

Trends Shaping Education Spotlight 18

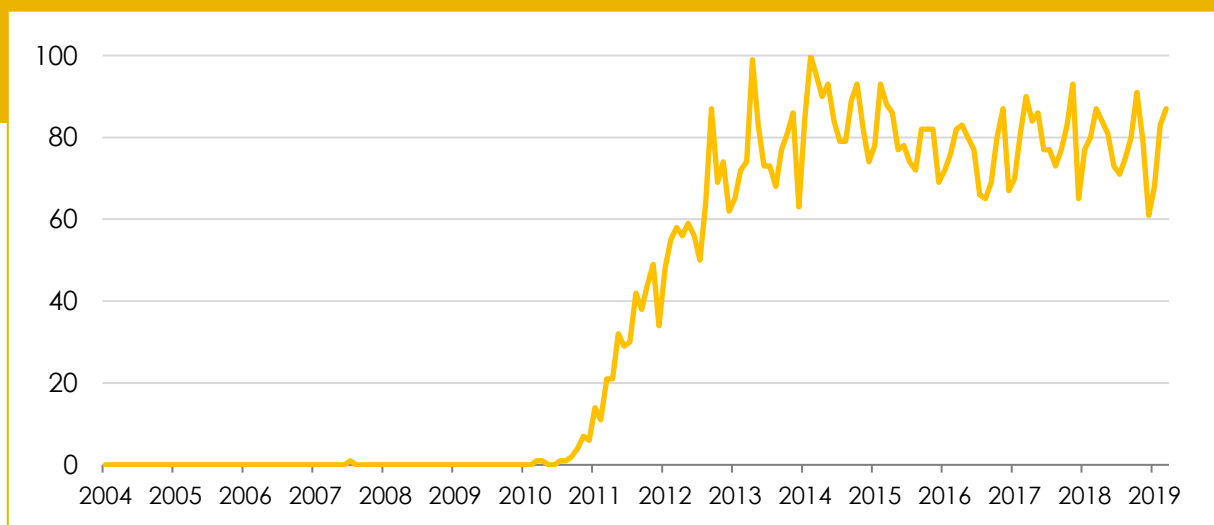
Play!

Playful experiences provide us with the opportunity to engage with others and learn in enjoyable ways. Recognising and building on the power of playfulness and play can be a way to support more meaningful educational experiences for all, life-wide and lifelong.

Gamification: Increasingly a good business

According to Gallup (2017), 85% of employees are not engaged or actively disengaged at work on average worldwide. In this context, corporations seek to make routine production processes more appealing for workers by leveraging the kind of hedonic and challenging experiences found in games (DeWinter, Kocurek and Nichols, 2014, Ferreira et al., 2017). Consequently, 'gamification', a process for enhancing a service with affordances for game-like experiences (Huotari and Hamari, 2012), has received increasing attention since the turn of the decade (White and Briggs, 2012). Figure 1 reflects such growth in relative interest as measured by the number of Google searches for 'gamification'.

Figure 1. Google searches for 'gamification', 2004-2019



Note: Numbers on the vertical axis represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. A score of 0 means there was not enough data for this term.

Source: Google (2019), "Gamification", Google Trends, <https://trends.google.com/trends/>.

Lifelong playing, life-wide learning

Many distinguish childhood from adulthood by the presence or absence of play. Depictions of adults as “serious people” and notions such as “play is a child's work” are commonplace. Yet, children put serious work into their play and games and playful mind-sets are present all along adults' life.

Play starts in humans early, and is essential for children as active agents in promoting their own learning and well-being (Piaget, 1952). For example, children explore the environment and adjust to it by means of rough-and-tumble play and familiarise themselves with social roles and rules via pretend play, such as in *playing house*.

And while play becomes more formal and structured as people grow older, it is still present. For example, sport games replace rough-and-tumble as a form of physical play, and games with rules become more common than other forms of play. In this sense, not all play is necessarily playful (e.g. sport competitions) and not all that can be considered playful can be categorised as play (e.g. chatting with others) (Mardell et al., 2016). Yet playfulness—an internal predisposition composed of creativity, curiosity, sense of humour, pleasure and spontaneity (Guitard, Ferland and Dutil, 2005)—is a natural state in all humans, young and old alike.



Main types of play for both children and adults include: physical play, play with objects, symbolic play, pretend play and games with rules

A number of emotional, social and cognitive conditions linked to play, playfulness and playful experiences are a key to people's learning (Dumont, Istance and Benavides, 2010). Play builds on joy, on the feeling of easiness and fun

(“flow”) that keeps players immersed in the task, focused and engaged in problem-solving. It connects knowledge and skills to concrete aspects of real life, developing meaningful understanding of the world around us. Play builds on a ‘beginner's mind-set’ where individuals assess, test and repeat without fear of failure, learning incrementally through iteration. Furthermore, playful experiences most often involve social engagement, key to identity formation and socioemotional adjustment (Zosh et al., 2017; Gauntlett et al., 2010).

The connection between playful experiences and learning suggests playfulness can be an important complement for education throughout people's lifetime. While play has been traditionally emphasised in early childhood education, it has now expanded to other stages of formal learning. For example, ‘gamification’ and game-based learning have become more common in schools and universities as well as the workplace (Hamari, Koivisto and Sarsa, 2014; Armstrong, Landers and Collmus, 2016).

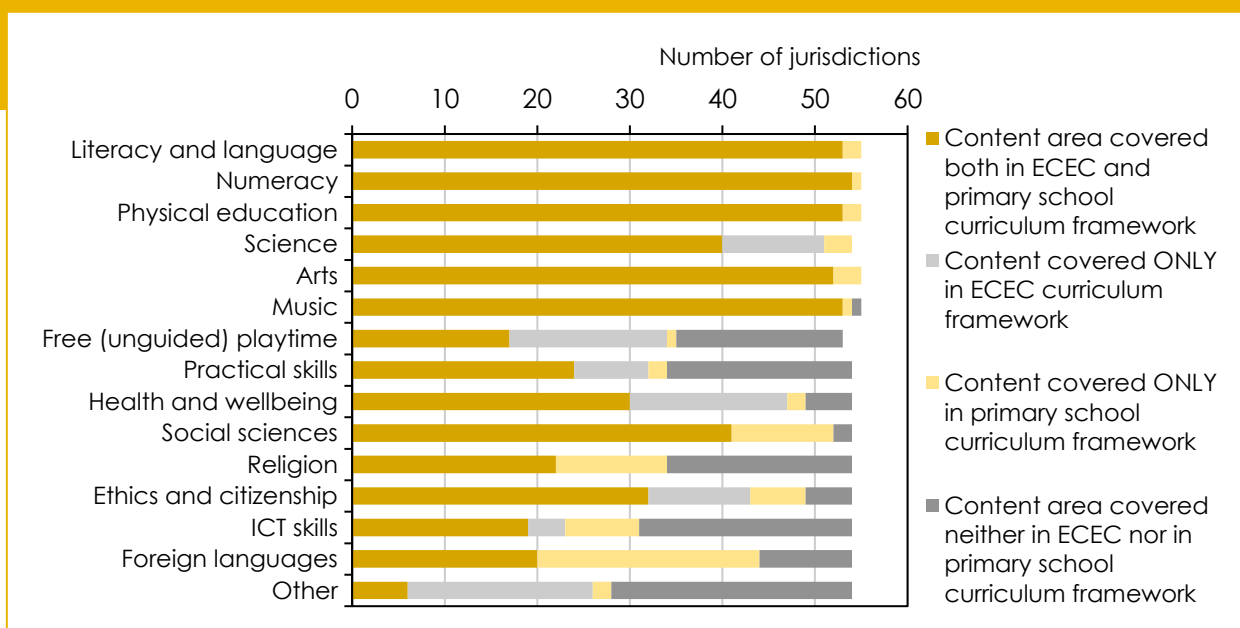
Play and learning in the early years

Children's play takes many forms. Some play is structured and adult-led, such as in adult-designed games with rules. Other forms are more free, unstructured and completely child-led; can be also risky to some extent, such as exploration outside adult supervision, wrestling or climbing and jumping from great heights (Brussoni et al., 2015).

Children develop motor, cognitive, social and emotional skills through various types of play. For example, children develop gross motor skills and spatial processing through physical play, and improve fine motor skills by manipulating objects, such as toys. Toys and games such as building blocks, word-games and board games build the basis for language and numeracy skills, and symbolic play such as moving with rhythms and drawing develops their expressive capacity and sound and visual recognition. Pretend play supports language and narrative skills, and it is important to socioemotional development and familiarisation with social roles and rules (Whitebread et al., 2017; Liu et al., 2017; Toub et al., 2019).

In education, holistic and child-centred curricula with a strong focus on play are most typical of early childhood education and care (ECEC) (OECD, 2017a; Shuey et al., 2019; Jensen et al., 2019), and many jurisdictions highlight the importance of free playtime by including it in their curricula alongside other learning areas. Figure 2 shows that recognition of free play is more common in ECEC than in primary: unguided playtime is part of the ECEC curricula in 34 of the 54 jurisdictions observed by the OECD (2017a), while only in 18 jurisdictions this is the case for primary education. In other 18 jurisdictions, free play is absent in the curricula of both levels.

Figure 2: Main curricular content areas in ECEC and primary education in 54 jurisdictions, 2016



Note: "Other" includes individual contents named by the jurisdictions that fell outside the predetermined contents, e.g., social skills and media, media and external activities, and safety.

Source: OECD (2017), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, <https://doi.org/10.1787/9789264276253-en>.

Let children be children

The absence of unguided play in formal curricula does not necessarily mean it is not present in schools. However, there is a growing concern on whether children are getting enough opportunities to engage in free unstructured play, within and beyond formal education.

First, rising urbanisation (OECD, 2016b) reduces access to open natural spaces. In addition, children's independent mobility (being able to go to the store alone, for example, or run and play in the street without adult supervision) is also restricted by attempts of parents to increase safety, and by the overscheduling of children's out-of-school time with structured activities (Brussoni et al., 2012).



Schools and kindergartens add to this phenomenon too. On the one hand, safety concerns might result in highly structured and supervised playing environments, which offer children little challenge and opportunity for free exploration—this might happen even in jurisdictions where free play has been traditionally recognised as important, such as Norway (Sandseter and Sando, 2016).

On the other hand, accountability regimes might exercise pressure on ECEC settings and schools to move towards more academic-oriented teaching strategies, reducing playful learning in the classroom and recess time (OECD, 2017a; Roberts-Holmes, 2015; Miller and Allmon, 2009). This is worrisome as recess time is essential to children for a number of reasons. It serves as a break between demanding cognitive tasks, which helps in diminishing stress and distractions and refocus cognitively; as a space for physical activity, which compensates for more sedentary time; and as an opportunity for socioemotional development via social interaction with peers (Murray et al., 2013).

Risk ≠ harm: Free play is key to child self-regulation

While the notion of “risk” is often considered as something to be avoided at all costs, there is a growing push to allow children to engage in unstructured play. By taking risks, children come to understand their skills and those of playmates, better evaluate the environment, become more capable of keeping themselves safe and relate to peers more effectively. Further gains include improved mental health, such as higher self-esteem, and physical health in the form of physical activity and healthy weights (Brussoni et al., 2012, 2015). Within play, child-led unstructured time thus seems to be key.

Adults need to conceptualise risk as a neutral term encompassing both sources of potential harm and learning. Prevention is thus as important as opportunity when it comes to a balanced view on child safety. Parents, education professionals and the broader community can support children's multiple playing needs in a number of ways.

Supporting children in their play

From the perspective of education policy and practice, both teachers in ECEC and the early years of primary education can support students in their play. Professional development opportunities can increase the knowledge of educators on appropriate playful learning design and play intervention and scaffolding, i.e. the instructional technique in which sufficient support is offered when tasks are first introduced to students and it is gradually removed when students start mastering the expected knowledge and skills. Teachers acquire know-how on how and when to initiate (e.g. providing prompts to children), direct, and provide feedback to children and how long to wait for assessing results (Trawick-Smith and Dziurgot 2010; Jensen et al., 2019).

In pretend play, for example, school staff can assess and support children's planning: what they want to play, what they want to be and what they need to prepare for doing it. Educators can scaffold child roles and rules, explaining how and why people behave in a certain way and helping children reflect on their own actions. The use of language can also be guided during play and support can be given to children for them to build strong narratives and scenarios. Educators need to decide on the most appropriate props they give to children, assessing their maturity and need for guidance as opposed to more imaginative and self-directed action (Leong and Bodrova, 2012).

The environment where playing takes place (guided and unguided play) is also important. On the one hand, this relates to general urban planning: more walkable pedestrian-friendly neighbourhoods can help diminish parental perceptions of danger (Foster, 2015) and thus support children's free play. On the other hand, it concerns school and community infrastructure, including classrooms and playgrounds. The promotion of choice and variety, movable playground equipment, social encouragement, and inclusiveness are key to encouraging active play among children on school and community playgrounds (Hyndman, Benson and Telford, 2016). In making decisions, a risk-benefit assessment can help identify potential sources of harm and better determine whether reconsideration of safety regulations and modification or removal of certain elements is needed (Brussoni et al., 2015).

Play-friendly urban planning in Barcelona (Spain)

As of February 2019, Barcelona (Spain) has its first plan to fostering children's outdoor play and physical activity. The plan includes sixty measures to strengthen and diversify recreation in the city, such as streets reserved for play in all districts every Sunday, opening school playgrounds up for community use and support services availability for children with functional diversity.

This plan has been designed in consultation with the community, including children, half of whom were not satisfied with the existing playing areas. In order to respond the children's concerns, the plan foresees the promotion of more diverse and challenging playing spaces, where children can be in contact with natural elements such as sand and water, and that foster affordances for collaborative play.

For more information:

<https://ajuntament.barcelona.cat/>

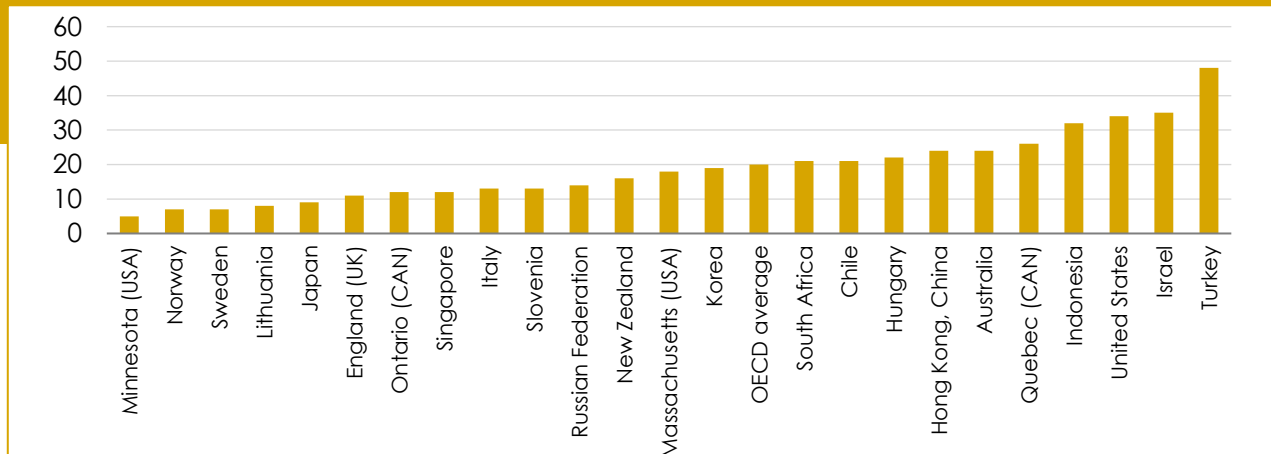
Cities and school districts in OECD countries such as Australia, Canada, Sweden and the UK among others have already shifted direction to better balance risks and opportunities in their policies regarding playground design (Barry, 2018).

Games, gamification and playful learning at school

Discussions about play in education are not restricted to younger children, as reflected by the growing interest in gamification of learning in school over recent years (Hamari et al., 2014). There are several ways with which learning is 'gamified' at school, many of which involve technology. Examples include the use of (video) games, commercial or specifically designed for education ("games for learning", "serious games"). It also involves using simulations (e.g. a virtual labs) and virtual worlds (e.g. *Second Life*) (OECD, 2016a). Games, simulations and virtual worlds are not the same (Aldrich, 2009), but boundaries can be diffuse (e.g. *World of Warcraft*). They do not always involve playing in a strict sense, although all are playful to some extent.

The use of simulations for learning, for example, has been on the rise over the last decade (Vincent-Lancrin et al., 2019). As shown in Figure 3, in 2015, teachers in some OECD and partner countries and economies reported that an average of about 20% of students made frequent use of computer simulations during science lessons, although with substantial variations across jurisdictions. About half of the students used simulations for science learning at school in Turkey, while less than 10% did in Minnesota (USA), Norway and Sweden.

Figure 3: Share of 8th grade students who frequently study natural phenomena through computer simulations during science lessons as reported by their teachers, 2015



Note: Figures based on the TIMSS database. Data from the closest year are used where 2015 data for countries were not available.

Source: Vincent-Lancrin et al. (2019), *Measuring Innovation in Education 2019: What Has Changed in the Classroom?*, <https://doi.org/10.1787/9789264311671-en>.

Simulations and virtual worlds allow for experimentation that otherwise would not be possible (e.g. to explore the inside of a human body), with no age limits and little access restrictions except for the technology itself. In both ICT-based and old-fashioned face-to-face games, participants face challenges that require active involvement, the practical application of knowledge and skills, and collaboration with others.

A key to successful game-based learning is building on how games actually work. As in recreational play, immersion in the task takes time and understanding of its rules and

dynamics is necessary; iteration is conducive to improvement and thus feedback and reflection should be continuous. Learning can be enhanced when games and simulations are a supplementary to other instructional methods, and when instruction design foresees the learning occurring in parallel to game play, i.e. the “meta-game”, as in discussions among users about the game traits and functioning (Young et al., 2012; Sitzmann, 2011).

Another way to build on the power of games is to apply game mechanics to non-game settings, where a number of game features can be used for teaching and learning (Hamari et al., 2014). From schools to universities and in-work training, these are used to keep learners engaged and facilitate learning through incremental progression. The main challenge for teachers is how to make game mechanics support learning instead of just using them as occasional rewards (Paniagua and Istance, 2018).

Gamification entails therefore a multiplicity of teaching and learning mechanics with a feature in common: they go beyond ‘game designing’ to leverage the benefits of play and games to enhance students’ learning and well-being (Paniagua and Istance, 2018). Such pedagogical strength lies in a number of elements (Flatt, 2016):

- Everyone is a participant
- Learning feels like play
- Everything is interconnected
- Learning happens by doing
- Failure is reframed as iteration
- Feedback is immediate and ongoing
- Challenge is constant

Gamification provides a pedagogical lens beyond concrete mechanisms for instruction. It relates to a broader ‘pedagogy of play’; one that proposes student agency, curiosity and enjoyment as vehicles for learning (Mardell et al., 2016). Under this perspective, the range of tools at teachers’ disposal is rather wide: using videogames is certainly an option, but a provocative question or a suggestive analogy, for example, might induce a state of playfulness that triggers engagement and learning as well.

Integrated pedagogies combining different levels of teacher and child-directedness and aiming at the development of a breadth of skills and knowledge, such as active, experiential, and cooperative learning, may better align with and reinforce such perspective. Teacher experience and knowledge as well as broader organisational and systemic capacities easing teachers’ management, planning and instruction under integrated pedagogies (time, professional development, access to professional networks, etc.) are key to facilitate such alignment well and accordingly to the specific learning needs of learners in each particular context (Parker and Thomsen, 2019; Paniagua and Istance, 2018).

Playful learning through hip-hop (Colombia)

Familia Ayara is a non-profit group that uses debate and rap to empower at-risk youth in Colombia. Their projects use art as a channel for young people to express their emotions and feelings and to reflect on the problems that affect them. Through rap, this intervention seeks to develop literacy skills, expand their lexicon and knowledge while creating rhymes and songs that they interpret. Also, it aimed at helping cultivate self-care and discipline and take youngsters away from drug use and abuse. Graffiti would allow them to express their experiences, dreams and goals through the colour and physical intervention of their environment. A robust evaluation of the outcomes of the intervention is nevertheless needed.

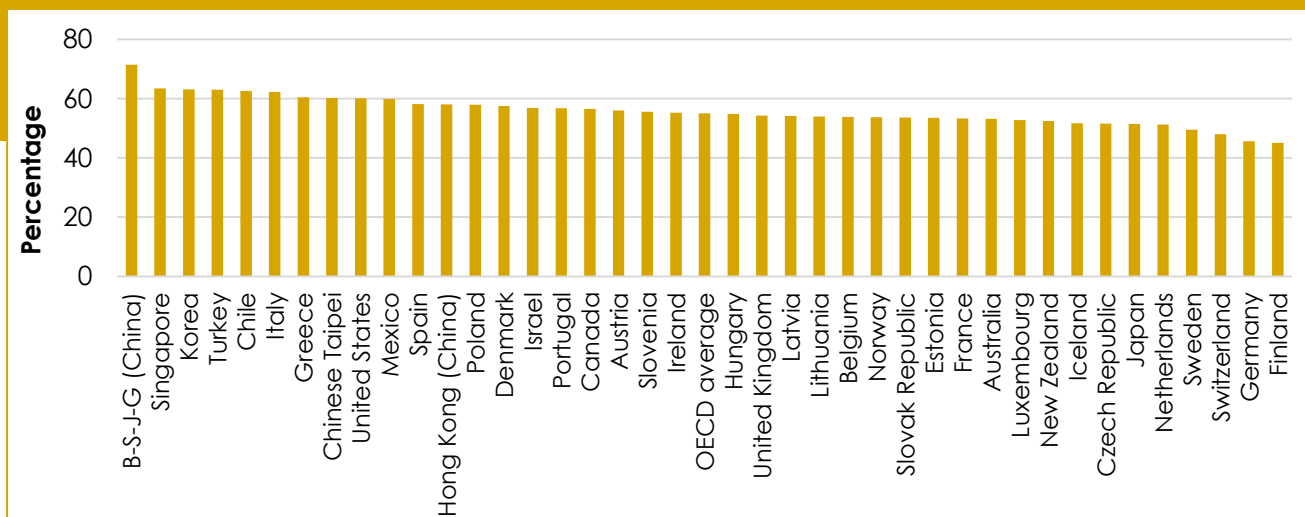
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Leisure, learning and well-being

A distinction can be made between formal, more “serious” obligations (work, study) and recreational activities in leisure time, such as gaming. Yet, as exemplified by gamification, joy may occur in the course of academic work as well as learning takes place outside of it.

Figure 4 shows that 15-years-old spend a significant part of their waking time in formal learning obligations, within and outside school. This is particularly the case in Asian countries and economies such as China, Korea and Singapore. Still, approximately half of students’ time across OECD countries develops outside such duties. Both adolescents and adults report spending between 3 and 6 hours daily in leisure activities such as playing sports, participating or attending events, visiting or entertaining friends, watching TV at home (OECD, 2019) and, increasingly, playing videogames.

Figure 4: Adolescents’ formal learning time as a share of their waking hours (weekdays), 2015



Note: Formal learning time refers to intended learning time at school and study time after school (homework, additional instruction and private study).

Source: Figure II.6.23 in OECD (2016), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, <https://doi.org/10.1787/9789264267510-en>.

In 2015, an average of 34% of adolescents across OECD countries—56% of boys, 13% of girls—reported playing videogames every day or almost every day (OECD, 2017b). Not surprisingly, gaming is increasingly capturing the public attention. Much of it (media, academia, etc.), however, focuses on the potential downsides of videogame use despite the fact that research on negative outcomes of gaming is often inconclusive and based on poor and non-transparent methods (Przybylski, 2019; Van Rooij et al., 2018).

Certainly, spare time can be a context for boredom, stress and anxiety, and a proper context to engage in unhealthy and antisocial behaviours (Siennick and Osgood, 2012). Research on adolescents’ leisure does point out that structured activities—organised activities taking place under some kind of adult supervision, such as academic clubs, organised sports or scouting—are linked to more favourable academic, psychological, and

behavioural outcomes than more common but unstructured ones, such as hanging out with friends and playing games and videogames (Farb and Matjasko, 2012).

Because of this, some have argued in favour of taking leisure “seriously”, that is, promoting and emphasising the systematic pursuit of amateur, hobbyist, or volunteer activities as opposed to those more casual, short-lived and hedonistic ones (Stebbins, 2001). Yet, whether “casual” leisure is merely a banal pastime is not so clear. Outcomes of all leisure activities are strongly mediated by contextual factors such as the family and community environments (Farb and Matjasko, 2012), and casual leisure often involves a substantial display and development of cognitive, social and emotional skills, as in gaming (Gottschalk, 2019).

Taking leisure seriously is indeed related to higher commitment and intensity of participation, and thus is a preventive mechanism for boredom and potential engagement in risky behaviours. But the degree to which individuals take their leisure seriously—as well as work and school duties—is related to their level of intrinsic motivation. Supporting individuals in developing the necessary skills and attitudes to self-initiate meaningful activities may therefore depend on the provision of a wide range of leisure options that individuals can start taking seriously at some point (Kleiber, 2012).



Leveraging the educational power of leisure for all

For children and adolescents, this relates to easing their access to a diversified repertoire of extracurricular options that they can uptake with some degree of flexibility. Flexible schedules, or the possibility to attend on a drop-in basis can be then coupled with clear messages about attendance expectation and a strong inclusive ethos that do not discourage engagement for anyone willing to participate. Schools can provide for and facilitate information about such opportunities, and communicate with families to raise awareness on the importance of encouraging children's participation without exerting an excessive pressure and control over them—which might result in the reduction of positive outcomes or participation drop-out (Persson, Kerr and Stattin, 2007; Anderson et al., 2003).

Use flexible, co-created policy interventions that target those children most in need

At the same time, when planning such an offer it is important to bear two things in mind. First, children and adolescents are the ones primarily concerned for their leisure time, planning for such offer needs to be done in

consultation with them. On the other hand, since these opportunities are not necessarily offered extensively nor for free, priority might be given to those with lower capacity to provide structured meaningful leisure for themselves, such as socioeconomically disadvantaged individuals and the youth in less dense and disconnected geographical locations.

Towards the future

Play and playful experiences have always taken place in formal education settings and contributed to enhancing individual learning and well-being. The increasing recognition of their valuable contribution in both schooling and corporate settings is certainly good news. Continue supporting such perspective is a promising agenda in which a wide range of actors may play a decisive role:

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|-----------------------------|---|
| Policy makers | <ul style="list-style-type: none"> • Consult children and youth in playground and leisure programmes design • Provide professional development for teachers that includes playful learning • Support access to educational leisure for all |
| Schools and education staff | <ul style="list-style-type: none"> • Recognise and support the educational value of play and leisure time • Facilitate reflection and collaboration to translate pedagogical practice into playful learning experiences |
| Parents and tutors | <ul style="list-style-type: none"> • Balance safety concerns with affordances for free play • Support children and youth to organise their leisure time in partnership with schools and community services |

Questions for future thinking

1. Some have suggested that teachers might be replaced by Artificial Intelligence. But what if they remain as a form of academic tutors that guide (young and old) individuals' learning in an extended leisure time (similar to what happened in ancient Greece)? What might be the risks to manage in this learning evolution?
2. Many adults increasingly enjoy more flexible working arrangements, such as telework. If this were to become commonplace, is the impact on children's play likely to be advantageous or detrimental? What could the policy consequences for each scenario be?
3. Toys are becoming increasingly sophisticated. How can educators leverage the potential advantages of software-based internet-connected toys, while at the same time mitigate their risks (privacy, data security, etc.)?

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