction between asking learners what they *did* or *liked* vs. what they *learned* or *discovered*.
- There is a difference between reflecting on playful learning and making the *reflection process itself* playful. In making the reflection process playful, because what is playful for one is not always playful for another, it is helpful to give learners a choice of reflection format.
- Different formats for reflection include written notes or Post-its, tweets, audio recordings, peer interviews, and a deck of cards with different options. If the reflection is nonverbal, ask for a verbal or written “artist's statement” to supplement the response.
- Invite learners to compose reflections together, share them with each other, invent humorous or playful wording as reflection prompts (e.g., sneak peek, tickle your brain, brain buddy), or use role-play or pretense.
- Too much reflection can become tedious. Only ask for as much reflection as you or your learners have time to revisit. Try limiting the length of students' reflection responses either in writing or verbally (e.g., by limiting the number of words or sentences). This can encourage learners to consolidate their thinking, lighten the reflection request, and leave room for other voices in large-group conversations.
- Consider sharing your own reflection as a teacher about what you are learning about student learning.
- See the Playful Learning Reflection Planner in the PoP Toolbox for other suggestions.



Build a culture of collaborative learning

The second practice for supporting playful learning is Build a culture of collaborative learning. The psychologist Lev Vygotsky explained how learning is fundamentally a social process. Children (and adults) learn from and with others by encountering new perspectives and ways of thinking, which supports both individual and group learning.¹⁰⁵ Small groups in particular foster deeper learning.¹⁰⁶ The social component of learning appears throughout the playful learning indicators from Denmark, South Africa, the U.S., and Colombia. In the model developed in South African schools, the social dimension was so powerful that all three indicators of ownership, curiosity, and enjoyment include the concept of *ubuntu* (“I am through others”).

Playful learning is enhanced when players exchange, build on, or disagree with each other’s ideas. However, many children do not see themselves as actually *learning* when they are in a group.¹⁰⁷ Rather, they think learning occurs when a teacher or textbook provides or confirms “the right answer.” Documenting the learning process, which we describe at the end of this chapter, is one way to make the learning that takes place in a group visible. You can build a culture of collaborative learning in your classroom by using the following strategies:

- Use play to build relationships.
- Facilitate purposeful conversations to build knowledge.
- Foster a culture of feedback.

Use play to build relationships

Playful learning helps learners learn academic content and concepts as they develop meaningful relationships with peers. Relationship-building does not just happen during recess or free choice time; it also happens while learning the curriculum. When forming small groups, consider which learners have strengths and interests that are most likely to complement and support the learning of others. Be prepared for conflict to arise, but (if there is no safety issue) wait before intervening to see whether the learners can work it out for themselves. Remember to occasionally become a player and ask learners if it is okay to join in their play and what role they would like you to play.

Look for ways to connect learners to each other. In the Picture of Practice *More Than One Way to Tell a Story*, you will read about an early childhood class in the U.S. where children take turns sharing stories and then acting them out. When her teacher, Jodi Krous, invites Maddy to tell her story, Maddy’s friend Pat is eager to join in. Jodi responds by asking Maddy, “Do you want her to listen? She might have some good ideas.” Maddy agrees. Later, when the class is acting out a story, Alice is unsure how to be a dog. Jodi invites the rest of the class to “be a dog for a sec” to help her out. Several children immediately begin acting like a dog, giving Alice the examples she needs to proceed.

Here are some other ideas for connecting learners to each other:

- Review the individual learning experiences you typically offer to determine whether reframing them as collaborative might deepen or extend the quality of learning. For example, if children are playing in the block area, ask them how they might connect one structure to another.

- When posing a thought question to the class, ask students to turn and talk before responding.
- If you ask students to write individual responses to a question, take time afterward for students to review the responses as a group to identify themes or patterns.
- The Expert Books in the PoP Toolbox suggests creating a class book in which each learner creates a page of something they do well and something they are still learning.
- See Partner-Explore¹⁰⁸ from the Inspiring Agents of Change collaboration for a way to help children develop relationships with children they might not otherwise get to know.

Facilitate purposeful conversations to build knowledge

In playful and collaborative learning spaces, individuals work together to build knowledge as a group. This requires time for small group work, individual thinking, and purposeful whole group discussion. In conversations such as Blair's students' discussion of policing practices at Codman Academy, learners set goals, imagine, ask questions, and work through challenges. At Nova Pioneer Ormonde Firdous wants her Grade 5 students to understand how to read and write informational texts, develop their critical and creative thinking skills, and enjoy the learning process. To relaunch a previous conversation about informational texts, rather than provide a definition herself, Firdous asks students to share their current definitions in small groups and then with the whole class. A passionate debate ensues when one student claims that even though Spiderman is fictional, it is a fact that he can spin webs from his wrists. The conversation about the relationship between fact and fiction continues over the next few weeks as new questions arise, ultimately extending to children's families. The children are highly motivated to apply their critical and creative thinking to a compelling subject—the nature of facts.

At Esikhisini Primary School Ntombifuthi invites small groups of her 4th graders to go outside to find a plant to study and then describe to one another. Then she asks students to discuss what they notice and identify similarities and differences across plants. Only at this point does Ntombifuthi ask each student to make a careful observational drawing on their own. At the end of the lesson, students make presentations to share their learning with the whole class. The plant study both begins and ends with students building and sharing knowledge with others.

Here are some other resources for facilitating purposeful conversations:

- The Project Zero Thinking Routines Toolbox¹⁰⁹ and School Reform Initiative¹¹⁰ websites offer a wealth of thinking routines and discussion protocols for guiding conversations that promote this kind of collective knowledge-building.
- Selecting a Thinking Routine in the PoP Toolbox can help you choose a thinking routine to support learners when they are exploring, synthesizing, or digging deeper into ideas.
- For younger children, see Snapping Ideas Together¹¹¹ from the Inspiring Agents of Change collaboration for a way to help children problem-solve on their own with little adult guidance.

Foster a culture of feedback

Giving and receiving feedback from peers and adults about work-in-progress is a particular kind of “purposeful conversation” that can be invaluable to supporting a culture of collaborative learning. Yet exchanging feedback can also feel scary. Creating group norms and using discussion protocols or routines to look at student work can help learners feel comfortable sharing emerging ideas. Group norms facilitate children and teachers learning from and with each other by providing shared expectations for interactions and conversations. Norms like “It is okay to disagree” and “You don’t have to follow the advice” can increase learners’ acceptance of different perspectives while remaining open to critique. Educator Ron Berger uses three simple but powerful norms: “Be kind, be specific, and be helpful.” Peer-to-peer teaching, or inviting learners to be a teacher for the day or part of a day, also supports students in learning from each other. In her English classes at Colegio Unidad Pedagogica in Colombia, Catalina Cortes invites students to give each other feedback by asking them to be the first to respond to what their classmates have shared, followed by her own responses.

Other tips for fostering a culture of feedback include:

- See the Ladder of Feedback¹¹² for a simple yet powerful structure that moves learners through four steps of the feedback process: Clarify, Value, Share Concerns, and Suggest.
- Share the protocol with presenters beforehand and ask for specific questions they would like feedback on.
- Take notes of the feedback so presenters can have a record of what was shared.
- Ask students to facilitate the feedback sessions themselves.
- Invite students to role-play a group of authors, artists, or scientists giving feedback to colleagues.
- Share stories from other classes or from your own experience about times when feedback proved especially useful.



Promote experimentation and risk-taking

The third practice for supporting playful learning is Promote experimentation and risk-taking. Experimentation, invention, and discovery become possible when learners are invited to find their own path to learning goals. Evolutionary biologists believe that play evolved, in part, to provide a safe way to try out new behaviors and ideas.¹¹³ Schools exist, in part, to provide a safe place for children to experiment with materials and ideas, make mistakes, try new things, and work through disagreements or frustration. Fostering a culture of experimentation helps children develop critical and creative thinking skills, giving them opportunities to see experimentation and risk-taking as important parts of the learning process.

Two strategies promote a culture of experimentation:

- Engage learners in open-ended investigations.
- Encourage risk-taking as fundamental to the learning process.

Design open-ended investigations

Engaging students in open-ended investigations for which there is no correct answer opens the door to playing with ideas and making unexpected discoveries and connections. Not knowing exactly how things are going to turn out helps learners become comfortable with the unknown. When learners approach learning experiences with a playful mindset, they discover that experimenting, taking risks, and learning from mistakes are key components of learning.

In the Picture of Practice *Playful Learning Online*, you will read how Colegio El Nogal teacher Karen Beltran invites the kindergartners in her online class to experiment with light and shadow using any materials they can find. The children, supported by family members, relish their time to experiment freely without a preset goal.

In a different lesson, Ntombifuthi Chiloane, one of the teachers in *Exploring Soil Types and Plants*, moves beyond a textbook activity on frame structures (structures with a combination of beams, columns, and slabs that can resist lateral and gravity loads) to create an open-ended investigation for her 11-year-old (Grade 5) learners. While the textbook has a prescribed task of having each student make and strength-test a triangle and two other shapes using struts that they make out of paper, Ntombifuthi gives her class of forty a variety of materials and challenges them to make any structure they want, as long as it is “strong.” Almost all the children choose to work in small groups, with some groups collaborating and some competing, to make the strongest structure. The students produce a range of structures, from windmills to the human skeleton, using different methods for achieving stability. Afterward, the children reflect on which structures were more or less stable and why.

Here are some other tips for engaging learners in open-ended investigations:

- Try designing learning experiences that offer multiple pathways for which neither you nor your students know the outcome. Seek out materials that inspire experimentation (e.g., balls and ramps, light and shadow, or color-mixing), and pose questions that lead to sustained inquiry.
- Note that “open-ended” does not mean *no* guidance or support; providing tools or structures like a checklist or an outline of a master plan can help children take charge and self-direct. The Planning for Invention Student Worksheet¹¹⁴ from the Inspiring Agents of Change project suggests a sequence of questions to pose when learners are ready to take on an independent project.
- Many websites, such as Tech Interactive¹¹⁵ offer a wide variety of design challenges and lesson plans. Selecting and Facilitating a Design Challenge in the PoP Toolbox provides guidance for choosing and facilitating a design challenge that supports learning content, collaboration, and creative problem-solving.

Encourage risk-taking as a strategy for learning

Learning is an iterative process. No one learns without making mistakes, especially when trying something new. All risks have potential adverse outcomes and thus require a bit of courage from the risk-taker. However, the experience of wrestling with a challenging idea or task is an especially

powerful way to learn. Learning through play gives learners a low-stakes way to take risks, make mistakes, and learn from them. You might tell students that you expect to see them making mistakes and taking risks, especially when encountering new situations.

Many of the practices and strategies for supporting learning through play require some degree of experimentation and risk-taking on your part (e.g., designing new lessons, inviting children to co-construct rules, or letting learners lead their learning without a predetermined outcome). In addition to offering open-ended investigations, you can normalize risk-taking, making mistakes, and “failing forward” (learning from what went wrong) by making them visible to learners and celebrating them as opportunities to learn, iterate, and try again. In the Picture of Practice *Too Many Rules on the Playground*, you will read that when teachers give kindergartners the freedom to play in the playground with just two rules to follow, the children demonstrate their capability to take considered risks. They do not do anything they do not usually do on the playground (some of which was previously considered breaking a rule, like riding a bicycle in a restricted area). In addition, the children invent their own safety rules, seeking adult input as needed. The older kindergartners look after the younger ones. Some of the quieter children become more interactive. Over the course of the week, there are no injuries or damage to materials or the grounds. Perhaps the children have a better sense of safety considerations than the adults had given them credit for. In any event, trusting children to make wise choices with teachers nearby leads to a new sense of possibility for playground activity.

The teachers also model risk-taking through their transparency about trying something new, conveying a powerful message that children can do the same. The teachers are explicit about their decision to take a risk, posing the question, “What happens when we have fewer rules on the playground?” They discuss the question with the children and introduce them to the idea of research. Later, the teachers share their documentation with the children (and, separately, with colleagues and administrators) to ground discussions about the experience.

Here are some other tips for encouraging and celebrating risk-taking:

- Creating a Culture of Risk-taking in the PoP Toolbox identifies language, routines, and rituals for fostering a culture of risk-taking, such as exploring students’ assumptions and associations with terms like “risk” and “mistake,” inventing playful language to describe learning from mistakes, and encouraging families to normalize experimentation and risk-taking at home.
- Celebrate moments when you or your students take a risk, perhaps with a special cheer, a round of applause, or a silly dance.
- See the I BLEW IT certificate¹¹⁶ for a playful way to honor your and your students’ experimentation.



Encourage imaginative thinking

Encourage imaginative thinking is the fourth playful learning practice. Engaging the imagination brings learners into the *what if* space of learning, where students take new perspectives, explore new ideas, and invent new creations. Give learners an opportunity to imagine, explore, and create

things that are meaningful to them and to others. Below we share four strategies to support imaginative thinking in the classroom:

- Share stories to engage and enhance learning.
- Use role-play and pretend scenarios.
- Provide materials and experiences that engage the senses and the body.
- Ask questions that invite curiosity and imaginative thinking.
- Share stories to engage and enhance learning

Telling stories and creating narratives are a central way humans of all ages connect to, understand, and explore ideas.¹¹⁷ Across time and place, stories provide a way to share experiences and knowledge, giving meaningful frames to our lives. Encourage learners to listen to and tell stories to explore ideas and share personal experiences. You also can tell stories of learning (e.g., learning a new language, when you first needed to use algebra, or your former student who could not spell but was a good writer) that can inspire children and help them understand the process of playful learning. You can also draw on literature for rich examples of playful learning.

In the Picture of Practice *Playful Learning Online*, you will read how Mauricio Puentes Garzon in Bogota creates a story about a partridge to engage his 38 3rd graders in an online dance class. He invites children to flap their “wings” like a partridge and use their long necks for drinking water. The children also dance around the water to explore concepts of lateral movement and moving in a straight line. In *More Than One Way to Tell a Story*, you will read how Jodi Kraus invites her 3- and 4-year-old children to tell and act out stories each day. The activity supports literacy development, the expression of ideas and feelings, and community-building. The children invent stories about firefighters, birthday parties, and dogs based on their own interests and ideas from other children.

Other ideas for using storytelling to support playful learning include:

- Consider developing a larger narrative (e.g., student pirates on the lookout for hidden theorems, a group of astronauts landing on Mars) that could inspire playful learning in math or science. You might change the physical setting (e.g., lighting, seating arrangements, adding a (fake) candle, playing soft music, or projecting an evocative image on a screen).
- Tell a tale that sparks learners’ imagination and curiosity, such as an unexpected package left at the classroom door or a mystery at school like, “Who framed the statistics teacher?” or “Who kidnapped the school mascot?” Or, invite a mystery guest to the classroom who needs help solving a puzzle related to the content you are teaching.
- Storytelling and Story Acting for Older Learners in the PoP Toolbox extends the Storytelling and Story Acting approach to older students.
- If you don’t feel comfortable telling stories, practice telling stories to a friend, a family member, or your cat.

Use role-play and pretend scenarios

Role-play and pretend scenarios enable learners to explore ideas and issues from different perspectives. They can engage learners of any age within or across lessons and units, often lightening the tone of assessment. Think of the third-grade partridges in Bogota and the 10- and 11-year-old plant scientists in Pretoria. In *Creating a Restaurant*, before visiting the restaurant, teachers ask students to role-play workers in different jobs to generate relevant questions. To launch a unit about the moon, ISB teachers Sorina Mutu and Jason Yelland tell their 10- and 11-year-old students to pretend to prepare for a voyage to the moon. They ask parents to sign “permission forms” and help their children pack for the trip. When children arrive at school, Sornia and Jason lead them to a spaceship built by the school caretaker. Throughout the unit, children continue the pretend journey on the playground and at home, integrating what they are learning about space into their play.

ISB middle school students explore whether author William Golding is an astute observer of human nature or unduly pessimistic when he describes the effect on groups of people of removing rules in *Lord of the Flies*. Teacher Will Henebry develops two lessons for students to carry out in the woods near the school to examine the social dynamics in the book. Will then facilitates a debate in which he gives signs with the names of the four main characters in the book to four students and asks them to try to convince others in the class to join their group. Students can move between groups at any time. In follow-up reflections, students express surprise at: the depth of their own knowledge, the degree to which their minds could be changed, that their classmates hold diverse points of view, and the contributions from students who are usually quiet. One student writes, “From the discussion, I learned that, even though I’m on one team, and someone else is on another, I still really respect them, and even some of their statements were really hard to argue against. The discussion was really fun, and I hope we can do it some time again.”

Other ideas for using role-play and pretend scenarios include:

- Use props, costumes, and symbols to help students get into character.
- Create cards with roles or scenarios that can be selected or assigned.
- Become a character yourself to help students get into role-playing—do not be afraid to ham it up a bit.
- Document the experience so you can revisit it. Ask students to rehearse and get feedback from their peers.
- Help students learn about their roles by seeing the roles in action (e.g., on a field trip or in a video).

Provide materials and experiences that engage the senses and the body

Cardboard boxes, rocks, shells, and other found and natural materials give learners the opportunity to imagine, create, and explore. Tinkering and maker-centered learning encourage learners to explore the properties of materials and the designed world, to mess around with ideas, and to problem-solve. Consider introducing new smells and sounds in the classroom. Offer tools and materials that inspire inquiry, inventiveness, and creative thinking. These might include sand,

water, tempera and watercolor paints, pen and pencil, India ink, pastels, paper, charcoal, clay, wire, or loose parts. Asking students to express and communicate their thinking in different media often deepens learning.

For a lesson at Esikhisini in South Africa, Ntombifuthi takes her 5th graders outside to act out the spin and rotation of the earth around the sun so they can understand the phenomena of day and night in an embodied way. At ISB, middle school teacher Tue Rabenhøj begins a unit on the rainforests by turning off the lights and playing the sounds of the rainforest as students enter the room. Karen Beltran in Colombia, teaching online, engages kindergartners in exploring light and shadow by inviting them to make their own shadows with materials they can find at home. All of these examples engage the senses and the body to make teaching and learning more vivid by drawing on materials or experiences that inspire interest, curiosity, and imagination.

Other ideas include:

- Go outside with your class to gather materials like sticks, leaves, or stones to use for free exploration or for representing ideas you are studying.
- Choose one material (e.g., wire, clay, etc.) to make available over time to encourage new discoveries and explore ideas related to the curriculum. In the Play Toolbox, Play Kits describes how to create play kits to enhance online or in-person learning.
- Invite learners to use their bodies to process information (e.g., if you are studying sea creatures, ask children to pretend to be fish pushing water through their gills). In the PoP Toolbox, Moving to Learn provides ideas for using movement to develop skills, prompt the imagination, and build and demonstrate understanding.

Ask questions that invite curiosity and imaginative thinking

Posing questions that invite imaginative and divergent thinking provokes curiosity and wonder.¹¹⁸ Open-ended questions are more likely to normalize the experience of uncertainty in life. They can be framed to suggest the possibility of imagining a different, and perhaps better—more just, humane, sustainable, or beautiful—world. Questions with multiple answers (or perhaps no definitive answer at all) invite students to play with ideas and open opportunities for further learning. Think about the difference between asking a child, “What are the phases of the moon?” and “What have you noticed about the moon?”

In the Picture of Practice *Playful Learning Online*, you will read how middle school English teacher Catalina Cortes asks her students, “What are your thoughts and feelings about the government-proposed tax policy?” When introducing a lesson on subtraction, Nuhaa Ismail, a 2nd grade teacher at Nova Pioneer Ormonde in South Africa, does not ask, “If I removed 7 children from our class, *how many children would we have left?*”, but rather, “If I removed 7 children from our class, what would happen?” When the class turns to individual work on the word problem, “Kayden has 24 sweets. He gives Busi 18 sweets,” rather than ask, “What is the answer?” or “How many sweets are left?” Nuhaa asks, “*What is happening in this word problem?*” In these examples, Nuhaa changes what are often closed-ended questions into more open-ended ones. A result is that playfulness among her students is activated. Asked how she feels about these questions, Tsalerato answers, “I made a mistake and I was proud that I solved it on my own....

(Nuhaa) didn't tell us how to solve the problem. [She] made me feel like a president because I got to make my own choice in what strategy to come up with."

Developing a good question can be its own inventive process that unfolds over time. Observe learners' play, conversations, and interactions to discover what they wonder about. Invite children to share their wonders with peers. Making children's and your own questions visible in the classroom—on a "Wonder Wall," a table, or hanging from the ceiling—reminds the group to remain curious and seek meaning. In *Debating the Nature of Facts*, Firdous poses the question, "Does a fact have to be true?" which leads to students' questions: "If a fact is 'something that actually exists,' is fear a fact?" and "If the definition of fact is 'things known to be true,' what about religious beliefs that are true for some, but not others?"

Resources from the PoP Toolbox to help develop questions include:

- Imaginative Sparks Generator, which suggests different ways to inspire imaginative thinking.
- Questions Worth Playing With, which includes questions like, "Where do ideas come from?"; "How do you figure out what to do when you don't know what to do?"; and "As you play, what stories do you discover in these materials?"



Welcome all emotions generated through play

The fifth and final practice to support playful learning is Welcome all emotions generated through play. Learning through play can involve a range of emotions, including feelings of enjoyment, satisfaction, and ownership, as well as frustration and anger. It is important to welcome and value all these emotions when designing and facilitating learning experiences. Because what is playful for one is not necessarily playful for all, providing more than one way for students to learn through play during a learning experience will likely reach more learners. Below are three strategies for welcoming and valuing learners' emotions:

- Design for joy.
- Use play to explore complex issues.
- Support learners in working through frustration.

Design for joy

There are many ways to design learning experiences to create feelings of excitement, belonging, pride, and joy. You can introduce novel materials, pose a puzzle or challenge, redesign the physical environment, set up a game or team competition, or invite students to do any of these. To set a playful tone, the beginning of a lesson or unit is often a good time to engage students in playful learning. Try introducing a lesson without words, putting a riddle on the wall, or setting up your classroom as a courtroom, café, or Greek agora. Designing joyful lessons can be particularly helpful when building skills that benefit from repetition (e.g., spelling, multiplication tables, or practicing an instrument).

Embedding surprise or the unexpected in the classroom is an effective way to get students' attention (e.g., juxtaposing a periodic table in English and Chinese in the chemistry room). In *Creating a Restaurant*, Cristian's presentation at the Cosmic Chicken Restaurant includes a puzzle about the mascot's name. The secret ingredient in the chicken recipe also captures the 4th graders' imagination and leads to a schoolwide survey about food preferences.

ISB middle school math teacher Merete Jørgensen notices that when she inadvertently leaves an algebra equation on the whiteboard, it piques the interest of the pre-algebra students in her next class. Merete capitalizes on the students' curiosity and starts leaving formulas or equations on the board from one class to the next. Students enjoy the challenge and soon ask Merete if they can be the ones to leave "math mysteries" on the board. Students look in math textbooks and online to find suitable material. One class even decides to write the mathematical expression on the window with a washable marker so the students outside will have to read the numbers and symbols backwards!

Here are some other tips and resources to design for joy:

- Seeing teachers make mistakes or get things wrong can be highly motivating!
- Moving to Learn in the PoP Toolbox suggests joyful ways to use the body and movement to enhance learning.

Use play to explore complex issues

Using play as a strategy to explore complex topics can lead to new insights or ways to think about issues. At the same time, you need to be sensitive to the experiences and emotions of the learners in front of you. Perhaps the most important thing you can do is provide a safe space and climate of trust for learners to share their thoughts and feelings. Stories, hands-on materials, role-play, and pretend scenarios are all strategies that can engage learners in grappling with difficult issues and help them navigate conflict and disagreement.

In *Playful Learning Online*, Catalina invites the 11- and 12-year-old students in her online class to explore an issue that is dominating the lives of Colombians. In the spring of 2021, the Covid-19 virus was raging out of control, and Colombia was experiencing massive demonstrations to protest a controversial new tax policy. Thirty-five protesters were killed in one day. Schoolwork was not a primary concern for many students or families. Because of Colegio Unidad Pedagógica's schoolwide peace initiative, one of Catalina's learning goals was to foster civil discourse. She asks 14 of her students who are struggling to learn English to create and present posters sharing their thoughts and feelings about the recent tax policy proposed by the government. She encourages students to talk to their families about the issue.

In Catalina's class, students generally keep their computer cameras turned off. However, most turn the cameras on to share their posters and participate in the discussion. While most posters are critical of the government, one student shares a position critical of the protesters. Catalina affirms the student's right to form her own opinion and ends the lesson by thanking students for developing their own perspectives and reiterating her respect for their ability to think for themselves. Catalina's students have the right to learn about and understand difficult or sensitive topics like war, poverty, or racial inequities. Doing so in a productive way requires space for

them to ask questions, take risks, imagine, and feel empowered to follow up on their curiosities. Play offers a safe way to try out new behaviors and ideas. The students are unusually invested in sharing their thoughts and feelings because the topic matters to them. They look up words in the dictionary and online and use their imaginations to create images and slogans that reflect their personal beliefs.

Children often integrate themes of violence or terror into their play; they will engage in play even in difficult circumstances like the Holocaust or slavery.¹¹⁹ Like the rest of us, children do—or will—encounter “monsters”—individuals who commit horrific acts. How should we respond? We can be horrified, try to ignore the monsters, make fun of them, or study them. The right dose of playfulness, while not diminishing the horror, can help learners find the courage needed to face these monsters.

Other tips and resources for exploring complex issues include:

- Use Play to Explore Complex Issues in the PoP Toolbox, which suggests different ways for learners to consider multiple perspectives and reimagine outcomes using the above strategies.
- Observe and listen for issues that come up in students’ conversations or interactions, such as housing insecurity or gender equity. Consider infusing these into topics you are already teaching.
- One way to bring the world into the classroom is to post newspaper headlines or photographs around the room to see what questions or conversations they provoke. The *New York Times* has a weekly feature called *What’s going on in this picture?*¹²⁰ which shares intriguing images with the captions removed. Students are asked to imagine what is going on and can join a conversation online or in class. Consider starting a weekly or monthly routine.
- If students are hesitant to participate in conversations about difficult issues, introduce the topic in a playful way. For example, ask students to write their thoughts or questions on pieces of paper, crumple them up, and throw them around the room. Students can discuss the comments in pairs or in a larger group.
- Talk to colleagues about teaching difficult topics. Engage families to learn about their perspectives on these topics and to keep them informed. Be sensitive to your school’s norms about when and how students learn about issues important to the community.

Support learners in working through frustration

Playful learning is different from entertainment—it involves challenge, and it does not always have to be “fun.” People tend to work hard and push themselves when they care about what they are learning. Children will often challenge themselves in play so they can reap the rewards that come from seeing what they can do. Learning through play frequently involves negotiating ideas and materials with others, which can lead to charged emotions such as failure and frustration. Learners need support and encouragement when learning becomes difficult. Bringing a sense of curiosity helps more than judgment. The goal is not to remove the hard feelings, but to help learners stay in a productive and safe space where they can experience these emotions and still take risks to solve problems.

At the Colegio Unidad Pedagogica in Colombia, at the start of the year each primary grade classroom identifies a common topic to investigate. In *Creating a Restaurant*, half the students in the 4th grade express interest in gastronomy and half in technology. Some are also interested in art. The lack of agreement and long negotiation process triggers feelings of frustration for many students. The teachers turn this into a learning opportunity by helping students recognize the challenges inherent in any form of compromise and encouraging them to name, share, and accept their emotions. Ultimately the students decide on restaurants (which, in the students' minds, incorporate elements of gastronomy, technology, and even the arts) as their focus.

In *Investigating Policing*, Blair uses playful learning to support her 12th grade students' inquiry into policing in the U.S.—something many of them experience outside of school. The students discuss and debate their points of view using norms previously identified, leading to feelings of empowerment, connection, and confidence. Before responding to comments likely to trigger strong emotions, Blair makes sure to pause for students to listen and reflect, saying, “Okay. Let’s pause. I want you to disagree with each other. You’ve been doing so respectfully. Continue that please. And a lot was just said, so everyone should take two minutes to jot down what was said.”

Other ways to help learners deal with frustration include:

- Model working through frustration by naming when you feel frustrated or telling a story of someone else’s frustration.
- Supporting Learners with Conflict and Frustration in the PoP Toolbox suggests ways to help learners who are feeling frustrated.
- Celebrate times when you or your students successfully met a challenge or worked through frustration, e.g., by adding marbles to a jar. When the jar is full, celebrate with a special snack, taking a longer outdoor break, or playing a favorite game.
- The Do-Over¹²¹ and Making Friends with Conflict¹²² tools from the Inspiring Agents of Change project provide low-risk opportunities for younger learners to accept conflict as a natural part of life and to practice repairing relationships.

The role of documentation in making playful learning visible

A key teaching practice that underlies all five of the playful learning practices is documentation. 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 learning*.¹²³ Documenting playful learning processes and products is a way to make learning visible throughout a learning experience and at the end. Revisiting documentation of learners' thinking and learning with colleagues provides valuable insight into the next steps for supporting playful learning. Documentation serves different purposes during different stages of learning. Perhaps first and foremost, teachers use documentation to guide their teaching decisions to enhance student learning.

There are many ways to document. You can document—or make playful learning processes visible—through video, written notes, photographs, or student work and reflections. You can also set aside a public space in the classroom for “works in progress.” You can engage students in

documentation by giving them cameras or audio or video recorders. The most important thing to keep in mind when documenting is to focus on the *learning* that is taking place, not just what was done.

Documentation is also an important tool for navigating the paradoxes of playful learning. As you will read in the Picture of Practice *Too Many Rules on the Playground*, a kindergarten study group confronts the paradox between rules and freedom by investigating the question, “What happens when we have fewer rules on the playground?” Children wear green “freedom bracelets” for one week while following just two rules: “We take care of each other. We take care of the materials on the playground.” Each day, their teachers document the playground activity by taking short videos and writing observations in a notebook, which they later share with the study group and with the children. This documentation enables the adults (and children) to assess the results of their experiment by grounding follow-up discussions in a shared reference point.

A few tips about documentation:

- Documentation often includes images as well as text. So, if you usually post only photographs on your walls or electronic platform, try adding quotes from students or your own reflections about learning. Or, if you typically post quotes or other text, add photos of the learners or powerful moments during the learning experience.
- For celebrations, art exhibitions, or theater or musical performances, give attendees a glimpse of the learning *process* that was especially exciting or provocative—perhaps an unusual discovery or a difference of opinion that led to a new insight.
- If you decide you would like to document, we recommend only collecting as much documentation as you have time to revisit.
- For more information on documentation, see the Making Learning Visible website¹²⁴ or the book *Visible Learners: Promoting Reggio-Inspired Approaches in All Schools*¹²⁵.

Practice the practices

We realize that the five playful learning practices and sixteen strategies described in this chapter are a lot to take in! We suggest you start by choosing one practice that is of greatest interest and identify one or two strategies with which to experiment. Try out a tool from the PoP Toolbox (see Table 4.2). Practice the practices.

Practice the practices with others. In the Pictures of Practice, none of the practices or strategies were carried out by a teacher acting alone. All were embedded in a supportive school culture where adults were encouraged to experiment with ideas and experiences that support learning through play. You will find an illustration of such a school culture in the next Picture of Practice and we focus on ways to create such schoolwide cultures in Chapter 5.

Table 4.2: Playful Learning Classroom Practices and Tools

Playful Learning Classroom Practices	PoP Tools
 Empower learners to lead their own learning	<ul style="list-style-type: none"> ▷ Getting to Know Your Learners ▷ Making Learning Meaningful ▷ Involving Learners in Decision-Making ▷ Say Yes to the Mess ▷ License to Hack Cards ▷ Playful Learning Reflection Planner
 Build a culture of collaborative learning	<ul style="list-style-type: none"> ▷ Selecting a Thinking Routine ▷ Expert Books
 Promote experimentation and risk-taking	<ul style="list-style-type: none"> ▷ Selecting and Facilitating a Design Challenge ▷ Creating a Culture of Risk-taking
 Encourage imaginative thinking	<ul style="list-style-type: none"> ▷ Storytelling and Story Acting for Older Learners ▷ Play Kits ▷ Questions Worth Playing With ▷ Imaginative Sparks Generator ▷ Moving to Learn
 Welcome all emotions generated through play	<ul style="list-style-type: none"> ▷ Supporting Learners with Conflict and Frustration ▷ Using Play to Explore Complex Issues
Other	<ul style="list-style-type: none"> ▷ Playful Learning Planner



Too Many Rules on the Playground

Teachers of 3–5-year-olds

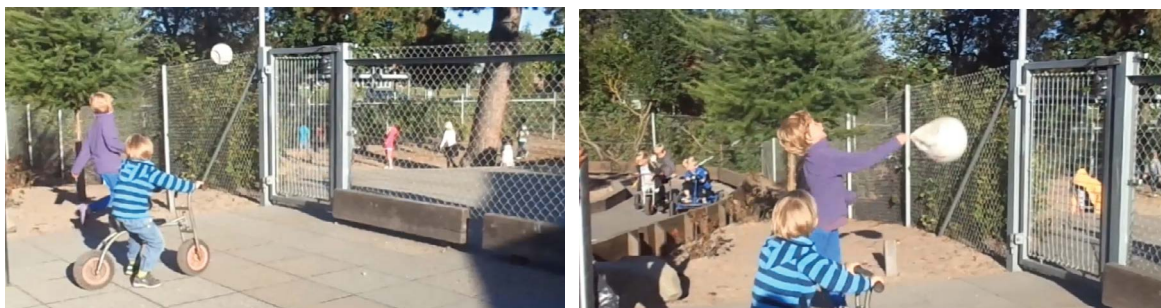
International School of Billund (ISB)

Billund, Denmark

A lot of rules

It is early September, and Marina Benavente Barbón (lead teacher) and Carolina Ayala (assistant teacher) are on the playground with their class of fourteen 5-year-olds. Many in the class are learning English at school, and several have documented special needs. During the hour-long outdoor

Throwing balls
over the fence is
not allowed



play period, Marina and Carolina find themselves saying “no” more than “yes.” Several children want to climb and pick the apples from one of the small trees on the edge of the playground, but Carolina stops them, explaining that this is against the rules. Toby, a child with special needs, sees friends and siblings from older classes through the fence and tosses a ball to them. Marina stops the game—throwing things over the fence is not allowed. In fact, there are many rules created by the teachers, administrators, and the school caretaker to keep children safe and prevent undue wear and tear on playground, including:

- No going up the slide
- Bicycle riding is only allowed on the bike track and in one direction
- Playing with apples that fall from the tree is not allowed
- No throwing items over the fence
- No digging outside of the sandbox
- No playing with tree branches
- Trees are not for climbing

Frustrated that he cannot act on his ideas to play with the ball, Toby runs off, opens the door to the school, and disappears inside. Marina sighs as she follows him— this happens so often. She begins to wonder, *Is having so many rules on the playground interfering with childrens' play and learning? What if we tried something else?*

A playful idea (and a risk)

Later that week, Carolina and Marina attend their first Pedagogy of Play study group meeting of the school year. At ISB, teachers are organized into study groups that meet regularly during the year to investigate how to support playful learning. At the meeting, teachers consider which question related to play and learning they are interested in exploring. Marina pitches an idea to Carolina:

We keep getting messages about learning through play, but I keep feeling like I have to stop it. Like when they were counting the apples, and learning math – why should I stop that? I feel like I get told two different things all the time, and I don't think that is fair for the kids.

Within a few minutes, Carolina and Marina agree to focus on a risky but important question:

What happens when we have fewer rules on the playground?

Other teachers are intrigued yet worried about the implications of asking such a question. Marina reassures them that they will address the question as an experiment and document what happens. With previous experiences working at schools where rules were not to be questioned—by children or teachers—Carolina and Marina feel they are taking a risk, but they also feel supported to give it a try.

Planning the experiment—just two rules

Over the next few days, Marina and Carolina explain their plans to the children and talk about what it means to conduct research. This is a powerful message for the kindergarteners, who were not aware of their teachers' roles as teacher-researchers, but who now have the opportunity to participate in an authentic experiment. With the children, Marina and Carolina create green “freedom bracelets” and explain that when the children put these bracelets on, they only need to follow two rules on the playground:

- We take care of each other.
- We take care of the materials on the playground.

Documenting and sharing the documentation

The following week children head out to the playground with bracelets on their wrists. Each day, Marina and Carolina film short video clips of the children's play and write observations in their notebooks. The children ride their bicycles on the part of the playground not normally allowed, throw the ball over the fence with the older children, and pick and gather apples from the apple tree. Surprisingly, there are no injuries or broken equipment.

Children trying out the new rules on the playground



Reviewing the video footage later, Carolina and Marina make five observations:

- The children did not do anything too risky, even though they could have
- The children created their own safety rules
- The children needed less grown-up supervision
- The children felt trusted
- The children shared their ideas and plans with us and asked us for input

Marina and Carolina also observe children interacting with peers in different classes. They see “runners” staying in the playground without trying to escape into the school. Toby and some others in the class, finally enjoying being outside, try new things. Marina and Carolina witness happier children, fewer incidents, and no material or trees damaged during the whole week.

Two weeks later, the study group gathers to watch the videos and read the reflections Marina and Carolina post to their shared digital learning space, Padlet. Some of the teachers observe the children having fun, being more creative than they usually are, and taking risks. “The bracelets give them freedom,” explains Tove.



Carolina reflects with the study group

I wonder if we have too many rules because rules are made to be broken. We could rethink our rules because fewer rules are better. I think it's cool what you are doing.

Julia notes that it might not be safe where the children decide to play. Megina (the facilitator) shares that she saw children being safe.

It does make me think that they are capable of making wise choices if trusted and adults are there. They did have two rules: that the children needed to stay safe and keep materials safe. I wonder if those are enough if the teachers and the children know that they are negotiating limits as they go.

Several other teachers wonder if having fewer rules may help children “play more fully.” Someone suggests adding classes one by one to try the experiment, documenting as they go.

June asks if it is okay to try the experiment without asking permission from the school caretaker.

To me, it seems disrespectful to break rules that have been set by someone who is in charge of the playground without even asking.

Tove agrees:

If something really bad happens, and a child falls and hurts his head, and it's something we allowed...I'm just thinking about insurance in that case. Then we are responsible.

Carolina and Marina acknowledge their idea is controversial and thank their colleagues for their thoughtful comments. Carolina understands the safety concerns but notes that she saw older children being careful and kind with the younger children, noting,

I think this is something we could help them with, and also help the small ones to trust the big ones and to play with them.

Marina agrees and wraps up the discussion:

*For me it's called the **play**-ground. It's for playing. I think we need some rules, but too many rules makes it difficult for the children and difficult for us. So maybe next time, when we make the rules, [the administrators] could come... and talk to us, and ask us what rules do we think are necessary. And maybe they could observe how the kids play. So I think in that way, maybe we could do it together so we don't have to keep saying no, no, no.*

Sharing documentation with the children

Encouraged by the study group's open and supportive conversation, Marina and Carolina decide to push their research further and share their documentation with their class. They watch a video excerpt with the children and discuss:

Marina: Who remembers how you use this (holding up one of the green bracelets)?

Viva: When we have the bracelets, then we can do anything and ride everywhere, bike on the blue part. And then you and Carolina are going to go around with a camera.

Lucy: You said we had to be nice to each other.

Marina: Yes—that was one rule. Actually, there were just two rules. Do you remember the other one?

Christof: Take care of our things.

Anja: And we have to take care of the little ones.

Marina shares documentation with the children



Several children also use the word “fun” to describe the experience. Divani declares, “I can teach them,” explaining that he wants to teach the young children about the two rules. Revisiting the documentation allows children to share their perspectives about play and rules on the playground. But Marina and Carolina are not quite sure what to do next. They hope other teaching teams will be interested in experimenting with fewer rules, but they need support from the school leadership to push this idea further.

Going public to school leadership

At a leadership team meeting, Marina shares documentation from the research process. The leadership's responses are overwhelmingly positive. One administrator appreciates,

There are just two rules, and they are so simple.

The school's communications manager wonders what would happen if the children *started* the year with only two rules. Everyone in the room acknowledges that too many rules can limit creativity, make children feel stressed, and get in the way of learning. They agree that rule-making can be seen as a dance in which teachers and children negotiate limits in an ongoing, iterative way. They also agree that the school caretaker should be part of the process and follow up with him. When key points from the meeting are shared back with the study group, the teachers are thrilled to hear about the leadership team's support.

“Opening a door”

In study group meetings over the next few months, respectful and productive conversations about negotiating rules continue. Although no permanent or official changes are made to the playground rules, Marina feels the experience enabled children to feel more powerful and capable in their outdoor play, and also pushed her thinking:

This was so early in the year, but I learned that the children could handle the responsibility—all of them could. That impressed me because I wasn’t sure, given their maturity, given their ability to balance their feelings.

Perhaps most importantly, through her inquiry, Marina learned that if something was not working at the school, she could effectively advocate for change, explaining: “My mindset changed as I realized that I could push for different possibilities. It was like opening a door.”

Chapter Five:

How Can Educators Create a Schoolwide Culture of Playful Learning?

In Chapter 1 we presented the principles of a Pedagogy of Play. The sixth principle—Supportive school cultures enable playful learning to thrive—is the impetus for this chapter. A school culture (by which we mean the shared values, practices, norms, and understandings that guide behavior) where children and adults feel trusted and safe to try, experiment, and take risks is essential for playful learning to thrive. Although school cultures can exhibit strong resistance to change, change is possible. New understandings and practices that are more conducive to playful learning can be established. In this chapter we offer ideas for fostering this change as well as for sustaining existing cultures already supportive of playful learning.

This chapter is written for administrators, school leaders, and teachers with a central role in shaping school culture. Of course, some influences on school culture are beyond the control of school leaders. Systemic inequities in societies impact children, families, and educators, and will not be erased by playful practices within the school walls. National policies can also work against play and playfulness. Yet school leaders often do have influence over key components of teaching and learning, such as timetabling, curriculum, and professional development activities. School leaders also play a crucial role in guiding the culture of the school to ensure that learners and educators feel welcome, safe, and trusted. While multiple resources offer guidance in shaping these foundational aspects of school culture,¹²⁶ in this chapter we focus on decisions and processes that lie within the control of school leadership and speak directly to playful teaching and learning.

Consider the Picture of Practice *Too Many Rules on the Playground*. Marina and Carolina engage in several classroom strategies that promote playful learning: encouraging risk-taking, involving children in decision-making, and reflecting on learning with learners. What school-level factors enable them to enact these strategies? This example comes from a school with a strong, schoolwide commitment to playful learning. Structures such as the teacher study groups and a leadership advisory group that meets regularly promote dialogue and experimentation. In the study groups, teachers engage in ongoing, meaningful professional learning in which they feel supported and encouraged to ask questions, take risks, and look at classroom documentation together to reflect on their teaching. School leadership expresses explicit support for Marina and Carolina's efforts. All of these factors support a culture that creates the conditions for playful learning.

In this chapter, we share five schoolwide practices, with accompanying strategies (see Table 5.1), for fostering a school culture that enables playful learning to thrive:

1. Build shared understandings about playful learning
2. Leverage school structures like curriculum, assessment, and the physical environment to support playful learning
3. Provide professional learning opportunities that center learning through play
4. Foster playful community connections
5. Lead playfully

You will notice that the leadership practices in this chapter are distinct from the teaching practices introduced in Chapter 4. While school leaders can certainly draw on the playful teaching practices (e.g., *Build a culture of collaborative learning* can extend beyond the classroom and be enacted schoolwide), we found in our research that school leaders use distinct practices to foster playful learning in their leadership roles. The practices and strategies shared here have been compiled by analyzing data from across our research, including interviews with school leaders and teachers, and observations of faculty meetings, teacher study groups, and parent events from collaborating schools in Denmark, South Africa, the U.S., and Colombia. In Appendix A we provide more information about how these practices were identified.

Build shared understandings about playful learning

As part of this research project, we have spent many hours in schools. We have listened to children, teachers, principals, parents, and community members. One thing is clear: people hold different understandings of play and learning. This makes sense. As we have noted, although the concept of play is universal, specific ideas about play and the role of play in learning are shaped by context and culture. For this reason, you cannot assume that your faculty and colleagues will hold similar understandings of playful learning.

While it is not practical or even appropriate to suggest that everyone at a school have identical understandings of playful learning (disagreement can spark productive dialogue), some degree of agreement is needed for a culture of playful learning to flourish. Without such an understanding you will face the situation described in Chapter 3 where differing conceptions of playful learning, at times, led to educators working at cross purposes. With a shared understanding teachers can provide coherent playful experiences across grade levels. A shared understanding and commitment also allow teachers to feel trusted and take the risks needed to bring playful learning into their classrooms.

Strategies for building shared understandings of playful learning include:

- Engage in community conversations about the role of play in learning.
- Develop your own indicators of playful learning.
- Align school policies and practices with your conception of playful learning.

TABLE 5.1: Playful Learning Schoolwide Practices and Strategies

Practices	Strategies
Build shared understandings about playful learning	<ul style="list-style-type: none"> ▷ Engage in community conversations about the role of play in learning ▷ Develop your own indicators of playful learning ▷ Align school policies and practices with your conception of playful learning
Leverage school structures like curriculum, assessment, and the physical environment to support playful learning	<ul style="list-style-type: none"> ▷ Identify opportunities for play within your curriculum ▷ Ensure that school timetables enable play ▷ Play with your environment
Provide playful professional learning opportunities	<ul style="list-style-type: none"> ▷ Onboard new staff through and about play ▷ Design playful staff workshops and meetings ▷ Provide playful mentoring and coaching ▷ Support Playful Participatory Research
Foster playful community connections	<ul style="list-style-type: none"> ▷ Create playful rituals and celebrations ▷ Engage playfully with families ▷ Find opportunities for school-community partnerships
Lead playfully	<ul style="list-style-type: none"> ▷ Get feedback ▷ Make playful learning visible ▷ Model playfulness

Engage in community conversations about the role of play in learning

Conversations about playful learning that honor individual experiences and perspectives create opportunities for a school community to come together around shared understandings about the role of play in learning. Let's consider an example of how such conversations can influence practice. At the International School of Billund (ISB), the school's mission reads: *By placing play at the heart of education, ISB stimulates every child's natural desire to learn.* This mission statement embodies a clear and common understanding about the role of play in learning. It resulted from a schoolwide conversation—including students—to discuss and create a mission statement that would signal the school's commitment to playful learning. Naming play as part of the core mission makes it easier for ISB educators to consider playful moves when making decisions about curriculum, hiring, professional development, the school environment, and interactions with the larger community. Teachers do not have to justify including play in teaching, resulting in ongoing playful practice. In *Too Many Rules on the Playground*, we saw how Marina and Carolina are empowered to take risks and bring their ideas to leadership because the very idea of playing with their practice is encouraged by the school's mission.

You may not be able to redefine your school's mission with play at the center. However, consider whether there is room to include elements of playful learning, such as learners leading, exploring the unknown, or finding joy in language that guides decision-making at your school. And provide opportunities to come together as a learning community to surface memories, beliefs, and attitudes about the role of play in learning. You might ask colleagues or families to reflect on a playful learning experience and share a drawing or a short story to start conversations about the conditions that allow for playful learning (see *Storytelling and Story Acting for Older Learners* in the PoP Toolbox for suggestions about bringing these stories to life). Looking together at documentation from a classroom can also help ground conversations about playful learning.

Develop your own indicators of playful learning

PoP researchers observed in classrooms and interviewed teachers and learners to create initial drafts of the Danish, South African, American, and Colombian indicators. Based on feedback from educators and additional observations, we finalized them. You and your colleagues can do the same, creating a collective understanding of what playful learning looks and feels like at your school. To support you in these efforts, we have created a *Playful Learning Indicators Research Guide*. The guide outlines four steps for creating indicators: forming a team and making a plan, collecting and analyzing data, creating a model, and sharing the indicators with your community. The guide is available in the Toolbox.

You do not have to start from scratch to create your indicators. *The Playful Learning Indicator Research Guide* suggests ways to use the cross-cultural indicators (leading learning, exploring the unknown, and finding joy) as a starting point for understanding playful learning in your learning community. The three indicators can serve as compass points for developing a shared understanding of playful learning specific to your context. Alternatively, you might use the indicator models from Denmark, South Africa, the U.S., or Colombia if one aligns particularly well with your context. We invite you to hack these indicators and adapt them for your school.

The process of creating indicators can be as valuable as the product. As part of an online course about playful learning, educators at the Briya Public Charter School¹²⁷ in Washington, DC (U.S.) created their own set of indicators. The invitation to create their own indicators empowered them to put their values around playful learning into practice. That is, observing, documenting, and reflecting on playful learning gave the teachers the courage and clarity they needed to follow the children's lead, and fostered trust in their own and the children's capacities as playful learners. Other educators in the course also spoke to the value of creating indicators as a way to spark meaningful conversations about teaching and learning and to develop a shared understanding of playful learning.

Align school policies and practices with your conception of playful learning

Once you have reached a shared understanding of playful learning, use it to create or adjust school policies and practices to promote a culture of playful learning. Of course, sometimes policies will be in tension with the goals of playful learning—the paradoxes are a good reminder that we need to keep children safe *and* let them take risks. But it is important to ensure that your rules do not prevent the playful learning you want to see in your school. Periodically examining policies, structures, rules, and traditions through the lens of learning through play can be helpful. For example, when hiring and onboarding new teachers, ask candidates about their conceptions of and beliefs about play and the role of play in school. Listen for signals around what they value and use it as a chance to talk about what learning through play means to them and how they would operationalize it in their classrooms. When making hiring decisions, principal Gavin Esterhuizen from Nova Pioneer Ormonde in Johannesburg focuses on teacher mindsets—choosing teachers who are open to trying new ideas, getting feedback, and who acknowledge that they do not have all the answers.

Leverage school structures to support playful learning

You have many structures and systems in your school: a curriculum that you follow, timetables that guide daily life, and an established physical environment. How might you navigate, or even leverage, what is already in place in a way that allows playful learning to thrive? Here are some strategies for leveraging school structures to support a pedagogy of play at your school:

- Identify opportunities for play within your curriculum.
- Ensure that school timetables enable play.
- Play with your environment.

Identify opportunities for play within your curriculum

In this book, we have offered principles, practices, and examples from the classroom about playful learning. What we have not offered is a curriculum or set of playful lessons. Still, curriculum is important. What curricular structures support or make room for learning through play?

There is more than one way to think about this. There are curricula that have been shown to be particularly conducive to learning through play in schools, such as those designed around experiential, inquiry-based, and project-based learning. The Reggio Emilia approach, Montessori education, EL Learning, and the International Baccalaureate curriculum are also fertile ground for playful teaching and learning.

Consider whether the curriculum approach used in your school is play-friendly. Will it accommodate the PoP practices? Does it allow for teacher and learner autonomy, and invite community members to co-design norms, rules, and routines? Does the curriculum in your school support a school culture that:

- Empowers learners to lead their own learning: *centers the learner and learners/experiences*
- Builds a culture of collaborative learning: *values and promotes the social nature of learning*
- Promotes experimentation and risk-taking: *supports integrated and interdisciplinary study, embraces learning experiences that are open-ended and flexible, celebrates testing and trying and being transparent about mistakes*
- Encourages imaginative thinking: *invites adaptation, innovation, invention, and out-of-the-box ideas*
- Welcomes all emotions that surface in learning: *focuses on the whole child, not just academic or cognitive development*

Perhaps you are designing your curriculum from the ground up or redesigning or realigning an existing curriculum. The above characteristics can guide conversations to help you choose a structure that supports learning through play. Or perhaps you are working within a prescribed curriculum that does not offer clear and easy options for integrating playful learning. Advocating for play on a systemic level might involve a close examination of the opportunities and challenges of integrating playful learning, or it might involve looking for opportunities to engage a playful hack. There are a number of resources in the PoP Toolbox (e.g., the Imaginative Sparks Generator, Play Kits, the Playful Learning Planner, and Selecting Thinking Routines) that can support educators in making these small moves.

Once you have considered your curricular approach, think about the systems of assessment in your school and reflect on how they reflect your policies around play. Ongoing, embedded, authentic assessment practices, such as pedagogical documentation, portfolios, and narrative reports, are conducive to assessing the rich learning that happens through play. Summative assessments can also be playful in nature. At ISB, which follows the International Baccalaureate curriculum, teachers frequently design dynamic summative assessments at the end of a unit with input from their classes. For example, primary teachers wrapping up a unit on weather designed a video-based summative assessment, in which students worked in pairs to write and “broadcast” weather reports that included key learnings from the unit.

Letting students make decisions about their assessments when appropriate centers and empowers the learner. Students at Codman Academy in the U.S., for example, were upset to learn that their advisory groups were suddenly going to be graded, noting that they do not come to crew [home room] to get graded, they come “to feel better, to hang out, or whatever.” Hearing

the students' concerns, their teacher, Sydney Chaffee, invited them to co-construct the grading system in a way that honored student needs while respecting school policy.

Ensure that school timetables enable play

Part of the consideration for whether a particular curriculum is play-friendly is the “fixed” nature of time. Recall the paradoxes from Chapter 1, where time (perceptions and policies) can be at odds with playful learning in school: play is timeless, as children lose themselves in play, while timetables and set routines set the flow of learning in school. Navigating this paradox may be easier—meaning a “yes, and...” resolution is more likely—if time is flexible and malleable. Consider providing teachers the agency and flexibility to make in-the-moment decisions about extending a class period to allow for ongoing playful learning or deviate from a set plan to follow children's inquiry, even if that means hacking the timetable. Sometimes the playful hack is even bigger. Executive Director Traci Walker Griffith from the Eliot School in Boston (U.S.) changed the entire school schedule to add what is called the EPIC block (Eliot. Play. Innovate. Create). Each day, every student, kindergarten through 8th grade, has the opportunity to explore and play for an hour. Students choose from a menu of cross-disciplinary topics that last for several weeks. Topics include creating board games to teach about home economics and designing anime characters. And as we saw in *Facilitating a Student Composed Schedule*, sometimes the whole system needs a playful hack! Leveraging school structures in support of playful learning can also happen through more direct moves by leadership; for example, allocating time for adult play, experimentation, and inquiry. This signals to the whole community the importance and value of playfulness in school.

Play with your environment

How you design and set up physical learning spaces throughout a school—whether classrooms, hallways, conference rooms, lunchrooms, or the playground—signals the importance of playful learning and supports playful learning practices. Through observations and interviews with practitioners, it is clear that the physical environment impacts possibilities for playful learning, an insight confirmed by the literature about engaging learning environments.¹²⁸ Consider how the architecture and furnishings in your school provide flexibility for teachers and students to make choices about their learning. For instance, does the furniture or room design allow for different ways students can configure themselves to work independently or in groups? Are there areas that might be set up to support varied learning approaches or tasks?

As you consider the architecture, furnishings, materials, and general aesthetics of the learning environment in your school, be on the lookout for whether learners and teachers have agency over their environment. Can they make decisions about how to organize spaces? Are learners of all abilities able to freely access varied and flexible spaces and have access to a variety of resources? Do learners feel safe and trusted to explore their physical environment and take reasonable risks in their learning? Do the aesthetic elements of the learning space (light, transparency, finishes, acoustics, etc.) evoke joy and wonder and curiosity?

These considerations do not mean that playful schools must be well-resourced with abundant materials, innovative classroom furniture, or fancy fixtures. In fact, in our research with schools in the U.S., South Africa, Colombia, and Denmark, we saw a range of resourcefulness and creativity in thinking about how to best leverage the classroom environment for playful learning. Simple classrooms that have four walls, desks, and chairs can become spaces that foster playfulness by moving the desks into clusters rather than rows, inviting children to bring found or recycled objects to decorate the room or use as learning materials, and displaying learners' creative work (paintings, drawings, writing) with care on the walls. Easily found natural materials (stones, leaves, sand, sticks), paper, pencils, and even shadow play provide wonderful opportunities for curiosity, wonder, and exploration, and require little money or material resources. Even as the impact of Covid-19 forced children in Bogota, Colombia, to learn from home, resourceful teachers and families worked together to transform everyday household items into magical learning props. Perhaps the most powerful move educators in low-resourced schools can make involves learners and their families imagining and creating new possibilities for their classroom and school environments. Learners and their families may have ideas about how to arrange the furniture, items they could create for the classroom through community effort, or simple materials that they may want to contribute. You might be surprised at their unexpected ideas that can transform a dull, gray learning space into a place that evokes joy and wonder.

Provide playful professional learning opportunities

In Chapter 3 we described characteristics of teaching that support playful learning, where educators are leading their teaching, exploring the unknown with their students, and finding joy in their work. There are many connections between teachers' professional learning and their students' playful learning. Teachers encouraged to be imaginative educators are likely to encourage imaginative thinking. Teachers supported in being curious and courageous are more likely to promote experimentation and risk-taking. Teachers who feel cared for by the school culture are well poised to welcome all emotions generated through play.

Some educators are naturally predisposed to be imaginative, curious, and caring; others may need support to activate a playful mindset. In either case, these characteristics can be cultivated. This practice centers learning through play and provides strategies for cultivating playful mindsets through a range of in-service professional learning opportunities. Here are four strategies to help you provide playful professional learning:

- Onboard new staff through and about play.
- Design playful staff workshops and meetings.
- Provide playful mentoring and coaching.
- Support Playful Participatory Research.

In the PoP Toolbox you can also find a planning tool for crafting playful professional learning experiences.

Onboard new staff through and about play

When new teachers join your school, you have a unique opportunity to connect them, right from the start, with your school's philosophy and values. If playful learning is a core value at your school, communicate that clearly during the onboarding process. Of course, an important step is making sure a stance supporting playful learning is articulated in your school handbook and in onboarding materials for teachers. Follow this up by using playful experiences to introduce your new educators to school policies and structures. For example, you could create a set of questions or conversation starters about the role of play at your school to explore values and beliefs about playful learning. Print or write out the questions as a deck of cards and use them during onboarding orientation to spark discussion about learning through play. This could be a one-on-one activity or done as a group with new teachers. Invite new teachers to use play materials (playdough, natural materials, art materials) to represent past experiences with learning through play, or to envision what learning through play will look like in their future classroom. Or follow the lead of the International School of Billund: they created a board game to introduce the Pedagogy of Play principles (see Chapter 1) to new teachers. Notice that these playful onboarding experiences are intentional—each invite new teachers to learn about what is important about playful learning at the school while also sharing about themselves and their teaching and learning experiences.

In addition, encouraging new teachers to play can offer a chance for them to become familiar with and explore your school's curriculum. What this looks like will vary depending on the age of the children and the content of the curriculum. For example, when onboarding a new primary school teacher, make time during your onboarding workshop to play with the math manipulatives included in the curriculum and invent new games to teach math concepts. Or for a new middle school science teacher, provide time to experiment with the equipment and supplies in the science lab, to see what possibilities emerge. Selecting and Facilitating a Design Challenge in the PoP Toolbox can be helpful in identifying such activities. Creating time for this type of open-ended exploration sends a powerful message to teachers that they are welcome and encouraged to continue to play themselves and foster playful learning in their classrooms. When you invite new teachers to engage in play, explain *why* and *how* you planned a playful learning experience for them; for example, by relating the learning experience to your school's playful learning indicators. This models how you think about designing playful learning across the school, and offers teachers an example of what they might do in their own classrooms.

Finally, consider pairing new teachers with a playful mentor teacher at your school (see more below). Getting started with new teachers in an intentional, supported, and playful way can have a big impact on fostering playful teachers who are joyful, collaborative, and intentional about teaching through play. And of course, feeling cared for as they begin teaching in a new school is also likely to lead to teachers being more caring with their students.

Design playful staff workshops and meetings

Teacher workshops and staff meetings offer the opportunity for educators to engage in playful learning and develop a playful mindset. Staff meetings can become a dreaded experience for educators if the agenda is dry and filled with reviewing rules and regulations or talking about dull logistics. Similarly, professional learning workshops might be viewed with skepticism or

frustration if teachers feel the topics are disconnected from their daily practice and questions, or if the sessions are not engaging.¹²⁹ What does it take to transform these moments into opportunities for playful adult learning?

Playful staff meetings and workshops often begin with developing co-constructed norms about how you and your colleagues will spend your time together. Along with norms such as Start and end on time and Listen to understand, consider including norms that foster playfulness, such as Risk-taking is encouraged here; Laughter, singing, and dancing welcome; or Playing with ideas is expected. With established norms that encourage playfulness, design your staff meetings or workshops with playfulness in mind. We have seen several examples of this through the PoP research:

- *Make playdates for educators.* At the Nova Pioneer Ormade school in South Africa, the staff start the school year with a playful learning experience for themselves. Each teacher signs up to learn something they do not know how to do, such as building small rockets or learning a new dance. When the school shares this experience in their family newsletter, they are modeling that everyone in the school community is a playful learner. The playful spirit is infectious and evokes curiosity and enjoyment for the families as well.
- *Engage staff in meaningful, interactive work during meetings and workshops.* At ISB in Denmark, school leader Camilla Fog uses the ISB indicators of choice, wonder, and delight to plan her all-school monthly staff meetings.¹³⁰ She provides a social half-hour with dinner before the meetings and opens the meeting playfully (e.g., with a skit) to foster feelings of delight. Then, teachers engage in purposeful and playful planning about school structures and policies using art materials and Google Docs in small-group, interactive discussions.
- *Play with materials.* Consider including playful workshops centered around working with materials so teachers at all levels have a chance to explore and work with loose parts materials and consider ways they can incorporate these into their teaching.
- *Have “What if” conversations.* In the Picture of Practice *Playful Learning Online*, you will read how children engage in explorations of light and shadow and enjoy dance classes from their homes. The Colombian teachers who facilitated these experiences had spent some of their staff meeting time wondering “What if?”—generating new ideas for learning to thrive in a challenging situation during Covid-19 online learning. Talking about the opportunities rather than the limitations of online teaching during staff meetings contributed to these examples of playful learning for children.

The PoP Toolbox has a number of resources you can use in designing playful staff gatherings, including Creating a Culture of Risk-Taking (which can apply to the staffroom as well), License to Hack cards, Selecting Thinking Routines, Say Yes to the Mess, and Selecting and Facilitating a Design Challenge.

Provide playful mentoring and coaching

Coaching and mentoring provide educators regular cycles of feedback and support. Extensive research in schools that offer sustained coaching or mentoring finds these tools to be a powerful

way to promote shifts in teaching practice, foster a sense of connection, and increase feelings of support and well-being.¹³¹ In our research in South Africa, Denmark, the U.S., and Colombia, coaching and mentoring were frequently observed and discussed as essential components of playful teaching.

Think back to the two teachers at the Esikhisini Primary School in South Africa referenced in the Picture of Practice *Soil Types and Plants*. Ntombifuthi Chiloane, a newer teacher, describes how she was mentored by veteran teacher and peer mentor Kabezwane Chezi. Ntombifuthi was guided in her practice by Kabezwane and was supported emotionally to take risks in her teaching. Both teachers describe benefiting from this peer mentoring relationship, and both describe it as a factor that helped them to be more playful educators.

Several teachers in the U.S. schools also describe peer mentoring as a powerful support behind their playful teaching. For example, both the Eliot and the Josiah Quincy schools have mentoring programs that play a crucial role in cultivating a playful school culture. Kelly Garcelon, a teacher at Josiah Quincy, describes her mentor as “a life saver” and says it was “the best thing ever” to have a mentor. Kelly and her peer mentor had a weekly lunch together during her first year at the school, the aim of which was to laugh, connect, and talk through tough issues coming up in the classroom. Kelly’s mentor helped her cultivate many of the characteristics of a playful educator: being cared for cultivated her ability to be *caring* to her students; laughing and bonding with her mentor sparked *joy*; problem-solving with another teacher promoted *creativity*; and having someone to talk through ideas with encouraged more *risk-taking* and *flexibility*.

Coaching encourages teachers to take risks, try new things, and be curious about learning and developing their practice. Using coaching or mentoring to foster learning through play means that play should be central to the mentoring process. Consider using a coaching framework or tool that values teaching through play. For example, if you have your own Indicators of Playful Learning, use this as a tool for grounding coaching or mentoring reflections and discussions. Through coaching or mentoring, teachers feel supported rather than surveilled. These processes can make teacher evaluation a supportive, constructive process rather than a punitive one.

Support Playful Participatory Research

The teachers in the Pictures of Practice *Facilitating a Student-Composed Schedule* and *Too Many Rules on the Playground* were part of study groups, engaging in something called Playful Participatory Research (PPR). PPR is a form of participatory teacher research that is both a professional learning tool and a research approach. Participatory research invites teachers to collect data, analyze results, and use the knowledge generated to solve problems in their own communities. This process positions educators as knowledgeable professionals capable of conducting research in their own schools.¹³² PPR builds on this tradition of teachers as researchers and adds a playful component to the process.

We developed the PPR approach with educators at ISB. Our research¹³³ with ISB teachers found that the PPR process was useful to the teachers’ professional learning, helped them navigate the paradoxes between play and school, and fostered playfulness in their teaching. This

A Quick Start Guide to Playful Participatory Research (PPR)

PPR is a playful, reflective teacher research process and professional learning approach for all educators. Here's how to do it.



is not surprising. Other research has shown¹³⁴ that the most effective approaches in supporting teacher professional learning are not through single workshops but rather in ongoing, embedded professional development processes that are relevant to and shaped by the teachers themselves. PPR offers exactly this sort of professional learning environment.

The PPR process begins with educators posing questions about teaching and learning that are relevant and meaningful to them. In *Too Many Rules on the Playground*, Marina and Carolina's question was, "What happens when there are fewer rules on the playground?"

In a school that takes on PPR as a core component of their professional development plan, teachers are supported in their research through ongoing study groups that meet regularly. They are encouraged by their administrators to take risks, try out ideas, and tinker with their teaching practice. Individual teachers can also engage in PPR on their own, although we recommend that anyone engaging in PPR collaborate in some way with others (other educators, families, students, or a combination) to support reviewing and analyzing documentation as well as trying *playful provocations* that help explorations of research questions.

Here is a graphic overview of how PPR works:

The PoP tool Selecting Thinking Routines is particularly relevant to facilitating conversations in PPR groups. See the PPR guide in the PoP Toolbox for more details about the research process and examples of PPR in action.

Foster playful community connections

The success of playful practices often depends on the degree to which systemic conditions support them. Playful practices are more likely to take hold and thrive when there is community-wide support for playful learning. Schoolwide rituals, family engagement, and making connections beyond school walls builds support for playful learning. Three strategies that encourage community connections are:

- Create playful rituals and celebrations
- Engage playfully with families
- Find opportunities for school-community partnerships

Create playful rituals and celebrations

Whole-school assemblies, gatherings, and schoolwide rituals are prime opportunities to share your school's commitment to learning through play with the whole community. Consider how you might highlight learners' voices and include them in the planning and implementation of community events. Welcome ideas that make visible the importance of risk-taking, innovation, and learning and playing together. Though whole-school events are typically carefully crafted, leave room for serendipity and surprise!

In our research, we have observed rituals and celebrations that highlight playful learning. Bryandale Pre-primary in South Africa offers playdates for the adults in the learning community.

Before school on Fridays, teachers and administrators come together to play children's games. They laugh together, play together, and reflect on their experience. Doing this not only gives them a more empathic lens into what it is like for the children to play ("Now I understand why the kids always bump into each other!"), but also provides an opportunity for kids and parents to see the teachers playing as they enter the building for drop-off. This becomes a talking point for teachers to consider with families how play is central to the way children learn in school.

At ISB, "Passion Days" are woven intermittently throughout the school year as a time when regular classes are suspended so that students can have dedicated time to explore their own interests. Children are invited to plan and choose the learning they want to explore, whether skateboarding, chess, or cooking. As school head, Camilla Uhre Fog, explains in a letter to parents:

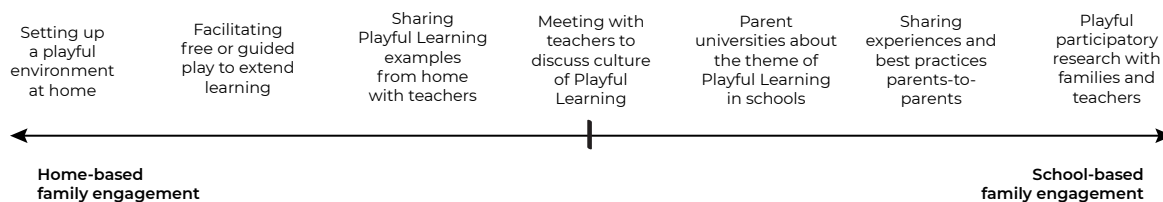
The goal of Passion Day is to give students the opportunity to spend time at school pursuing their own interests with the support of enthusiastic teachers and inspiring resources. You might think of it as the ISB equivalent of Google's '20% Time,' a concept that gives engineers a portion of their workday to explore their own projects and interests (the results of which include Gmail and Google Translate).

Engage playfully with families

Engaging with families can be challenging, with barriers such as schedules, language differences, limited internet access, transportation (for in-person events), and even priorities or differing belief systems making it difficult to connect about playful learning. Yet, just as it is important for educators to have a shared understanding of the value of and practices around playful learning in their school, it is also essential for families to be involved. Inviting parents or guardians into playful whole-school rituals and routines is one way to bridge home and school life. In the Passion Day example, parents are often invited to teach about something they are passionate about. In the Bryndale example, the teacher playdates were intentionally timed to coincide with drop-off time to promote conversations with families.

Though it caused significant negative impacts on learning, the school closures that resulted from Covid-19 demonstrated how school and family connections could be leveraged in support of playful learning. In *Playful Learning Online*, 4-year-olds at Colegio El Nogal in Bogota were supported by family members in their exploration of shadows. And as the Eliot School in Boston pivoted to online learning, the leadership moved quickly to get kids access to computers, to get food-insecure children their lunches, and to connect parents and teachers via text to ensure all children had what they needed for home learning. Online "back to school nights" were held to orient families to the new systems involved in distance learning in order to help maintain the school's playful learning approach.

There are many entry points for families to become involved to develop and deepen connections between playful learning that happens at home and at school. The Pedagogy of Play blog post *Families as Allies in the Construction of a Culture of Playful Learning in Schools*¹³⁵ identifies opportunities to engage with families along a continuum—from home-based activities to inviting families into playful participatory research with teachers:



Offering multiple options at different points on the continuum enables families to choose a path of engagement that works for them. For example, create platforms that are easy for families to access when sharing documentation about playful learning. Paper handouts or posters, displays in the entryway of your school, digital portfolios, or social media platforms can also be helpful. You might create a handout for families about the benefits of playful learning, with examples from your school, or create a long-term display of your school’s playful learning indicators and examples of how playful learning comes alive in different classrooms and subjects near the school’s entrance. The Getting to Know Your Learners and Selecting and Facilitating a Design Challenge tools in the PoP Toolbox can also be adapted to use in meetings and conversations with families.

Find opportunities for school-community partnerships

You may remember from the cross-cultural indicators of playful learning we shared in Chapter 3 that meaning emerged as a key indicator from the six schools in the U.S. Calvin, a 7th-grader at the Atrium School, explained that a meaningful, playful learning experiences involves “something relevant to our lives—an object or a person that allows us to connect with it and [become] involved with it.” Thabiti Brown, Head of School at Codman Academy, describes how playful learning connects to issues of importance in the wider world—learning for his community is connected to family and friends, to interests both in and out of school, and to the “lived realities” of their students. Learning is not only more playful but more engaging and deeper when it feels purposeful.

One way to foster these connections is to plan experiences that bridge learning with events, people, and opportunities beyond school walls. You might look for organizations in the community, such as museums or businesses, that align with lessons and support learning; consider bringing your students into these organizations or invite staff or community members into your classroom. Look for ways students can contribute to municipal events or decision-making. In South Africa, Esikhisini principal Steve Maaepa creates partnerships with athletic and artistic organizations, providing learning experiences learners likely may not get at home (e.g., instruction in piano and rugby). In Denmark, ISB students are often seen throughout the community—learning at the library, contributing to municipal conversations and decisions, and participating in the design and implementation of local festivals.

Developing and supporting learning that extends into the community can be mutually beneficial for schools, families, and neighborhoods. At the Jose Asuncion Silva school in Bogota, a school that serves children from low-resourced families, community relationships, collaborations, and dedicated leadership helped turn the school around. Formerly infamous in the community for student conflict, drug use, and violence, principal Judith Guevara Uribe started a play-infused afterschool program to make the school a safer space for children and learning. Students and

teachers turned a public park close to the school into a playful, safe environment for children and their families. With more time for learning (including afterschool classes in swimming, cheerleading, basketball, dance, and music) and safe spaces for play, absentee rates dropped and student learning increased.

Lead playfully

We opened this chapter by noting the importance of the adult learning culture mirroring the student learning culture. If you want your students' experiences to be characterized by playfulness, make sure that you, as a school leader, are modeling playfulness and leading with a playful approach. Three strategies to keep in mind as you lead by playful example are:

- Get feedback
- Make playful learning visible
- Model playfulness

Get feedback

No matter what ideas you try from this chapter, be sure to regularly ask members of your school community to share their experiences with you. For example, ask teachers to share thoughts on their professional learning, considering whether and how they experienced agency, opportunities to explore the unknown, and joy. When families join you for a school celebration, offer a way for them to share if and when they experience playfulness—for example, by jotting down a reflection and sticking it on the door as they leave. If you have created your own indicators of playful learning, use them to ground conversations. Providing copies of your indicators and inviting educators, families, or learners to reflect on how they experienced playful learning during a staff meeting, family gathering, or in-school activity can be helpful feedback to you about whether participants really experienced playful learning. This feedback will help you to adapt your playful learning approaches.

Make playful learning visible

When you design a more playful learning space, create opportunities for playful teacher professional learning, or cultivate a school-community partnership that enhances play, make sure that learning is visible within and beyond your school. For example, share in a family newsletter what is happening during a playful staff meeting, or in your peer mentoring program. Encourage teachers to talk about their learning with their classes, and dedicate wall space in a central area of your school where the whole school community can see what is happening when teachers learn together. Teachers, families, and children taking risks, playing together, being curious, and experiencing joy models for learners of all ages that playful learning can and should be a life-long process. ISB hosts an annual Celebration of Learning showcasing the teacher research conducted in study groups throughout the year.

Model playfulness

Finally, demonstrate to the community that you take risks, experiment, and are willing to be vulnerable; walking the walk helps create a culture of playfulness, builds trust, and lets others feel safe to take their own risks. Transparency is key. For instance, at a staff meeting say, “I’m not sure how this is going to go, but we are going to try ...” Reflect on these experiments with your staff. You may remember the License to Hack cards available in the PoP Toolbox; in addition to giving students permission to change the learning experience, give yourself not only a license to hack, but a license to experiment with new ideas.

Creating a schoolwide culture of playful learning

Research and experience make clear the challenges of changing ingrained behaviors in schools.¹³⁶ Schools are complex ecological systems where new ideas cannot simply be “installed,” but rather require support and buy-in from various stakeholders. The change we are proposing—to create a learning culture that supports playful learning—requires that the whole school community comes together to build shared values about playful learning. It requires leveraging school structures to support playful learning, providing professional learning opportunities that center learning through play, and fostering playful community connections.

Thoughtful school heads know they are not the only leaders in the building. Wise teachers understand that, even if it is not in their job description, they are responsible for supporting a healthy school culture. Creating a schoolwide culture of playful learning is not something that can be done by one person or even a few—it is a team sport. How should you get started? One step at a time! Begin with your leadership team, or a few colleagues you think might be inspired by the ideas you read about here. Ask yourself which colleagues might be eager to collaborate in planning a playful staff meeting or rethinking your onboarding program? Invite them in. Share this chapter with them and talk about the practices and strategies that resonate with you. Together, choose one or two practices to try out first. Plan a way to communicate your playful stance to families, maybe through a small step of having a morning coffee to talk about the importance of playful learning. And get feedback about what you try. One step leads to the next. Along the way, you will likely find more and more allies among your colleagues, families, and school community members. Return to the ideas in this chapter gradually and try new strategies over time. Little by little, a lot of playful leading—and learning—can happen.



Playful Learning Online



The Covid-19 pandemic disrupted education around the world. This Picture of Practice illustrates how three teachers in Colombia, from early childhood, primary, and middle school, created online playful learning experiences for their students.

Kindergartners Explore Shadows

4-year-olds

Colegio El Nogal

Bogota, Colombia

Karen Beltran is a kindergarten teacher at Colegio El Nogal, a public charter school. Before 2020, the common wisdom among early childhood educators was that you could not teach young children online. While there is no doubt in Karen's mind that kindergarten is much better in person, she nonetheless tries to continue to teach playfully online. Teaching from her home, Karen meets with her class of twenty-two children online two or three times a day.

Her goals for this particular session are to promote children's social skills, enhance their language and conversational abilities, and engage them in scientific thinking. She will also introduce Viviana Gonzalez, who is becoming one of the children's teachers.

The session begins with a welcome song and the introduction of Viviana. The child climate expert for the day, Maria, reports on the weather. Karen then asks the children what they had

for breakfast. This question is more than a social pleasantry; it is a diagnostic practice to identify children at risk for hunger as many families at the school face food insecurity. The class atmosphere is upbeat. Karen, smiling and laughing, exudes warmth. The children, who call out questions and comments, seem comfortable in this online space.

Karen then begins a multi-part lesson about shadows. First, she asks the children what they think shadows are. Answers include*:

The black

Light that accompanies us

The shadows are black, and it is behind us

Samuel suggests that shadows are “the cold.”

Rather than aiming for a correct answer, Karen lets the children construct their understandings together. She suggests,

Let’s ask Julian if he agrees with what Samuel said, that shadows are cold. For you, are shadows cold?”

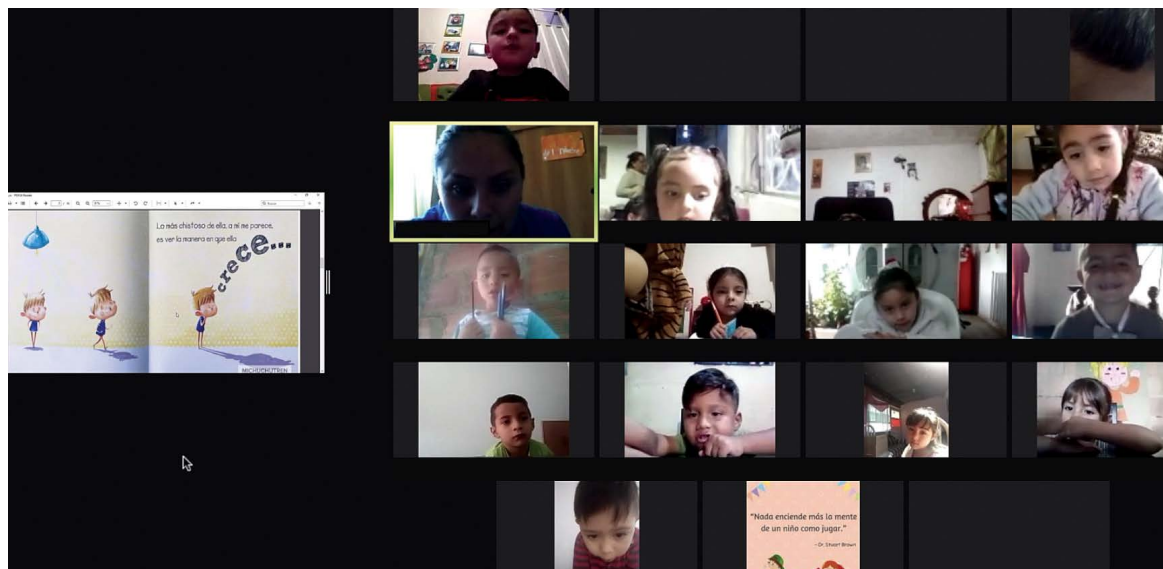
Julian agrees shadows are cold. Karen proposes they return to this conversation after hearing a story about shadows.

She introduces Viviana, who reads the book, *My Shadow and I*. Based on a poem by Robert Louis Stevenson, the book notes that shadows grow and shrink quickly, among other features. Viviana



An upbeat mood at the start of the session

* Unless otherwise noted, conversations have been translated from the original Spanish.



The children listen to the book

A shadow bird



Juan's shadow creation



Saying goodbye online



reads dramatically, gaining the children's full attention.

As a further provocation, Karen turns off her camera and tells the children, "I have a surprise." Turning her camera back on, she uses her hands and a light source to create a shadow bird and a rabbit. The children smile and laugh in response.

Karen then invites the children to explore with light to make their own shadows and share them with their classmates. Some children make birds similar to Karen's. With the help of family members, others construct different creations, including a web of shadows using electrical wires.

Time runs out, and the online session closes with a song and affectionate farewells. When the class resumes the next day, the children revisit and revise their ideas about the nature of shadows.

3rd Graders Learn Colombian Dances

8-year-olds

Colegio Jaime Garzon

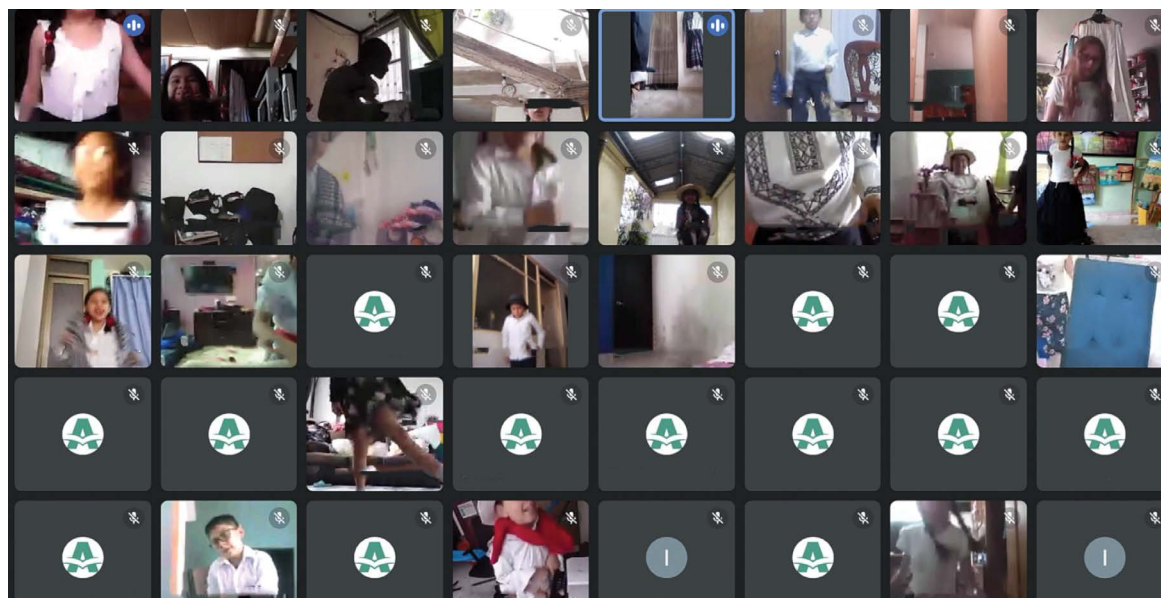
Bogota, Colombia

Mauricio Paredes Garzon of Colegio Jaime Garzon, a public charter school, sees dance as means to foster his students' cultural identity and pride in Colombia's cultural diversity. He believes "dance is a way to include tradition and give children a broad view of who we are as Colombians." His learning goals include fostering creativity through movement and mastering specific dances. Mauricio's challenge is to accomplish this while teaching a large group of students online. He embraces the challenge.

Dressed for their dance class



Mauricio welcomes thirty-eight 3rd graders into a virtual space, greeting them affectionately, "How are my chickens?" As requested by Mauricio, many appear in traditional dress. This takes creativity and resourcefulness from the children and their families as few have the means to



The class
online

purchase special clothes for a school lesson. Sheets become shawls and hats are borrowed from relatives or fashioned out of cardboard.

Several students ask Mauricio if their dress is suitable. His response is, “Spectacular!”

The lesson begins with music from the Caribbean, a region with a large African influence. Mauricio turns on the music and invites the children to start dancing. To encourage the children to think about how they are moving, he asks,

What if there was bubble gum on the floor? How would you move to get unstuck?

When the song ends, Mauricio introduces the concepts for the day’s lesson: lateral movement and moving in a straight line. Aware of Colombia’s rich biodiversity and his students’ love for animals, Mauricio proposes a scenario for the rest of the lesson:

How about we pretend to move our arms like the wings of a partridge? Remember to move our wings in a straight trajectory and include your upper body.

After a short pause to allow students to gather additional props (e.g., a bowl representing water the birds will drink), the music moves to the Andes, a region with indigenous and European influences. Mauricio continues his scenario, telling the children, “Pretend to be partridges drinking water. Use your long neck.”

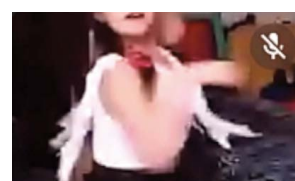
He encourages students to “Dance around the water. Keep moving your wings. Don’t forget your wings.” Mauricio uses a laptop and a phone to provide two views—one of his whole body and one of his feet—as he models the dance.



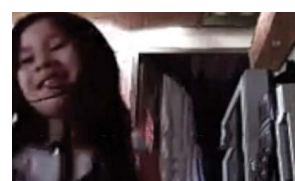
Maria as a
partridge



Carlos flapping
his wings



Some dancers



The storyline continues, but now, rather than asking the children to be partridges, Mauricio asks them to be buzzards to “scare the partridge away” and “protect the water.” Mauricio gives feedback on the dance moves, while keeping the story frame: “Please go slower. Don’t drink the water so fast. It’s not good for you.” He also notes, “You can see how you can learn about tradition through dance.” Indeed, over the next lessons, he introduces dances from the Pacific region, the plains that border Venezuela, and his hometown of Puente Nacional in the state of Santander.

It is time for class to end. Mauricio shares the learning goals for the next class—learning rhymes and couplets—and says goodbye. Many students who had cameras off at the start of class now have them on. Students are reluctant to disconnect. The students and Mauricio exchange virtual waves, hugs, and kisses as everyone signs off.

Middle Schoolers Voice Opinions About Government Policies

6th and 7th grades (11- and 12-year-olds)

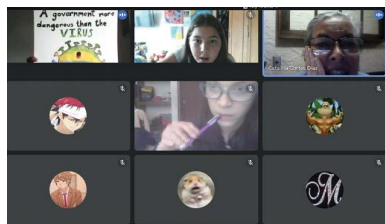
Colegio Unidad Pedagogica

Bogota, Colombia

Engaging preteens in learning an additional language can be a challenge. For Catalina Cortes, a 6th- and 7th-grade English teacher at the independent school Colegio Unidad Pedagogica, this is particularly true in April and May of 2021. Colombia is experiencing a surge in Covid-19 cases as well as large-scale demonstrations against the government. Catalina’s students are very aware of the crises facing their country; for many students and families, schoolwork has become a secondary concern.

Catalina divides her 6th and 7th graders into ability groups. In this lesson, she works with 14 students with emergent English skills who are not highly motivated in the subject. Along with promoting English skills, Catalina’s goals for the lesson include fostering civil discourse and giving students the opportunity to express how they are feeling during this time of uncertainty. These goals are part of a schoolwide initiative called the “Peace Project,” with the aim of helping Colombian society heal after many years of civil war. Civil discourse about public policy is an important goal for these students from left- and right-leaning families, yet far from guaranteed.

Patsy sharing
her poster



The lesson begins with several students sharing maps they made to practice prepositions. Marta shares her map, explaining, “The hospital is in front of the supermarket.” Carolina encourages her, commenting, “Your drawing is beautiful,” and helps Marta with her pronunciation. With only a few cameras on, the level of interest seems modest, though Patsy applauds at the end of Antonio’s presentation.

Interest and commitment increase significantly with the next activity. Catalina asks students to present posters they have created expressing their ideas and emotions about a government-

proposed tax policy that many in the country feel is unfair to low- and middle-income citizens. The students are eager to participate.

Patsy begins, sharing her poster that reads, “A government more dangerous than the virus.”

Alejo’s poster reads, “Evil doctor bacon his indolence is very sow,” a joke which produces laughter among her classmates. Catalina asks the class in Spanish, “Did you guys understand?”

Several enthusiastically call out, “Yes!”

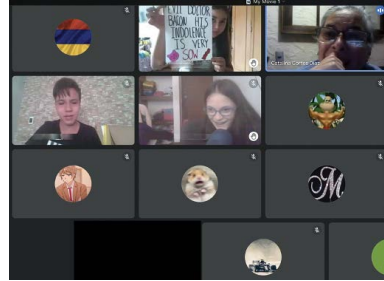
Other posters are presented, many showing support for the anti-tax protests. These include:

- *Colombia stained with blood* - Joseph
- *The government stole our right* - Marta
- *Stop this, They are killing us* - Migel
- *We are angry with the government—we are tired* - Carolina
- *On the other side of the fear is the country we dream of* -Eduardo

However, not all agree. Marta’s poster reads: *Fuera las marchas*, which means, “Time to stop the strike.” She explains that as someone who loves learning and going to school, she does not like the disruptions the protests have caused (many schools, including Unidad Pedagógica, have stopped in-person classes during the protests because of safety concerns). Catalina is quick to validate Marta’s feelings, saying, “It’s good you have your own opinion.”

Catalina notes that students have worked hard on their posters, using dictionaries to look up words that are not in their active English vocabulary. She ends this portion of the lesson by telling her students in Spanish,

I am very thankful that you took the time to discuss with your families and reflect. I can see that these are your own opinions. I respect your ability to think for yourself. I respect that the posters came from your soul. Thank you.



Alejo sharing his poster



More Than One Way to Tell a Story

3- and 4-year-olds

Eliot School

Boston, United States

Each day in Jodi Krous’s class at the Eliot School, her 3- and 4-year-old children engage in storytelling/story acting. Created by Vivian Paley and adapted and integrated into the Boston Public School early childhood curriculum, storytelling/story acting involves a child dictating a story to their teacher, which is then enacted by the whole class. The activity has multiple learning goals, including community-building, helping young children express their ideas and feelings, and literacy development.

In what follows, we share the storytelling portion of the activity that took place in Jodi’s classroom one morning during a forty-five-minute exploration time. While most children are building with blocks, drawing pictures, and acting out scenarios in the dramatic play area, Jodi collects stories from three children. We highlight a series of small moves that Jodi makes to support these children’s playful learning. The moves illustrate a flexible approach to teaching that we call “more than one way,” which we will discuss in detail in Chapter 6.

Cole’s story: A little fireman named Goldilocks

Cole is the first storyteller. Jodi calls him over to the library. She is not surprised when he immediately announces that his story will be about a firefighter. Every day on the way to school, Cole insists that his parents walk by the fire station near the school. After a few seconds of thought, Cole begins: “Once upon a time, a little fireman was wandering in the woods.” Then, despite

advice from his mother, who happens to be named Goldilocks (Jodi had just read that folktale), the firefighter ventures far from home. Jodi works hard to keep up with Cole as he dictates his story, writing in the class's story journal. As Jodi nears the bottom of the page, Cole announces that the little fireman has found the house of the Three Bears.

4-year-old children often tell chronological stories best described as “and then, and then, and then stories.” Developmentally, **4-year-olds are good at stringing together events, but bringing stories to a conclusion is not a strength***. Based on advice from Paley herself, Jodi generally limits stories to one page. However, in this case, Jodi realizes Cole's story would be truncated if it ended now, so she turns the page and continues taking dictation.

*McCabe and Peterson, 1991

Cole explains that the fireman takes a nap in one of the bear's beds. Near the end of page two, he says that the bears have discovered that “someone has climbed the ladder to our bedroom.” The dad bear tells the momma bear he is going to take a look. Realizing the story may be heading towards a satisfying end, Jodi again disregards the one-page rule and continues writing. Page three sees the bears discovering the fireman in their bed and the fireman then fleeing the bears' home. The end.



Cole telling his story to Jodi

Jodi reads the story back to Cole. As the storyteller, he is empowered to select what role he would like to play when the class enacts the story later in the day (the rest of the roles will be assigned randomly by going around the circle of participants). Cole wants to be the momma bear.

Maddy's story: The birthday party

Maddy is next on the list. As she comes over from dramatic play to the meeting area to tell her story, Maddy is followed by Pat, with whom she has been playing. Jodi asks Maddy about Pat's presence. “Do you want her to listen? She might have some good ideas.” Maddy agrees that Pat can stay and begins her story. “Once upon a time...” Jodi repeats each word Maddy says as she transcribes them into the story journal. Maddy continues, “There was a girl, and it was her birthday.” Pat suggests, “Maybe she got some presents.” Maddy adds, “She got cake, and she got some presents.”

The girls watch Jodi closely as she writes. She completes a sentence, and Pat calls out with delight, “Look, a baby circle!” Jodi explains, “It's called a period. I put it there at the end of her thought. It sits on the line.”

Maddy continues with a few more sentences. Jodi reads the story back to Maddy to see if there is anything she would like to add or change and asks her whom she would like to be in the

Maddy (center)
telling her story
to Jodi with Pat
listening



enactment. Maddy's answer: "The girl." Pat wants to be one of her friends. Jodi reminds the girls about the rule that only the author gets to pick a preassigned role—a bump in this otherwise agreeable interaction. A solution is reached when Maddy suggests Pat be given co-authorship of the story.

Alice's story: A messy dog

Alice is the third storyteller on the day's list. Historically, Alice has been reluctant to tell stories. However, she loves dogs, so Jodi decides to join her in the writing area that has been stocked with dog-themed books, markers, and paper. There, Alice is drawing pictures of dogs. Jodi asks Alice about her drawing and then, on Post-it notes, jots down what turns into a story.

Alice telling her
story to Jodi



It is the tale of a messy dog's mishaps in an ice cream shop, as the dog gets ice cream and then hot sauce spilled on it. Pretty funny content, and Alice and Jodi laugh and smile. The story continues with Alice and her friend Enlin picking the canine up and bringing it back to its home. One might expect a bath to follow, resolving the problem of a messy dog. Instead, the dog causes more mess, "getting grass all

over." Alice indicates that the story is over. Jodi expresses appreciation for the additional mess. Reading the story back to Alice she learns that Alice wants to play the dog in the enactment.

It is worth noting that many kindergarten classrooms in the U.S. have a sign on the walls that reads "Good stories have a beginning, middle, and end," suggesting there is one way to tell a good story. However, not all good stories have a beginning, middle, and end in the sense that they

present and resolve a problem. Research by **Courtney Cazden and others*** demonstrates that narrative structure is a cultural construct. For example, they have identified a storytelling style among African Americans that can be likened to jazz music, starting with a theme, riffing off the theme, and ending by returning to the theme. Alice's story has this jazz-like feel. With this in mind, Jodi does not press her to resolve the problem of the mess, knowing there is more than one way to tell a good story.

*Cazden, 1988;
McCabe, 2008;
Michaels, 1991;
and Mistry, 1993

When it is time for the group to enact her story, Alice happily comes on to the “stage” (a taped-off section of the meeting area) but then is unsure how to proceed. Jodi asks her classmates, “Can everyone be a dog for a sec?” Immediately Alice's classmates demonstrate how she might pretend to be a dog. Some are on their knees. Some are squatting. Some are “woofing.” Jodi notes, “There are lots of ways to be a dog.” With some options in mind, Alice gets on all fours and acts out her part of the story.

Young children enjoy telling stories, but an invitation to tell a story that interrupts play or comes with stipulations about length, subject matter, or structure can be met with resistance or even refusal. This is far from the case with Cole, Maddy, and Alice. From the smiles on their faces, their body language, and the quality of their narratives, it is clear they are playful participants in storytelling. Jodi approaches her classroom with flexibility—a sense that there is *more than one way*—that accommodates children's interests and allows them to lead, explore the unknown, and find joy in their learning.



Alice's classmates providing her suggestions about how to pretend to be a dog

Chapter Six: Concluding Thoughts—Playful Learning for All

In your efforts to promote playful learning, you are joining a long tradition, one that is gaining momentum around the world. Over two thousand years ago, the Greek philosopher Plato recognized that play supported children's learning and felt that playful conversations could further adult understandings.¹³⁷ A thousand years later, the Persian scholar al-Ghazali advocated for education that included playful activities such as puppet theaters, sports, and toy animals. He maintained that the "prevention of the child from playing...deadens his heart, blunts his sharpness of wit, and burdens his life."¹³⁸ Several hundred years after that, during the Ming Dynasty in China, Wang Yangming regarded "playfulness" as children's natural temperament and maintained that education should be shaped accordingly.¹³⁹

In the last 150 years, with advances in learning theory, there has been a growing understanding that play has an important role in education. In Japan, Sozo Kurahashi proposed that teaching should be driven by children's interests and curricular themes based on observations of children's play.¹⁴⁰ In Italy, Maria Montessori wrote that "Play is the work of the child" and devised an education system accordingly.¹⁴¹ In the then Soviet Union, Lev Vygotsky highlighted the importance of play in children's development and argued for meaningful, play-based educational experiences.¹⁴² Similarly, in the U.S., John Dewey's discussions of active, meaningful school experiences align with our conception of playful learning.¹⁴³

Since 2010, there has been an increasing focus on playful learning, with ministries of education in South Africa, Ukraine, and Scotland, among others, incorporating play into national policies.¹⁴⁴ By the time the Covid-19 pandemic struck, playful learning had helped Colombian educators Karen, Mauricio, and Catalina, from *Playful Learning Online*, adapt their instruction for distance learning. During a period of great uncertainty, they used playful practices to continue to help their students lead their learning, explore the unknown, and find joy in learning.

We hope that this book supports your participation in this growing movement, helping you and your colleagues build classroom and school cultures that support playful learning. This is because we believe all learners have the right to engage in playful learning.

Play has learning benefits for *all* learners. It can help them to master skills, experiment, innovate, and navigate uncertainty. Playful learning is where all learners can ask "What if."

The world needs people—lots of people—to be asking "What if." This seems particularly true for children facing difficult and harsh circumstances: displacement because of war, separation from immediate family members, hunger, and more. Even in these circumstances, children play.¹⁴⁵ In a world filled with uncertainty, children need an education that helps them learn to adapt, be creative and resilient, and work collaboratively with members of their communities to identify and solve problems—having the benefits of being able to ask *What if*. This is one of the reasons why the UN Charter on the Rights of the Child includes the right to play.¹⁴⁶ Not for some children; for *all* children.

In our final chapter, we address two topics that can help bring playful learning to more children. First, we name some challenges you may face in creating cultures of playful learning and suggest some “What if” possibilities to address these challenges. We then explain “more than one way,” an idea that can support your efforts to adapt playful learning to the circumstances of your classroom and school.

Challenges to playful learning and some “What ifs” to face them

As you embark on efforts to bring more play and playfulness into your classroom and school, you will undoubtedly face challenges. In this section, we name some of these challenges and offer some “What ifs”—thoughts about how you might address them. Of course, you are the best judge of how to address challenges in your community such as:

- Where to start
- How to support change
- How to respond to concerned families (and colleagues)
- What to do about limited resources
- How to address contrary policies

Where to start?

We have offered multiple ways for you to foster a culture of playful learning: five classroom practices with fifteen associated strategies, five schoolwide practices with multiple dimensions, and eighteen related tools. You might be wondering where to start.

Rob Houban of the Agora Schools—a network in the Netherlands where playful learning thrives—believes educators often overthink change and innovation in their practice. His advice about where to start is to make a plan and *do it*, saving reflection for *after* you try something. We agree.

What if you started by starting?

Pick one strategy and try it. Document your experiment. Use the documentation to reflect on what went well and what you would do differently. Try it again.

And what if, after trying a few things, you made a plan based on what was working and the most pressing needs of your students? The plan might focus on one aspect of playful learning, for example, helping learners explore the unknown. It might focus on one classroom or schoolwide practice. We suggest giving your plan time—a year or even more. Getting good at the playful classroom and schoolwide practices takes practice.

How to support change?

You have identified a strategy to try. You have a plan. Perhaps inspired by one of the Pictures of Practice, it entails an in-depth, whole group conversation, or students interacting in small groups without your supervision, or a new schoolwide ritual. You think the plan will make learning in your classroom or school more fun and interesting. You give it a try—and it fails.

Schools are famously resistant to change.¹⁴⁷ Relationships and approaches to learning tend to be firmly established and perpetuated. For example, teachers often teach as they were taught. Breaking patterns to make significant and lasting change is a challenge.

Changing culture is hard. For example, learners enter your classroom with a sense of their “student self”—how to behave in school, how they learn, and how to relate to their teachers and fellow students. The older the learner is, the more ingrained this student self becomes, and for some it does not include play and being playful. While they likely engage in creative and collaborative play outside of school, asking questions, learning from mistakes, and collaborating with peers are not part of their understanding of what happens in school. Rather, school entails listening to the teacher and trying to learn the right answer. The same could be said of teachers—some may have a “teacher’s self” that is at odds with trying to build a schoolwide culture of playful learning.

What if you focused on building a culture of playful learning that would expand your learners’ “student self” to include using play as a strategy for learning?

Recall how, in the first Picture of Practice, *Debating the Nature of Facts*, 4th-graders in Firdous’s class were initially reluctant to engage in conversation and debate. Nova Pioneer Ormonde’s principal Gavin Esterhuizen explains that in South Africa children are generally expected to be quiet, respectful, and not look adults in the eye. So, it is not surprising that some students hesitated to participate in conversations where they might even disagree with their teacher. Gavin notes that in South Africa, educators discussing school and classroom culture is unusual—school culture is generally taken as a given (this is true in other countries too). To change culture, Gavin leads conversations that explicitly talk about creating a school culture that promotes playful learning in line with South African values. With attention to culture, Firdous creates a classroom where controversial statements lead to robust and respectful conversations.

How to how to respond to concerned families (and colleagues)?

Families naturally want the best for their children; in some communities, quality education is the only chance for advancement for young people and their families. In cultures where the idea that play supports learning is foreign, families may question the idea of playful learning as part of their children’s education. We have heard from many educators that a major challenge in bringing more playful learning to their schools is family resistance.

What if you engaged families in conversations about playful learning?

There are many ways to structure conversations with families about playful learning. Ask families to think about how they played as children and what they learned from this play or to

identify a person who uses play for a strategy for learning and how that person contributes to the community. Share your school's indicators of playful learning to provide a fuller sense of what playful learning looks like, grounding discussions in documentation of their children learning playfully. Do not expect one conversation to change minds. However, over time families will gain a better understanding of how play supports learning. Ultimately, they can be allies in bringing more play and playfulness into your school.

The same can be said for colleagues with similar attitudes about play and learning. Again, what if you engage these colleagues in conversations grounded in evidence of what students learn through play? The Pictures of Practice in this book can serve as such evidence.

What to do about limited resources?

Some classrooms and schools have access to valuable resources—books, laptops, high-speed internet, an array of art materials, and more—that support playful exploration and learning. In addition, the relatively small class size in some settings allows for frequent student-teacher interactions. Settings with larger class sizes and limited resources make providing students with materials and attention a challenge.

What if you used low-cost or free materials?

Leaves, sticks, pebbles, and bottle caps can be used for counting, classifying, sorting, and other math activities. Cardboard can be used to create props for dramatic play. Look at items through the eyes of children and consider how they might use the materials creatively.¹⁴⁸ For example, recycled materials can be used in art projects. Share with your students the works of artists who use recycled materials for inspiration.¹⁴⁹ Natural, repurposed, and recycled materials can also be used for activities and to stock students' play kits (see the PoP Toolbox).¹⁵⁰ These materials may be readily available, and businesses and community members may be happy to provide resources if they know it will support children's learning. And some playful activities—storytelling, singing, and dancing—do not require any materials at all!

What if you expanded the walls of your classroom to include the outdoors?

The outdoors affords space for students to move and can put them in a playful mindset. Use the outdoors to provide students a new point of view or space for imaginary play. If going outside is not an option, consider what spaces beyond the classroom can be used to inspire playful learning.

What if you created a classroom culture that supports your students playfully learning?

Here we refer back to the idea of culture. A playful classroom culture is as much about ideas, routines, and mindsets as it is about materials. While it will take practice, the strategies discussed in Chapter 4 can be implemented in any classroom, regardless of the physical resources available. Reflecting on learning with learners is particularly important here for building a classroom culture of learning through.

How to address contrary policies?

In Chapter 5, we discussed how curricular demands can make it difficult for playful learning to take root. Relatedly, high-stakes assessment practices can be a barrier to playful learning. While it's not impossible to promote playful learning in contexts with structured curricula and high-stakes tests—remember how in South Africa Ntombifuthi and KabiZwane provide playful learning—such policies matter.

What if you advocate for more “playful-learning-friendly” policies at your school and beyond?

Speaking frankly and persuasively to authority figures—school heads, policymakers, and political leaders—takes skill and courage. Perhaps at first, rather than becoming the spokesperson for such efforts, you help in creating evidence from your classroom about how playful practices promote essential learning. You are an expert in how your students are learning and have an important perspective to share.

What if you did all of the above—tried and reflected, planned, built culture, engaged with families, and advocated—with others? What if you asked colleagues, supervisors, families, and students to play with ideas and structures with you? The anthropologist Margaret Mead wrote, “Never doubt that a small group of thoughtful, committed people can change the world; indeed, it's the only thing that ever has.” Find your group.

More than one way

Throughout this book, we have argued that there is *more than one way*—more than one way to explain the relationship between play and learning, describe what playful learning looks and feels like, and create classroom and school cultures that support playful learning. Now we reflect on the idea of *more than one way*, an idea in which, in its simplicity, we find utility.

More than one way is a reminder that there are multiple ways to learn, teach, solve problems, explore, communicate, behave, and be a good student, teacher, and member of a school community. It involves flexibility and an openness to surprise. *More than one way* involves recognizing that not everything in a classroom and school will go as planned, and everyone—students, teachers, and school leaders—needs to adapt and be flexible. Emerging from our research, and in particular, conversations with educators, *more than one way* resonates with other educational ideas: pluralistic theories of intelligence, a commitment to social justice, and adaptations for children with special rights.¹⁵¹ Recognizing, allowing, planning for, and celebrating *more than one way* can, open up opportunities for playful learning in a variety of circumstances.

What does *more than one way* mean for educators who want to promote playful learning? In thinking about curriculum and learning activities, it is a reminder to ask questions with several (or even no definitive) answers. It means recognizing that multiple perspectives strengthen solutions to problems. It means providing multiple ways for students to explore and express ideas. It means that even when there is a correct answer, exploring different pathways to that answer and being

able to explain one's thinking in different ways is a strength. Indeed, one characteristic of expertise is the ability to explain something in more than one way.¹⁵²

For example, in mathematics, Liz Caffrey, a middle school teacher in the U.S., explains:

There is more than one way to understand math. There's more than one way to solve a problem, and also there is more than one way to represent ideas. Sometimes there is a better, more efficient way, but it doesn't mean there's one way. Having lots of tools and perspectives on things gives you a more rounded ability to problem-solve or tackle more difficult things later in life.

Regarding problem-solving and creativity, Codman Academy school head Thabiti Brown notes:

If you have more perspectives, you have a better chance of coming up with the solution. Collective action gets stronger outcomes. Indeed, recognizing that there is more than one solution, answer, or approach seems a prerequisite for using play as a strategy for learning.

In thinking about student behavior, *more than one way* is a reminder that educators should allow students to move their bodies in ways that support their learning. Giving learners agency over their bodies opens up possibilities for playful learning. In the classrooms we observed across the four countries, teachers allowed and encouraged children to sit (or stand) in different ways during whole group discussions, individual work time, and small group conversations. Part of teaching is helping learners discover the physical ways that support them in attending, contributing to, and learning in their class community.

Educators should embrace more than one way of their own professional learning. When something is not working for a student or group of students, a *more than one way* approach involves teachers asking, "What if?" in order to explore alternatives. It means being curious about students and striving to get to know them—their interests, abilities, ways of learning, and funds of knowledge.¹⁵³

More than one way can be contrasted to the belief that there is just one way, or *one-wayism*. *One-wayism* appears when there is one way to answer a question, solve a math problem, or sit during whole group meetings. In these situations, there is often just one way to teach. Scripted curricular guides have a very specific language for teachers to use, with a premium placed on the fidelity of implementation. In extreme but not uncommon situations, school leaders expect to walk into separate classrooms of the same grade level and find them on the same page in the curriculum. While one can debate the efficiency of such centralized approaches to learning, one thing is certain: they do not promote playful learning.

It is worth briefly probing the roots of *one-wayism* and the bureaucratic approach to teaching and learning it represents, roots that are related to misguided attitudes about learning, play, and school. The anthropologist David Graeber noted, "What ultimately lies behind the appeal of bureaucracy is fear of play."¹⁵⁴ The origin of this fear, at least for the well-intentioned bureaucrat, lies in a lack of trust. Lack of trust that school leaders will wisely guide their institutions. Lack of trust that teachers have the abilities to or interest in providing powerful learning experiences. Lack of trust in students caring enough about learning that they will do so without rewards and punishments. We recognize that play is a complex phenomenon and not without risks. We are

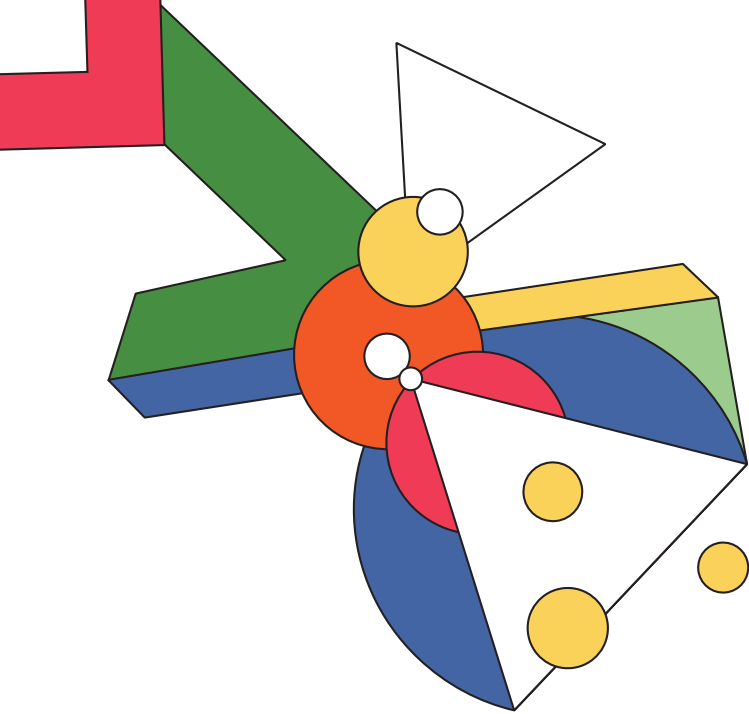
not opposed to accountability. And we have confidence in the abilities of groups of people to self-organize (an ability promoted through play). Surveying the educational landscape around the world, we strongly believe that in many, if not most, instances, bureaucratic controls need to be loosened to allow for more than one way.

The Pictures of Practice provide examples of the diversity of teaching and schoolwide practices that support playful learning across age groups, cultures, and content areas. Jodi, Firdous, Ole, Ntombifuthi, Carol, Blair, Mauricio, Marina, and their colleagues approach teaching and learning with curiosity and flexibility, with the idea of *more than one way* in mind.

Of course, there is more than one way to learn about playful learning. While we hope this book and other Pedagogy of Play resources offer inspiration, insight, and specific practices, we encourage you to explore other playful approaches to learning, including the work of the Agora Schools (Netherlands), Anji Play (China), Care for Education (South Africa), the Center for Playful Inquiry (U.S.), Reggio Emilia (Italy), Sesame Workshop, and Vivian Paley, along with the schools featured in the Pictures of Practice and other examples in this book.

Throughout this book, we have addressed three main issues about playful learning. In Chapters 1 and 2 we discussed *why* it is useful to have a pedagogy of play. In Chapter 3, we examined what playful learning looks and feels like. In Chapters 4 and 5 we looked at *how* you can promote playful learning, offering practices and strategies to incorporate into classrooms and the fabric of life at your school. And, in the Pictures of Practice, we have provided examples of the many ways educators from around the world are supporting their students' playful learning. In this conclusion we offer thoughts on how to navigate challenges and think about *more than one way* to introduce or reinforce playful learning in your school. We hope the principles, indicators, and practices, examples, explanations, and tools in this book help you and your colleagues find *your* way to helping your children lead learning, explore the unknown, and find joy in learning.







PoP Educator Toolbox

The Pedagogy of Play Educator Toolbox includes eighteen tools and resources. The tools are grouped under the five classroom practices described in Chapter 4 (see Table 4.2 on the next page). There are also two guides: one for playful learning indicators research and a second about playful participatory research. Remember, you can always use the License to Hack tool to adapt any of these resources for your context.

Table 4.2: Playful Learning Classroom Practices and Tools

Playful Learning Classroom Practices	PoP Tools
 Empower learners to lead their own learning	<ul style="list-style-type: none"> ▷ Getting to Know Your Learners ▷ Making Learning Meaningful ▷ Involving Learners in Decision-Making ▷ Say Yes to the Mess ▷ License to Hack Cards ▷ Playful Learning Reflection Planner
 Build a culture of collaborative learning	<ul style="list-style-type: none"> ▷ Selecting a Thinking Routine ▷ Expert Books
 Promote experimentation and risk-taking	<ul style="list-style-type: none"> ▷ Selecting and Facilitating a Design Challenge ▷ Creating a Culture of Risk-taking
 Encourage imaginative thinking	<ul style="list-style-type: none"> ▷ Storytelling and Story Acting for Older Learners ▷ Play Kits ▷ Questions Worth Playing With ▷ Imaginative Sparks Generator ▷ Moving to Learn
 Welcome all emotions generated through play	<ul style="list-style-type: none"> ▷ Supporting Learners with Conflict and Frustration ▷ Using Play to Explore Complex Issues
Other	<ul style="list-style-type: none"> ▷ Playful Learning Planner ▷ Creating Playful Learning Indicators for Your School ▷ Playful Participatory Research Guide

Getting to Know Your Learners

Questions to help students play a bigger role in their learning

Choose from (or adapt) the questions¹ below to learn about learners' interests and backgrounds (called *funds of knowledge*) and their thoughts about playful learning to plan for and support learning.

- **Home language:** What language(s) do you speak with your family and friends?
- **Cultural background:** Where are you and your family from?
- **Family traditions and values:** What traditions and values are important to your family? Do you have any special days or celebrations?
- **Friends and family members:** Who is in your family? Who are your friends?
- **Family members' occupations or skills:** What does your [parent/grandmother/sister/uncle...] do while you are at school?
- **Play activities (learner and family):** What do you like to play? What do you like to do when you are by yourself? With your friends? With your family?
- **Favorite games, sports, play themes, or hobbies:** What are your favorite games? Sports? Hobbies? What do you like to do outside of school?
- **Favorite music, movies, or TV shows:** What music do you like to listen to or dance to? What movies or TV shows do you like to watch?
- **Household responsibilities (e.g., caregiving, chores, growing and preparing food):** What do you do at home to help your family? Do you help take care of siblings or other children at home? Clean? Cook? Make repairs?
- **What else is important for me or others to know about you?**

About playful learning...

- What was your favorite playful learning experience in school—when you felt joy or wonder about what you were learning about math, language arts, or another subject area? Why?
- What would your ideal playful learning experience in school look like? Why?
- When do you experience agency, curiosity, and joy in school? In different subject areas?
- What suggestions do you have for me or your other teachers for including more agency, curiosity, and joy in your learning?
- What would you like to learn more about?
- How can I best support you in learning about _____?
- What questions do you have for me?



Tips for Using This Tool

- ▷ Use the information you learn to better understand your learners and to make connections between their lives and the curriculum.
- ▷ Create an easily accessible way to record the information, e.g., on a spreadsheet, chart, notecards, or file folders, either online or as hard copies.
- ▷ Possible settings for conversations include:
 - ▽ Talking to learners informally during transition times—before or after class, or during mealtime, breaks, play, or outdoor time
 - ▽ Inviting small groups of children to a “lunch bunch” during mealtime
 - ▽ Facilitating a whole-class conversation
 - ▽ Having more structured interviews with learners (and/or their families), either individually or in small groups (older students might interview each other).
- ▷ Beware of unintended messages in which learners might feel pressure to represent their culture.
- ▷ For conversations with families, ask, “What would you say are the strengths and interests of your child(ren)? What else do you think is important to know about your child? What is important to know about your family?” You might also give them an online or paper questionnaire or survey to fill out.

More Than One Way

- ▷ Offer different ways for learners to share their funds of knowledge, e.g., they might write a poem or song or create an identity web about themselves.
- ▷ Ask learners to create a playful learner autobiography or perhaps a “math” (or other subject area) autobiography about when and how math has come up in their lives. Ask learners to interview family members with similar questions.
- ▷ Invite students to create self-portraits or portraits of their friends (or take photos), along with a brief description of their interests, strengths, or other qualities. Post them in the classroom. Include your own profile!
- ▷ If you are struggling to identify a child’s strengths or interests, try video- or audio-recording children’s work or play during outside or small-group time. Notice what children like to play, read, write, or talk about.

Notes

1. These questions are based on Gonzalez, N., Moll, L.C., and Amanti, C. (Eds.) (2006). *Funds of knowledge: Theorizing practices in households, communities, and classrooms*. Routledge.

Making Learning Meaningful

Connecting learners to the communities around them

When planning

- ▶ **Before the school year begins or starting a new unit, survey what is going on in the community, country, or world** to identify occasions where you might connect to topics you are already teaching. What current events are children likely to know and care about? Which local events, issues, or organizations might enhance or extend children's learning? Consider local cultural, civic, or other public institutions such as colleges, museums, libraries, government agencies, and arts and civic groups.
- ▶ **Invite local people of interest to the class** (e.g., a florist, carpenter, politician, activist, artist), either to share their expertise or to ask for student input on a problem or question they are facing.
- ▶ **Consider children's rights and responsibilities as members of their classrooms, school, and larger communities.** What issues are missing student voices? How might children influence the thinking of others by sharing opinions about policies and practices that will affect their lives (e.g., school transportation, recycling, public spaces, etc.)? Interview children individually or in groups to ask them what problems their community faces and what ideas they have for addressing them.
- ▶ **Identify an authentic audience for learners to share their learning with,** in or outside school. Potential audiences include students in other classrooms, grades, or schools; younger or older students; families; and community members. Older students might write an article for a platform like Wikipedia about a topic of interest that they think others would find valuable.

When teaching

- ▶ From time to time, **ask children to make connections between what they are learning and why it matters.** "Why does this matter to me? To the people around me? To the world?" For more information, see The 3 Whys thinking routine¹.
- ▶ **To support children's desire to take meaningful action, ask them to consider different spheres of influence.** Let them know that having a conversation about raising awareness or engaging others in identifying or solving a problem can also be a form of action. "What actions can we take with people we know?" (e.g., at the dinner table, face-to-face); "What actions can we take with people in our community?" (e.g., school or neighborhood); "What actions can we take with people around the world?" (e.g., online, nationally, or internationally). For more information, see the Circles of Action thinking routine².



More Than One Way

- ▶ **Partner with another organization**, such as a children's museum or library, to build on children's strengths and share their expertise with the community. See **Places to Play in Providence: A Guide to the City by Our Youngest Citizens**³ and the **Children are Citizens Guidebooks**⁴ for inspiration.
- ▶ Another way to connect learners to the community is for the class to **receive an invitation from a public official or another person of note** asking for their ideas or participation. In the Boston Public Schools (U.S.), kindergartners receive a letter from the mayor inviting suggestions about construction in the city that would make Boston a fairer and more interesting place for children. Children's constructions are displayed at City Hall.

Notes

1. **The 3 Whys thinking routine:** www.pz.harvard.edu/resources/the-3-whys
2. **Circles of Action:** www.pz.harvard.edu/resources/circles-of-action
3. **Places to Play in Providence: A Guide to the City by Our Youngest Citizens:** issuu.com/r2lp/docs/places_to_play_in_pvd
4. **Children are Citizens:** www.pz.harvard.edu/projects/children-are-citizens

Involving Learners in Decision-Making

Inviting students' input into the content, processes, and products of learning

The content of learning

- ▷ Ask students **what they think they already know and what they would like to know** about a topic at the beginning of a unit. Post their responses in the room and look for opportunities to refer back to them.
- ▷ When learning something new (letters, words, maps, geometry, current events, music, etc.), ask students **what they are most interested in learning about**.

The learning process

- ▷ Ask students to **recall a time they learned something really well**, either in or outside of school. Ask them to write down what helped them learn it so well and share it with you and/or the class for future reference.
- ▷ **Give learners a choice** about when to complete an academic task, the agendas for class meetings, where to sit, whether to sit or stand, with whom to work, what is on the walls, how to line up or be dismissed, the clean-up song, snack procedures, break time, etc.
- ▷ Invite students to be **“teacher for a day”** or part of a day. With your support, children might take over tasks like taking attendance, keeping track of the schedule, or teaching a particular skill or topic.
- ▷ Ask students to **create a game to teach their peers** about a skill or concept that requires practice, such as vocabulary, geography, math or history facts, elements in chemistry, etc.
- ▷ Invite students to **design their own homework assignments**. Pose questions such as: What do you need to work on? How do you know? How will you work on it? When and for how long? What will you be able to do when you are done that you cannot do now?
- ▷ **Co-create classroom rules and norms** with learners to foster a sense of belonging and investment in the learning community. Let students know that the rules can be changed through thoughtful discussion and involve them in negotiating new rules as needed. The School Reform Initiative Website contains a helpful norms-construction protocol¹. See also Reinventing Rules in Outdoor Games from Opal School² (U.S.) for an example of creating and disrupting rules.

The products of learning (showing what you know)

- ▷ Ask students **what markers or signs they would look for to show they had learned something**. How would they (and you) know that they had learned?



- **Co-create an assessment rubric** with your students.
- At the beginning of a topic of study, **invite learners' ideas about how to share what they have learned** with others. Consider different formats (e.g., poster, skit, music composition, etc.). If the medium is nonverbal, ask for an accompanying verbal or written “artist’s statement” (a written explanation about the visual creation).
- Ask students **what type of product might contribute to the group's knowledge** as well as individual learning?

Tips for Using This Tool

- Use this tool when planning a lesson or unit to identify ways to involve students more fully in the teaching and learning process.
- If one or more students seem disengaged, or if you feel like your class has hit a roadblock socially or academically, use one or more of the ideas in this tool to engage your students in problem-finding and solving.
- Give students a **License to Hack Card**³ that says, “This card gives me license to direct my learning with regard to the [content, process, or product—choose one] of learning.”

More Than One Way

- Ariela Rothstein, a secondary school student in Lexington, MA (U.S.), formed a Best Practices Club⁴ to harvest student feedback on improving teaching and learning at her school. After securing approval from school leaders, the club created a classroom observation protocol on effective teaching practice in four areas: student understanding, the student’s role, the teacher’s role, and classroom atmosphere.

Notes

1. The **School Reform Initiative Website contains a helpful norms-construction protocol**: www.schoolreforminitiative.org/download/norms-construction-a-process-of-negotiation/
2. **Reinventing Rules in Outdoor Games from Opal School**: www.pz.harvard.edu/resources/reinventing-rules-in-outdoor-games
3. **License to Hack Cards**: www.pz.harvard.edu/resources/license-to-hack-cards
4. **Best Practices Club**: www.edweek.org/teaching-learning/opinion-students-as-coaches/2006/02

Say Yes to the Mess*

Responding to students' spontaneous and playful ideas

Considerations

1. Plan with saying yes in mind, allowing for time in lessons when you can be open to students' suggestions. Requests to play can be explicit ("Can we change where we are sitting?") or implicit (many side conversations between children might be a request to talk to one another).
2. Consider the request and say yes when students can explain how their ideas relate to learning goals or provide a good answer to the question, "How will this help you/us learn?"
3. If you are unsure, ponder the request out loud and involve students in the decision-making process (e.g., "Pedro thinks we should go outside to look at more trees. I'm wondering if taking that time will help us in..." or "I like this idea, but I'm worried that..."). If there is another adult in the room, enlist their advice.
4. The play doesn't have to be immediate; you can put the idea into operation later in the day or week (write the idea on the schedule to ensure follow-through).
5. It is OK to say no, for reasons of safety, time, and other competing priorities.
6. Trust the children and take risks; such risks are part of being a playful teacher!

Tips for Using This Tool

- ▷ If you say yes, check to make sure things are going as "planned," students are keeping to their agreements, and the play is supporting learning. Consider taking a photo or short video to debrief the decision later.
- ▷ Debrief with your students how the "Say Yes" decisions went. Acknowledge any problems you saw and celebrate when things go well. How do students feel the decision went? Saying yes won't always be the right choice. The ultimate aim is to build a community understanding about when play supports learning.
- ▷ Build your sensitivity about when and why to follow children's ideas. Reflect on times you said yes (or no) and what occurred. Talk to colleagues about your experience and ask about theirs. Discuss the Say Yes Scenarios—mini-case studies with no right answer where teachers must pick whether to say yes to play.¹
- ▷ For teachers with shorter time blocks, saying yes can wait until the next class period.
- ▷ There is no right answer regarding when and how to say yes to children's playful impulses. Depending on your group, the time of year, and more, saying yes may be the right move.



Notes

* The title and ideas in this tool come from the “Say Yes to the Mess” Study Group (Gabriela Salas Davila, Athina Ntoulia, Rachel Palmer, and Kathrin Schaller) at the International School of Billund, Denmark. The group also created the Say Yes Scenarios.

1. The **Say Yes Scenarios** can be found at:
www.pz.harvard.edu/resources/activity-say-yes-scenarios

License to Hack Cards

Inviting learners to shape the learning process

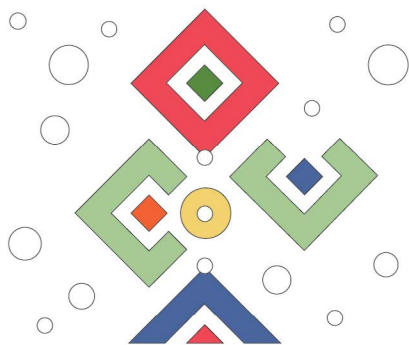
It is up to you and your learners to determine which playful learning experiences work best. The License to Hack Cards (see following page), originally developed by educators at the University College Lillebælt in Denmark, give learners permission to change any part of a learning experience to create increased ownership of learning. (The text on the example here translates to “You have permission to change the learning process in order to make it more meaningful or to deepen learning.”) Here are some ideas about how to use License to Hack Cards with learners of any age:

- ▷ Print cards on playing-card-sized paper and distribute them to your learners at the start of a learning experience. Explain that they can “play” their card at any point in the learning experience if they have an idea about how to make the learning better for themselves or for the group.
- ▷ Create a poster-sized version to hang in your classroom after introducing the idea to your learners.
- ▷ Ask your learners, “How else do you think we could use a License to Hack? What ideas do you have?” (For younger learners, first explain the idea and share examples of times you or they have “hacked.”)
- ▷ Reflect on the hacks. Ask students if the hack supported learning (make sure the judgment is about the hack and not the hacker).
- ▷ Keep a card for yourself too, and give yourself license to hack as you plan and teach your curriculum!

More Than One Way

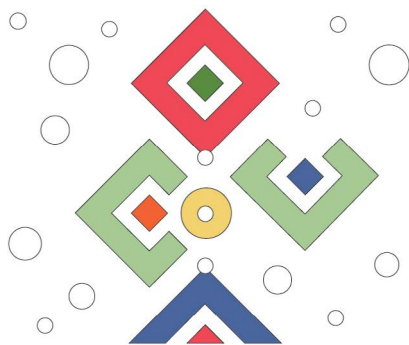
- ▷ If the word “hack” does not feel right in your context, encourage your students to consider other options, e.g., “License to Improve,” “License to Suggest New Ideas,” “License to Adapt,” “License to Try Something Different,” “License to.... [add your own framing].”
- ▷ Give a small number of cards to a group of learners for the year. Tell them they need to reach an agreement about how best to use them.
- ▷ Experiment with other ways for learners to shape the learning experience that will work best for them, such as “This card entitles me to work on my own right now.” Other options include “This card entitles me to...: work past the end time ...make as many mistakes as I need to ...try and fail ...take a 5-minute break ...seek help from another student or teacher.”
- ▷ Introduce families to the idea of a license to hack. Encourage them to consider how their child might hack one aspect of their home life, e.g., how chores are carried out or how furniture is organized, in order to make it more fun, fair, or functional. As at school, adults continue to have the final say. Invite families to share what their children came up with.

License to Hack



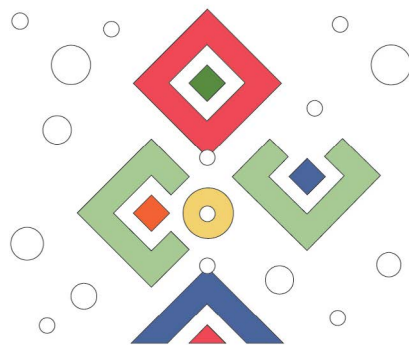
This card entitles me to change the learning process in order to make it more meaningful or to deepen learning.

License to Hack



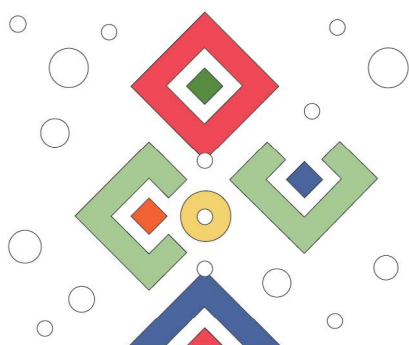
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License to Hack



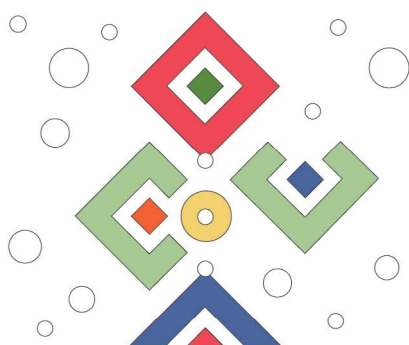
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License to Hack



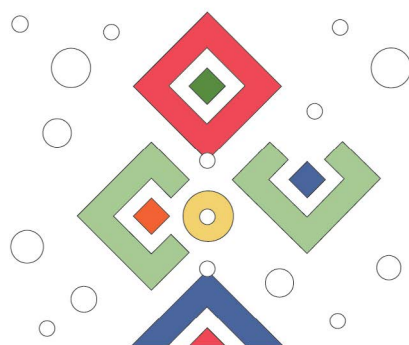
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License to Hack



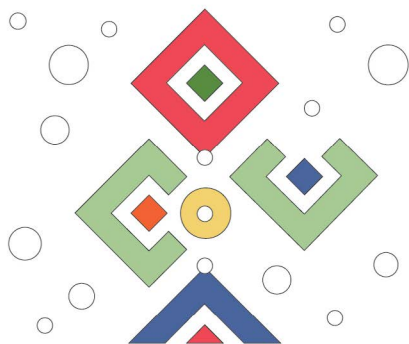
This card entitles me to change the learning process in order to make it more meaningful or to deepen learning.

License to Hack



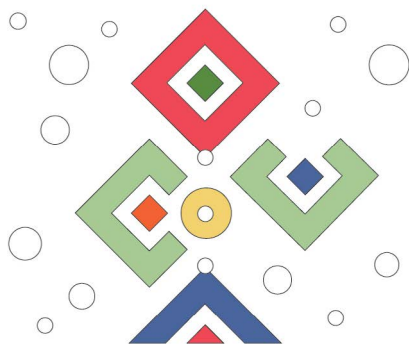
This card entitles me to change the learning process in order to make it more meaningful or to deepen learning.

License to Hack



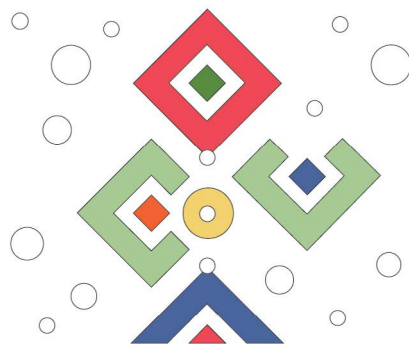
This card entitles me to change the learning process in order to make it more meaningful or to deepen learning.

License to Hack



This card entitles me to change the learning process in order to make it more meaningful or to deepen learning.

License to Hack



This card entitles me to change the learning process in order to make it more meaningful or to deepen learning.



Playful Learning Reflection Planner

Planning for meaningful student reflection

As you plan for reflection about playful learning, consider...

- ▷ **Purpose:** Why are you asking learners to reflect? What and whose learning do you want to support? Keep in mind the distinction between asking “what learners did or liked” and “what they learned.”
- ▷ **Time:** Reflection can be useful throughout a playful learning experience, not just at the end. Do you want learners to reflect before, during, and/or after a learning experience? Ask students at the beginning of a unit or lesson how they would like to share their learning with others.
- ▷ **Format:** What format would you like the reflections to take? Consider giving learners a choice of format such as writing, drawing, discussing, building, acting, dancing, peer interviews, written notes, tweets, or online formats like Padlet or Jamboard. If you choose a non-verbal format, ask learners for a written or verbal “artist’s statement” to provide context for their creation.
- ▷ **Social Dimension:** Do you want learners to reflect individually or with others? Do you want to make their reflections public (e.g., share with another student, a small group, etc.)?
- ▷ **Setting:** Where would you like learners to reflect? From time to time, give learners a choice of where to create their reflection, e.g., the hall, the library, a soft chair, the floor, the art area, a secluded space, or going on a “walk-and-talk.” Perhaps play music chosen by students.

Tips for Using This Tool

- ▷ When inviting students to reflect, only ask for as much reflection as you or the learners have time to revisit.
- ▷ Reflections can sometimes feel onerous to students. Use the word “reflection” judiciously. Ask students to help you come up with playful or humorous wording for reflection prompts.
- ▷ Share your own reflections as a learner about what you’re learning about playful learning. Modelling reflecting is especially important for learners unfamiliar with reflection.



More Than One Way

- ▷ Invite reflections on feelings as well as thinking.
- ▷ Ask students to revisit their learning by taking on different perspectives, including inanimate objects (e.g., “What would the sun say if it could speak?”).
- ▷ Try limiting the “size” of the reflection by asking students to use a limited number of words or sentences. This helps learners to synthesize their thinking and lightens the “tone.”
- ▷ At the end of class, try asking questions such as:
 - ▽ What is one thing you learned from another student? What is one thing another student learned from you?
 - ▽ Write three quiz questions your teacher could ask you at the beginning of the next class to remind you of the big ideas.
 - ▽ What is one big idea and one unanswered question you are leaving with?
- ▷ See **Selecting A Thinking Routine** on the next page for useful reflection routines such as **Connect-Extend-Challenge**, **I used to think... Now I think...**, and **Circle of Viewpoints**. See also Edward Debono’s **Six Thinking Hats** (www.debonogroup.com/services/core-programs/six-thinking-hats/)

Notes

- ▷ For more information about reflection, see pp. 70-71 in Chapter 4 of this book.
- ▷ This tool is based on ideas developed by the “Reflector Llama” Study Group (Mario Casas, William Henebry, Tue Rabenhøj, Ole Stahlfest, and Marc Thorup) at the International School of Billund, Denmark.

Selecting a Thinking Routine

A menu of routines for facilitating knowledge-building conversations

You can find the routines at: www.pz.harvard.edu/thinking-routines.

Exploring ideas

- ▷ **See-Think-Wonder:** Encourages learners to make careful and thoughtful observations and sets the stage for inquiry.
- ▷ **Think, Puzzle, Explore:** Activates prior knowledge, generates ideas and curiosity, and sets the stage for deeper inquiry.
- ▷ **Chalk Talk:** Helps learners consider ideas, questions, or problems by silently writing responses to a prompt and making connections to the responses of others.
- ▷ **Compass Points:** Helps learners explore various sides of a proposition or idea before expressing an opinion about it.
- ▷ **Question Starts:** Gives learners practice developing good questions.

Synthesizing ideas

- ▷ **Headlines:** Helps learners capture the essence of an idea, topic, discussion, or event.
- ▷ **Color-Symbol-Image:** Aids learners in distilling the essence of ideas nonverbally.
- ▷ **Generate-Sort-Connect-Elaborate:** Helps learners organize their understanding of a topic through concept mapping.
- ▷ **Connect-Extend-Challenge:** Helps learners connect new ideas to prior knowledge.
- ▷ **I used to think... Now I think...:** Assists learners in reflecting on how and why their thinking has changed.

Digging deeper

- ▷ **What Makes You Say That?:** Promotes evidence-based reasoning by asking learners to share their interpretations.
- ▷ **Circle of Viewpoints:** Facilitates exploring diverse perspectives.
- ▷ **Step In - Step Out - Step Back:** Promotes developing a disposition to take social and cultural perspectives responsibly.
- ▷ **Word-Phrase-Sentence:** Helps learners capture the essence of a text.



Other

- ▶ **Think-Pair-Share:** Promotes learners' understanding through active reasoning and explanation.
- ▶ **The 3 Whys:** Develops learners' intrinsic motivation to investigate a topic by uncovering its significance in different contexts.
- ▶ **Circles of Action:** Supports learners to move beyond understanding and take action.
- ▶ **Me-You-Space-Time (MYST):** Helps teachers prepare for making thinking visible.
- ▶ **Ladder of Feedback:** Supports learners in giving and receiving feedback.

Tips for Using This Tool

- ▶ The routines are designed to foster students' content knowledge and thinking skills and dispositions across subjects. They can be used repeatedly to help learners build knowledge as they exchange, build on, or disagree with one another's ideas.
- ▶ Your learning goals should drive the use of thinking routines, rather than the other way around.
- ▶ The routines are intended to become one of the regular ways that students go about the process of learning in the classroom, rather than "another thing to do."
- ▶ Use a small number of routines consistently, rather than multiple routines once or twice, so they become part of learners' thinking patterns.
- ▶ Choosing which material to use with a thinking routine is as important as choosing which routine to use.
- ▶ Many of the routines are best carried out in a group. Even if a routine can be completed individually, it is useful to share individual responses in a small or large group.
- ▶ Routines can be carried out in person or virtually. Online, students might post thoughts in Padlet or Jamboard so they can review classmates' thoughts and discuss implications.
- ▶ Most of the routines exist in both English and Spanish.
- ▶ See www.pz.harvard.edu/thinking-routines for additional routines. PZ routines include ways to explore objects and systems, works of art and music, possibilities and analogies, perspective-taking, controversies and dilemmas, and global thinking.

Notes

- ▶ These **Thinking routines** were mainly developed by Project Zero researchers.
- ▶ **Chalk Talk** is adapted from Hilton Smith of the Foxfire Fund.
- ▶ **Think-Pair-Share** is adapted from: Lyman, F. T. (1981). "The Responsive Classroom Discussion: The Inclusion of All Students," in A. Anderson (Ed.), *Mainstreaming Digest* (pp. 109-113). College Park: University of Maryland Press.

Expert Books

Helping learners see themselves as sources of knowledge

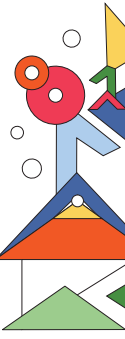
An Expert Book is a class book with a page for each learner that shares something the learner does well and something they are still working on. The book can be used for ongoing conversations about how students learn from and with one another.

Process

- Ask each learner, “What is something you are really good at?” or “What expertise do you have and appreciate about yourself?” “What is something you are still working on?”
- Each learner creates one page, including an image (photo, drawing) of the learner.
- Create a page for yourself too! Your learners will appreciate you modeling this for them and sharing your expertise and learning in progress. Other adults in the school can also make a page for the book.
- Once the book is created, read it together as a class and look for connections. Is Yalda working on her writing skills, and is Bea already an expert? They might learn they have something to talk about together!
- When a student is stuck working on a problem or topic (e.g., algebra), refer them to the Expert Book to see if another learner could offer expertise.

More Than One Way

- Learners can interview each other about their expertise and what they still want to learn.
- Books do not have to look one way! Printed paper books are great, and so are digital versions. Try creating a book in PowerPoint or a similar program, so you can either share it on-screen or convert it to a PDF for easy printing and sharing.
- As an alternative to a book, you could also create an Expert Card deck with your learners (see example on the next page).
- Short videos about each member of the classroom community could be created instead of, or in addition to, a book.
- Turn over editorial decisions to the students.
- Include family members (parents or other caregivers, grandparents, aunts, uncles, siblings, and cousins) in the Expert Book. Family members can create their own pages at a school event, or students can interview them to create a new page. Try to include a page from each student’s family.
- Partner with the art teacher to create a book.
- Creating a class book of things that each learner does well, along with things they are still learning, can be a great way to appreciate and learn from one another’s expertise, as well as value the fact that everyone is working on learning new things all the time. The book can ground conversations about risk-taking, how making mistakes is part of learning, and the importance of trying again.



Examples

- ▷ **Young learner (age 8):** Luis is an expert at speaking Spanish, building with LEGOs, and playing soccer. He still wants to learn how to divide.
- ▷ **Adult learner:** Yalda is an expert cook, distance runner, and scientist. She is working on her writing skills.

Selecting and Facilitating a Design Challenge

Using hands-on creative problem-solving activities to foster content learning and collaboration

Determining the challenge

When selecting a design challenge, consider whether the challenge:

- ▷ Complements or directly connects to your learning goals (e.g., understanding the mechanics of a lever, exploring the material, or building on the ideas of others)
- ▷ Offers a “low floor and high ceiling”¹—a simple way into the task so all learners can be easily engaged, along with potential for increasingly complex exploration
- ▷ Gives learners multiple pathways to explore content and solve the challenge, e.g., by playing with an idea or problem that has no set solution
- ▷ Provides opportunities to learn through experimentation and risk-taking
- ▷ Encourages collaboration

Facilitating the experience

Once you have decided on the challenge, consider:

- ▷ Introducing (or co-creating) norms with learners, e.g., what should they do when they get stuck or encounter a conflict?
- ▷ What students need to know or understand before trying the challenge
- ▷ How long the design challenge is likely to take
- ▷ Which materials to make available and how to introduce them
- ▷ How to group your learners (three to four students is often a good starting point)
- ▷ Whether to offer learners a choice of challenges
- ▷ Documenting², or asking one to two students to document, the learning process (e.g., what did the group do when they got stuck or made a mistake?). Allow time at the end for groups to reflect on and share their experiences with each other to support metacognition (thinking about thinking).



Tips for Using This Tool

- ▷ The Tech Interactive webpage can get you started on a variety of design challenges: www.thetech.org/content/bowers-institute/resources
- ▷ Resist the urge to solve problems for your students; it is OK for them to experience challenge. Sitting with and working through difficulty is an important skill to learn.
- ▷ When students express frustration or need help, suggest they first look to their peers for support.
- ▷ Depending on your learners and goals, consider limiting the amount and choice of material. This can be both environmentally sound and promote deeper exploration.
- ▷ Consider having one central area where students keep their materials, which may help them get inspired by each other's work. Try asking students to pause partway through the class period and walk around the room to see what other groups are doing.
- ▷ Host a school event to engage families in a design challenge like the one their children experience. Post interesting moments or outcomes from the children's learning process. Ask families to reflect on what they learned.

Notes

1. Explore this post by Mitch Resnick to learn more about the idea behind "low floors and high ceilings": mres.medium.com/designing-for-wide-walls-323bdb4e7277
2. To learn more about documentation visit: www.makinglearningvisibleresources.org/uploads/3/4/1/9/3419723/five_features_of_documentation.pdf

Creating a Culture of Risk-Taking

Conversations, norms, and routines that normalize risk-taking, making mistakes, and experimentation

Facilitate conversations to unpack the meaning of terms like “risk-taking” and “making mistakes”

- ▷ Ask, “What comes to mind when you think about the word [risk-taking]?”
- ▷ Record learners’ responses on a large piece of paper. Afterward, ask them what they notice or wonder about.
- ▷ Revisit the page from time to time to see if new insights or questions have emerged. (See also **Cracking Open Words**¹ and the **Making Meaning Routine**².)

Discuss examples to explore the relationship between risk-taking and learning

Choose a provocative video, image, or artifact that shows humans or animals taking risks (see suggested video clips on the next page). Then facilitate an open-ended conversation about play, learning, and risk-taking, using one or more of the following prompts:

- ▷ What do you notice? Point to what makes you say that.
- ▷ Where did you see play taking place? Where did you see learning taking place? What makes you say that?
- ▷ Does everyone agree? Who has another point of view?
- ▷ What is the connection between learning and risk-taking? Between learning and play?
- ▷ What are your own experiences of taking risks? What did you learn?

Use language, routines, and rituals that encourage risk-taking and mistakes

- ▷ In collaboration with your learners, develop classroom norms or rules that highlight risk-taking and experimentation, e.g., “We take risks (or make mistakes) to help ourselves and others learn.”
- ▷ Create a “mistake of the day/week” ritual, in which you and the children nominate, record, and celebrate mistakes and the learning that follows. For example, ask children at the end of each day/week, “What was a helpful mistake you made today/this week? What did you learn?”
- ▷ Invent playful language with children to describe unexpected or surprising moments of learning from mistakes or risk-taking, e.g., “oopsie,” “beautiful mistakes,” “do-overs,” etc.
- ▷ Ask two students to serve as “risk observers” to record notable moments of risk-taking or mistake-making to revisit with the class. Discuss when and where risk-taking and mistake-making seem to support learning.
- ▷ Start a “beautiful” or “favorite mistakes” wall, either in or outside the classroom.
- ▷ Facilitate a brainstorming session to harvest ideas about a question or problem, with a ground rule that you cannot critique another person’s idea.



Tips for Using This Tool

- ▷ Creating a culture of experimentation and risk-taking is an ongoing process.
- ▷ Model risk-taking and making mistakes in your teaching (perhaps even making mistakes on purpose!). Be transparent when trying something new or unknown. Talk through making a mistake out loud—how you feel about it, what you learned, and what you might do differently next time.
- ▷ It is perfectly normal for children and adults to experience anxiety when trying something new. Name the anxiety and reassure learners that feeling anxious shows they care about what they are attempting.
- ▷ Suggested video clips about risk-taking:

Human risk-taking

- ▽ Choose an excerpt from this 16-minute film of children and adults deciding whether to jump off a 10-meter diving board (The New York Times; Jan. 30, 2017). Available at: youtu.be/5QMljSnt_E
- ▽ A six-minute YouTube video of learners in an Anji Play kindergarten (China) jumping off a plank on top of an oil drum. Available at: youtu.be/cuksYrro7Cc (video by Anji Play; Jan. 9, 2018).
- ▽ YouTube clips from the British TV show “Educating Yorkshire,” in which a student overcomes his stammer with the help of his teacher.
 - ▼ End-of-Year School Speech:
youtu.be/aM4mDJYDgBE (video by Our Stories; Jul. 23, 2020).
 - ▼ Student and Teacher Retelling the Story:
youtu.be/B3yuE8jFkwc (video by Our Stories; Dec. 14, 2020).

Animal risk-taking

- ▽ A two-minute YouTube video of a crow using a bottle cap to slide down a snowy roof: youtu.be/hn00jCneVUg (video by Viralno; Feb. 2, 2017).
- ▽ Choose an excerpt from the fifty-minute YouTube wildlife documentary, “Animals Like Us: Animal Play”: youtu.be/WlmKDJuaCmU (video by Best Documentary; May 5, 2016).
- ▽ A two-minute YouTube video of lion cubs playing in their pride: youtu.be/TeCkm-BEZ-8 (video by Discovery; Jun. 4, 2015).

Notes

1. **Cracking Open Words** is an Inspiring Inventiveness tool, co-developed by Opal School (U.S.) and Project Zero. Available at: www.pz.harvard.edu/resources/cracking-open-words
2. The **Making Meaning Routine** is from the book *The Power of Making Thinking Visible* by Ron Ritchhart and Mark Church. Available at: openingpaths.org/blog/wp-content/uploads/2018/03/Making-Meaning-Routine-Ron-Ritchhart-CoT.pdf

Storytelling and Story Acting for Older Learners

Using storytelling and acting to support learners in imagining possibilities

1. **Choose a prompt.** Decide what prompt you want to use to spark storytelling and give learners a few minutes to think quietly about their story. Some examples:
 - ▽ To learn more about your learners' past experiences, ask them to think of a story from their own life. Relate the story prompt to your content area—e.g., ask science students to tell a story of a memorable experience doing science in the past.
 - ▽ As you near the end of a math unit, ask students to imagine a story about using their new mathematical knowledge in a real-life situation.
 - ▽ To support learners to transfer a new skill or approach beyond the classroom, ask them, "Imagine yourself five years from now. Tell the story of how you are now using _____ approach/strategy/practice in your life/work."
2. **Tell stories.** Group your learners into pairs. Each learner will have a chance to be a storyteller and a scribe and write down their partner's story.
 - ▽ Storytellers: Tell your story slowly enough that your partner can write the story down, word for word.
 - ▽ Scribes: Write down your partner's story word for word. Ask your storyteller to pause as needed, and repeat back what you have written as you go. Write the story with pencil and paper or use a digital device. Read the finished story back to your storyteller. Ask, "Did I capture your story accurately? Is there anything you'd like me to add or change?"
3. **Act out stories.** Come back together as a whole class or in groups of at least 10 learners per group. Choose some or all of the stories to act out as time allows.
 - ▽ Sit in a circle on chairs or on the floor so that the space within the circle becomes the stage. The scribe reads the story aloud. As new characters appear in the story, the scribe asks learners one at a time to join in acting out that role. See example below.
 - ▽ Suggestion: To simplify choosing roles, go around the circle and ask each learner in turn if they would like to play the role of the next character who appears in the story. Give the storyteller the first choice of which role to play, or the option of watching their story be enacted.
4. **Reflect on learning.** After learners act out the stories, invite them—individually, in pairs, or as a group—to reflect on how sharing, hearing, and seeing each other's stories influenced their thinking.



A storytelling and story acting example

- **Prompt:** Tell a story about a time when you felt like a scientist
- **Context:** A high school biology class
- **The story told by one learner:** When I was a small child, I was playing outside behind my house. I found a huge beetle with horns in the grass. I was a little afraid and very curious. I went to tell my father, and he came outside to look at the beetle with me. We counted the legs together and looked at the horns. We noticed the color and the shape of its body. Then I made a little house for the beetle with leaves and sticks. The next day it was gone. I didn't feel like a scientist then, but thinking back on that experience, I was learning about a new creature in the natural world.
- **Acting it out:** One learner takes on the role of the child, one the role of the beetle, and one the father. No props or costumes are used; the actors simply pantomime the actions as the narrator reads the story aloud. The rest of the class is the audience who applauds at the end of the story.

More Than One Way

- If you do not have enough time in class, ask students to prepare their stories outside of class and bring them in to act out together.
- To encourage brevity and succinctness, suggest that stories should be no longer than one handwritten page.

Notes

- Storytelling and Story Acting, developed by Vivian Gussin Paley, is a widely used approach for dictating and acting out stories in early childhood classrooms. For information about the practice see Patricia Cooper, *The Classrooms All Young Children Need: Lessons in Teaching from Vivian Paley* (Chicago: University of Chicago Press, 2009).

Play Kits

Creating a play kit with simple, affordable materials to encourage imaginative thinking online or in person

Suggested materials

(Allow flexibility so learners can use what they have and do not need to buy materials.)

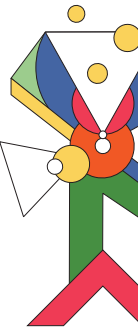
- ▷ Something to sculpt with (clay, wire, playdough, paper)
- ▷ Something to build with (LEGO bricks, wood, dominos, plastic cups, rocks, sticks, fasteners such as paper clips)
- ▷ Something to collage with (found and/or recycled materials)
- ▷ Paper and something to make marks with (markers, crayons, paints, pencils)
- ▷ A foundation or base to build/play on (e.g., a piece of cardboard, a plate, or a tray)

Sample prompts

- ▷ Represent an idea that stood out to you from the chapter we just read.
- ▷ Create a model of... (e.g., the digestive system, erosion, a sustainable energy system...).
- ▷ Represent a time when you felt... safe/sad/proud/playful....
- ▷ Create a representation of the main idea(s) in this music or piece of art.
- ▷ Create something that expresses the meaning to you of... (e.g., bravery, collaboration, challenge, equity...).
- ▷ Use your play kit to help you solve a problem or think about a situation in a different way.

Using the play kits

- ▷ Ask learners to bring their kits to class regularly (or have them nearby at home) so they have access to the materials as needed. They can use the kits to play with ideas, create models, and talk about their work. Playing with materials can help learners explore questions and represent ideas in new ways, making their thinking more visible to themselves and others.
- ▷ Prepare to be surprised by the new ideas that emerge! As much as possible, allow learners to choose which materials they want to work with to respond to a prompt. During or after creating, invite learners to share their ideas and creations with each other.



More Than One Way

- Try using the play kits in pairs or small groups for collaborative expression.
- Use play kits as homework—play at home, take a photo, and share your photo with others in an online platform.
- If readily available, add tools (rulers, scissors, etc.).

Notes

- Maggie Van Camp introduced us to the idea of play kits. She uses the kits to support her teacher candidates' learning.

Questions Worth Playing With

Questions to ask and post to spark learners' wonder and curiosity

Questions that can make content more meaningful

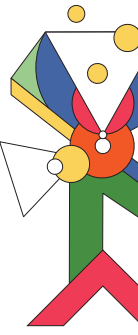
- How might understanding stories of the past help us better understand issues of today?
- What can we do with feelings of injustice in our current experience?
- How might nurturing our relationship with the natural world support our ability to think and act for the good of everyone?
- Why do different people see the world in different ways?
- What happens when people with different worldviews come together?
- How can we move from recognizing that there are different perspectives to seeking understanding of those perspectives?

Questions about community and collaboration

- Who are we as a community?
- What becomes possible when we share our strengths with our community?
- How does play support collaboration?
- What leads people to act on behalf of others as well as themselves and what happens when they do?
- How do you know when you are collaborating?
- What is difficult about collaborating and what strategies make it easier?
- Where do ideas come from?
- How do stories connect us?

Questions about emotion and conflict

- Why do things go wrong sometimes and what would the world be like if they didn't?
- How do you figure out what to do when you don't know what to do?
- What does it mean to care for something bigger than yourself?
- How will encounters with [insects/a literary figure] help us explore powerful emotions that might arise, like fear, possessiveness, wonder, joy, and love?
- What do friendships need to grow and flourish?
- What happens when we hurt someone in our community?
- How can reflecting on thinking and feeling deepen our understanding of ourselves and others?



Tips for Using This Tool

- ▷ Big questions—questions with multiple answers or no definitive answer at all—invite curiosity and wonder.
- ▷ Consider enlisting one or two colleagues and/or students to help you choose a question to enhance learning during one or more curriculum units.
- ▷ These questions are for you and your learners to consider. Some questions may need to be rephrased for young children, e.g., “How do you know when you are collaborating?” might become, “How do you know when you are working as a team?”
- ▷ Hack this list by adapting questions to your own setting or creating questions of your own.

Notes

- ▷ This tool is adapted from “Sample Big Questions” in **Asking Big Questions**, an Inspiring Inventiveness tool co-developed by Opal School (U.S.) and Project Zero. Available at: www.pz.harvard.edu/resources/asking-big-questions

Imaginative Sparks Generator

Questions to inspire imaginative thinking

Open-ended questions that draw on the imagination

- ▷ Use the following **Question Starts**¹ to help you and your students brainstorm interesting questions about a topic:
 - ▽ Why...?
 - ▽ What are the reasons...?
 - ▽ Suppose that...
 - ▽ What if...?
 - ▽ What is the purpose of...?
 - ▽ What if we knew...?
 - ▽ Imagine...
 - ▽ How would it be different if...?
 - ▽ What would change if...?
- ▷ Ask questions that invite children to take different perspectives, such as, “What would the weather report sound like from a [worm’s] perspective?”, “What would [the exhaust pipe] say if it could talk?”
- ▷ Show the class or a small group a photograph, object, or drawing, and ask them what they think it is. Have students ask each other, in turn, “What else could it be?”² Afterward, ask them to reflect on what they learned about using their imaginations.
- ▷ When studying the natural or physical environment, invite students to use their imaginations, e.g., when learning about animal habitats, ask students to create their own animal that might thrive in a particular environment. When studying transportation, ask students to design new ways they could get from home to school.

Provocations that trigger the imagination

- ▷ Put a work of art, intriguing quote, or provocative question related to the topic you are studying on the wall to inspire wonder in the classroom. Provide post-it notes and a pencil for students to share their thinking and wondering over time.
- ▷ Juxtapose two items or ideas that are not typically paired. For example, pair cut and dying flowers with a bean seed sprouting or a growing plant, or pair voting laws and sports rules. Ask students what they notice and what they imagine about possible connections.
- ▷ Choose an object or system related to a topic you are studying (e.g., the body, an automobile factory, or a branch of government). Ask learners to identify its parts, purposes, and the people who interact with it. Pose one or more of the following questions: “In what ways could it be made more effective? ...efficient? ...ethical? ...beautiful?” (See the **Imagine If...**³ thinking routine.)



Tips for Using This Tool

- ▷ Play is activated by just the right amount of novelty and surprise. Too little novelty can lead to boredom; too much can create anxiety. Monitor learner engagement when posing the above questions or provocations over time. Involve learners in deciding what to repeat and vary.
- ▷ Other examples of questions that invite perspective-taking include: “How might [your grandchildren] respond to this question fifty years from now?” “What would [the flower] look like if you were high up on a ladder?”
- ▷ Brainstorm additional questions that invite perspective-taking with your colleagues and/or students.
- ▷ If learners develop a concept or theory based on their imagination that does not reflect reality, rather than correcting them, hold them accountable to the logic or parameters of the task or question within their own description.
- ▷ Design is everywhere! Ask learners, in pairs or trios, to go on a **Design Hunt**⁴ around the classroom, school, or neighborhood to find designed objects or systems. Ask them to photograph or sketch the object or system and share: 1) what they notice; 2) what they think the designer considered when creating the object or system; 3) how they might redesign it and why.

Notes

1. **Creative Question Starts** is a thinking routine from Project Zero (also available in Spanish). Available at: www.pz.harvard.edu/resources/creative-question-starts
2. **What Else Could It Be?** is an Inspiring Inventiveness tool, co-developed by Opal School (U.S.) and Project Zero. Available at: www.pz.harvard.edu/resources/what-else-could-it-be
3. **Imagine If...** is a thinking routine developed by the Agency by Design project at Project Zero (also available in Spanish). Available at: www.pz.harvard.edu/resources/imagine-if
4. **Design Hunt** was developed by the Agency by Design project at Project Zero. See www.agencybydesign.org/sites/default/files/AbD%20Design%20Hunt%20.pdf

Moving to Learn

Using movement to enhance learning

Moving to imagine

- Ask learners to act out a concept or phenomenon in their bodies and move accordingly. For example, imagine being on the moon with weaker gravity. Pretend to be a character in a book. Act out the meaning of newly learned vocabulary.

Moving to support skill-building and memorization

- Use chants, gestures, or body movements to support memorizing lists, processes, or other factual information (e.g., country capitals, chemical elements, the scientific method). Play movement games that make repetition engaging and fun.

Moving to demonstrate knowledge

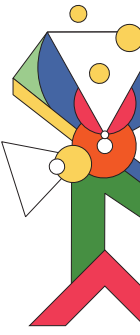
- Give learners a choice of using movement to show what they know about a topic (e.g., choreograph a dance or series of movements to represent an understanding of a work of literature or art, a scientific process, or a mathematical formula). During formal assessments, offer movement as another way to respond to a question (e.g., ask a learner struggling to answer a test question to demonstrate a principle using hand motions and movement).

Language & Arts

- After sharing a poem or piece of music, invite learners to pantomime or dance their response to the work before talking or writing about it.
- As a warm-up for a writing exercise that involves describing emotions, invite learners to move their bodies or use pantomime to better understand and express different feelings.
- When learning new vocabulary in a first or additional language, encourage learners to act out the meaning of words.

Math

- Create a large number line. Ask learners to jump over the odd numbers, counting out the even numbers on which they land.
- Ask learners to physically make a circle and use steps to measure the circumference and diameter of the circle.
- Post possible answers to questions you have posed (e.g., a math equation) on a wall. Divide the class into teams. The goal is to be the first team (member) to touch or tap the correct answer with a stick. Teams should collectively decide which answer to touch. Keeping score is optional.
- For math activities that engage the whole body, see www.mathfulplay.org/ as well as www.sidewalkmath.com/.



Science

- ▶ Climate change: Ask students to pretend to be polar bears¹ and roam around the classroom. Then section off half the room as off-limits because of habitat loss. Ask students how they feel. What does habitat loss mean? What new ideas does this give them about the polar bears' experience or climate change?
- ▶ Ask learners to represent the relationship of the earth, sun, and moon with their bodies. Invite them to take turns enacting the celestial bodies as they orbit and revolve.
- ▶ Ask learners to represent how blood flows through the body, circulating and picking up molecules of oxygen in the lungs and sharing them with the organs.
- ▶ To deepen learners' understanding of complex systems and how they work, see **Exploring Systems with Human Machines**² and **Exploding Systems with Human Machines**.³ These tools ask learners to collaboratively use their bodies to represent abstract systems at work and to imagine how they can be changed.

Tips for Using This Tool

- ▶ Invite learners to move around and use materials from their play kit or items in the room, or to draw as they explain ideas or respond to questions.
- ▶ Embrace the choice and autonomy movement provides learners. Encourage students to invent their own movements.
- ▶ Lean into the joy (and sometimes silliness) of movement. Laugh with students and enjoy the experience!
- ▶ While movement can benefit all students' learning, it is particularly helpful to students with limited language skills. Use movement to ensure you are meeting the learning needs of all your students.
- ▶ Set boundaries for safety as needed. For example, if students are invited to move like dinosaurs, it may be okay to stomp and step on the chairs but not bite or hit others.
- ▶ Pair movement with other forms of representation. For example, after learners demonstrate the flow of blood in the body through movement, ask them to draw, write, or talk about their new understandings and questions.
- ▶ If students cannot move around the room, they can perform hand gestures with chants or songs.

Notes

1. We learned about the polar bear activity from Elif Buldu (Bayburt University) and Metehan Buldu (Kirikkale University), Ankara, Turkey.
2. **Exploring Systems with Human Machines:** www.pz.harvard.edu/resources/exploring-systems-with-human-machines
3. **Exploding Systems with Human Machines:** www.pz.harvard.edu/resources/exploding-systems-with-human-machines

Supporting Learners with Conflict and Frustration

A protocol, principles, and teaching moves to support learners in navigating conflict

A protocol for addressing conflict during play¹

- ▷ **Validate the emotion:** “I see you are really upset. How did you feel when _____?”
- ▷ **Slow things down:** “What were you trying to do? Tell me more about _____.”
“Let’s take a minute of silence for everyone to jot down their thoughts and feelings.”
- ▷ **Encourage listening:** “I heard you say _____.” “Did you hear what ____ said?”
“What is a question you might ask ____ to better understand where they’re coming from?”
- ▷ **Support problem-solving:** “How can you imagine this problem being solved?” “What ideas do you have?” “What’s another strategy you can try?”
- ▷ **Reflect on what just happened:** “What were you hoping would happen?” “What surprised you?” “Do you see ways to resolve this conflict?”

Principles to keep in mind

- ▷ Children come to school with a variety of experiences with conflict, some of which may include trauma. Responding to each child’s individual needs and history is critical. Make a habit of asking yourself, “What is happening for this child?” rather than, “What is wrong with this child?”
- ▷ Remember that you are not there to take away the hard feelings, but to help learners stay in a productive and safe space where they can experience difficult emotions and still take risks to solve problems. You can support this process by approaching it with a sense of curiosity and inquiry, rather than judgment.
- ▷ Strong emotions can sometimes interfere with clear thinking. Cooling off should not be a punishment, but a powerful and responsible decision for the good of everyone.
- ▷ If children seem particularly reluctant to take risks, try to figure out the source of their resistance. Is it fear? Lack of practice with persistence? Prior experiences with failure?

Possible teaching moves

- ▷ With your students, develop a set of norms for your classroom community. Consider including norms such as, “It is OK to disagree” and the “24-hour rule” (“If someone says something that bothers you, you have 24 hours to decide either to talk to that person or to make your peace with the comment”).
- ▷ Encourage a culture of “Do-Overs.”² Begin by inviting children who struggle with collaboration to participate in a Do-Over—a low-risk way to reset or restart something that went wrong. Do-Overs are applicable to any kind of physical or emotional challenge—unnecessary physicality, hurtful words, miscommunications or misunderstandings, or exclusionary behavior.



- ▶ Ask students to reflect on experiences of conflict: “What do you think happened?” “What did you learn?” “What would you like to do differently in the future?” Invite students to share their reflections with the group so others can learn from their experience. (You can model working through frustration or conflict by sharing your own experiences, which can give learners language and strategies for coping with strong emotions.)
- ▶ Make (or ask children to make) and post a menu of children’s problem-solving strategies, with visual icons created by the children. Invite children to practice a strategy in the absence of conflict. Post compelling quotes from children about conflict in the classroom.

Tips for Using This Tool

- ▶ When learners are genuinely engaged in their work and ideas, negotiating ideas and resources with others, learning through play can open the door to strong emotions. Yet conflict and frustration can also be opportunities for learning. Use this tool to support and encourage learners when playful learning gets hard.
- ▶ For younger learners, if you notice conflict, move closer physically, but still give them a chance to work out the problem before intervening. A quick way to make sure everyone feels heard afterwards is to ask the child(ren) in distress for a signal of two thumbs up, to the side, or down, about how they’re feeling.
- ▶ For older learners, peers can often be more successful than adults in helping students resolve conflict. You might create a “peacekeeper” role and enlist students in negotiating and mediating conflicts for their classmates.

Notes

1. Many of the questions and tips in the “Protocol for addressing conflict during play” come from **Making Friends with Conflict**, a tool created by the Inspiring Agents of Change project at Project Zero. Available at www.pz.harvard.edu/resources/making-friends-with-conflict
2. **Do-Overs** was created by the Inspiring Agents of Change project at Project Zero. Available at: www.pz.harvard.edu/resources/do-over

Using Play to Explore Complex Issues

Exploring difficult topics through play

Using play as a strategy to explore difficult or sensitive topics, such as slavery, war, or poverty, can lead to unexpected insights or novel ways to think about those problems; it can also foster empathy and collaboration. We want learners to be flexible and creative when confronted with difficult problems. At the same time, these topics can lead to strong feelings like sadness and anger or generate misunderstandings. Supporting playful learning in these situations does not mean trivializing or taking lightly the circumstances, emotions, or people involved. Play provides a safe way to try out new behaviors and ideas.

Steps

1. **Identify the Topic:** Complex current events or topics such as racism, climate change, and immigration can arise either from curriculum requirements or from the learners in front of you. How do you decide which topics to address and/or how to approach them?
 - ▽ First, and most important, is to create a climate of trust and provide a safe space for learners to share their thoughts and feelings.
 - ▽ Next, consider your own comfort level with the issue. Is there content that you would consider off-limits for play (e.g., a “gas chamber” game)? If some topics seem too sensitive, consider exploring historic or fictional, rather than current, events or experiences. You can also give students a choice regarding focus.
 - ▽ Finally, invite the perspectives of families and school leaders to generate buy-in upfront. Clarify who makes the final decision about moving forward.
2. **Explore Different Perspectives:** Invite learners to consider multiple perspectives on the topic you’re studying through storytelling, books, interviewing each other or community members, role-play or pretend scenarios, or expressing thoughts and feelings in different media. Such perspective-taking fosters empathy and understanding of diverse points of view. Students might even take on the perspective of a non-human element of an issue or event (a river, a polar bear, the rain, etc.). Ask students to use their senses to enrich their experience.
3. **Imagine Different Outcomes:** Ask students to imagine different outcomes for historic or current events. Students might pretend they’re scientists or policymakers, tasked with developing a five-year plan to solve an environmental or economic crisis. Or invite students to create skits with new endings for past injustices, or to explore a complex topic from different disciplinary perspectives (e.g., political, economic, and biological) and share new insights from that perspective. Or ask students to tell or act out a story about overcoming a challenge, or create a “choose-your-own adventure” with alternative endings.
4. **Share Learning:** Give students a choice of how to share what they have learned with a meaningful audience, such as their peers, families, or community members. Ask for their ideas about assessment criteria for their products or presentations.
5. **Reflect on Learning:** Use the Project Zero thinking routine, “I used to think... Now I think...” (or tweak it to say, “I used to feel... now I feel...”) for students to reflect on and share with others what they learned from this experience. What new questions have emerged? Help students understand that complex issues will continue to be complex.



Tips for Using This Tool

- ▶ Although play can be a helpful resource for accepting difficult emotions and experiences, this does not mean “anything goes.” Raising sensitive topics can trigger strong emotional reactions for children with a history of trauma. Pay close attention to the experiences and emotions of the learners in front of you. With young children, notice what they are doing and talking about on the playground and during free play or transition times.
- ▶ Take special care when asking children to engage in role-play or pretend scenarios. In particular, do not ask children who have suffered trauma to play the roles of oppressors.
- ▶ With older children, sensitive topics may show up in conversation with you or with peers. Within a complex issue, give older learners a choice of topics, when possible, and options for how to explore and represent their ideas.
- ▶ Using this tool requires courage. While we recommend collaborating with colleagues when using any of the PoP tools, collaboration is especially important with this tool. Talk to your colleagues, school leaders, families, and perhaps the students themselves to get their perspectives, especially if you teach learners with backgrounds different from yours.
- ▶ For more information about the connection between play and children’s ability to respond to challenges, see learningthroughplay.com/explore-the-research/coping-through-play

More Than One Way

- ▶ For Step 2 (Explore Different Perspectives), see Project Zero perspective-taking routines such as **Circle of Viewpoints**; **Step In - Step Out - Step Back**; **Stories**; and the creativity routine, **Color, Symbol, Image**. See www.pz.harvard.edu/thinking-routines
 - ▽ Another option is to ask learners to “try on” the perspectives of Edward DeBono’s Thinking Hats (facts and information, emotions, process, creativity/new ideas, benefits, and cautions). See www.pinterest.com/pin/391531761346516002/
- ▶ For Step 3 (Imagine Different Outcomes), see the Inspiring Agents of Change tools, **Exploring and Exploding Systems with Human Machines**, which help students understand systems and how to disrupt them. See also Project Zero’s **Imagine If...** or **Think, Feel, Care** thinking routines at www.pz.harvard.edu/resources
- ▶ The JusticexDesign (JxD) website includes resources that support learners in exploring the complexities of design, representation, power, and participation. JxD is based on three principles: Design is not neutral; power is multidimensional; and participation is constructed. See sites.google.com/justicexdesign.org/project/home

Notes

1. **I used to think... Now I think...** is a thinking routine developed by Project Zero. Available at: www.pz.harvard.edu/resources/i-used-to-think-now-i-think

Playful Learning Planner

A planner to help you use the playful learning indicators to increase engagement, enhance learning, and make school more enjoyable

1. **Identify an experience in which you would like to support learning through play**
(a particular class, a theme, a unit of learning, or something else).
2. **Consider how you can structure the experience to encourage...**
(choose one or more of the below indicators as your focus)
 - ▽ **Leading learning:** Playful learners *feel* invested, motivated, determined, and independent. Playful learning *looks* active, participatory, and collaborative, with learners making decisions about how, where, what, and with whom to learn. Learners also support each other and value the opinions and ideas of others.
 - ▼ For example, enable learners to lead their learning by giving them a choice regarding 1) *content* (e.g., What aspect of World War II would you like to learn about?); 2) *the learning process* (e.g., Would you like to study alone or with a classmate?); or 3) *assessment* (e.g., How would you like to show what you know—write a paper? create a video? something else?).
 - ▽ **Exploring the unknown:** Playful learners *feel* surprised, fascinated, and inspired. Playful learning *looks like* inquiring, experimenting, imagining, questioning, taking risks, and actively participating.
 - ▼ For example, to encourage exploring the unknown, pose questions without predetermined answers; do something out of the ordinary; invite an unexpected guest into the classroom provide an unusual material; or go outside.
 - ▽ **Finding joy in learning:** Playful learners *feel* trust, fun, excitement, and challenge, along with a sense of belonging and safety. Playful learning *looks like* celebrating, competing, joking, singing, smiling, and laughing.
 - ▼ For example, to support finding joy, allow students to learn together, face and overcome manageable challenges, sing, dance, or celebrate learning.
 - ▽ Note: The indicators and markers above are based on the PoP cross-cultural playful learning indicators.¹ If you have developed your own indicators, use them instead.

Tips for Using This Tool

- ▷ If you use another planner, this tool can provide a reminder to consider the indicators of playful learning.

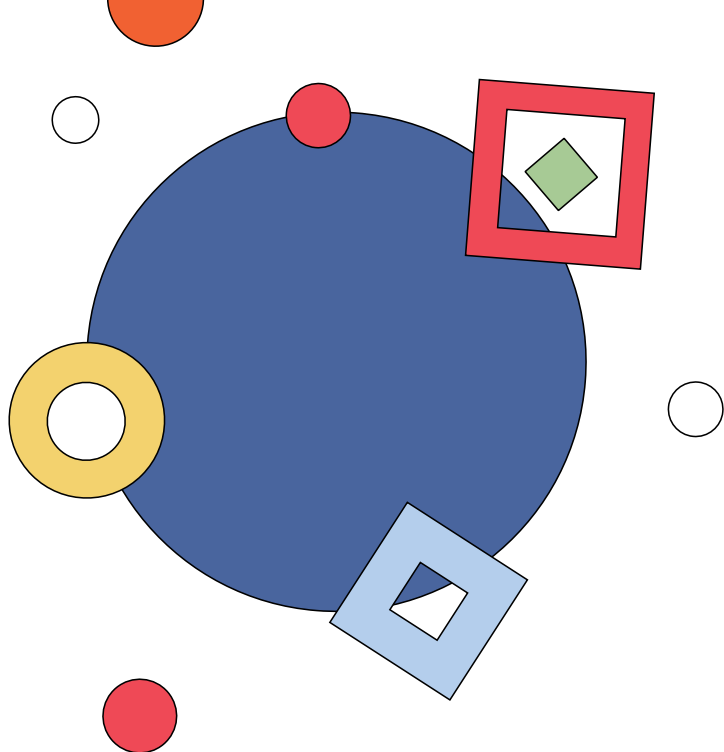
More Than One Way

- ▷ Plan and reflect with one or more colleagues who can share their perspectives and support you in trying something new. Curriculum specialists (e.g., art, music, or physical education teachers) offer different disciplinary perspectives.
- ▷ Include students in the planning and reflection process. Ask for their suggestions about adding more agency, wonder, or joy to the learning experience. Get their feedback after trying something new.

Notes

1. For more information about the cross-cultural playful learning indicators, see Chapter 3.

To create your own indicators, see the **Playful Learning Indicator Guide: A Weekly Handbook for Research Teams**. Available at www.pz.harvard.edu/resources/playful-learning-indicators-guide



Creating Playful Learning Indicators for Your School

A Research Guide for Educators

Overview of the Playful Learning Indicators Research Guide

Welcome to the Playful Learning Indicators Research Guide, an important step to bring more playful learning into your school by creating a shared understanding of what playful learning looks and feels like. This common understanding will provide touchpoints for planning lessons and activities, thinking about assessment, and communicating with parents and families. This research guide is written for teachers, school leaders, and other educators. It will help you create playful learning indicators through a process of observing playful learning, interviewing students, discussing indicators as a team, and drafting, testing, and revising. Feel free to ask for input from colleagues and families. This process is based on our research with educators in Denmark, South Africa, the U.S., and Colombia.

Let's start by answering some questions you might have about the process of creating indicators.

Why should I create playful learning indicators?

The goals of playful learning, and the decision about what playful learning looks and feels like in your educational community, should be made by you and your colleagues. Moreover, you are a researcher in that every day you observe and listen to learners, reflecting on or discussing their learning with your colleagues, trying new teaching strategies, and adjusting your practice accordingly. This guide helps bring your research to the forefront. Teachers who have created playful indicators report that the process is uplifting, meaningful, and a great way to learn from each other—a rewarding form of professional development.

What is in this research guide, and how do I use it?

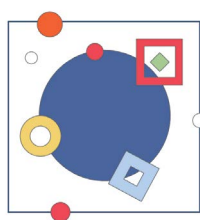
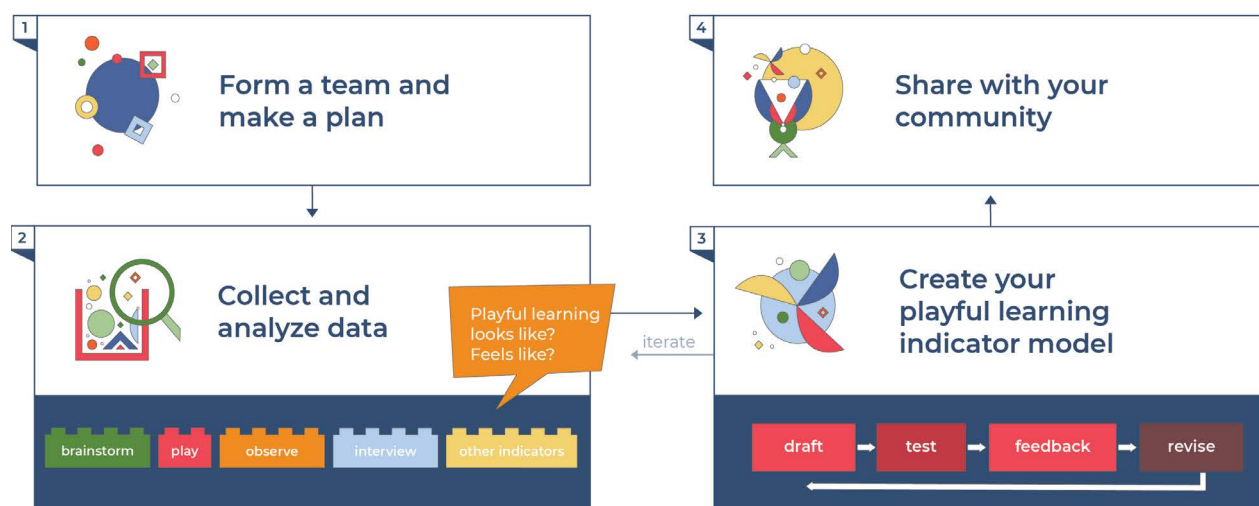
This guide describes the four steps of creating playful learning indicators in your school. There is more than one way to conduct this research, and you are welcome to change the process to make it more meaningful to you and your team. On the Pedagogy of Play website, the Resources for Educators tab shares resources that help with the nitty-gritty: what to discuss at team meetings, tips on carrying out research tasks, activities to keep the process playful, and topics for the team to reflect on (See *Playful Learning Indicator Guide: A Weekly Handbook for Research Teams*. Available at www.pz.harvard.edu/resources/playful-learning-indicators-guide).

Research Steps

The four steps for creating playful learning indicators are:

1. Form a team and make a plan.
2. Collect and analyze data: Brainstorm, play, observe, interview, and look at other indicators of playful learning.
3. Create playful learning indicators: Draft, test, get critical feedback, and revise.
4. Share your playful learning indicators with your learning community.

Let's review each step in greater detail.



Step 1: Form a Team and Make a Plan

Form a Team

Who should take part? Any educator who is interested in playful learning. Participation should be voluntary. Team members can be from the same school or organization, or from several sites in the same region or district.

How many members should there be on the team? There is no set answer. Four or five members is the minimum number for a lively discussion with diverse opinions, and more than ten members makes it challenging for everyone to actively engage. If you have a large group, we suggest breaking into smaller subgroups and forming a steering committee to facilitate the whole group's participation.

What are the roles of team members? Suggested roles are:

- ▷ Manager: handles logistics (sends reminders, reserves meeting room, gathers materials, etc.)
- ▷ Facilitator: sets agenda and leads discussion at team meetings, looks ahead to upcoming research tasks, and helps the team prepare for the next step
- ▷ Notetaker: takes and shares notes at team meetings

Depending on the preference of your team, members can take turns in these roles from week to week, or keep the roles set throughout the research. If the group is large, the steering committee can share these tasks.

It is important to have support from the leaders of your school or organization. Support can come in many forms, ranging from actively participating as a research team member to giving blessings from afar. Keep your leaders informed and share your insights and discoveries with them throughout the process.

Make a Plan

The research runs in cycles of a team meeting followed by a research task. Making a research plan will likely happen during your first team meeting, followed by your first research task. After an agreed-upon period of time for the task, use the second team meeting to share data, insights, or wonderings, and decide on your second research task. The cycle repeats until your team is satisfied with the playful learning indicators you created, and is ready to share them with your community.

How long will the research take? Again, there is no set answer. The process might take five or fifteen weeks, depending on whether you meet weekly or every other week, how much time you devote to each research task, and how you divide the work. Deciding on the time frame is part of making a plan.

What will we discuss at the first meeting?

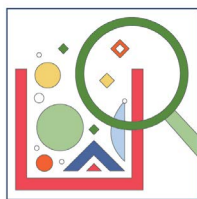
- ▷ Review this research guide:
 - ▽ If needed, provide time to read this guide.
 - ▽ Discuss: What do you appreciate in the guide? How might it help your professional development?
 - ▽ Ask: What questions about the guide need clarification? What are your concerns?
- ▷ Make a research plan that suits the interest, time, and resources of your team: Decide how often, when, and where to meet.
- ▷ Choose a manager, facilitator, and note-taker.

Share your plan with your school leader and know that you can always revise the plan later!

Maintain a Playful Mindset

Most importantly, approach this research project the same way children engage in play! You've made a research plan, so give it a try. If something doesn't go as planned, talk to your team members, make adjustments, and try again. Playfulness flourishes when we appreciate each

other's ideas and recognize each other's hard work. Differences in opinion might lead to conflict (just as in play), so listen, negotiate, and learn from each other. In the schools of Reggio Emilia, Italy, they say, "Nothing without joy!" Feeling joy is a great guiding principle for your work ahead.



Step 2: Collect and Analyze Data: Brainstorm, Play, Observe, Interview, and Look at Other Indicators of Playful Learning

Now you are ready to dive into data collection and analysis! In Step 2, you will collect data by brainstorming with your team about playful learning, observing in your classroom, and interviewing your students. Throughout the process, you will analyze your collected data by discussing them at team meetings: What does playful learning look like? What do students say it feels like?

The Five Research Tasks



There are five research tasks for collecting data in Step 2:

Brainstorm

Brainstorm what playful learning means to your team. To make the discussion quick and playful, you can: 1) Set a timer for three minutes to free-write, draw, or put one word or idea on each Post-it note or paper; 2) Pair up with a colleague and talk for three minutes; 3) Do a few rounds of rapid-fire free association, where each person takes a turn saying the first word associated with playful learning that comes to mind; or 4) Create an online word cloud generator, where each person types in words associated with playful learning, and the final picture reveals frequently used words and patterns.

Discuss:

- ▷ What does playful learning mean to you?
- ▷ What role do you think playful learning can have in your learners' or your own school experience?
- ▷ What moments feel most playful to you as a teacher?
- ▷ Imagine a learning experience in which your learners are the most playful. What does this experience look and feel like?

Afterwards, look at all the words, pictures, and experiences you shared. Can you organize them into two groups: *Looks like* and *Feels like*? Keep track of outliers, or words/phrases that do not fit.

Play

This task is an opportunity for you to play as adults. Take off your teacher hat and experience playful learning for yourself! Throughout the process, identify what learning looks and feels like for *you*. Here are three playful learning tasks: Paper Airplane from Visible Learners¹,

the Marshmallow Challenge from Tom Wujec², and the Paper Bridge Challenge from the Exploratorium³. If you would rather focus on upcoming teaching in your classroom, invite your teaching team to have a playful experience with the content as adults—solve a math problem, deep-dive into a piece of literature, or get your hands dirty in a science experiment as learners and enjoy the process of playing with ideas.

Observe playful learning

Observe a lesson, activity, or class period for about twenty to thirty minutes (longer or shorter is okay). Record playful learning moments, either by video- or audio-recording or by taking observational notes. Aim for the recording to be short (three to five minutes), but shorter is fine as well. During or right after the activity, ask the students:

- How did you feel in _____ (name the activity or lesson)?
- What did you learn?

At your team meeting, share one or two clips of the video/audio recordings or observational notes, including your students' responses. Discuss: What do you notice? What did playful learning feel and look like? What connections are there amongst the observations? What questions about playful learning remain, and how can we find out the answers?

Interview learners

Talk to your learners about their experiences of playful learning, including a memory and an ideal. The interviews can be conducted in small groups or as a whole group responding to a writing or drawing assignment prompt. Ask learners: What does this memory of playful learning look like? How did you feel when learning was playful?

As with the previous task, share a piece or two of student work and discuss it with your team: What do you notice about playful learning? What did it look and feel like for your learners?

Consider other playful learning indicators

In Chapter 3, we shared cross-cultural playful learning indicators based on PoP research, and in Appendix A we share indicator models from Denmark, South Africa, the United States, and Colombia. Choose the indicators that are most relevant to your context and discuss with your team:

- What do you notice about the indicators?
- What do you wonder about? Anything surprising, intriguing, or puzzling?
- What did playful learning *look like* and *feel like* in the four research locations?
- How do the indicators relate to playful learning in your classroom? What are similarities and differences?
- How might you use or hack these indicators?
- Other questions?

These research tasks are not in sequential order; instead, they are like LEGO bricks that snap together, forming structures that are flexible in order to best suit your team and the context of your school. Which block would your team prefer to start with—brainstorming, looking at other indicators, or diving right into observing and interviewing learners? Perhaps you have a large team and decide to break into small groups, have each group work on a building block, and report back at the next meeting. Maybe you would like to choose a couple of blocks, say, brainstorming and observing, and focus on these two until you feel ready to add another block such as playing. The possibilities are endless!

Tips for Researching While Teaching

You will be collecting data of teaching and learning by taking photos, video- or audio-recording, taking observational notes, collecting and analyzing student work, and transcribing interviews or discussions. Your life is full enough as a teacher; to add these research tasks to the load may seem daunting. Here are a few practical tips to help you enjoy researching while teaching.

Ask throughout the process: What does playful learning look like? What does it feel like?

This question—What does playful learning look like and feel like?—is central to the research. Your responses to the question, supported by evidence from observations, interviews, brainstorming, and discussions, will be the data for creating your indicators of playful learning. Make a habit of asking yourself and each other this question, and take notes of your responses.

What is the difference between *looks like* and *feels like*? *Looks like* is observable: behaviors, actions, and facial or physical expressions that can be observed. *Feels like* is subjective: feelings, ideas, and thoughts that can only be known if expressed by the person experiencing them. In everyday language, we tend to mix the two up. We might say, “The children are so happy when they play!” How do we know that? We see them laughing. However, we are not the children nor do we know how they feel. The laughter we observe might be nervous laughter. We don’t know unless we talk to the children. In this situation, “laughing” is what playfulness *looks like*, while what it *feels like* depends on what the children say. As you research playful learning in your classroom, be as intentional as possible in distinguishing between *looks like* and *feels like* so that you do not ascribe feelings to children based on your own assumptions.

Plan research into your lesson

What are the times playful learning is most likely to occur? How can you optimize those times by capturing what playful learning looks like and feels like? As a teacher, you likely have a sense of “My students will love this lesson!” when you plan. If so, be prepared with your tools for note-taking, video-recording, or audio-recording. What about spontaneous playful learning moments, when you do not have your notebook, laptop, or smart phone to capture them? One option is to hold a discussion right after, and record or take notes on students reflecting on the experience. Ask the students: Was it fun? How so? What choices did you make? What was interesting and new? What did you learn? Or perhaps you would like to ask students to draw and write about a playful learning experience in a language arts lesson or writing center activity. After reviewing their work, you might choose a few students to interview, and take notes on how they elaborate their ideas.

Create opportunities for students to be independent and engaged

Often, when students are engaged in playful learning, they do not need teachers to intervene. Savor these moments, take photos, record videos, and write down your observations. Furthermore, think ahead about how to plan more playful, independent, and engaging tasks into your lessons, so that you can enjoy observing playful learning unfold in your classroom.

Seek help from colleagues

Can team members help with recording in each other’s classrooms? Do you have additional adults (assistant teachers, specialists, volunteers, etc.) in your classroom? Perhaps ask them to video-record the students while you teach. Students who are competent with technology can also help by taking photos of their work or video-recording each other’s learning.

Help from colleagues also comes in the form of supportive eyes when looking at the classroom data together. Recording the happenings in classrooms sometimes makes teachers feel vulnerable. The discussion questions in the online resources—sample research team meeting

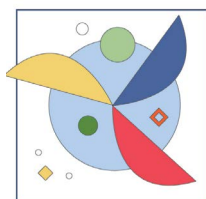
agenda and tasks, as well as Project Zero thinking routines such as See, Think, Wonder⁴ or the Ladder of Feedback⁵—can help keep the feedback specific, useful, and kind. Feeling wary of the watchful eyes of others is not uncommon. Trying to name and discuss these feelings when they arise, whether at team meetings, in small groups, or individually with research team coordinators, is essential to supporting one another in the process.

Be patient with yourself

As with any new practice, you will likely make a lot of mistakes at the beginning, from batteries running out to misplacing notes to simply being too busy to record the moment. Please know you do not have to be successful at every try! If you miss recording a playful learning moment one day, there are bound to be others to capture the next day. A handful of such moments is likely all you need for this project.

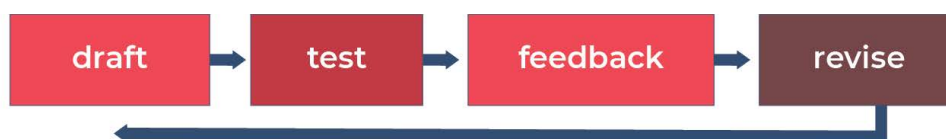
License to hack playful learning indicators from PoP research

The playful learning indicators from PoP research are there for you to hack! Some research teams like to start with a blank slate, feeling other models will constrain their creativity. Others find it useful to see what others have done. While not a universal model, the cross-cultural indicators synthesize patterns about playful learning and provide a framework to guide your efforts. The indicators from Denmark, South Africa, the U.S., and Colombia may also be helpful, particularly if your context shares similarities with one of these locations. Read Chapter 3 for more information about the cross-cultural indicators and see Appendix A for the indicator models from the four research sites.



Step 3: Create Your Playful Learning Indicators: Draft, Test, Get Feedback, and Revise

Step 3 is an iterative process of creating a first draft of playful learning indicators, testing them in your classroom, getting critical feedback from colleagues, and revising. Repeat the process until you feel ready to share the indicators with the community.



Drafting

Up until this point, you have been asking, “What does playful learning look like and feel like?” Now you will synthesize all your data into *markers* and *indicators*. *Markers* are words that describe what playful learning looks and feels like. Examples from the four locations of PoP research include: Playful learning looks like *smiling* and *laughing*, *experimenting* and *investigating*, *making* and *changing rules*, and *peer teaching*. Playful learning feels like *enjoyment*, *positive frustration*, *agency*, and *belonging*. Indicators are overarching concepts that encapsulate a group of *markers*, such as the cross-cultural indicators in Chapter 3: *leading learning*, *exploring the unknown*, and *finding joy in learning*.

First, look for markers

Gather video- or audio-recordings, interview transcripts, observation notes, and minutes of brainstorming meetings and look for terms that describe what playful learning looks or feels like. What stands out as a frequently used word? Are there terms with similar meanings that can be combined? Compare and discuss patterns that emerge, but also keep track of puzzles that do not seem to fit. The goal is to come up with two lists of *markers*—*looks like* and *feels like*. You might wonder: How many markers is the right amount? It depends on your findings, but thirty to forty will give you a ballpark sense. Of course, your list may be longer or shorter, and it is perfectly acceptable to add or change markers later.

Next, create indicators

After you have the lists of markers, notice the themes that arise to create the indicators. There are two ways to go about this. The first is to use the cross-cultural indicators to help you identify three general categories: one involving *leading learning*, a second involving *exploring the unknown*, and a third involving *finding joy in learning*. Think of this as remixing or building on previous research. You can then use one of the words in the PoP indicator categories or one that better fits your context. Once you have your indicators, organize your markers, placing each in the right indicator category. For some markers, this will be clear (e.g., in Denmark, the marker “smiling” clearly belongs in the “delight” category). For other markers it will be harder to choose, with two or even more options seeming reasonable. Don’t stress—what is most important is to group the markers to the best of your ability in order for indicators to emerge.

A second approach, building from scratch, involves organizing your markers, looking for emerging patterns, and creating indicators that capture general themes. You might have two, three, four, or more indicators. However, if you have too many indicators, they will not be as helpful when observing playful learning. The indicators do not need to capture every experience of playful learning in your school. One way to test if you have created strong indicators is whether all your markers fit comfortably into at least one category.

Testing

Now that you have created a first draft of your playful learning indicators, take them out for a test drive! You can pair up in your research team and see if you spot the markers in each other’s classrooms, or circle markers you observe in your own classroom as you reflect on your teaching. To get started:

- ▷ Print out your draft playful learning indicators and markers.
- ▷ Observe a lesson or activity for about fifteen to thirty minutes. Use the draft to look for moments of playful learning.
- ▷ As you observe, circle *feels like* or *looks like* words or phrases that you believe characterize your observations.
- ▷ If possible, take short videos (one to two minutes) or photos of moments that you believe reflect the *feels like/looks like* words you have circled to share at your team meeting.

While testing the indicators, notice also what might be missing: Are there additional *looks like* or *feels like* patterns that you would like to suggest to your team? Take note of what works, what needs revising, and what you wonder about to discuss at your team meeting.

Getting feedback

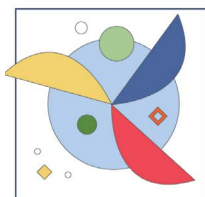
Share your playful learning indicators with critical friends for feedback. Critical friends can be folks in your school community who are not active team members, such as your school leader, other teachers, or parents and families. Educators who have prior experience creating playful

learning indicators can also be good critical friends. Feedback is particularly helpful when you feel “stuck” and in need of a fresh perspective. For a discussion protocol for your meeting with critical friends, see the Ladder of Feedback⁵ developed by Project Zero.

Revising (and maybe repeating some of the process)

After testing and getting feedback, you are probably eager to revise your playful learning indicators. Go ahead! Discuss with your team and make changes, but also pause and reflect: Would you like to repeat parts of this iterative process? Would more testing of your indicators, perhaps in the classrooms of colleagues who were not in the research team, make the model better? Are there other critical friends from whom you would like to get feedback? You might have noticed that there are bi-directional arrows between Step 2, Collect and Analyze Data, and Step 3, Create Your Playful Learning Indicators. Would you like to repeat some of the tasks in Step 2, say, conduct more classroom observations during a different part of the school day, or interview students in other classrooms? Maybe you would like to revisit other models from PoP research for inspiration? At this point, you’ve become familiar with the research process, so if each person wants to repeat a different part of the research, feel free to do your thing!

In your last research team meeting, make your final revisions to the indicators and create a visual representation (feel free to use or modify the playful learning indicators template on the right). Discuss how to use the indicators in your classroom and share them with the greater community. Then celebrate!



Step 4: Share Your Playful Learning Indicators with Your Learning Community (and Continue to Refine)

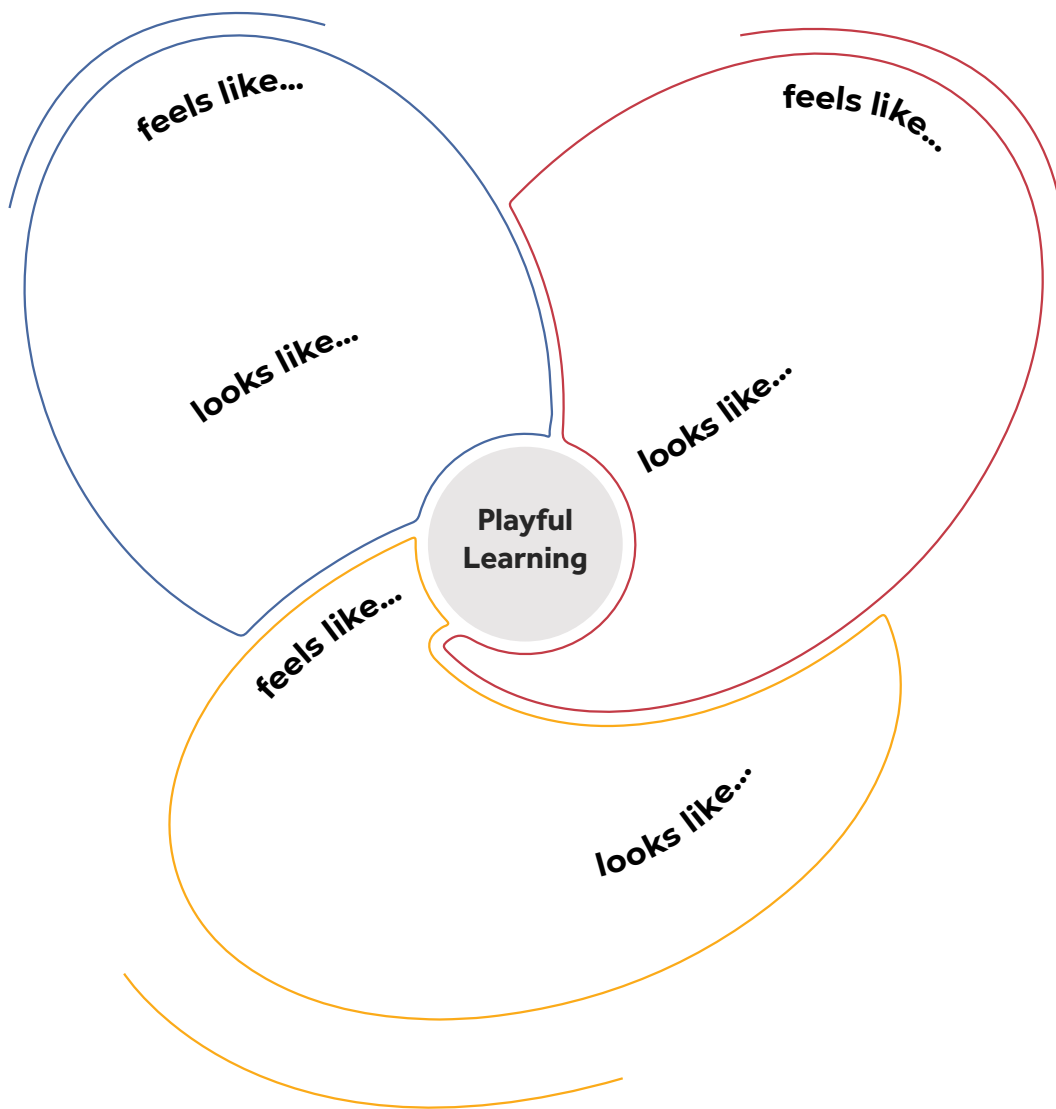
This last step can be big or small depending on your purpose and audience.

Your playful learning indicators can be used for various purposes, including:

- Planning playful learning
- Reflecting on and assessing playful learning
- Revising or adding to your school’s mission/vision statement
- Developing interview questions and “look-fors” in hiring new teachers
- Determining professional development workshop topics
- Interacting with families—presenting at curriculum night and open house events
- Presenting at educational conferences
- Advocating for changes in curriculum standard frameworks and educational policy

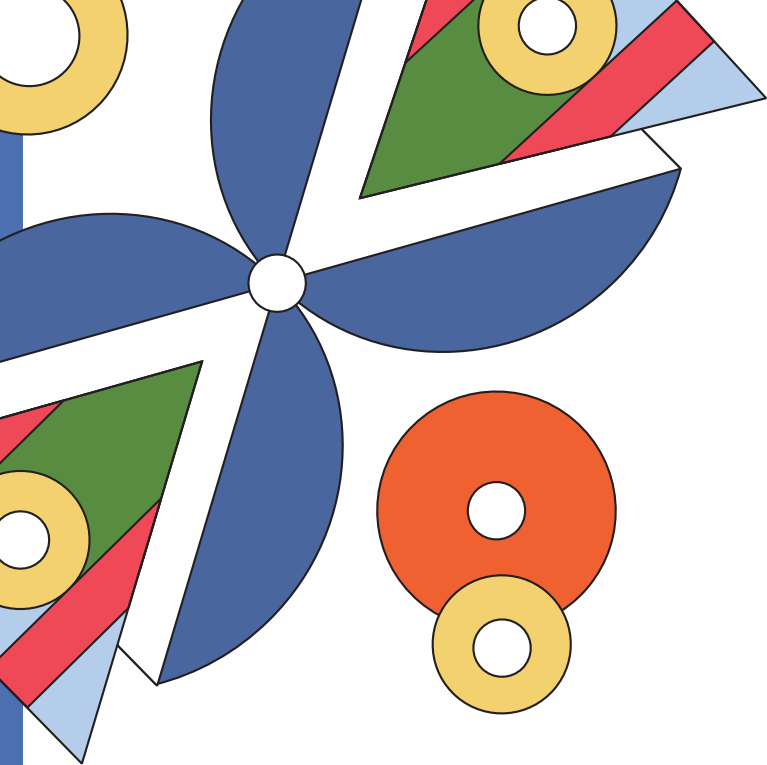
Keep in mind that creating your playful learning indicators is an ongoing, iterative process. We encourage you and your school community to continue to redraft, retest, and refine!

My/Our Indicators of Playful Learning



Notes

1. **Paper Airplane Activity.** Available at www.pz.harvard.edu/resources/airplane-activity
2. **Marshmallow Challenge** from Tom Wujec. See www.marshmallowchallenge.com/
3. **Paper Bridge Challenge** is an activity developed by the Exploratorium. Available at www.exploratorium.edu/science_explorer/card_bridge.html
4. **See, Think, Wonder** is a thinking routine developed by Project Zero. Available at: www.pz.harvard.edu/resources/see-think-wonder
5. **Ladder of Feedback** is a thinking routine developed by Project Zero. Available at: www.pz.harvard.edu/resources/ladder-of-feedback



Playful Participatory Research Guide

Overview of Playful Participatory Research

Welcome to the Playful Participatory Research (PPR) Guide for teachers and school leaders who want to create a schoolwide culture that supports playful learning. Here, we share an overview of what the PPR process is, who it's for, and what kind of time is involved, and how the process might unfold. On the Resources for Educators tab of the Pedagogy of Play website, you can find a downloadable version of this guide along with an interactive workbook and an example of the workbook filled out by a teacher researcher.

Let's start with answers to some questions you might have about the PPR process.

What is Playful Participatory Research (PPR) and why should I do it?

PPR stands for "Playful Participatory Research." It was developed to support educators' playful learning because in order to promote playful learning for children and older learners, adults need a way to engage in playful learning too. PPR is a type of "practitioner inquiry" or "teacher research"—research that is done by educators.¹ Can teachers really be researchers? Yes! This kind of research is not about control groups or quantitative methods. This is research that involves you collecting data or documentation about your learning community, making sense of and analyzing what you collect, and applying what you learn to better understand a topic or idea. Your data will be your documentation of your classroom, your school, and your learners—you know them better than anyone else and you make decisions about teaching and learning every day. PPR is a reflective and playful way to explore a puzzle, try out a new idea, and think differently about how you support your students' learning. Research about PPR has shown

that it can help educators to take risks and explore new possibilities in their teaching, and that exploring questions playfully helps incorporate more playful learning into classrooms and schools.² Doing PPR at a schoolwide or program-wide level has also been shown to have a positive impact on school culture by providing a stronger sense of community.

Who can do PPR?

PPR is for anyone who considers themselves an educator. School leaders, coaches, therapists, family members, museum educators, etc. can all do PPR. This guide is mainly written with teachers and school leaders in mind, but please think creatively about trying PPR in your own role and context. PPR involves sharing ideas with others, so you will need at least a couple of colleagues to support each other as PPR researchers. Of course, your group can be larger, and could include:

- ▷ Your teaching team
- ▷ Educators across your school or context
- ▷ Educators from other schools or contexts
- ▷ Other students (if you are in a college class learning to teach)
- ▷ Family members of children in your class

If you don't have a group formed and ready, consider reaching out to a colleague across the hall, or a friend from afar—someone you can connect with regularly throughout the PPR process. PPR works both in-person or via video chat, so you don't need to be in the same location as the other members of your group to learn together.³ You can also involve the learners in your classroom and their families as collaborators in doing PPR—more about that below.

How much time does PPR take?

Educators are busy! How will you have time for PPR? Well, it doesn't take as much extra time as you might think. A lot of the PPR process is about thinking differently while planning, teaching, and assessing your students—things you are already doing. Beyond that, you might want to dedicate about one hour each week to reflect and play with ideas (maybe during a weekly team meeting, or a video chat you schedule with other educators) and perhaps a longer two-hour session once each month to play with ideas, reflect playfully on your documentation with others, and try out playful provocations. That should be enough! If you are a school leader, you can support PPR by making sure your teachers have time in their schedules specifically for PPR work. And if you are a teacher, you can advocate for this kind of time by talking with your school leadership about how it informs your teaching practice.

The Playful Participatory Research Cycle

Here we describe the PPR cycle which is illustrated on the next page.

Step 1: Wonder

To do PPR, you need something you are curious about, framed as a good question. Coming up with a good question is *hard*. But once you do, you are on your way to an answer. Think about your current role. If you're a teacher, what is puzzling you about your current class? Maybe there's a particular student or group of students who are hard to engage. Maybe an area of your classroom isn't getting used the way you had hoped, or a particular subject or kind of lesson doesn't feel exciting to you or the students. Maybe you're puzzled about addressing issues of equity with your students and want to devote time to thinking more deeply about how to do

A Quick Start Guide to Playful Participatory Research (PPR)

PPR is a playful, reflective teacher research process and professional learning approach for all educators. Here's how to do it.



that well. If you are a school leader, what is puzzling you about supporting teachers? Working with families? Designing and leading professional development for your staff? In the interactive PPR workbook on our website, you'll find a step-by-step guide for identifying a good question.

Step 2: Make a plan

The next step is to make a plan for how the process might go. This includes:

- ▷ Deciding when and with whom you will meet to talk about your PPR on a regular basis (e.g., weekly, bi-weekly, or monthly)
- ▷ Planning how and when you will explore your PPR question
 - ▽ through playful provocations on your own or with your PPR colleagues (e.g., playing with materials, watching a video, taking a field trip)
 - ▽ by trying and documenting things in your classroom
- ▷ Thinking about where and when you will share what you learn in the process

Your plan might not play out exactly as you write it, and that's fine! But thinking through the process at the beginning can be a helpful way to launch your PPR.

Step 3: Play!

Now comes the fun part. The heart of doing PPR is playfully exploring your question, and you have lots of options, more than one way, to go about this process. Most PPR researchers follow a cycle of: **play, document, discuss, repeat**. But you don't have to do the steps in that order (or even do *all* the steps) and there isn't just one right way to enter the process. How your PPR unfolds depends on the question you are playing with. Let's take a closer look at what play might look like in your exploration, and how you might document your learning.

Playful provocations

A *playful provocation* is a playful learning experience for you to engage in with your study group or PPR partners. It is a chance to experiment, test out ideas, and play with your question. This is a unique feature of PPR, compared to other approaches to practitioner inquiry or teacher research. You can do playful provocations in-person or online. No provocation is too silly or wrong, if it has potential to help you explore your PPR question in a new way. Here are some suggestions for playful provocations you might try; we encourage you to think of your own too:

- ▷ Use materials. Does your question involve using new learning materials? Try using those materials yourself with your PPR partners. Allow yourselves to imagine how the materials/space would feel from the learner's perspective. If it feels appropriate, you might role-play being a learner using those materials. Or just explore them as adult learners.
- ▷ Try out a new learning experience. Are you planning to introduce a new activity, routine, game, or learning experience as part of your PPR? Try playing/doing it first with your PPR partners.
- ▷ Role play. Take on roles and act out a situation your learners are experiencing or something you plan to try with them. This can help you empathize with your learners and explore their perspectives. Or you might share stories about playful learning and act them out (see the PoP Tool Storytelling and Story Acting for Older Learners).
- ▷ Go on a scavenger hunt or "design hunt." Perhaps you're exploring a question about how learning spaces are arranged in your school, or how accessible materials are to young learners. Go around and document (draw or take pictures of) what you see.

- ▷ Take a field trip. Visit another school, museum, playground, forest, library, etc. to get new ideas related to your question. Go with a PPR partner or two so you can debrief and discuss the experience.
- ▷ Read an article or book related to your question.
- ▷ Listen to a podcast or watch a video related to your question.

Take a little time after each playful provocation to write down your thoughts, experiences, and new questions. Then reflect on what you experienced with your PPR partners. Visit the interactive workbook on the Pedagogy of Play website for ideas and protocols that can guide this reflection.

Try something with your learners

PPR involves taking risks and trying new things in your practice. It also involves including your learners in the research process. We encourage you to be open about your research with students as a gesture of respect for their role in the process. Here are some ideas for things you might try:

- ▷ Plan a new learning experience for your learners. See the PoP tool Playful Learning Planner for support here.
- ▷ Change something about your classroom environment.
- ▷ Introduce a new material (e.g., clay, wire, natural materials, a new digital tool or app, etc.).
- ▷ Try a new daily or weekly routine.
- ▷ Interview learners about their ideas, then incorporate them into your practice.
- ▷ Involve learners in a discussion about your question. Tell them you are doing research and want to learn more about your topic. Ask them what ideas they have. For example, “Class, I’ve noticed our morning routine isn’t working. What have you noticed about our mornings?” or “What ideas do you have about your topic.?” Listen and record learners’ ideas, and then keep them included in the process. Let them know what you try and share some of your documentation back with them so they can participate in reflecting on what you are learning through your PPR process.

Document

Teacher-researchers use documentation—video and audio recordings, photographs, samples of children’s work, and transcripts of classroom conversations and interactions—as an important data source. Gathering this type of information is a regular part of what teacher-researchers do while teaching. Documentation can be defined as *the practice of observing, recording, interpreting, and sharing through different media the processes and products of learning in order to deepen learning*⁴.

The online interactive PPR workbook includes a workbook planner that will help you decide where, when, and how to document to learn more about your question. There you will also find tools such as “Quick Start Guide to Documentation,” a discussion protocol to look intentionally at your documentation, and the Looking Playfully at Documentation Protocol. See Chapter 4 for further discussion of documentation.

Keep the PPR going by continuing to document, looking playfully at that documentation, and playing with ideas through playful provocations. Arrange these steps in the order that makes sense for you and your question. Just remember to reflect along the way—let’s talk more about how to do that right now.

Step 4: Reflect

Reflection is an ongoing component of PPR. You will want to reflect throughout the cycles of documentation and play described above to process what you've learned. Here are some suggestions for ongoing reflection:

- ▷ Use your workbook. The interactive workbook found online provides a way for you to track your ideas, what you try, and what you learn. It is a way for you to see the progression of your question and what you are learning over the course of your research. Your workbook entries can be poetic, beautiful, messy, artistic, or eclectic—what's important is that you reflect in the way that works for you.
- ▷ Make a routine. Pick a time each week when you set a timer and spend 10–15 minutes writing about what you're learning about your question. Or make a habit of always thinking about your PPR during your morning commute on Tuesdays, or while you are brushing your teeth at night. Pair this with jotting some quick notes in your workbook after that time.

In addition to ongoing reflection throughout the PPR process, you'll need to do a bigger-picture reflection session or two when you are ready to wrap up your question and share what you have learned. You can do this after working with your questions for a couple of months, one term, or a whole year. When you are ready to wrap up and reflect on the whole process, you could:

- ▷ Read back through your workbook, highlighting or noting parts that are especially important and show shifts in thinking. Look back at your documentation. Spend ten–fifteen minutes writing about what stands out to you, and how it helps you think about your question.
- ▷ Write down your hypotheses about, or possible answers to, your question. A hypothesis is a best guess—it doesn't have to be right, or perfect. But when you think about all the things you've tried, documented, discussed, and learned about your question, you are going to have some answers. Even if the answers are imperfect, or partial, that's OK! You can still have a hypothesis.
- ▷ Share your hypotheses with your PPR partners and/or the learners in your class. See what they think. Revise your hypotheses if needed after those conversations.
- ▷ PPR always leads to new questions. Think about and record what you are now wondering about your topic, or new topics and ideas that you might want to explore next.

Step 5: Share

When you've gotten this far, you will have ideas to share! Other educators, learners, and their families will benefit from learning about your research and hearing what you tried and learned, and your new questions. Whatever format you use to share your PPR, make sure you include the following components in your presentation:

- ▷ Your question
- ▷ Your context, role, and the learners you worked with
- ▷ A quick explanation about your process: What did you try? How did you document?
- ▷ Some examples from your documentation
- ▷ Your reflection and hypotheses about your question
- ▷ Any new questions you have now or ideas for future PPR

There are many ways to share your research. Sharing your findings in creative and playful ways is a distinctive feature of PPR. The important thing is that you do share what you learn, and that you are *leading your learning, exploring the unknown* (learning something new), and *finding joy* in the process of sharing and talking with others about your PPR work. Ways you can share about your findings include:

- ▷ At your school:
 - ▽ If many teachers across your school participate in PPR, choose a date near the end of the school year for a PPR celebration. Dedicate a special day for PPR educators to share their work by setting up playful provocations for others, giving playful presentations, or sharing their work through posters and interactive discussion. Invite families, students, and educators from neighboring schools to attend.
 - ▽ Ask your school leader for time during your next staff meeting to share what you learned through PPR. Lead your colleagues in a playful provocation similar to something you tried, and present what you learned in a playful way. Ask some questions you are still wondering about to get new perspectives on your research question. The Resources section of the online PPR Guide includes an example of a simple poster format that some educators have used to share their PPR.
- ▷ In a virtual space:
 - ▽ Create a digital gallery (for example, using a Google Site or a resource like Padlet) to share your research with others within or beyond your school community.
 - ▽ Use your school's website to share your research.
- ▷ In writing:
 - ▽ Several education journals globally publish teacher research.⁵ Even if you've never written an article, consider writing up what you learned and publishing it for others to learn about from afar.
 - ▽ A school or local community blog is another way to share about your research.

Ready to get started? Head to the PoP website and print or make a digital copy of the PPR Guide and interactive workbook. There is more than one way to engage in PPR—make this process your own!

Notes

1. To read more about practitioner inquiry, teacher research, and Playful Participatory Research see: Cochran-Smith and Lytle 2009; Perry, Henderson and Meier 2012; Baker and Salas-Davila 2018.
2. See Baker and Ryan 2021
3. For an example of an inquiry group that did this work entirely online, see Baker et al. 2021
4. Krechevsky et al. 2013
5. If you want to write up your PPR study and publish it, there are several journals that publish exclusively teacher research, including Voices of Practitioners: www.naeyc.org/resources/pubs/vop (which focuses on teacher research in early childhood education) and Educational Action Research: www.tandfonline.com/journals/reac20

Endnotes

- 1 Mardell, Solis, and Bray 2019
- 2 See p.103 of Friedman et al. 2021, where Ijumaa Jordan describes this phenomenon
- 3 Parker, Stjerne Thomsen, and LEGO Foundation 2019
- 4 Our pedagogy of play takes inspiration from a variety of sources and we make no claim that what is presented here is all new. We are particularly indebted to: Expeditionary Learning (EL) and their project-based approach, ideas from Reggio Emilia, and colleagues from Opal School. And it is not always clear where good ideas come from. We apologize in advance if we have not credited ideas appropriately. If you find an omission, please let us know so we can correct this in future versions of the book.
- 5 Rogoff 2009
- 6 Krechevsky, Mardell, Filippini, and Tedeschi 2016
- 7 To learn more about the practice of pedagogical documentation see Krechevsky et al. 2013 and Project Zero and Reggio Children 2001
- 8 We use teachers' real names in the Pictures of Practice to recognize their work. Students have been given pseudonyms to protect their privacy.
- 9 A note on the word "fun." Learning through play advocates sometimes avoid the word, worried it can imply a lack of seriousness. Even more than play, fun is suspect (in fact, play may be suspect in the minds of some because it is fun). While play is more than fun—involving learners leading learning and exploring the unknown—enjoying learning and having fun support learning. As David Graeber 2014 asks in a provocative article on the nature of play, "What's the point if we can't have fun?" For an academic analysis of fun see Fincham 2016.
- 10 Harris MacKay 2021
- 11 For information about the ambiguity and difficulty of defining play, see Sutton-Smith 1997 and Johnson et al. 2015
- 12 Mardell et al. 2016 discusses a wide range of scholarship and theories around play
- 13 While not all scholars agree, we side with those who argue that playful mindsets—playfulness—is what turns an activity into play (e.g., Barnett 1990; Lieberman 1977). Christian 2012 summarizes this view when he writes, "It is the child's playfulness that renders an activity play. As such, playfulness is recognized as the essence or spirit of play" (p.10).
- 14 Li and Jullian 2012
- 15 Gardner 2011
- 16 Perkins 1992

- 17 Vygotsky 1978
- 18 Lahey 2016
- 19 Learning is a complex phenomenon with multiple meanings. Although many people believe that children are learning all the time, we would argue that learning—in the sense of achieving mastery—takes time and effort. In our research group at Project Zero (PZ) we believe learning is the result of thinking, and thinking is more than a matter of skill (Perkins 1992). Thinking is also dispositional and distributed among individuals, groups, and cultural resources and artifacts (Perkins et al. 2000). One way to think about learning in schools (and associated educational practices) is to ask, “What are teachers helping students get better at?” Is it communicating through oral and written language and using domain tools to solve problems, or following directions and figuring out how to take tests successfully? We think some of the most valuable learning opportunities a teacher can provide are those that help students learn in many directions at once (a phrase used by our PZ colleague, Steve Seidel) as well as a feature of most playful learning experiences. One form of getting better that is particularly worthwhile is getting better at getting better—developing the metacognitive awareness of thinking that helps children play a more active role in their learning.
- 20 Some play advocates use the term “learning through play” to foreground the combination of learning, play, and playfulness. Others prefer “playful learning.” While some see subtle but important differences between the two terms, in this book we use them interchangeably.
- 21 Schulz, Andersen, and Roepstorff 2022
- 22 David Perkins, e-mail exchange with co-author Jen Ryan, May 9, 2016
- 23 Info here:
cms.learningthroughplay.com/media/wmtlmbe0/learning-through-play_web.pdf
- 24 LaBrecque 2022
- 25 Pellegrini and Bohn 2005
- 26 Kushner 2012
- 27 Weisberg et al. 2016
- 28 Eisner 1988
- 29 Roopnarine et al. 2014 describe play in Australia, Brazil, China, England, Estonia, Jamaica, Japan, Mexico, Sweden, and Turkey
- 30 PALICE (Play and Learning in Children’s Eyes).
See www.fhi360.org/taxonomy/term/4821
- 31 Cheng and Wu 2013
- 32 Heimann and Roepstorff 2018
- 33 Dweck 2006

- 34 Ritchhart and Church 2020
- 35 We are sometimes asked about the relationship between the pedagogy of play and gamification. In education, gamification refers to adding game-like properties (scoring, competition, and in more sophisticated situations, a narrative process) in an activity in order to motivate and engage learners. While we see value in making the learning of basic skills more enjoyable, we resist attempts to trick or bribe children into learning. There are authentic reasons for children to practice skills. Playful learning engages students in educational experiences that connect to students' lives and personal motivations and to meaningful applications beyond the classroom. Put another way, we want learners to play the games, not the games play the learners.
- 36 Zosh et al. 2017
- 37 Created by Savhannah Schulz, and inspired by the Dutch painter Peter Bruegel the Elder's *Children's Games*, work on our picture of play began with a team conversation about types of play to depict. We wanted a wide range of play to be shown, including dramatic play, physical play, and games as well as solitary play, social play, play involving just children, play with children and adults, and play between people and other animals. We interviewed our research colleagues in Denmark, South Africa, the U.S., and Colombia, asking about their favorite types of play, both in their childhood and currently. To broaden our perspectives we also asked this question to colleagues in China, Egypt, India, and Turkey. These interviews resulted in a list of over 100 play activities including tejo (Colombia), jacks (U.S.), and sandlot soccer (South Africa). With the types of play in mind, we selected the 35 activities in the drawing. We committed to depicting players of different ages, abilities, body types, gender, and cultural groups. We decided to set the play in spaces inspired by architecture from the four countries where we conducted our research.
- 38 For an interactive annotation of the playful visual, see www.savhannahschulz.com/teaching-materials/playful-learning-visual
- 39 Mitch Resnick, inspired by his mentor Seymour Papert, refers to the fun that is experienced when being challenged as "hard fun." This is fun that surfaces when learners are involved in experimenting, taking risks, testing the boundaries, and adapting when things go wrong. See Resnick 2020
- 40 Csikszentmihalyi 1997
- 41 Andersen 2022
- 42 Dr. Esther Mahlangu is a globally acclaimed South African artist. She is known for her bold and abstract paintings inspired by Ndebele designs traditionally used to decorate houses.
- 43 Rogoff 1990
- 44 Carlsbergfondet 2019
- 45 Chu and Schulz 2020
- 46 Lillard et al. 2015

- 47 Our review is not encyclopedic. For a more encompassing research review see Zosh 2022. Further, it has been rightly pointed out that the current body of research on play and learning disproportionately comes from the U.S. and Europe. In an attempt to address this imbalance, we conducted reviews in four of the world's five most spoken languages (we did not conduct a review in Hindi as we were advised research from India would also be published in English). While extensive, our review was not exhaustive and further efforts are needed in identifying relevant literature. More importantly, research on the relationship between play and learning should be conducted in a wider variety of contexts.
- 48 The English literature review, from which the vast majority of our studies come from, draws on the following data bases: Child Development and Adolescent Studies, EBSCO, Education Abstracts, Educational Administration Abstracts, ERIC, PsychInfo, and Teacher Reference Center.
- 49 Hollis, Harvard's online search engine for the University's physical and online collections, was used to review how play supports learning in the Spanish literature. The collection includes the following educational and social science databases: Portal de Portales Latindex, Redalyc, Hispanic American Periodicals Index, Scielo, and Bibliotech Virtual de CLACSO. The review found that there is a tradition of over a hundred years of reflecting on play as essential to children's development and learning. Influenced by Freud, Erikson, Piaget, and Vygotsky, the first studies took place in Spain and are based on playing as a strategy to improve communication, peer relations, decision-making processes, and rational thinking, and as a tool to teach values during physical education classes and recess (Ortega 1991). These early studies were expanded to Latin America and to cross-country research collaborations (Chile/Spain, Argentina/Spain, Colombia/Argentina, etc.) (Sosa 2008; Linaza and Maldonado 1987; Muñoz et al. 2018; Sarlé 2015). In the 1970s, there was a shift to an interest in playing as a pedagogical tool in schools to teach content such as math, reading and writing, oral expression, and cultural belonging and identity, among other areas. At the same time, studies on constraints for the implementation of playful learning in classrooms began. In this area, rigid curriculums, vertical relations between teachers and students, and a vague understanding of teachers on how to apply playful learning techniques are identified as the main limitations to bringing playful learning into classrooms (Garaigordobil 1995; Sarlé 2015). Contemporary research examines how learning through play promotes inclusion in classrooms with children from different nationalities and how to expand the use of playful learning in classrooms in Spain and Latin America (D'Antoni 2016; Muñoz et al. 2018).
- 50 The general Chinese language academic database, China National Knowledge Infrastructure (CNKI), was searched for articles about the relationship between play and learning. The review found that, while there are many articles about playful learning, there is a dearth of original research. At the same time, there are a number of Chinese scholars currently theorizing about the importance of play and playful learning in early childhood education, including Haidong Ding 丁海东, Yan Liu 刘焱, Xueqing Hao 邱学青, and Doris Pui Wah Cheng.

- 51 Google Scholar and partial access to the Egyptian Knowledge Bank formed the basis of the Arabic literature review. The review found a consensus among scholars that play is important for healthy child development. Several studies found significant improvements in learning based on play-based interventions in 5th grade (Zahrani 2018) and kindergarten (Mohtadi 2021; Qasem 2017; Mohamed 2021). Additionally, researchers noted negative attitudes held by many adult caregivers towards play: that play holds no values concerning learning. Play that involved messiness and dirt was particularly frowned upon. Because of our location in the U.S., we faced restrictions on what databases were available, and suggest future searches include a full review of the Egyptian Knowledge Bank and utilization of Dar Almandumah (a Saudi-based database).
- 52 Bateson and Martin 2013 and Burghardt 2005
- 53 See, for instance, Wood-Gush, Vestergaard and Petersen, 1990; Jensen and Kyhn 2000
- 54 Spinka, Newberry and Bekoff 2001
- 55 Andersen 2022
- 56 As discussed in Pellis and Pellis 2007
- 57 Spinka, Newberry and Bekoff 2001
- 58 Copple and Bredekamp 2009; Dotson-Renta 2016; Pica 2004; Wennerstrand 1998; Frost 2015; Manning 1998
- 59 National Research Council 2000; Paley 1990; Frost et al. 2012; Elias and Berk 2002; Mann, Berk, and Ogan 2006; McClelland, Acock, Piccinin, Rhea, and Stallings 2013
- 60 Gilliam and Shahrar 2006
- 61 Wenner 2009
- 62 There is debate among play researchers about whether pretense is indeed unique to humans. Some argue that the play fighting found among many mammalian species involves pretense—that these young animals are pretending to fight (and these young animals know the difference between this activity and real fighting).
- 63 Gopnik 2016
- 64 Andersen 2022
- 65 Andersen 2022
- 66 Bonawitz et al. 2011
- 67 Ginsburg, Lee, and Boyd 2008
- 68 Cooper 2009; Dickinson and Tabors 2001; Cremin et al. 2017; Christie and Rosko 2015
- 69 Qasem 2017; Mohtadi 2021
- 70 Marcon 2002; Lillard and Else-Quest 2006; Weiland and Yoshikawa 2013
- 71 Cheng 2011; Han, Moore, Vukelich, and Buell 2010; Honeyford and Boyd 2015; Kangas 2010; Kennewell and Morgan 2006

- 72 Morris et al. 2021
- 73 [issuu.com/oecd.publishing/docs/play-create-learn-what-matters-most-for-five-year-](https://www.oecd.org/publishing/docs/play-create-learn-what-matters-most-for-five-year-)
- 74 Alexander, Entwisle, and Kabbani 2001
- 75 Liu et al. 2017
- 76 Andersen et al. 2022, Schulz et al. 2022
- 77 MacKay 2021
- 78 Van Vleet and Feeney 2015
- 79 Moore 1985
- 80 Johnson 2016
- 81 The story of computers is a fascinating one. The idea of programmability—an essential idea in computing—originated in 8th century Baghdad. Three brothers, Ja’far, Ahmad, and Musa al-Hasan, created a machine for pure fun that they called “the instrument that plays by itself.” Like contemporary music boxes, the machine worked by a cylinder striking teeth of a tuned metal comb. One could change the song—program the machine—by replacing the cylinder. 700 years later, a French music box maker took the idea and created cylinders to program weaving looms. The idea never reached widespread use because of the expense. However, a few years later a fellow French inventor began using far less costly punch cards to program the looms. Such punch cards were used to program computers through the 1980s. The road to computers was paved through play.
- 82 Curie 1938
- 83 Maurois 1959
- 84 Graeber and Wengrow 2021
- 85 See for example Derman-Sparks, LeeKeenan and Nimmo 2015
- 86 In Spanish, the three indicators identified by Colombian educators are *autonomia* (autonomy), *curiosidad* (curiosity), and *alegría* (joy). In Appendix A we share the Spanish version of the Colombian indicators.
- 87 Educators in South Africa note that students will often come close together, even touching each other, when playful learning is occurring.
- 88 There are many emotions associated with play, including frustration, despair, and anger. However, we have chosen to highlight joy because it is often in short supply in children’s school experiences. Joy is a complex emotion; some would say it is impossible to experience joy without knowing sadness. In Chapter 4 we argue that to promote playful learning educators need to *welcome all emotions generated through play*.
- 89 A Danish term, *hygge* has been explained as “having a cup of warm tea with good friends on a cold evening.” It expresses the value of being together with others in a comfortable way.
- 90 *Lúdica* is a Spanish word long used by educators in Colombia to describe a mindset that links effective learning and play. It can be translated into English as “playful.”

- 91 The philosopher Ludwig Wittgenstein's advice, "Don't be afraid of talking nonsense, but you must pay attention to your nonsense" captures the insight that silly and joking behaviors can lead to new ideas and ways of solving problems.
- 92 Cooper 2009
- 93 See www.pz.harvard.edu/projects/inspiring-agents-of-change
- 94 See www.pz.harvard.edu/projects/making-learning-visible
- 95 Ben Mardell, Megina Baker, and Yvonne Liu Constant were classroom teachers for many years and taught graduate student courses on the pedagogy of play.
- 96 See www.atrium.org/mission-and-philosophy-and-diversity
- 97 See Ahmed 2018, Muhammad 2020, Paris and Alim 2017
- 98 Moll et al. 1992
- 99 Tomlinson et al. 2003
- 100 See International Baccalaureate "Primary Years Programme" www.ibo.org/programmes/primary-years-programme/
- 101 The Responsive Classroom is a good source for creating classroom norms: www.responsiveclassroom.org
- 102 Karrie Tufts and Jim Linsell (personal communication with co-author Mara Krechevsky, 2007) offer a useful set of attributes of high-quality reflection, regardless of format:
 - Fosters understanding rather than simply evaluation
 - Informs students and teachers about what was understood and how to proceed with teaching and learning
 - Values time and space for students to thoughtfully assess their work and growth as learners
 - Pushes student thinking another step to self-assess what is being or has been learned
 - Helps students make a personal or emotional connection to content
 - Invites feedback between student and teacher and student to student

They also suggest sample weekly reflection questions related to learning content and process:

Set 1 (content):

- What is one thing you really understood this week?
- How do you know you understood it?
- What questions do you still have? (I wonder... I want to know...)

Set 2 (process):

- What is something you or others struggled with this past week?
- What did you or others do to make progress on this problem?
- What questions do you still have? (I wonder... I want to know...)

Set 3 (process):

- Create a [visual metaphor/musical phrase/movement sequence] that describes you as a learner/thinker this week.
- Explain why you selected this.
- What questions do you still have? (I wonder... I want to know...)

- 103 Dewey 1933
- 104 Owen and Vista 2017
- 105 Vygotsky 1978
- 106 Hattie 2009
- 107 Krechevsky 2012
- 108 www.pz.harvard.edu/sites/default/files/Partner-Explore.pdf
- 109 www.pz.harvard.edu/thinking-routines
- 110 www.schoolreforminitiative.org
- 111 www.pz.harvard.edu/resources/snapping-ideas-together
- 112 www.pz.harvard.edu/resources/ladder-of-feedback
- 113 Bateson and Martin 2013
- 114 www.pz.harvard.edu/sites/default/files/Planning-for-Invention-Student-Worksheet.pdf
- 115 thetech.org/content/bowers-institute/resources
- 116 Ritchhart 2010 “I Blew It” certificate
See *Assorted Graphics* at www.ronritchhart.com/info-graphics.
- 117 Bruner 1986
- 118 The strategy of using questions to invite imaginative and divergent thinking and provoke curiosity and wonder has been explored by a number of educators. See Erickson et al.’s idea of provocative questions (2017), Land et al.’s idea of threshold concepts (2008), and the Reggio Emilia (Italy) idea of provocations (Cagliari et al. 2016).
- 119 Solis et al. 2020
- 120 www.nytimes.com/column/learning-whats-going-on-in-this-picture
- 121 www.pz.harvard.edu/resources/do-over
- 122 www.pz.harvard.edu/resources/making-friends-with-conflict
- 123 Krechevsky et al. 2013. We borrow the concept of documentation from educators in the Reggio Emilia preschools.
- 124 www.pz.harvard.edu/projects/making-learning-visible
- 125 www.amazon.com/Visible-Learners-Promoting-Reggio-Inspired-Approaches/dp/111834569X

- 126 See for example Muhammad 2020, Ahmed 2018, and Hargreaves and Shirley 2009
- 127 See the Briya Schools website: www.briya.org
- 128 See, for example, Klein 2016; Kuh 2014; Shackell et al. 2008; Ceppi, Zini, and Reggio Children 2003; Nair 2014; Greenman 2005; Loughlin 1977
- 129 Kragler, Martin, and Kroeger 2008; Stoll et al. 2006; Catapano 2005; Dhendup, Jatsho, and Tshering 2021
- 130 Mardell and Fog 2017
- 131 The literature on coaching is extensive. A sampling of peer-reviewed research that has demonstrated successful outcomes from coaching and peer-mentoring, across a range of geographies and teaching contexts, includes: Artman-Meeker et al. 2015; Banuelos, Doerfel, and Stoffel 2019; Hsieh et al. 2021; Tyrosvoutis et al. 2021
- 132 Our understandings of teacher research and practitioner inquiry is based on: Cochran-Smith and Lytle 1999 and 2009 on practitioner inquiry; Noffke and Somekh 2009 on action research; and Escamilla and Meier 2018 and Perry et al. 2012 on teacher research. All agree that teachers should not simply consume research produced by academics, but can rather engage in their own rigorous research practices and contribute to the field. We align with these scholars in viewing teachers as knowledgeable experts who can and should conduct meaningful research deeply connected to their teaching practice.
- 133 See Baker and Ryan 2021
- 134 Sims and Fletcher-Wood 2021; Kragler, Martin, and Kroeger 2008; Hamre, Partee, and Mulcahy 2017
- 135 Guerra, Solis, and Mardell 2019
- 136 Perkins and Reese 2014
- 137 D'Angour 2013
- 138 Egypt Today 2017
- 139 Wu 1995
- 140 Kiyomi Akita, email exchange with co-author Ben Mardell, 2021
- 141 Montessori 1964:25
- 142 Vygotsky wrote that “in play a child stands a head above his normal development” and advocated for practices with striking similarities to those explained in Chapter 4. See Vygotsky 2004.
- 143 Dewey 1916
- 144 Mardell, Solis, Bray 2019
- 145 Eisen 1988
- 146 Convention on the Rights of the Child 1990
- 147 Tyack and Cuban 2022

- 148 STEM seeds
- 149 For example, El Anatsui, who uses bottle caps to create beautiful tapestries.
See www.npr.org/2013/09/28/174727056/nigerian-bottle-cap-sculptor-taps-museum-staffs-inner-artists
- 150 LEGO Foundation offers useful resources in this regard, including Six Bricks and the Create with Anything materials. See: createwithanything.legofoundation.com
- 151 For example, the Theory of Multiple Intelligences (Gardner 1983/2011) and the Hundred Languages of Children from the Reggio Emilia Approach (Edwards, Gandini and Forman 2012), Adichie's idea of the danger of a single story (www.ted.com/talks/chimamanda_ngozi_adichie_the_danger_of_a_single_story), and Universal Design for Learning. These connections are captured by Jennifer Keys Adair 2020 when she wrote:
- Learning does not happen in one natural way but in lots of ways. Each individual learns differently. People learn differently in different cultural communities, countries and contexts, depending on what is available, who is powerful, what the norms and values are, and how learning makes sense for different kinds of lives and circumstances.*
- 152 Gardner 1999
- 153 Moll et al. 1992
- 154 Graeber 2015

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Appendix A: Research Methods

The Pedagogy of Play project explores three main questions:

- Why do educators need a pedagogy of play?
- What does playful learning look and feel like?
- How can educators promote playful learning?

In Chapter 1, we explained how we reached our answer to the “Why” question. Here, we discuss the methods for our answer to the “What” question, captured in the cross-cultural indicators of playful learning presented in Chapter 3, as well as the “How” question, presented in Chapters 4 and 5. Please note that due to the placement of this appendix in the book, we have used APA-style in-text citations rather than the Endnotes used across the rest of book.

In designing the research methodology, we drew on a theoretical perspective that educators should be viewed as knowledge producers and contributors to research on teaching and teacher education (Cochran-Smith and Lytle, 1999) and that research about education should be conducted with, rather than on, educators (Gutiérrez and Penuel, 2014; Noffke and Somekh, 2009). Because of this theoretical stance, our research has been highly collaborative, engaging educators in research design, data collection, and analysis. This is especially important given that we each bring our own perspectives and biases to the interpretation of data. Please see Appendix B, “About the Authors,” for more information about our perspectives and backgrounds.

Below we share an overview of where and with whom we collaborated, as well as a summary of our data collection and analysis approaches for research the “What” and “How” questions. We also provide detailed information about the indicators of playful learning from Denmark, South Africa, the U.S., and Colombia, introduced in Chapter 3.

Overview

Data collection and iterative analysis were conducted from 2015–2021 across four locations: Denmark, South Africa, the United States, and Colombia. Schools were purposively selected (Miles et al., 2014) because of their commitment to playful learning, based on recommendations from educational leaders in each country. Due to differing challenges in each context prior to and during the Covid-19 pandemic, the number of schools and methodological approaches taken in each country varied; we did not aim for a one-size-fits-all approach but rather co-constructed the research process in collaboration with educators and local research partners. Over the course of the study, we employed ethnographic (Atkinson, 2001), qualitative (Miles et al., 2014), and participatory action research approaches (Baker and Ryan, 2021; Noffke and Somekh, 2009; Reason and Bradbury, 2008).

In Denmark, ethnography combined with practitioner inquiry (Cochran-Smith and Lytle, 2009) allowed for an in-depth understanding of one school. Teachers formed study groups to engage in Playful Participatory Research (PPR) (Baker and Ryan, 2021; Baker and Salas Davila,

2018), a form of practitioner inquiry in which educators generate research questions, play with ideas, and document learning in their classrooms to explore learning through play. See the explanation in Chapter 5 and the “Playful Participatory Research Guide” in the PoP Toolbox for more information about PPR.

In South Africa, the U.S., and Colombia, we conducted qualitative research in collaboration with local researchers and educators. In all contexts, data sources included: semi-structured interviews with teachers, school leaders, and learners (Brown and Danaher, 2019); classroom observations focused on learning through play (Miles et al., 2014); and focus groups with learners (Vaughn et al., 1996). Educators in all contexts co-constructed the data collection by recommending playful learning experiences for the research team to observe, and meeting with the research team after the observation to discuss the experience. Table A.1 details the number of participating schools, educators, and data sources across contexts.

Research Contexts

Here we describe each of the four research contexts and all participating schools within those contexts.

Beginning the Journey: International School of Billund

PoP started with the International School of Billund (ISB). Here our research served two goals: 1) to understand, document, and support playful teaching and learning at ISB (as their professional development), and 2) to work with ISB to develop a pedagogy of play for any school context. Data collection took place between 2015 and 2021.

ISB is an English-language International Baccalaureate school located in Billund, Denmark, serving children ages 3 through 16. Established in 2013 by the LEGO Foundation as a private, independent school, at the time of publication, ISB was home to about 400 students and 100 staff members from over 50 countries. We collaborated with the whole school community to hone reflective practice, helping educators ask and answer questions, explore professional competencies, critically analyze their own and their colleagues’ teaching, make connections between theory and practice, and expand their understanding of pedagogy. Data collection included classroom observations; structured and unstructured conversations with students, teachers, school leaders and families; and information collected at whole school staff meetings and teacher study group sessions.

Expanding the Scope of the Research: South Africa

In 2017 and 2018, we conducted qualitative ethnographic research with local researchers in South Africa. We partnered with a Johannesburg-based non-profit organization, Care for Education, to identify two schools with whom to work. The Africa Reggio Emilia Alliance, a network of Reggio-inspired schools, facilitated contact with the third school. Staff from Care for Education and the University of Johannesburg also helped identify local researchers who we interviewed and

TABLE A.1: Overview of participants and data sources

Context	Number and Types of Schools	Number of Teachers	Grades Taught	Total Observations by Research Team	Total Teacher Interviews	Total School Leader Interviews	Total Focus Groups
Denmark	1 (independent)	40	Preschool - Grade 8	40	80	8	12
South Africa	3 (2 public, 1 independent)	11	Preschool - Grade 7	92	33	8	2
United States	6 (4 public, 2 independent)	22	Kindergarten - Grade 9	88	40	12	1
Colombia	5 (4 public, 1 independent)	17	Preschool - Grade 7	96	48	15	N/A*

* The ongoing Covid-19 pandemic during data collection in Colombia complicated the process and focus groups were not conducted in this context.

subsequently hired. These local researchers were integral to incorporating diverse perspectives on our research team—they drew on local expertise and language, shared insights from their disciplinary training (anthropology and psychology) that supported the development of ideas, and built rapport with educators, school leaders, and families.

The selected schools in South Africa represented early childhood to secondary grade levels, exhibited healthy and predictable school cultures (as indicated by district administrators and research colleagues), had school leadership who supported innovative approaches to learning, and teachers who showed interest in incorporating playful learning into their teaching practices. They differed with regard to resources and the racial, linguistic, and socioeconomic backgrounds of the students. Schools were selected because existing practices offered opportunities to observe learning through play in a range of classrooms rather than because they represented typical pedagogical practices in South Africa. In each setting, we conducted observations in classrooms, interviews with teachers and principals, and focus groups with students (see Table A.1).

Esikhisini—meaning “well of water” in Zulu—was the setting of *Exploring Soil Types and Plants*. It is a government primary school (**Grade R** through Grade 7) in the working-class township of Pretoria. A **quintile 2** school, 85% of its 610 learners live in informal settlements located five kilometers or more from Esikhisini and qualify for free transportation to school. The majority of learners are Black South African, with a growing minority from families who have emigrated from other African countries. The school has cultivated partnerships with local businesses, universities, and cultural institutions to provide a range of extra-curricular activities for learners (from chorus to cricket).

Bryandale is a fee-paying, **former model C** government primary school (Grades 1 through 7) located in a middle-income neighborhood in suburban Johannesburg. Attached to the school is a fee-paying, private pre-primary school that offers Grade R education along with a crèche (infants and toddlers). The learners—1,000 in the primary and 150 in the pre-primary—are approximately 50% Black, Coloured, and Indian, and 50% White (terms used by South Africa educators), predominantly from English-speaking homes. Both the pre-primary and primary levels follow the CAPS (the national curriculum for South Africa) and embrace eight core values, one for each grade.

Nova Pioneer Ormonde (NPO), the setting of *Debating the Nature of Facts*, is a fee-paying, independent primary (Grades R through 7) and secondary (Grades 8 through 12) school located near the center of Johannesburg. Most learners live 10 km or closer to the school; many come from Soweto, a township of Johannesburg. The 800 learners include children who are Black, Coloured, and of Indian descent. The school embraces an inquiry-based pedagogy inspired, in part, by the Reggio Emilia approach. The school is part of a growing network of independent schools in South Africa and Kenya. The school adheres to six core principles: the joy of learning, greater together, always growing, servant leadership, solutions first, and high expectations.

Grade R or Reception, an initial class in many South African schools, is for 5-year-olds.

Quintiles refer to the wealth of a school and/or surrounding areas. Quintile 1 and 2 schools are the poorest schools in South Africa, often described as “no-fee-paying schools” that receive the majority of their funding from the government. In comparison, Quintile 4 and 5 schools are wealthier schools that often charge fees.

“Former model C school” refers to a “whites only” school under the apartheid regime, which, under democratic rule, has become racially inclusive.

Continuing the Research: The United States and Colombia

As Project Zero is located in Cambridge, a city in the greater Boston area, we drew on our connections to identify six schools to partner with for the U.S. research. The schools included the Cambridgeport School, a public school in the Cambridge Public Schools District just outside of Boston. It serves students from pre-kindergarten through 5th grade. There are 325 students in the school, 44.1% of whom identify as students of color, 33.5% of whom are identified as high needs, and 21.5% of whom are identified as economically disadvantaged. The school states its core values as: “Be kind, be responsible, be reflective, aim high.” Teachers share a belief that children must engage with their world in order to learn and build knowledge. The school community is also strongly committed to promoting social justice.

The Eliot School in the Boston Public School (BPS) District, the setting for the *More than One Way to Tell a Story*, serves students from pre-kindergarten through 8th grade. It is designated an “innovation school,” which gives it increased autonomy to make decisions regarding curriculum and instruction, staffing, policies, and procedures. Located in the North End neighborhood of Boston, the school serves a population of 675 students, 38.7% of whom identify as **students of color**, 39.5% of whom are identified as **high needs**, and 17.6% of whom are identified as **economically disadvantaged**. The Eliot School’s mission is to provide a well-rounded education that helps every student achieve academic excellence. Its learning community follows five guiding principles: “Be Respectful, Responsible, Safe, Kind, and Inclusive.” In their aim to continue innovating, Eliot created uninterrupted blocks during the daily schedule to implement playful learning experiences, which they call EPIC (Eliot: Play. Innovate. Create.).

The Josiah Quincy Elementary School is a public school in BPS serving 795 students from pre-kindergarten to 5th grade. Located in Boston’s Chinatown neighborhood, the school has a large percentage of Asian students (62.3%), with a minority of African-American, Hispanic, and White students. 61.4% of the students are English Language Learners, 83% are identified as having high needs, and 50.7% are identified as economically disadvantaged. The school is in the process of adopting the International Baccalaureate Programme. The school provides a number of programs to meet students’ needs, including an early intervention center-based classroom for Chinese language students, advanced work class for 4th and 5th grade students, sheltered English immersion for Chinese language students, and programs for students with learning disabilities, including inclusion classrooms. The school emphasizes what it calls the FIRE values: Focus, Integrity, Respect, and Empathy (its mascot is a dragon).

Codman Academy, the setting for *Investigating Policing*, is a public charter school serving students from kindergarten through 12th grade with a lottery admission system. Located in Dorchester, a neighborhood of Boston, Codman Academy is a **Title I** school, with students of color comprising 99% of the student body. 72% are identified as having high needs, and 61.7% are considered economically disadvantaged. The school’s standards-based curriculum is grounded in the Expeditionary Learning (EL Education) approach, which focuses on the mastery of knowledge and skills, character, and high-quality student work, with an emphasis on social justice. The school maintains partnerships with a local health center, theatre company, YMCA, and youth foundation.

For American educators, **students of color** refers to students from non-European backgrounds, **high needs** refers to students identified and receiving services for specific learning needs, and **economically disadvantaged** refers to students who qualify for the government-sponsored free and reduced lunch program based on the income levels of their families.

Title I is a federal government designation based on family income. The designation qualifies a school for certain programs and is often used as a measure of poverty.

The Advent School is a fee-paying independent school serving students from pre-kindergarten through 6th grade. Located in the Beacon Hill neighborhood of Boston, Advent has 200 students from a wide range of neighborhoods in and around Boston. 34% identify as students of color, and 24% receive some form of financial assistance. Advent's Reggio Emilia-inspired curriculum emphasizes social justice and encourages teachers to approach instruction thematically, integrating curriculum subjects into topics of inquiry.

The Atrium School is a fee-paying independent school in Watertown, a city in the greater Boston area. With a total enrollment of 125, Atrium students come from over twenty surrounding communities. 25% identify as students of color, and 30% of families receive need-based financial aid. With one classroom per grade, the school has two full-time teachers in each pre-kindergarten through 5th grade classroom and five subject-specific teachers in grades 6 through 8. Atrium's mission is to promote "Excellence with Joy" through a balanced curriculum that incorporates arts, hands-on projects, and collaborative work in an environment that is creative, nurturing, and driven by values of social justice and equity.

In our research in Colombia, our colleagues at the School of Education at Los Andes University helped us identify five schools in the greater Bogota area. The schools in Colombia include La Aurora, a public school just outside of Bogota. The school serves 1,400 children who live in the rural area around the school.

The majority of students come from low-income families. Some of the students have deep roots in the area, while others are part of displaced families who were forced to leave their region of origin due to the Colombian civil war. The school's three campuses are administered by the same principal and academic coordinator.

Colegia Unidad Pedagógica, the setting for *Creating a Restaurant* and the middle school portion of *Playful Learning Online*, is an independent school known for its progressive approach to education. The school has almost 400 students from pre-kindergarten to 8th grade, from middle-class backgrounds. The school follows the national government's curriculum, and its educational model is based on alternative learning strategies.

The Jose Asunción Silva School is a public school serving pre-kindergarten through high school in the working-class neighborhood of Engativa. The school focuses on community and family connections, peaceful conflict negotiation, and helping students find a meaningful place in their community after graduation. Although many students did not return to school after Covid-19 restrictions were lifted, Jose Silva has maintained the full enrollment of its almost 800 students, including many displaced children and Venezuelan migrants.

Jaime Garzon School, named for a comedian and social critic who was assassinated in 1999, and El Nogal School are part of the Alianza Educativa public school network, a non-profit organization that administers 11 schools in Bogota. The network prioritizes socio-emotional learning and tracks indicators of student well-being. Serving students from low-income families, the network is renowned for students' high performance and a 70% college attendance rate for graduates. The schools are the setting for the kindergarten and 3rd grade examples in *Playful Learning Online*.

Data Collection

As mentioned earlier, data sources across all sites included:

Observations

Classroom and school observations involved documenting classroom playful learning experiences using video and audio recordings, photographs, and written field notes. We also observed and talked with children of all ages (preschool, primary, and middle years) to understand what learning through play feels like from a child's perspective. After observing a learning experience in the classroom, we conducted brief semi-structured interviews with a focus child in the class (agreed upon ahead of time with teachers) to learn how they experienced the learning activity. At ISB, the PoP research team based at Project Zero conducted these observations. In South Africa, the U.S., and Colombia, local researchers conducted observations to document evidence of playful learning in the classroom. Initial observations focused on the overall setting (e.g., physical materials and resources) and the flow of learning activities in the classroom (e.g., school day schedule, curricular content). In the next phase, observations focused on: 1) teachers' pedagogical practice and instructional moves and 2) individual children's learning experiences (two learners per classroom). The researchers focused their observations on instances in which learning experiences and interactions responded to learners' agency, interest, and/or positive affect, aspects identified as relevant in existing literature as well as from the researchers' own experiences in classrooms prior to Pedagogy of Play research. During these observations, the researchers engaged in informal conversations with teachers and students about the learning experience (e.g., how did the learning experience go? What did you like or not like about the experience? How did the experience make you feel?) to capture their reactions to the learning experience or classroom interactions.

Interviews

Teachers participated in three semi-structured interviews to explore their beliefs, attitudes, and practices related to playful learning. In the first interview, teachers were asked about their background, school context, educational goals for learners, and initial thoughts about playful learning and its role in their instructional practice. In the second interview, teachers were asked about the terms and phrases they used to describe playful learning. Interview prompts for this second interview included open-ended questions and photo- and video-elicited questions in which teachers were asked to reflect on specific moments captured in their classrooms during observations. Two interviews were also conducted with school leaders/administrators. They were asked to describe their school context, educational priorities, and beliefs about learning through play. The final interview for both groups involved eliciting feedback on the draft indicators of playful learning for the educators' specific context.

Focus Groups

In focus groups, learners were asked to draw and reflect on a playful moment (i.e., one in which they felt curious and excited) previously experienced in class, as well as to imagine their ideal

learning moment. Both the drawing task and the group discussion were intended to elicit learners' descriptions of playful learning experiences or what playful learning might look and feel like. Due to Covid-19 complications, no focus group was conducted in Colombia.

Workshops and teacher study groups (ISB only)

During eight schoolwide faculty workshops, we facilitated activities to explore the concept of what learning through play looks and feels like in the ISB context. For example, in a 2016 workshop, educators from across the school were invited to draw playful learning experiences from their own childhood or their teaching and to describe these experiences in words. We also participated in four events for families where playful learning was discussed.

At ISB we initially facilitated, and then gathered data from, thirty teacher study groups over the course of six years. These groups of four to ten teachers utilized Playful Participatory Research (PPR; see the PoP Toolbox for a guide to PPR) to explore questions about playful learning. The findings of these groups informed the classroom practices shared in Chapter 4.

The “What” Question: Context-Specific Findings

Our second research question was, “What does playful learning look and feel like?” In Chapter 3, we introduced the cross-cultural indicators of playful learning. As mentioned in that chapter, the cross-cultural model is based on context-specific playful learning indicators developed with educators in each of the four research settings. The context-specific indicators reflect a co-constructed understanding of learning through play to educators and learners in that community. Here we provide detailed information about the process, data analysis, and results of collaborative research in each site.

Data Analysis

As we collected data, we used an open coding approach (Saldaña, 2012) to identify terms and themes related to playful learning that emerged in the observation memos, interviews, and focus group conversations. Project Zero (PZ) researchers independently read memos; looked through photos, videos, and artifacts; listened to interviews and/or read interview summaries; and discussed insights and themes that emerged in the data. In collaboration with the local researchers in each cultural setting, the PZ team summarized emergent themes in different categories and developed the indicators of playful learning. During follow-up member-checking, teachers and administrators were asked to respond to a draft of the Indicators of Playful Learning for their cultural context, including how well the indicators reflected their ideas and experiences of learning through play in their school. Revisions were then made to the indicators to incorporate feedback from the educators. Below we share context-specific indicators of playful learning for each research site.

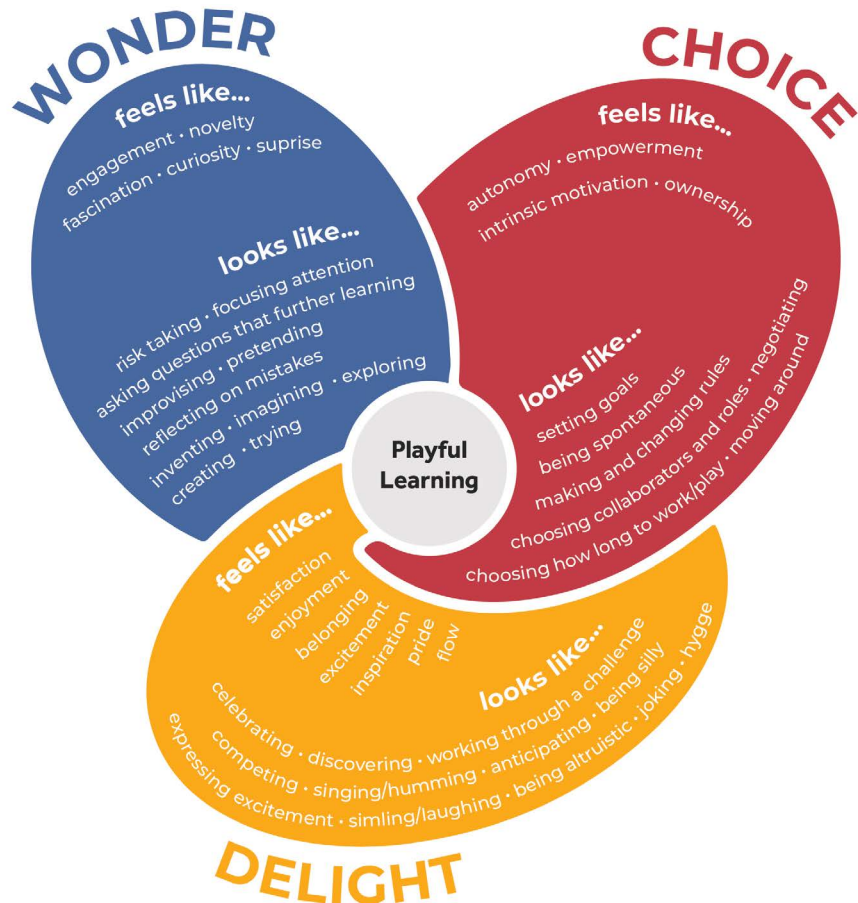
Indicators of Playful Learning: ISB, Denmark

We analyzed the data collected at ISB and identified the most salient terms used by the community to describe what learning through play looks and feels like. We mapped responses in the

interviews to observations made in the classroom, looking for patterns and connections among the data points. The “markers” (individual terms used by educators and learners to describe playful learning—see the smaller font in the diagrams below) presented as the smaller text in each model) were clustered into broader categories subsequently classified as “indicators.” The PoP team created a draft version of the Indicators of Playful Learning and shared this back with ISB teachers, administrators, students, families, and an advisory board for feedback, discussion, and revision. Several versions were exchanged between the PoP team and ISB educators before arriving at the current version of the indicators (see Figure A.1).

At ISB, playful learning occurs at the intersection of *choice*, *wonder*, and *delight*. *Choice* includes a sense of empowerment, autonomy, ownership, and intrinsic motivation (the markers). To an observer, this looks like learners setting goals, being spontaneous, making and changing rules, negotiating and moving around the classroom. *Wonder* entails the experiences of curiosity, novelty, and surprise, which can engage and fascinate the learner. To an observer, a sense of wonder looks like improvising or exploring, creating, inventing, pretending, imagining, and learning from mistakes. Finally, feelings of *delight* include excitement, enjoyment, satisfaction, inspiration, pride, and belonging. Learners who feel delighted may smile, laugh, joke, and be silly. They might sing, hum, be working through a challenge, and feel a sense of *hygge*, a Danish term that reflects sharing a cozy time with good friends. *Facilitating a Student-Composed Schedule* and *Too Many Rules on the Playground* provide concrete examples of these indicators at ISB.

Figure A.1
Indicators of
Playful Learning:
International
School of Billund
(Denmark)



Indicators of Playful Learning: Three Schools in South Africa

In the three schools in South Africa, playful learning is described and experienced as ownership, curiosity, and enjoyment, represented in Figure A.2. Ownership involves learners feeling empowered to lead their own learning and experiencing a sense of freedom, pride, responsibility, and being part of something bigger than themselves. To an observer, learners demonstrating ownership show confidence, voice opinions, value their own and others' ideas, see peers as resources, and collaborate. Curiosity involves a drive to learn more. To learners it feels like engagement, challenge, and at times positive frustration (dissatisfaction that leads them to try harder). To an observer, curiosity looks like students discussing and debating, imagining, experimenting, and huddling (learners being physically close to one another). Enjoyment involves learning leads to feelings of anticipation, trust, fun, belonging, and safety. Learners are smiling, laughing, celebrating, and joking. Alternatively, enjoyment may be expressed through active participation. In addition to these three indicators, the concept of ubuntu, a Southern African philosophy that highlights a person's humanity through their community, serves as a foundational underpinning. Ubuntu here reinforces the communal and social aspects of learning for each indicator; all three are supported by ubuntu. For example, learners feel curious partly because they are in a group that encourages risk-taking and exploration. *Debating the Nature of Facts* and *Exploring Soil Types and Plants* are examples of what playful learning can look and feel like in South Africa.

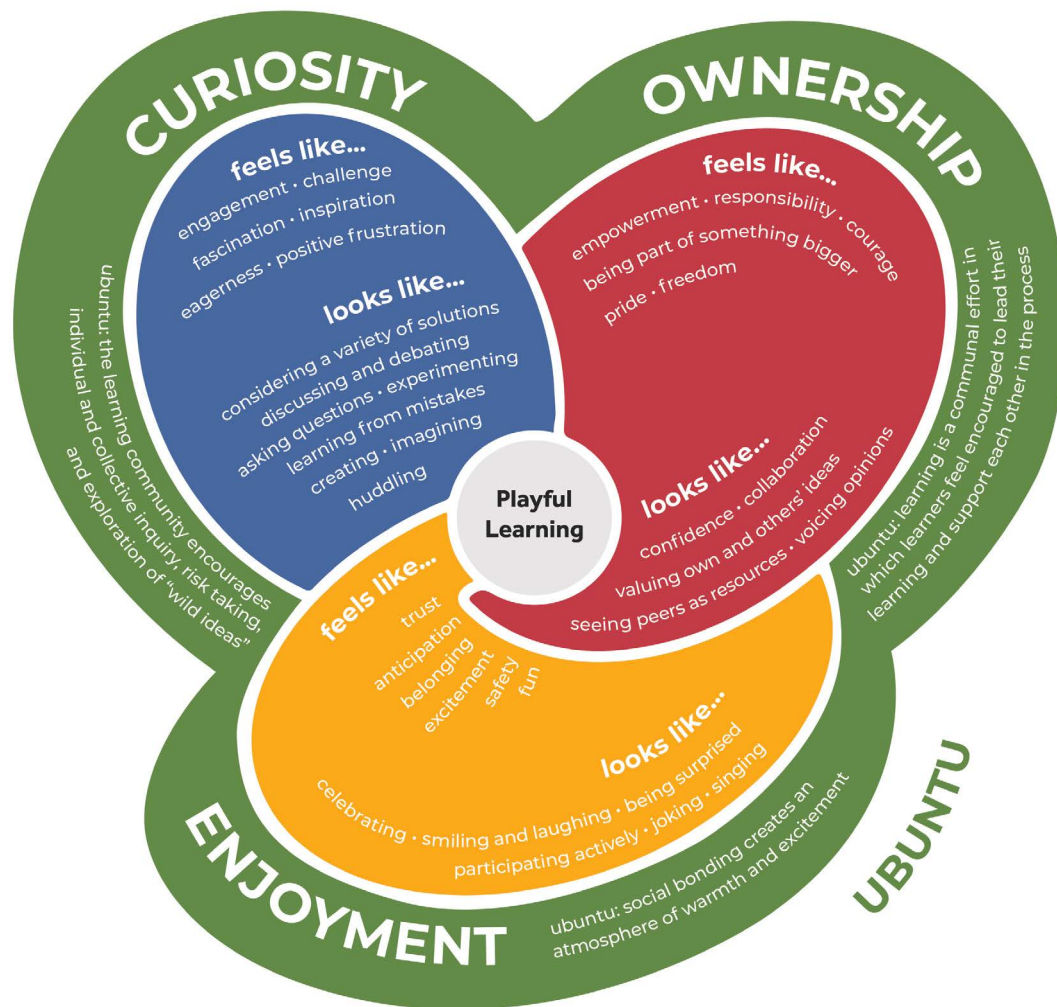
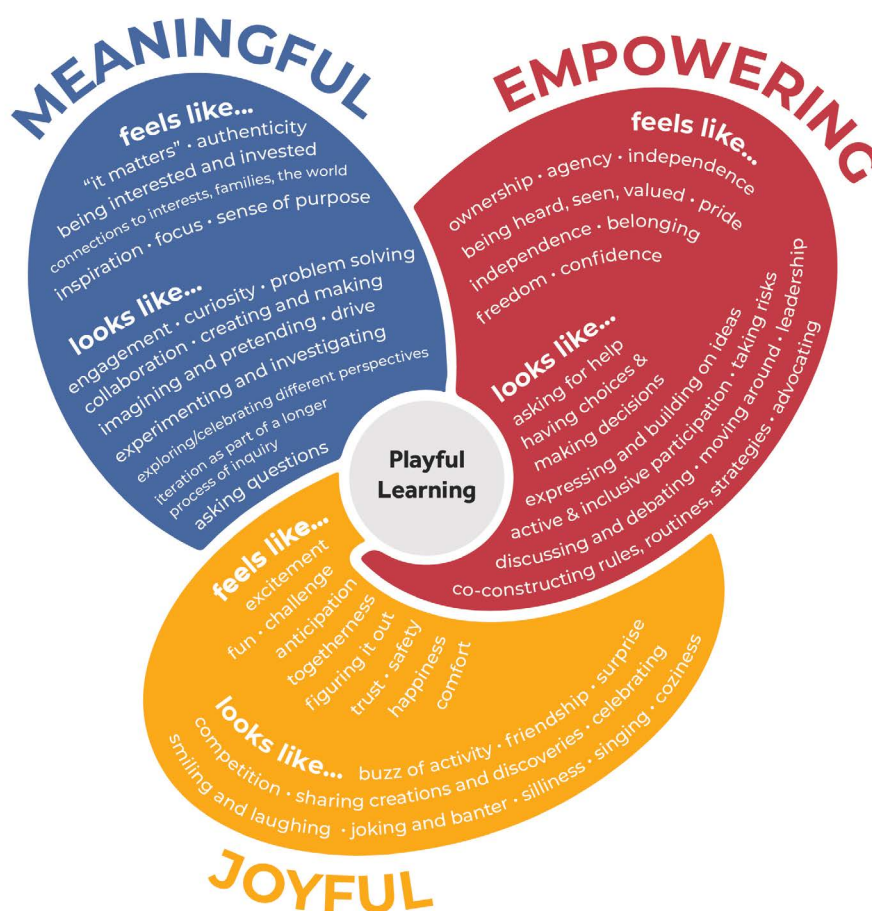


Figure A.2:
Indicators of Playful
Learning: Three
South African
Schools

Indicators of Playful Learning: Six United States Schools

In the six U.S. schools, teachers and students describe and experience playful learning as empowering, meaningful, and joyful, as represented in Figure A.3. Empowering experiences foster a sense of agency, ownership, confidence, independence, and pride. Learning that is empowering looks like students participating actively, expressing and building on ideas, discussing and debating, moving around, and asking for help from each other and adults. Meaningful learning feels interesting and connected to students' lives outside of school, and it looks like students who are engaged, curious, creating, imagining, and investigating. Joyful learning experiences often involve learners feeling excited or anticipating what is to come. Students enjoying learning often smile, laugh, or engage in friendly banter. *Investigating Policing* and *More Than One Way to Tell a Story* illustrate these indicators of playful learning in the U.S.

Figure A.3:
Indicators of
Playful Learning:
Six US Schools



Indicators of Playful Learning: Five Schools in Colombia

In the five schools in Colombia, playful learning emerges at the intersection of autonomy, curiosity, and joy. Figure A.4 is the English translation of the Colombian indicators. Figure A.5 is the model in the original Spanish. Curiosity involves feeling interested, amazed, and surprised. To an observer, learners are creative, questioning, and reflective. Autonomy entails learners'

feelings of belonging and competence, and commitment. To an observer, autonomous learners collaborate and participate in dialogue and negotiations. Joy involves feeling of excitement, motivation, and satisfaction. Learners who feel joy smile, laugh, celebrate, and establish warm and friendly relationships (*camaraderie*). *Creating a Restaurant* and *Playful Learning Online* provide illustrations of what playful learning looks and feels like in Colombia.

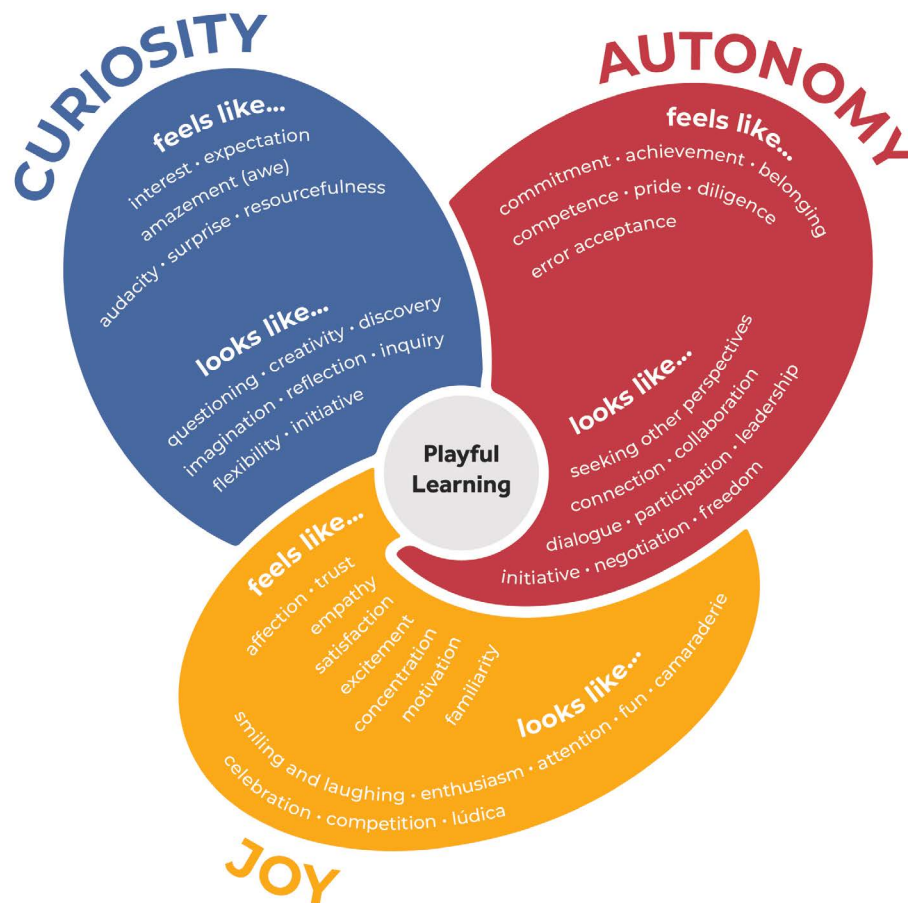


Figure A.4:

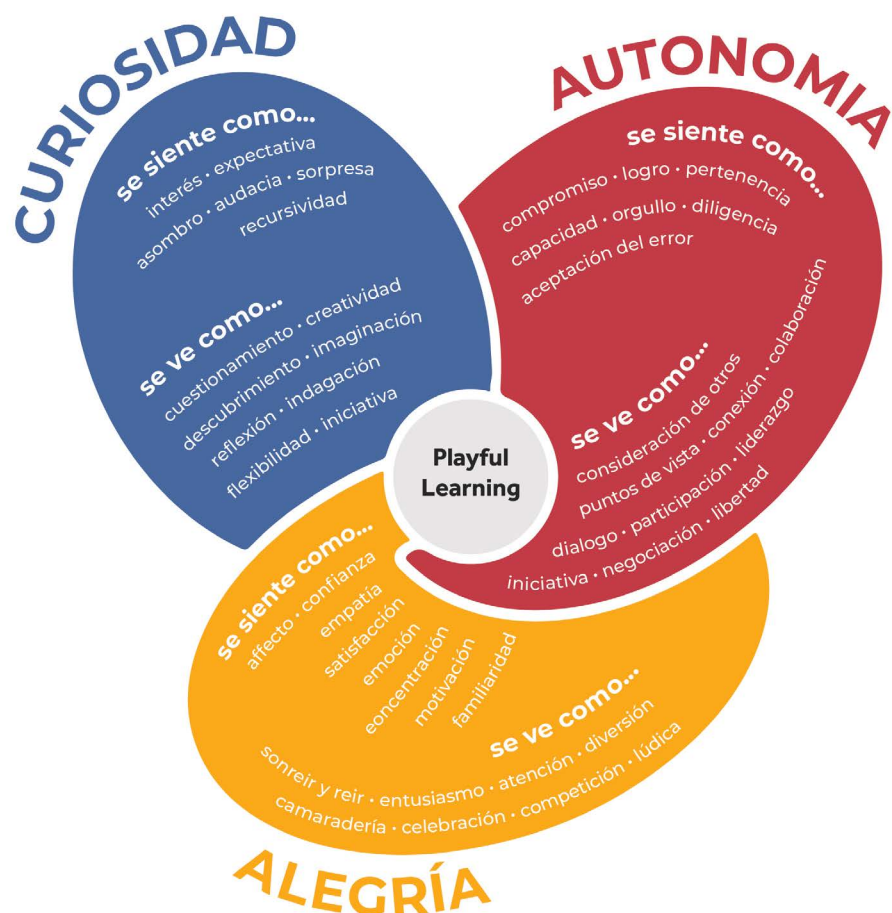
Indicators of
Playful Learning:
Five Colombian
Schools

English translation

Methodological Adaptations in the U.S. and Colombia

In the U.S. and Colombian research sites, we were forced to make a number of modifications due to the Covid-19 pandemic. We used methods similar to those in South Africa (ethnographic field observations and teacher and administrator interviews). However, as schools closed and teaching and learning shifted to distant and/or hybrid models, we shifted to conducting our research online. Although the switch to online learning—and social distancing requirements once schools reopened—certainly affected what playful learning looked and felt like, we were also able to observe possibilities for playful learning in online settings.

Figure A.5:
Indicators of
Playful Learning:
Five Colombian
Schools
Spanish Original



Cross-Cultural Indicators of Playful Learning

After developing context-specific indicators in Demark, South Africa, the U.S., and Colombia, we turned to synthesizing the findings into a generalized, cross-cultural map of what playful learning looks like across the four contexts. Our goal was to find patterns—similarities and differences—across the sites. The following criteria to guide our process:

- The indicators should not be more complicated than those models from the four sites.
- The indicators should represent overall trends and explain cultural variations.
- The indicators and markers should be kept discrete for as long as possible and only combined or collapsed into categories later as needed.
- The cross-cultural indicators should not undermine the connections between markers and indicators.
- The cross-cultural indicators should be visually coherent with the four sets of site indicators.

The analysis entailed identifying common themes that emerged across indicators and making inferences about groupings that explained the patterns and accounted for differences across sites. The analysis team (members of the PZ research team) used a mixed approach: two members used deductive methods working from the broad theory to more specific understandings and one member used inductive reasoning working from the specific markers to identify a broader pattern. One review foregrounded the markers, combining feels-like and looks-like markers from the four sites and categorizing them anew to see what patterns emerged. Another review foregrounded the indicators, analyzing similarities and variations of playful learning indicators across sites. A third entailed color-coding the markers and indicators by research site and then reorganizing them across sites. In triangulating methods, each researcher shared their approach and proposed a hypothesis for indicator categories and groupings of markers. We then reached a collective understanding of cross-cultural similarities and differences. We shared drafts of the cross-cultural indicators with educators from the four contexts for member-checking to ensure they reflected playful learning in their settings and to see if anything was missing. Based on their feedback, we created the final model you read about in Chapter 3.

The “How” of Playful Learning

The answer to our final research question, “How can educators promote playful learning?”, is informed by the long tradition of inquiry and active and project-based learning along with collective wisdom and scholarship of school leaders on how to promote such learning. We also drew on the wealth of data from the four research sites detailed in Table A.1. Across our interviews, classroom observations, and focus groups from the 15 collaborating schools, educators shared many powerful teaching practices and strategies. Our role at this point in the process was to organize and lift up these practices and make the wisdom of these innovative educators visible to others. The findings from this research question are the PoP Practices and related strategies that you read about in Chapters 4 and 5.

Our data analysis for developing the practices involved diving back into the data and using open coding (Saldaña, 2012) to catalogue the teaching and leadership moves that teachers and school leaders described. We then organized the practices and strategies thematically, noting patterns across research contexts and identifying examples from the data to illustrate these themes (Braun and Clarke, 2006). To make the practices most useful for educators and school leaders, we separated teaching and leadership practices into two separate groups, presented in this book as Chapter 4 (for teachers) and Chapter 5 (for leaders).

Throughout our iterative process of reviewing and organizing the data into practices and strategies, we reached out to educators across the research sites numerous times for member-checking (Creswell and Miller, 2000). Sometimes we asked for additional information about a particular strategy and sometimes we invited feedback on the emerging set of practices and strategies.

This was a lengthy and complex research endeavor stretching over eight years and four continents, and involving hundreds of educators and learners. We hope this Appendix has offered some additional information to those interested in research methodology about how wonderfully complex, messy, and inspiring collaborative, cross-cultural research can be.

Appendix B: Meet the Authors

In Appendix B we introduce ourselves so you can have a better understanding of where the ideas in this book come from. We have each written a short bio that lists elements of our background that influence our approach to education, schools, and playful learning.

Ben Mardell

As a boy growing up in a Jewish-American family near Chicago (U.S.), I became very interested in Robert Kennedy's 1968 presidential campaign. Kennedy's call for racial and economic justice resonated with my 8-year-old self's sense of fairness. I knew that I wanted a career that would involve working for social justice. Education has been that career. After graduating with an economics degree from Brown University, in 1983 I took a job teaching 3-year-olds. I have taught 4-, 5-, and 6-year-olds as well. As part of my professional journey, I received a master's in education from Wheelock College and a doctorate in Child Development from Tufts University. I have also been a teacher educator and, since 1999, a researcher at Project Zero. At PZ, I have worked on the Making Learning Visible (a collaboration with educators in Reggio Emilia), Inspiring Agents of Change (a collaboration with Opal School), and Children are Citizens projects. I enjoy hiking, swimming, biking, and playing games with family and friends.



Jen Ryan

In 1997, a year after finishing college with a degree in art history, I left my rural home state of Maine (U.S.) and headed to New York City to work at the Brooklyn Museum of Art. Teaching students in several galleries, I would often have to walk them by a Gaston Lachaise sculpture called "Standing Woman." She is very tall, nude, voluptuous, and fierce. And she tends to provoke awkward giggles from most 3rd graders. The first several weeks of my teaching I would try to quell the silliness—hustling students by, distracting them from the sculpture. But after listening to advice from an educator colleague, one day I decided to stop in front of her. We looked. We were quiet. We assumed her pose. I asked students to describe what they saw in the sculpture, how they felt in that pose, to describe a memory it evoked. There were still a few giggles, but these were now accompanied by questions, observations, and personal stories of strength and power. This moment was formative, later inspiring me to view my exploration of the arts through a lens of teaching and learning. I enrolled in the arts in education program at Harvard Graduate School of Education and began working with two researchers from Project Zero on a national arts education research project. Four research projects and sixteen years later, I am still at Project Zero. I love designing and engaging in participatory research and thinking about the arts, agency, dispositions, wonder, and curiosity. I am a researcher; mother and wife in a family of makers and explorers; knitter; and lover of winter, the arts, woods, oceans, travel, messy ideas, lists, and questions.



Mara Krechevsky

I never knew what I wanted to be when I grew up. I was a philosophy and psychology major at Yale University. Then I got fired from a job at ETS (Educational Testing Service, in Princeton, NJ), spent a year picking grapes in the south of France, and dropped out of Harvard Law School. I discovered Project Zero in 1983 when I rode the T into Harvard Square every few weeks to look at the job postings on a Harvard bulletin board (no computers or internet back then). I had never heard of the psychologist Howard Gardner, who nonetheless hired me to study two of the intelligences identified in his newly-formed theory of multiple intelligences. I have been a PZ researcher ever since. I have participated in many research projects, the most formative of which was Making Learning Visible, a 15-year collaboration, first with preschool educators in Reggio Emilia, Italy, and second with PreK-12 U.S. educators, to investigate and enhance group learning for children and adults, in particular by documenting children's learning processes. I love learning and learning about how to support it. I have multiple identities, chief among them, co-researcher, friend, learner, educator, writer, reader, listener, speaker, arts-lover, and traveler. I am also a Jewish-American, cis-gender spouse and mother of two, who loves to play with people and words.



Megina Baker

I was born in rural Maine, in the Northeastern U.S., and spent my early childhood among the woods, in my mother's enormous vegetable garden, and swimming in the frigid Atlantic Ocean. I knew I wanted to be a teacher around age 7, when my favorite game was to play "school" with my little brother as my reluctant student. I clearly had a lot to learn about being a teacher. In high school, I designed my own "student teaching" experience with an amazing 2nd-grade teacher at the local elementary school and then set off for college. A study-abroad preschool internship in Sweden turned into a lifelong bilingual, bicultural identity when I met my husband and stayed in Sweden. A master's in early childhood education from Tufts University and a Ph.D. from Boston College in Curriculum Instruction deepened my knowledge of teaching and learning. Collaborations with the Boston Public Schools writing the Focus on K2 curriculum and ongoing interactions with programs inspired by the preschools and infant-toddler centers in Reggio Emilia, Italy, influenced my philosophy of education. As an adult, I identify as a white, cis-gender, bilingual, bicultural woman. I am a teacher, a mother of two young bilingual



children, a musician, a gardener, and a hiker. It has been a joy to be a part of the PoP team from the start, sticking with this research through my time as an early childhood teacher educator at Boston University, and now as Director of Teaching and Learning at Neighborhood Villages, a non-profit dedicated to supporting excellent early childhood systems based in Boston, MA, U.S.

Savhannah Schulz

Like a platypus, I never felt that I neatly fit into the categories the world provided. I was German but somehow also South African. I was an ardent art lover, fascinated by science, yet also passionate about sports. When I was 15, I left the multi-cultured, densely populated district in the north of Germany that I called home and moved to a small town a few hours from Johannesburg in a search for my identity. There, in a classroom filled with fifty students, I gained a deep appreciation for the value of education, as well as the beauty of diverse and complex identities. I returned to Europe to pursue a transdisciplinary education in the UK and Denmark. Across three degrees, I majored in Visual Design, Psychology, Cognitive Science, and Semiotics. In 2017, I was fortunate to discover the Interacting Minds Centre (Aarhus University, Denmark) and the Pedagogy of Play research group at a conference about play. Only a few months later, I joined both groups and began my doctoral fellowship. Surrounded by wonderful minds (and so many fellow platypuses), I learned to appreciate my identity as an interdisciplinary researcher/visual designer trying to understand reflection and playful learning.



Yvonne Liu Constant

I was born in Taipei, Taiwan, to an extended family of educators—my parents, as well as five of my six aunts, are teachers or professors. From my art teacher aunt, who invited my cousins and me to explore new mediums alongside her, my math teacher mother, who noticed numbers and patterns all around us, my grandmother, who had a wealth of knowledge about botany and herbal remedies without formal schooling, and my microbiology professor father, whose motto was to spare no expense on books and travel, I learned that education extends far beyond schools and that a curious mind and a playful heart lead to the satisfaction and joy of discovery. After graduating from National Taiwan University, I moved to the greater Boston area, Massachusetts, U.S., for graduate studies at Tufts University and earned a master's and Ph.D. in Applied Child Development while teaching preschool, kindergarten, and 1st grade. From my mixed-race marriage and family-in-law, my friends from all over the U.S. and the world, and my students and their families with different life experiences, values, and beliefs, I learned to examine my own cultural context and implicit biases, to remain open-minded to others, and to seek understanding and common ground no matter how hard it appears. I identify as a Taiwanese American, trilingual, heterosexual, cis-gender woman, an avid reader, especially of science fiction, a long-distance runner who prefers running in the woods with frequent stops to check out animals and plants, and an environmentalist who volunteers as a citizen scientist.



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p. 4 (top left,
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pp. 24-29,
pp. 86-91

The photographs in *A Playful Introduction* from Denmark and in the Pictures of Practice *Facilitating a Student-Composed Schedule* and *Too Many Rules on the Playground* used by permission of the International School of Billund.

pp. 32-35

See Annotation of the visual at www.savhannahschulz.com/teaching-materials/playful-learning-visual

p. 222

Image of Savhannah Schulz. Photograph by Melissa Bach Yildirim