

# **Dannelse i det 21. århundrede Aftagerperspektiv: Kreativitet**

**Uddannelses- og Forskningsmødet 2018  
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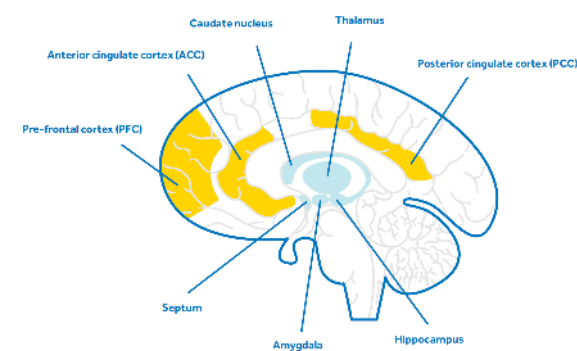
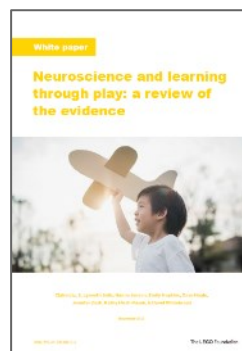
# LEGO

**LEg GOdt 1934**

# Helhed og kontinuitet i uddannelse



# Udvalgte forskningspublikationer



**De ting som vi har mest succes med, er ofte de ting som vi har skabt i samarbejde med mange andre.**



# Internationale tendenser

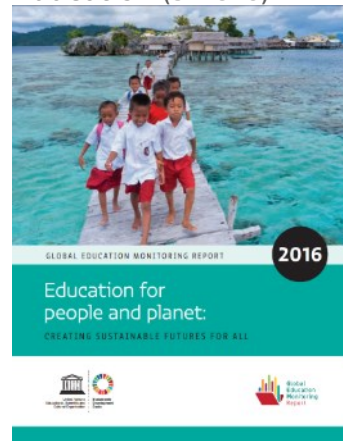
Mere end nogensinde før, er der behov for refleksion i forhold til hvad vi uddanner til, og hvordan vi forsker.

## Workforce (WEF)



65% of children entering primary school today will **ultimately end up working in completely new job types that don't yet exist**. Radically changing nature of work with more flexible work. (DK 40%)

## Education (UNESCO)



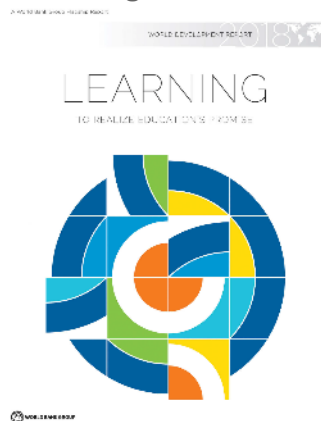
The Education 2030 Framework for Action states that all individuals should acquire a solid foundation of knowledge, develop **creative and critical thinking and collaborative skills**, and build curiosity, courage and resilience.

## Future of Education (OECD)



Students who are best prepared for the future are change agents. They can have a positive impact on their surroundings, influence the future, **understand others' intentions, actions and feelings, and anticipate the short and long-term consequences of what they do**.

## Learning (World Bank)



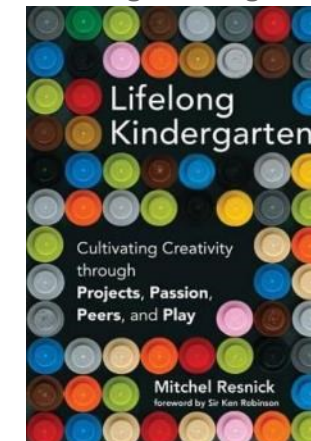
**Education as Freedom**  
The benefits of education go far beyond monetary gains: education **makes people healthier and gives them more control over their lives**. It generates trust, boosts social capital, and creates institutions that promote inclusion and shared prosperity.

## Early Childhood (Cambridge)



There is strong and consistent evidence that **high quality Early Childhood Education (ECE)** impacts children's academic development and their emotional and social well-being more powerfully than any other phase of education.

## Lifelong Kindergarten (MIT)



The rest of school, and the rest of life, should be more like kindergarten. **People of all ages must learn to think and act creatively**. The best way is by focusing more on imagining, creating, playing, sharing, and reflecting, just as children do in traditional kindergartens.

## PISA 2015, student well-being



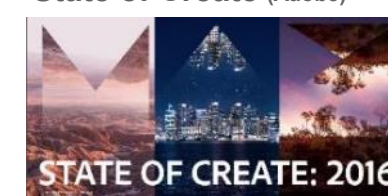
The positive impulses that promote healthy development e.g. interest, engagement, motivation to achieve. Adolescents who feel part of a school community are more likely to perform better academically and more motivated in school.

## Skills (Brookings)



A shift in education systems toward **broadening the provision of education beyond traditional disciplines** - beyond a focus on literacy and numeracy alone.

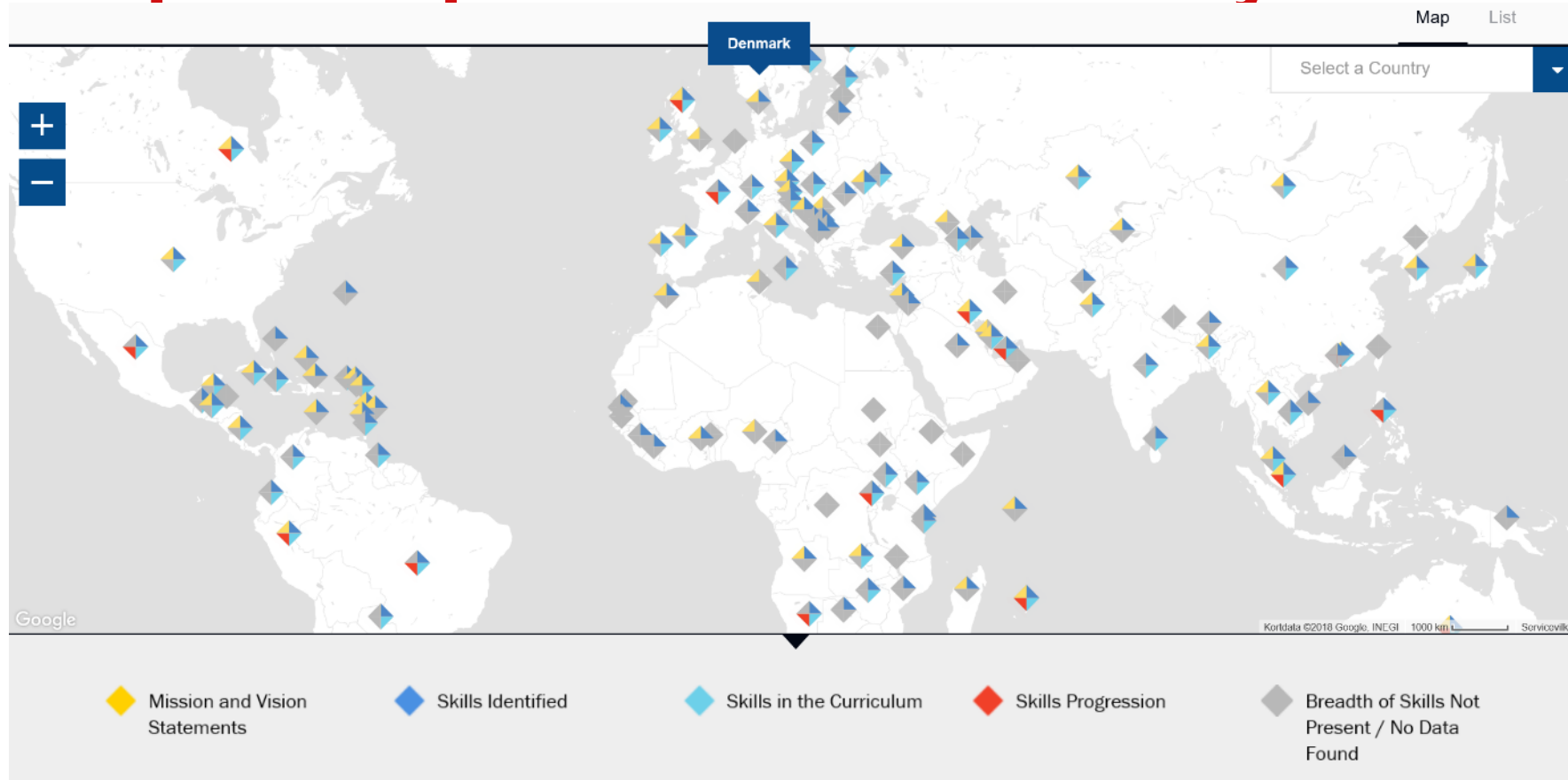
## State of Create (Adobe)



**Being creative is valuable to society and the economy**; it helps make people better workers, leaders, parents and students. Teachers and students see tech and creativity as important and want more focus on creativity and hands-on learning. Creators are more likely to be innovative, confident, problem-solvers and happy, and make a greater positive difference.

# Brookings Institution

## Kompetencer på tværs af uddannelsessystemer i verden.



### Education Innovation

We ultimately argue that two of the most important transformations needed are in **what children learn**—namely, that schooling must focus on a breadth of skills, including but going beyond academics—and **how children learn**, specifically that schooling must put students' curiosity at the center of the teaching and learning process and make room for hands-on, playful, and experiential learning.

Creativity, critical thinking, communication and problem solving are the 21st century skills most frequently identified by countries. (Kare, Kim and Anderson, 2016)

<https://www.brookings.edu/research/visualizing-the-breadth-of-skills-movement-across-education-systems/>



# Beijing

**Kan vi skabe en positiv social forandring ved at møde verden omkring os?**

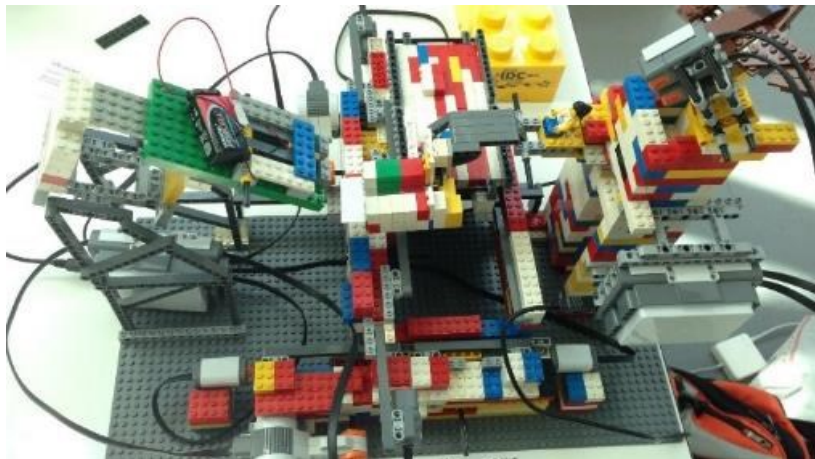






# Tsinghua University workshop

Kan i inspirere til at gøre atom-teori mere tilgængeligt og nærværende for børn og unge omkring jer?



Tilgang fra Tsinghua University:

- Vi skal ændre vores tilgang fra “**A-grade-students**” til ‘**X-students**’ – studerende som er eksperimenterende, kreative, kan samarbejde og er kritiske overfor verden.
- Forskere og undervisere skal **afprøve alternative former for undervisning** med større fokus på vejledning end instruktion.
- **Optagelseskriterier skal ændres**, så et større optag sker på baggrund af andre kompetencer f.eks. kreativitet og erfaring fra social formål.

# Tsinghua University, Lifelong Learning Lab

At understøtte en reform af det kinesiske uddannelsessystem fra børnehaven, til universitetet og livslang læring, ved at etablere et kreativt undervisningsmiljø på tværs af alder og discipliner, med udgangspunkt i grundlæggende kompetencer indenfor kreativitet og innovation.



## **Forskning- og Uddannelse er organiseret i opdelte discipliner... ... men kreativitet, leg og læring går på tværs af discipliner.**

Det gør det til en udfordring at finde viden og samarbejde omkring kreativitet og leg, og det opstår tit på uforudsete steder.



Hvordan understøtter vi uddannelsesforløb, som tager udgangspunkt i samfundsmæssige problemstillinger, og som arbejder på tværs af discipliner?



# Uddannelses- og Forskningspartnere

MASSACHUSETTS INSTITUTE OF TECHNOLOGY



## MIT Media Lab

For the past 30 years, the LEGO Group and the MIT Media Lab have collaborated on projects based on a shared passion for learning through play. Today, the LEGO Foundation and the Lifelong Kindergarten Group continue this tradition by pioneering new technologies and activities to engage children in playful and creative learning experiences.

UNIVERSITY OF CAMBRIDGE



## PEDAL Research Centre

The PEDAL Research Centre is a central partner towards building an evidence base to help us understand the role of play in children's lifelong learning and development. The Centre's research addresses three key questions which are fundamental to developing our understanding of play and playfulness in children: 1) What is play?, 2) How does play develop?, and 3) Does play have a role in school?

TSINGHUA UNIVERSITY



## Laboratory for Lifelong Learning

The LEGO Foundation and Tsinghua University are establishing a Laboratory for Lifelong Learning Tsinghua University (TULLL) in Beijing to support play and creativity from pre-school to university, and a new educational reform in China. TULLL will develop new learning tools and methods, and advocate for an increased knowledge about children and students' creativity, play and learning.

AARHUS UNIVERSITY



## Interacting Minds Centre

The purpose of collaborating with the Interacting Minds Centre at the Aarhus University is to conduct basic and applied research into the properties and mechanisms of playful learning experiences. The aim is to develop tools and methods for documenting, evaluating and measuring play and learning experiences; expand the research network and facilitate knowledge transfer to associated partners.

HARVARD GRADUATE SCHOOL OF EDUCATION



## Project Zero

The Pedagogy of Play (PoP) project is a two-year participatory research initiative in partnership with the International School of Billund and Project Zero at the Harvard Graduate School of Education. Supported by the LEGO Foundation, PoP explores how teaching methodologies around playful learning can be developed.

UNIVERSITY OF COPENHAGEN



## Baby Lab

This project aims to expand ideas of learning through play by including new foci on child exploration, parental support of exploration, interactive, socio-emotional aspects, and specific characteristics of materials in a playful child-caregiver interaction in cohorts of children 2-5.

TUFTS UNIVERSITY



## Center for Engineering Education and Outreach

Researchers from Center for Engineering Education and Outreach at Tufts University are using their experience to guide the development of a new Creator Space at the International School of Billund to help integrate classical engineering topics such as design and testing into the learning experience for students, including kindergarten.

BRAC UNIVERSITY



## Play Lab

This project aims to establish educational initiatives for children 3-5 through a guided-play curricula facilitated by trained play agents in community-based spaces called Play Labs. Research within BRAC University will focus on the impact on children's whole child development.



## Harvard University Center on the Developing Child

Using the science of early childhood and brain development as a source of new ideas that can be used to develop more effective policies & services focused on the early years of life. Testing out ideas through a science-based innovation approach to develop new interventions.



## New York University

Examining and documenting play behaviors in the home, to understand how infants development and learning depend on the toys and objects that are available to them, and the ways their parents engage them in everyday play.



## Reggio Children Foundation

The Reggio Children Foundation is based on the experience of the Reggio Children innovative infant-toddler centres and preschools. The LEGO Foundation works with Reggio Children to understand how digital technologies act as a language for children to naturally explore, express and understand themselves through experiential, active learning.



## Exploratorium The Tinkering Studio

The LEGO Foundation is partnering with the Tinkering Studio to integrate technologies into tinkering activities and to support innovative tools and learning environments on learning through play. The Tinkering Studio is part of the Exploratorium as the internationally renowned museum of science, art and human perception.



## Brookings Institution

The Centre for Universal Education, Brookings, is a thought leader in the global education community and develops new evidence around how to transform teaching and learning and how to translate that evidence into actionable strategies for policymakers.



## Design School Kolding

A Master Degree in Design for Play including a professorship, associate professor, PhD's, design lab and project management of hub for design and play in order to develop research, innovation and education on how to design for children's playful experiences.

**Vi understøtter et global forsknings- og innovationsnetværk med nu over 2000+ deltagere fra 65+ lande.**



# Designskolen, Kolding

“Design er et redskab, der kan skabe brobygning imellem teori og praksis.”

Formålet er at uddanne en ny generation af designere, der kan understøtte virksomheder og samfund i at bruge legens kvaliteter i forhold til produkter, medarbejdere og borgere, med nye designmetoder og brugerinddragelse.

Med Design for Play etableres der en ‘Master in Design for Play’, som en del af en Skandinavisk Hub for Leg og Design, som demonstrerer hvorledes forskning omkring leg kan oversættes til praksis.

Forskningen indebærer medskabelse med brugerne, med fokus på at lære fra og inspirere børn til at vokse op som designere af deres eget liv, og verden omkring dem.





# Designskolen, Kolding

Indhold af uddannelsen:

- Værdien af leg, dets oprindelse og hvordan den giver sig til udtryk fra et individuelt og samfundsmæssigt perspektiv.
- Kulturforståelse omkring Dansk og Skandinavisk kultur, dets egenskaber og kvaliteter.
- Legen som redskab til styrke motivation, samarbejde og kreativitet i praksis.
- Anvendelse af legen til at løse udfordringer indenfor læring, bæredygtighed og helbredelse.
- Redskaber som gør de studerende i stand til at formulere deres idéer og udtrykke deres arbejde på tværs af medier.
- Lære at se verden fra et børneperspektiv, - børn som undersøger hvad det vil sige at være menneske, hvordan man deltager og lever sammen med andre, hvordan man møder det ukendte, og udtrykker sig kulturelt.





# Play Lab, Bangladesh









***Uddannelses- og forsknings-  
institutioner kan være den  
kreative motor, som inspirerer  
til hvordan fremtidens  
samfund kan se ud.***

***Det handler ikke kun om at  
forberede til et ændret  
arbejdsmarked, men at skabe  
grundlaget og motivationen for  
en positiv social og  
samfundsmæssig forandring.***



*"Our idea has been to create a toy that prepares the child for life – appealing to its imagination and developing the creative urge and joy of creation that are the driving force in every human being."*

*Godtfred Kirk Christiansen 1995*

