

4 THE LEGO FOUNDATION AND THE QUANTIFICATION OF PLAY

Supranational organizations, corporate philanthropies, and corporations have been promoting play-based learning and the quantification of play-based learning. One corporate philanthropy in particular, The LEGO Foundation, which is part of the Real Play Coalition, has been working with the World Economic Forum and the Organisation of Economic Co-operation and Development (OECD) to support the expansion of the measurement, quantification, and assessment of play. The LEGO Group, headquartered in Denmark, is the largest toy company in the world, earning nearly \$2 billion a year through sales of its plastic interlocking blocks and also its LEGOLAND theme parks, a series of highly lucrative Hollywood movies, and other merchandise. The LEGO Foundation, a nonprofit organization funded by the company, plays a prominent role in promoting play-based learning internationally. The foundation promoting the idea of an international educational skills crisis that ought to be met with play-based learning. It encourages the measurement and assessment of play, the inclusion of such assessments in the OECD Program for International Student Assessment (PISA) international educational comparison tests, and the linkage of quantified play to the United Nations Millenium Development Goals promoted by the World Bank.¹

The LEGO Group has not been able to rely on a monopoly over the manufacture of plastic bricks. It faces competition from inexpensive Chinese imitators, whose bricks fit LEGOs. For more than a decade, LEGO has branched out into merchandising tie-ins, partnering with both DC Comics and Marvel Comics on LEGO Super Heroes toys, movies, and video games. They also partner with Pixar on “The Incredibles” franchise, Disney, Warner Brothers, Universal Pictures on Minions, and Minecraft, among many large media corporations. Although to a lesser extent, LEGO sells classic sets of bricks without instructions, LEGO toys have increasingly moved toward providing premade cinematic and video game narratives for themed toys that interlock corporate branding and merchandising arrangements with their products. LEGO sets have concomitantly moved toward instructional kit building with step-by-step instructions for children to build branded toys (DC Comics Batman, Disney scenes, etc.) and moved away from open play. As critics of school commercialism have contended, commercial film franchise tie-ins result in greater prescribed play by children.² Critics argue that prescribed play undermines imagination, as children are observed imitating and repeating the narratives and ideologies learned from movies or television rather than creating their own narratives.³ In addition, the increase in the sale of instructional kits results in the promotion of rule-following to complete an object of someone else’s imagining. This tendency of LEGO toys coheres with the LEGO Foundation’s promotion of instrumental, skills-developing, practical forms of play. The LEGO website and the Apple App store, appear to be increasingly promoting the interface of branded toy kits with video game apps. These digital directions for LEGO suggest the growing importance for the company of capturing and commercializing the data that children produce through the use of its products.

At the very least, the quantification of play for the LEGO Group has two important dimensions. On one hand, by

inserting play into the global accountability and standards movement spearheaded by the supranational organizations OECD and World Economic Forum that represent multinational capital, LEGO aims to position its business and products as essential to educational provision, human development, economic growth, and the acquisition of individual skills that contribute to that economic growth.⁴ By promoting play as quantifiable, measurable, and integral to global educational comparisons, LEGO stands to legitimate itself and its profit seeking activities in these regards while increasing the likelihood of greater revenue.

If quantified play can be successfully integrated into global comparative educational accountability standards, then play will be measured along with other academic achievement on national tests that form the basis for international comparisons. OECD wields major soft power influence on national policy around the world as nations seek to follow trends and advice to demonstrate global competitiveness and development to other nations. Nationally, efforts will be made to increase test scores by focusing on the skills and dispositions that will be measured. Having successfully lobbied for the incorporation of play-based learning as a measurable skill, LEGO will be ready to provide the curriculum materials in the form of LEGO products. The LEGO Foundation is heavily investing in its work with other organizations to accomplish this legitimization project: Project Zero at Harvard University, MIT Media Lab, collaborations with OECD, World Economic Forum, and the Real Play Coalition to name a few of the most prominent. Secondly, the agenda for the quantification of play creates the conditions for the increasing convergence of education and media entertainment corporations around digital learning products. This convergence of education and digital media entertainment naturalizes as necessary for learning and human development gamified forms of pedagogy typified in digital social and emotional learning apps, biometric measurement systems,

personalized learning products, and the interface of physical toys like LEGOs and drones with digital apps. As well, this convergence creates the conditions for the ever-greater digital measurement and surveillance of children's activity and human activity, the normalization and "making innocent" of total surveillance and commercialization of that surveillance through the discourse of childhood innocence.⁵ The expansion of commercialized surveillance is also made to appear innocuous by trading on sentimentality and nostalgia, as nearly every adult has played with LEGO blocks as a child, and the durability of LEGOs in culture makes it seem to be affixed to childhood itself.⁶ Such digital surveillance and commercialism includes children's use of screens on various devices and webcams but also the use of biometric tracking devices that are now being put on children in some schools throughout the day, as evidenced in Wildflower Montessori School's tracking of young children's every movement.⁷ The social control and commercial extraction/digital representation possibilities of datafication are part of a broader trend toward the "Internet of Things" that aims to integrate the physical world with the internet and digital industry.⁸

This chapter considers the mutual interest of LEGO and supranational organizations in quantifying play and promoting the quantification of play-based learning. What is important to grasp at the outset is how the agenda for play-based learning fits in with the broader trend toward career and technical education (CTE) that is promoted by supranational organizations and the global corporations whose interests they represent.⁹ CTE is the latest version of a very longstanding business agenda for education that pushes public schools to teach basic skills for work.¹⁰ CTE runs contrary to humanistic and democratic visions and values for public education that aim to make learning the basis for social understanding and collective political agency. CTE also promotes direct involvement of corporations in the making of curriculum and

a vision of public schooling as worker training. LEGO and the OECD/World Bank/World Economic Forum vision for learning through play shares with CTE a central focus on play for work-oriented skill development. In the reports and promotional materials of the LEGO Foundation, OECD, and the World Economic Forum, play for skill development lays claim to specific versions of play, creativity, context, and learning for agency. As I detail later in this chapter, what is misleading in this literature is that language and concepts from progressive educational traditions are being appropriated for a vision consisting of an emphasis on vocational skills, human capital development, and school to work—a vision championed by the representatives of global corporations and the corporations themselves. The incorporation of progressive and critical educational concepts and traditions into the language and logic of business is diametrically opposed to the humanistic origins and values of these terms. In addition, such a shift undermines the public and radically democratic potential of educational practice.

Like the trend for social and emotional learning, the play-based learning movement appears as a reaction against and remedy for the standards and accountability movement of the past several decades. The standards and accountability movement has been characterized by a pedagogical approach dominated by extensive testing and teaching to the test, alignment of practice with a homogenized curriculum, a content delivery/transmission model of teaching and learning, drudgery, and scripted lessons. Through an emphasis on play, creativity, and meaningful learning, LEGO appears to promote a pedagogy that breaks with the tendencies toward skill and drill, drudgery, and decontextualized meaningless consumption of knowledge of the standards and accountability movement. The LEGO Foundation and the play-based learning movement aims to *objectivize, universalize, and claim as neutral* what are in fact interested concepts, standards, and practices about play, learning, the self, and society that tend to represent the particular values,

interests, and ideological perspectives of dominant classes and cultural groups.¹¹ The play-based learning movement appears as an *almost* progressive pedagogical approach in its assertions about what should be standardized norms for play-based learning globally. According to the literature produced by LEGO Foundation and the Real Play Coalition, the movement emphasizes student pleasure and meaning, a valuation of context and student agency, creativity, and imagination.¹²

However, play-based learning as promoted by LEGO Foundation has particular definitions of context, creativity, imagination, and agency that delink learning from the social, political, cultural, economic, and historical forces and structures that inform children's play, the meanings of play, and the approaches to pedagogy that LEGO promotes. In what follows, I first detail the ways that LEGO Foundation lays particular claim to context, agency, creativity, and imagination. I then situate these definitions in terms of broader economic, political, cultural, and pedagogical realities; social contests; and structures. What becomes apparent in such an analysis is the ways that LEGO/OECD/World Economic Forum agenda promotes a conception of play that aligns with corporate interests and ideologies and stands starkly at odds with public and more radically democratic aspirations for education yet denies the politics of the play-based learning project. This should come as no surprise from a corporation or from supranational organizations dedicated to furthering the interests of global corporations. The justifications for and promotions of play-based learning could be grounded in theoretical perspectives and traditions. However, the selective appropriation of language and concepts from the traditions of progressive and critical education demands particular scrutiny when they are employed in a perspective that largely runs counter to the aims of critical education.

To grasp the play-based learning objectivization project promoted by the LEGO Foundation, LEGO Group, OECD, and World Economic Forum, I examine multiple reports that these

organizations produced and distributed, sometimes with partner organizations. I highlight the differences between the central assertions of the play-based movement and the critical educational traditions from which many of the concepts were extrapolated.

PLAY-BASED LEARNING: REDEFINING CONTEXT, AGENCY, CREATIVITY, AND IMAGINATION

LEGO Foundation reports, white papers, working papers, and “leaflets” make the case for play-based learning to be incorporated into global educational standards and for new metrics to be developed to evaluate play-based learning.¹³ Along these lines, one of the projects of the LEGO Foundation is to promote play in poor nations where children are “affected by crisis.” The LEGO Foundation website features the humanitarian work of the foundation with pictures of Syrian and Rohingya refugees. The accompanying text reads:

The LEGO Foundation is committed to promote learning through play for children affected by crisis to address a pressing challenge of our time and change the way the world thinks about play and learning through play and its importance for young children in crisis settings.¹⁴

Similarly, LEGO Foundation does international development projects in poor nations.

The humanitarian interventions by LEGO succinctly illustrate some key elements in the broader project to lobby for play-based learning globally as central to child development, humanitarian intervention, and education. These elements include psychological developmentalist justifications for play-based learning, a claim that student differences and cultural differences matter, that learning should be “meaningful,” “engaging,” “socially interactive,” fostering “agency,” supporting “creativity,” expanding “imagination,” and “socially interactive.”¹⁵

LEGO Foundation and their academic partners “identified five essential characteristics of playful learning, namely joy, meaning, active engagement, social interaction, and iteration.”¹⁶ What unifies these essential characteristics of play-based learning is an approach to learning and play that delinks individual activity and understanding from the broader social world and specifically from the broader structures, systems, and antagonisms that inform how meaning is socially produced. For example, LEGO defines meaningful play as “when they [teachers] integrate learners’ experiences from home and school.” While nodding to play being “culturally relevant,” play-based learning is made meaningful not by relating the object of knowledge to the broader social context but rather through formal pedagogical techniques that are specific to the classroom setting, like “group reflection on learning, and scaffolding—guiding learners from what is known to what is unknown; from the concrete to the abstract.”¹⁷ This reduction of meaning to the local and the evacuation of social context from meaning appear in many of the documents. For example, Ben Mardell, Daniel Wilson, Jen Ryan, Katie Ertel, Mara Drechevsky, and Megina Baker in the white paper “Towards a Pedagogy of Play” similarly extoll the virtues of meaningful learning being impacted by “larger forces,” yet they define these “larger forces” not as social structures, class antagonisms, or institutional forces but rather as things that are not larger forces at all: “the materials available in the classroom, time, opportunities for learning to interact with each other and classroom and school norms.”¹⁸

Despite the rhetoric of learning being meaningful, contextual, and social, play-based learning literature lacks any sense of how the broader social world and its economic, political, and cultural contests and power struggles inform the lived experiences of students and structure the meanings of experiences in particular contexts. LEGO Foundation’s play-based learning interventions in poor countries and with refugees are

positioned on their website as responding to the trauma of collective displacement. Yet play-based learning in this discourse provides no basis for engaging with such students about the subjective traumas they have experienced or the objective forces that produced those subjective experience. Nor is there any sense in this pedagogy of how the act of learning through play or any other way could be the basis for changing an understanding of experience, theorizing experience, making a different meaning of experience by problematizing that experience or comprehending it in relation to broader social realities and traditions of thought.

Play-based learning literature like the “Learning through Play at School” white paper invokes “authentic experience” as that which makes learning meaningful.¹⁹ On the contrary, critical educational traditions recognize that individual experience is never transparently true or authentic but rather always ideological, political, and dependent on interpretation. Experience is mediated through values, assumptions, and sets of meanings that have to be taught and learned for experience to become meaningful. Play-based learning literature celebrates “giving voice and choice” to experiences of joy, pleasure, delight, wonder, and familiar culture.²⁰

Critical education traditions seek to expand student agency by fostering the capacity for learning and knowledge to become the basis for social action and intervention and to enable acts of social and self-interpretation and self-governance. Traditions, such as critical pedagogy, provide students with conceptual tools to interpret and problematize knowledge and experience. Contrary to this approach, the LEGO Foundation claims that play-based learning fosters “agency” but positions agency in a strictly affirmational way that both undercuts the critical, socially interpretive, dialogic, and reflective aspects of learning. Agency in this framing is about teaching methodologies, not about learning as the basis for comprehending the social world or the capacity to make such comprehension

the basis for acting on and impacting the social world. As a methodology, agency in this discourse is about giving students greater freedom of movement and task choices: “teachers offered some degree of learner choice and voice around carefully planned, managed and assessed rigorous tasks.”²¹ Play-based learning is a methodological reform announced as a better, softer, and kinder mode of standards and accountability intended to create greater efficiencies of delivery of knowledge: “The promise of such a pedagogy is that it will enable self-directed learning to thrive within the constraints of a schedule, honor children’s interests and passions within a context of targeted learning goals and standards-based curriculum, and provide schools with structures that encourage healthy risk-taking while keeping children safe.”²² Play-based learning as promoted by LEGO Foundation is not advocated as a means for students to open up questions about the relationships between knowledge claims and social authority or knowledge as a means of social and political agency. Nor is it an approach to learning that recognizes that knowledge is made dynamically through dialogic exchange. It is instead an instructional methodology for the transmission of “standards-based curriculum.”

The absence of a political, critical, and reflective dimension to this form of play-based learning means that children are deprived of an approach to learning that helps them understand what broader social, political, cultural, and economic forces have rendered them less safe (particularly in the contexts of humanitarian crises such as those targeted by LEGO Foundation’s projects in refugee camps with children fleeing Syria and Myanmar). After defining play-based learning as a depoliticized pedagogy that can foster dispositions of choice and problem solving, Mardell, Wilson, Ryan, Ertel, Drechevsky, and Baker (2016) suggest that this will position children to address the world’s problem and crises.²³ As much of the literature suggests, the experience of refugee children

is traumatic. Yet play-based learning is not positioned as a pedagogical opportunity or entry point to comprehend the social forces that produce the subjective experience of trauma, displacement, and violence. In the LEGO literature, social context is given as a reason for the need for play-based learning, but social context is not part of play-based pedagogy itself (p. 11). So international development work promoting play-based education does not address the causes of the war and poverty suffered by the recipients of the LEGO largesse. In this view, pedagogy is not about comprehending reality to act on and shape it. Instead it is a methodology to develop problem-solving skills that maybe one day can be employed to address broad social problems. This massive disconnection between experience and the social world and between broader social problems and pedagogy is at the center of LEGO's version of play-based learning. This selective reference to LEGO's attention to context and meaning depoliticize pedagogy, reducing learning to play as a methodology of efficacious delivery of standardized content and discreet skill.

Sometimes the depoliticization of pedagogy in the LEGO literature overtly makes democracy a methodology: democracy is a classroom practice, a type of personal interaction among individuals, not the basis for reconstructing social institutions. "Knowledge construction in a playful participatory approach is a democratic process in which the whole school community (e.g., teachers, children, administrators, families) act as co-researchers (in varying roles and situations), engaging in both the consumption and production of knowledge."²⁴ What is missing here is a sense of how the production of knowledge and consumption of knowledge are political outside school. The political economy of knowledge production involves the vast sums of money and questions of ownership over meaning-making industries, such as LEGO's brand-interlocking entertainment narratives. The cultural politics of knowledge production involves contests and struggles over meanings and

the relationships between the social locations and ideological convictions of specific meaning-making actors. Play-based learning as described by LEGO has no sense of how a democratic approach to learning would have to involve these key questions of the power to make meaning and own meaning-making machinery. Such glaring omissions when discussing democratic pedagogy mean that, for example, the role of global corporations like the LEGO Group as a cultural producer and the student as cultural consumer of their products remain outside the purview of the play-based learning approach. There is no sense here of how students might employ the tools of critical media literacy to analyze and interpret the narratives and ideologies in LEGO's movies, streaming content, and apps.

Delivery, efficiency, and the continuation of standards-based accountability are consistent with the project to incorporate play-based learning into the global standards and accountability movement led by the OECD and to define creativity and imagination through the discourse of skill development for work. LEGO Foundation's literature hence puts out documents calling for creativity and imagination to be quantified and assessed for skill development:²⁵

Why now? It is more important than ever that we are able to have a nuanced and productive conversation about creativity assessment, because the Programme for International Student Assessment (PISA) has selected Creative Thinking as the innovative domain for the 2021 testing cycle—in other words, the creative thinking of teenagers around the world is about to be measured and likely compared.²⁶

LEGO is in the business of getting children to consume branded mass media products. LEGO's claims about play-based learning fostering creativity are largely framed through the language of worker training and the move to shift education to "lifelong learning"—another way of describing the trend toward credentialing, in which constant worker training becomes a new normal and education becomes a business for the workplace:

“At the LEGO Foundation, we want to build a future where learning through play empowers children to become creative, engaged lifelong learners. In an age of rapid innovation, where children will encounter unimagined advances and navigate unpredictable dilemmas, this aim is more important than ever before.”²⁷

This quote begins the LEGO Foundation leaflet “What We Mean by Creativity.” The document asserts that creativity in play-based learning should be “iterative,” by which they mean experimental. The child tries new possibilities with concrete objects and creates hypotheses about the situation. In this view, creativity is a practical activity with a specific process: “This focus on process aligns with our view that creativity is a skill that can be nourished and practiced.”²⁸ The point not to be missed in the LEGO Foundation framing of creativity is that creativity is about manipulating concrete objects in the present, not about imagining something different. The narrative about creativity sounds strikingly similar to a description of using LEGOs and putting together LEGO kits: “By interacting with the world around them, they connect (link or combine two or more things), explore (adapt, or go one or more steps further) and transform (radically change) ideas and products that already exist around them.”²⁹

Lest there be any confusion that creativity is about putting together LEGOs, three pages later, a large graphic of three connected LEGOs has the heading “The Creative Process.” Each LEGO of the creative process has a title: “Exploring,” “Transforming,” “Connecting.” Subsequent pages of the document put words around images of large LEGOs. What is striking here is not only the unveiled advertisement of the LEGO Group’s product under the guise of promoting an allegedly universally beneficial pedagogical approach. What is also striking is that the product being sold informs the definition of creativity put forward in the documents. Creativity is defined through the manipulation of the immediately experienced concrete object

(in this case, plastic bricks that are interwoven with Hollywood commercial content), not through imagining something radically different from what is known and experienced firsthand. "By trying out and developing things that are new to them in everyday contexts, creators learn about their world and gain practice taking risks in a safe environment."³⁰ What "risks" would the LEGO Foundation be referring to? The risks of putting together colorful bricks? Certainly they are not referring to the risks of being a refugee in flight from a war zone or the risks of attempting to start a new life in a new context. This definition of creativity that limits imagination to the directly experienced and immediately familiar context goes hand in hand with the denial of the broader social context in the play-based learning discourse. In addition, the reduction of creativity to manipulation and experimentation with the concrete ties in with the CTE movement and global standards and accountability movement to reduce schooling to be only about preparation for work. It also justifies the project of selling LEGOs to the world under the guise of education.

In this view, creativity should not be comprehended socially, historically, or culturally. LEGO represents play and the objects of play as outside the broader social and cultural meanings that make objects of play intelligible and desirable. It is as if the political and ideological forces that make some things meaningful in a particular context do not exist.

When we talk about creativity, we mean processes that are meaningful, first and foremost, for the one creating. For this reason, we do not focus exclusively on processes that are useful or valuable to society, history, or culture broadly. When a child picks up a broom-stick and playfully transforms it into a horse, that child is responding to the familiar, internalized meanings in her environment, and adding a new and personal meaning to them. In practicing this everyday process, children develop the skills necessary to participate in processes that will ultimately be meaningful for the world as well, and the skills needed to be engaged, lifelong learners.³¹

The meaning of flying on a broomstick for the child is hardly “new” and hardly strictly “personal.” Instead, play is mediated by broader narratives, ideologies, and identifications that are in part produced by culture industries. Who produces and reworks the cultural histories of the broomstick hobbyhorse? What is it that makes the broomstick horse meaningful to the child? How does the child get the idea of the broomstick horse? Who are children identifying with when they fashion and ride it? Which cultural significations function as what Stuart Hall calls the “preferred” (dominant) reading when the child imagines the broomstick as something else? What and who engages in cultural pedagogy to form the cultural inventory from which members of a culture draw to make meanings and construct intelligible narratives? Certainly, one of the players involved in cultural pedagogy is the world’s largest toy company. After reading the above quote, I typed “LEGO broom-stick horse” into a search browser, and among the first things to come up was the LEGO Harry Potter toy set and a LEGO Harry flying on a broom. Perhaps the most prevalent image of Harry Potter is one of him with his schoolmates playing an imaginary game of quidditch on flying broomsticks. The LEGO Group actively produces meanings and points of identification in coordination with large media and entertainment conglomerates, such as Warner Brothers. The narrative of innocent and authentic creativity, spontaneous imagination, and play coming from the LEGO Foundation and their well-funded partners from academia and NGOs sounds quite different from the LEGO Group marketing director Michael McNally, who celebrated in the *New York Times* the power of LEGO movies to sell LEGOs by getting the film characters/media products inserted into children’s play: “‘We know that children’s play reality involves mixing and matching characters and backdrops from our classic sets and our licensed properties,’ Mr. McNally said. ‘In that way, they can promote any of our mini figures or mini dolls to the role of hero in their own story.’”³²

That quote was from 2014, when LEGO had just launched the first LEGO movie. Currently, LEGO Ventures has been spearheading the move of the LEGO Group into multimedia digital products, seeing education and gaming at the center of product development. LEGO Ventures invests in digital content companies with an eye on buying the successful ones.

LEGO EDUCATION

If the first major purpose in quantifying play is to establish play as a global learning standard that will pressure nations to buy LEGOs for education, the second major purpose is to expand the interlocking of LEGO toys with commercial data extraction and accumulation. LEGO Education sells numerous products like LEGO robots and science kits at all grade levels as STEAM (Science, Technology, Engineering, Arts, and Math) curriculum. Kits include Mindstorm, Spike Prime, and WeDo. These products tie in traditional plastic block sets with digital devices, and in the upper levels, they involve coding. LEGO markets these products for home consumption, home schooling, and school with the slogan “Rebuild the World.” The advertising copy for robotic STEAM toys (that range in price from about \$200 to \$1,000) reads:

Meet Hannah. Hannah is like many students who enjoy learning through play—they never see something that is beyond repair. If something breaks, they know they can always rebuild it. This is the kind of self-confidence, perseverance, and resilience that comes when engaging in purposeful play. At LEGO Education, we are committed to nurturing and growing these skills and watching students #RebuildTheWorld.

The promise of rebuilding this broken world is accomplished in the advertisements by learning to be “resilient” and “confident” by repeatedly trying to rebuild LEGO toys that break apart and fail as the child experiments with building, say, a robot. In an animated cartoon advertisement that opens the

LEGO Education website, Hannah builds a robot that gives her dog a biscuit and grows up to be an adult scientist who builds a robot on another planet. The promotion employs standard techno-utopian tropes suggesting that technology and engineering will solve the worlds' problems, which are framed as technical rather than ethical or political. For example, the WeDo kit for grades 1 and 2 has a lesson about Max and Mia's science lab getting hot, and they build a cooling fan. The activity has students build a LEGO fan. They program the fan to turn at different speeds and stop being reliant on Scratch, Jr. (a pictorial coding app). "Creativity" in the lesson involves following the prescribed model building steps to make the plastic (a petroleum product) fan by assembling the premade components.

Not mentioned in the lesson about the experience of a warming environment are the deadliest social problems facing humanity and the world, including human-caused global warming and the hotter yet possibility of nuclear annihilation—consequences of the technological domination of nature. Not only does the LEGO curriculum offer nothing to comprehend what might be breaking a world that requires rebuilding (thus reinforcing the global capitalist project of growth at any cost and the ideology of consumerism). It also suggests that the work of rebuilding requires technical practical problem-solving skills that have nothing to do with social understanding. As in the LEGO Foundation's literature promoting play-based learning, the LEGO Education toys/lessons evade engagement with the forces and interests that "break the world." For example, the Spike Prime set includes a lesson "Super Cleanup," in which students build a trash grabber. The lesson purports to teach how to test the efficacy of product designs. But there is nothing in the lesson about what produces a planet awash in trash—such as, say, a global system of capitalism that requires ever greater growth of production, consumption of need-less goods, and a global culture in which consumerism is the

highest value to ensure the profits of a tiny number of ruling class people. Instead, the lesson teaches that picking up trash requires consuming expensive plastic toys and is a complicated technical problem that demands technical expertise. In this view, pedagogy solves the world's problems by providing discreet technical skills but decidedly not by providing the intellectual tools to investigate what breaks the world, who breaks it, and who wins and loses from the breaking. For example, the superrich have grown significantly richer during the COVID-19 pandemic while continuing to roll out robots and automation that will ensure that their companies will not need to restore the jobs lost during the crisis.

LEGO Education advertising for their products emphasizes that resilience and persistence developed by rebuilding toys translates to the needed technical skills for STEM careers. Hannah in the cartoon grows up to work in a lab and puts a robot on another planet (so much for this broken planet). Creativity, problem-solving, and meaningful learning are framed as the acquisition of toys and following of recipes for toy-building that parallels the prescriptive branded play of LEGO's endless array of Hollywood branded kits. The interface with apps means that the company can collect enormous amounts of data (commercially valuable data) from students about how they are using the products. This raises serious questions about student privacy, school commercialism in the digital era, data surveillance, and the uses of the educational apps to market LEGO's other commercial products.

In addition, LEGO Education's products promote the ideologies of technology and consumerism under a guise of neutrality. Just as in the LEGO Foundation reports, LEGO Education products disingenuously deny the politics of teaching, learning, and curriculum while then claiming that the depoliticized pedagogy will form the basis of some indeterminate future salvational activity, because technical—not social or self-interpretative—skills will solve the world's problems. Agentic

learning involves learning to develop the intellectual tools to interpret, act on, and shape the world. To rebuild the world requires first understanding the world. However, LEGO Education promotes forms of agency at odds with learning the tools for social interpretation. Lessons are restricted to practical manipulation of and experimentation with direct experience and what exists in the present. This gives a sense of agency in which experience cannot comprehend the social forces, antagonisms, structures, and systems that produce individuals' lived experiences. Agency in the world of LEGO Education then becomes one bounded by consumer choice and empiricism. If LEGO Foundation is successful with the OECD in getting play-based learning established as a quantifiable measure of academic achievement, agency will become a quantifiably measured form of play in which imagination is restricted to a repetition of immediate reality, and creativity predominantly involves following instructions.

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