



***Connectivity of skills and competences for smart specialization as driving force for sustainable development in Baltic Sea Region***

14 June 2017 | Visitor center/Besucherzentrum  
Maija Kāle, Nordic Council of Ministers' Office in Latvia



# Nordic Council of Ministers' Office in Latvia

- The Nordic Council of Ministers is an international organization for governmental cooperation among the five Nordic countries: Denmark, Iceland, Finland, Norway and Sweden
- The Nordic Council of Ministers' Office in Latvia, founded in 1991, has a central role in facilitating and implementing Nordic cooperation with Latvia. The office is collaborating with national and regional institutions, NGOs and Nordic diplomatic representations, carrying out projects in various fields, including Nordic and EU projects and joint Nordic-Baltic projects

## About Maija Kale

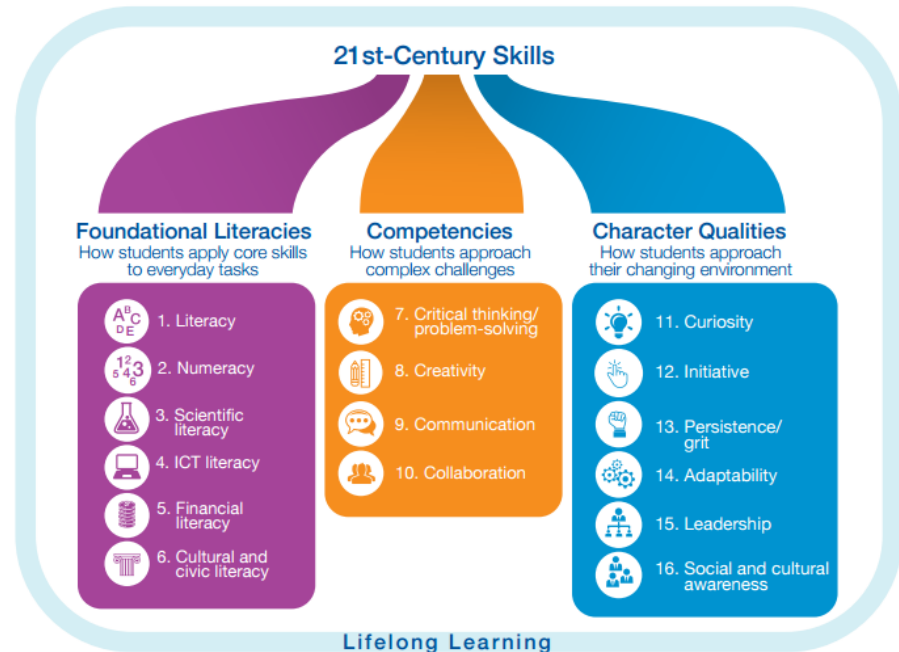
- Adviser on Sustainability, Innovation and Research since 2016
- Areas of work: energy, energy security, bioeconomy, circular economy, innovation, cluster collaboration, SME internationalization, smart cities



# Lifelong learning in the digital age

## Digital age = ‘the new literacy’

**Exhibit 2:** Students require 16 skills for the 21st century

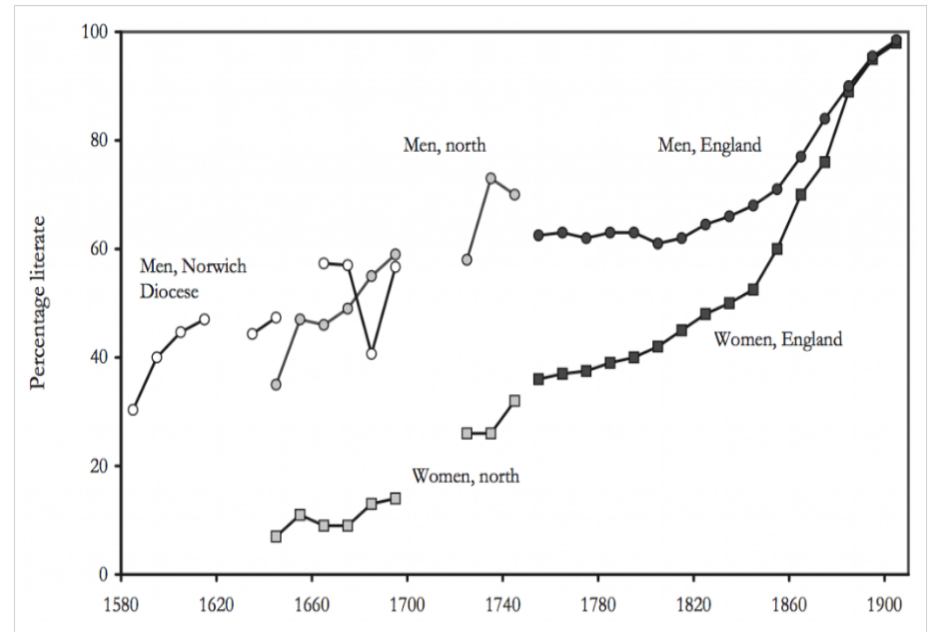


# Literacy dynamics

The following graph from Clark (2008)<sup>4</sup> shows how modernization - characterized by science, technological progress, freedom and tolerance - was enabled by improving the education of ever-larger shares of the population.

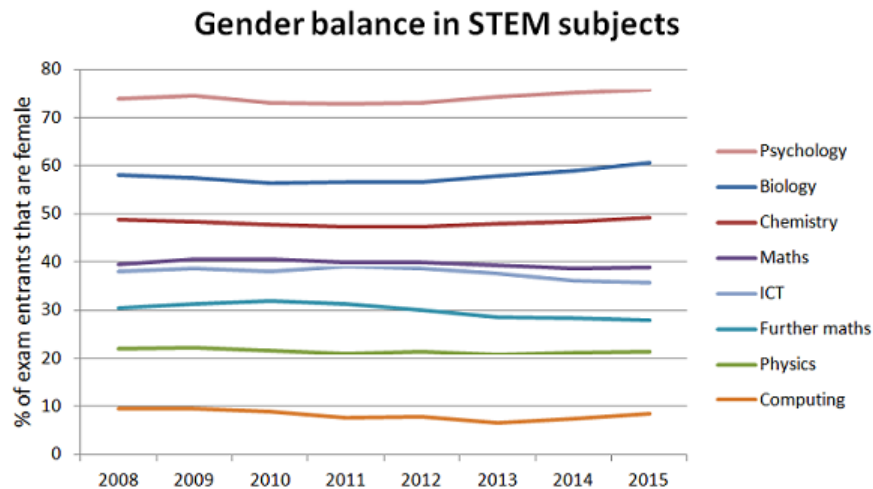
It also shows how this process of expansion led to a reduction in education gender inequality.

Literacy in England, 1580-1920 – Clark (2008)<sup>5</sup>



# Literacy dynamics

- **Most Stem subjects becoming more gender-balanced.** Only ICT and further maths have become more male-dominated in recent years.



Source: <https://www.tes.com/news/school-news/breaking-views/a-level-results-a-mixed-picture-stem-subjects>

# Lifelong learning in the digital age

**"DATA IS THE SWORD OF THE 21ST  
CENTURY, THOSE WHO WIELD IT  
WELL, THE SAMURAI."**

-Jonathan Rosenberg, adviser to Larry Page and former SVP of products at Google

Source: <http://www.cnn.com/2017/03/31/google-execs-agree-on-the-skill-employers-will-look-for-in-the-future.html>

# Lifelong learning in the digital age

## New jobs that AI will create

1. Partnering With Digital “Colleagues”
2. Becoming Digitally Mindful
3. Developing Empathy for Others’ Technology Preferences

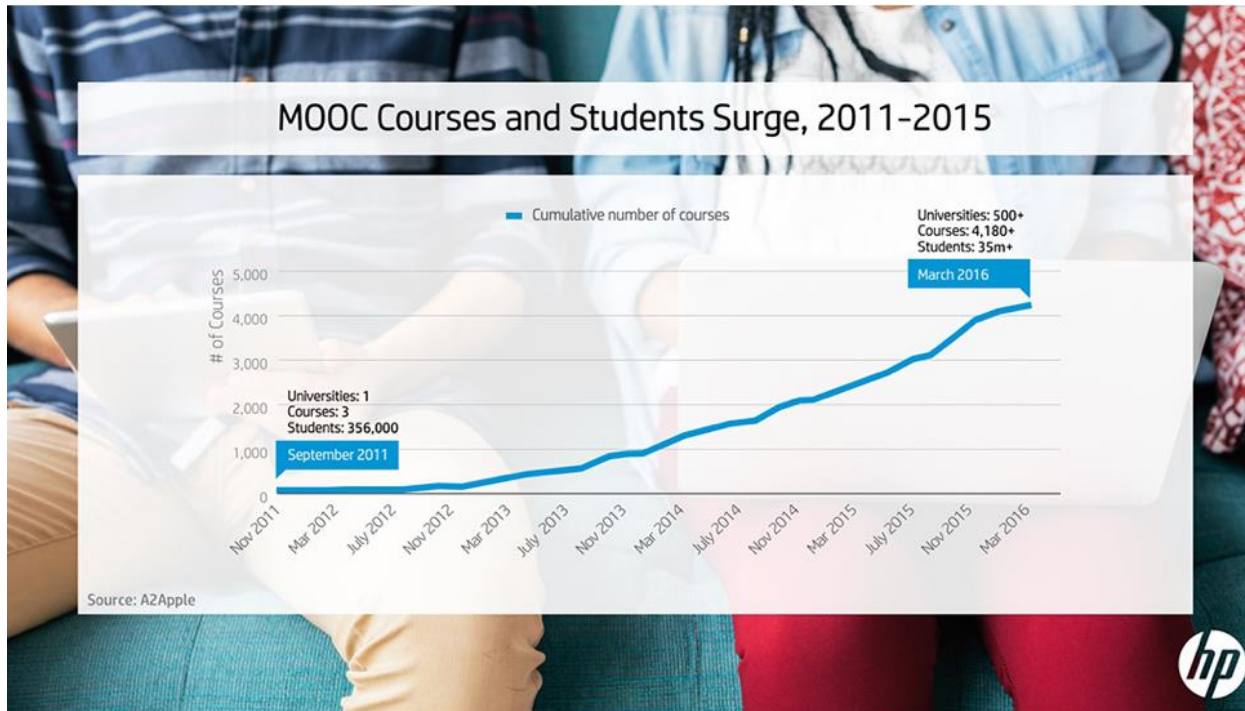
### Representative Roles Created by AI

TRAINERS	
<i>Customer-language tone and meaning trainer</i>	Teaches AI systems to look beyond the literal meaning of a communication by, for example, detecting sarcasm.
<i>Smart-machine interaction modeler</i>	Models machine behavior after employee behavior so that, for example, an AI system can learn from an accountant's actions how to automatically match payments to invoices.
<i>Worldview trainer</i>	Trains AI systems to develop a global perspective so that various cultural perspectives are considered when determining, for example, whether an algorithm is “fair.”
EXPLAINERS	
<i>Context designer</i>	Designs smart decisions based on business context, process task, and individual, professional, and cultural factors.
<i>Transparency analyst</i>	Classifies the different types of opacity (and corresponding effects on the business) of the AI algorithms used and maintains an inventory of that information.
<i>AI usefulness strategist</i>	Determines whether to deploy AI (versus traditional rules engines and scripts) for specific applications.
SUSTAINERS	
<i>Automation ethicist</i>	Evaluates the noneconomic impact of smart machines, both the upside and downside.
<i>Automation economist</i>	Evaluates the cost of poor machine performance.
<i>Machine relations manager</i>	“Promotes” algorithms that perform well to greater scale in the business and “demotes” algorithms with poor performance.

Source: <http://sloanreview.mit.edu/article/will-ai-create-as-many-jobs-as-it-eliminates/>

Source: [http://sloanreview.mit.edu/article/the-three-new-skills-managers-need/?use\\_credit=655f4d36484b23f8feb1aaa25d9765d7](http://sloanreview.mit.edu/article/the-three-new-skills-managers-need/?use_credit=655f4d36484b23f8feb1aaa25d9765d7)

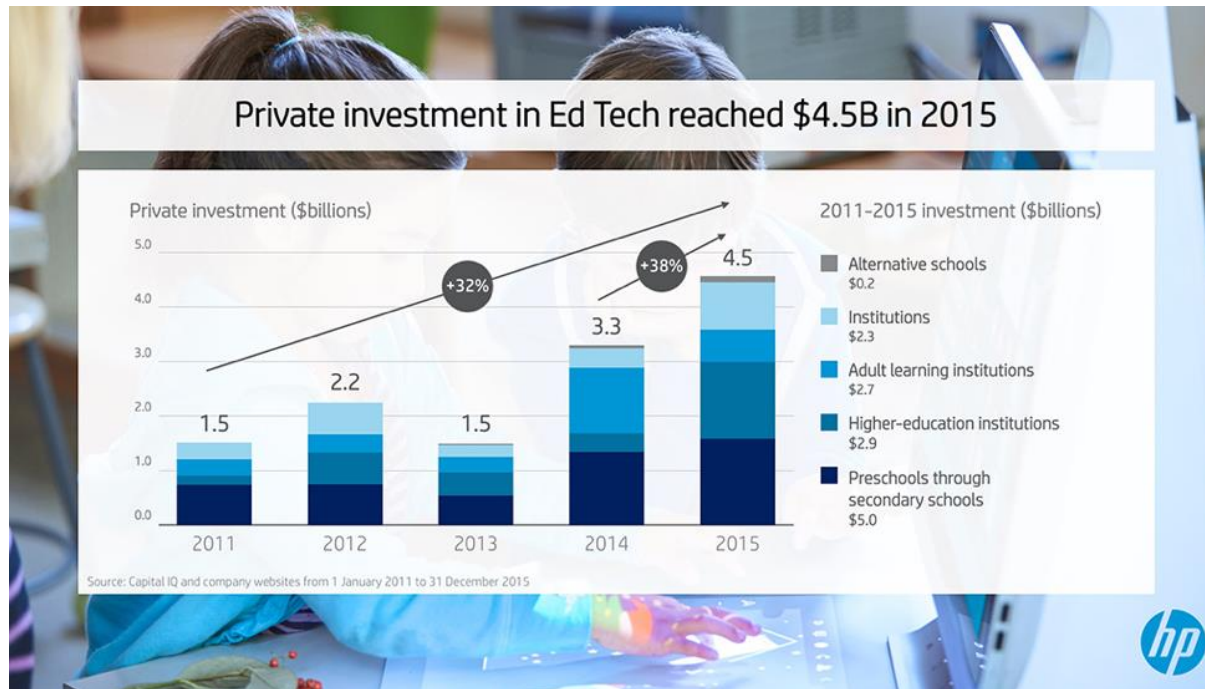
# Learning in digital environment



Source: <https://hpmegatrends.com/opening-doors-with-the-digitization-of-education-63fbd5c73f85>



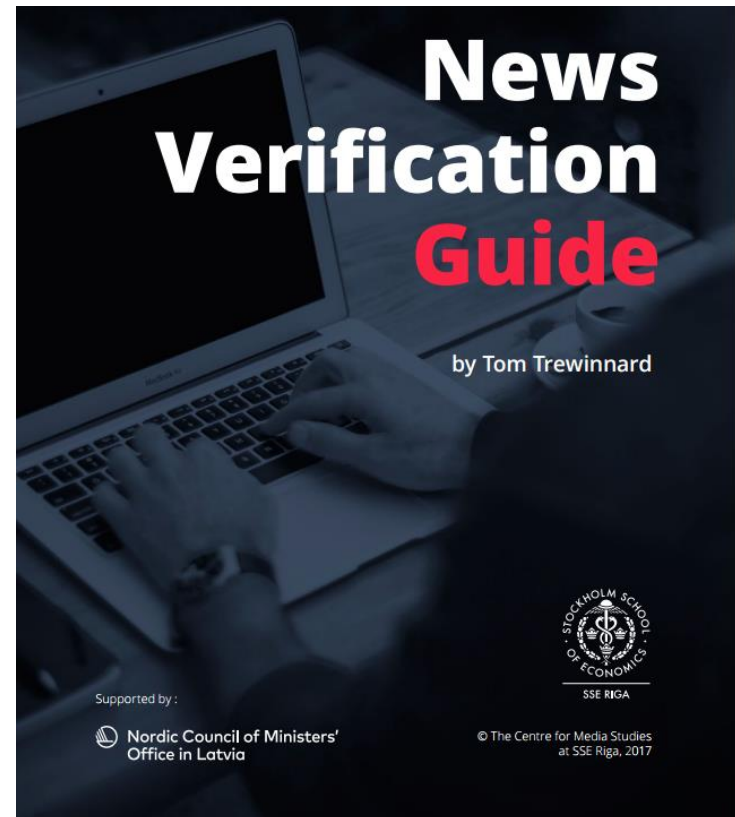
# Learning in digital environment



Source: <https://hpmegatrends.com/opening-doors-with-the-digitization-of-education-63fbd5c73f85>

# The Centre for Media Studies @SSE Riga

- News Verification Guide
- *In 2017, the Centre for Media Studies at SSE Riga has published the news verification guide for journalists prepared by Tom Trewinnard. This publication was supported by the Nordic Council of Ministers*



# The School of Data

- The school of Data
  - Data-driven stories
  - Journalists & NGOs

## In Latvia, a plea for citizens to push for data-driven public policy



Cedric Lombion - August 18, 2016 in [Event report](#), [Fellowship](#)

Data is the core substance required for evidence-based policies and decision-making. "How do we make Latvia the country that makes most use of data to inform its decision-making?" was the question that Latvian MP's and civil-society representatives tried to answer during 1,5 hours on the hot morning of July 2nd, at the occasion of the second edition of the national political festival, [LAMPA](#).



This festival, funded by the [DOTS foundation](#), aims to clarify the concept of open data which is still new for Latvian law-makers, who often confuse it with public data. The

# Riga Tech Girls

Only 2,1% girls & 12,7% boys  
plan to have a career in IT

- Tele2 Shared Service Center research

## Riga TechGirls

The first community in Latvia  
dedicated to educating and  
inspiring women about technology

21,3% students in IT are female  
1053 women in 2015/2016

- Ministry of Education of Latvia

Need to turn IT consumers into  
creators



CONSUMERS



CREATORS