# OBSERVATORIO de Sapiencia

# DYNAMIC REPORT OF
## STRATEGIC INTELLIGENCE

A look over the main educational **news and tendencies of the international landscape**



Behavioral change

The future of economic progress

Social innovation

Virtual and augmented reality

Ageing of the population

Entreprenurial spirit

Gender equality

Pandemic preparedness and response

4th industrial revolution

Educational innovation

Core soft skills

Employment and skills

Digital economy and society

Inequality

Data science

Quality basic education

Taxes

Youth perspectives

Educación STEM

**Education and skills**

Sustainable development

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Public finances and social protection systems

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Human rights

Digital communications

Innovation

Science

Covid-19

Artificial intelligence

The future of computing

Principles

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**Source:** Strategic intelligence
World Economic Forum

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# 1. Core soft skills

According to The World Economic Forum estimates published in 2020, In the next few years, around 85 million jobs will be lost due to growing division of labor between humans, devices and algorithms but at the same time new opportunities will be created adapted to the new dynamics of production and consumption. For this reason, educational plans cannot remain unalterable or rigid, since the field requires basic soft skills that are transversal to all areas of knowledge such as: creativity, flexibility, problem solving, critical thinking and teamwork. These skills begin to develop from basic education and are strengthened and refined in secondary education and in universities, as well as in life as an adult in the labor stage; In this way, soft skills are important not only to achieve greater adaptability to future jobs, but to improve the quality of life of individuals.

## INTERNATIONAL LABOUR ORGANIZATION

**Governance and the financing of skills development and lifelong learning**
25th of November 2021

The call to member states in the ILO Centenary Declaration for the Future of Work is to invest in human capacities and in the institutions of work to shape a future full of a fair, decent, inclusive, safe, productive and freely chosen work for everybody. In its 340th session, the ILO Governing Body called on the organization to take the lead on skills and lifelong learning, emphasizing on social dialogue and tripartism, human-centred recovery, the promotion of opportunities for decent work and increased productivity as a vehicle for inclusive recovery and resilience.
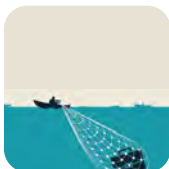
## LONDON BUSINESS SCHOOL REVIEW

**Five tips to land your ideal job**
23rd of November 2021

The LBS Career Centre supports students and alumni along their entire career journey. The article outlines five key aspects of the ideal job search process: identifying transferable skills and leadership style, believing in the impact you can have, being curious, building information networks, and letting them refer you to other job options.

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# 2. Quality Basic Education

According to an UNICEF report, in 2019 more than 175 million boys and girls didn't receive preschool education, and inequality in access remains high. Although equality in primary education has been achieved in almost two-thirds of the countries, girls continue to be less likely than boys to start secondary education; children with disabilities and the identification as an ethnic minority are other obstacles to accessing the system. The UNICEF concludes that, in addition to the challenge of increasing enrollment in boys and girls in basic education, we must pay attention to the infrastructures that enable learning, teacher training and to the creation of healthy and safe learning environments, not only during the day school but also outside it, at home.

## THE CONVERSATION

**Too many neurodiverse children don't have a full diagnosis, here's why**

3rd of November 2021

Neurodiversity is an elaborate word for all the different atypical ways in which individual brains can function. It covers both learning difficulties, such as dyslexia, and developmental conditions, including attention deficit hyperactivity disorder (ADHD). These conditions are more likely to be diagnosed in school-aged children than in later life. It is at school that the differences in how certain children function can become more apparent: the way one child might find it harder than others to grasp new concepts or another might have trouble regulating their emotions. Over recent years, through research, TV, film, books and government strategies, there has been a greater awareness and understanding of autism.

## IREX

**Checklist for overcoming digital barriers to inclusion in online learning**

1st of November 2021

During the pandemic, online learning replaced face-to-face learning in many development programs. This created new learning opportunities, but also posed challenges for the inclusion of students who have barriers to digital access. How can programs using online learning be more inclusive? An IREX research created a checklist to help teams reflect on digital barriers to inclusion in online learning and adopt more inclusive practices. This list has proven to be a useful starting point for more intentional planning.

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## Continuing
## 3. education programs

According to McKinsey & Company, In Europe and the United States, the demand for physical and manual skills that involve repetitive work is estimated to decline by 30% in the next decade, unlike technological skills such as coding, which will increase by more than half. Career paths are increasingly altered by these disruptions, creating a growing need for lifelong learning, at all ages in and out of traditional schools, even after formal education.

**BROOKINGS**

**Access to online college courses can speed student's degree completion**
22nd of October 2021

Online courses are an increasingly important part of students' college experience, but how does this impact what students glean from their college experience? Trends toward online learning were evident even before the COVID-19 outbreak. For instance, more than 30% of all students enrolled at postsecondary institutions took at least one online course in the fall 2016 term.

**RAND CORPORATION**

**Summer courses for all**
1st of November 2021

In 2011, The Wallace Foundation launched the National Summer Learning Project (NSLP) to expand summer program opportunities for students in urban districts and to study the effectiveness of district-led summer programs and how they could be well implemented. Through the NSLP, The Wallace Foundation has provided support to public school districts and their community partners in Boston; Dallas; Duval County, Florida; Pittsburgh; and Rochester, New York. In the eighth report of RAND's Summer Learning Series, the authors chronicle the early efforts of community leaders to create coordinated approaches to increasing access to quality summer programming, noting their challenges, enablers, and early outcomes. The report is intended to help city and county leaders, district leaders, out-of-school time intermediaries, and other community organizations launch and sustain such coordinated networks.

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# Pertinent
# 4. Post-Secondary Formation

The business sector has been warning about the growing differences between the skills that are in demand and those that the workforce actually has; Governments have defended the need to promote technical talent to increase the competitiveness of countries. The Deloitte report estimates that around 2.4 million jobs in the manufacturing sector will not be filled if changes aren't made. However, the path for this does not seem easy; Given the speed of the changes taking place, A greater collaboration between political sectors, educational institutions, companies and investors is necessary.

**ASIAN DEVELOPMENT BANK**

**Accreditation of online courses in higher education-early adopters in the European Union, India, Indonesia and Malaysia**

7th of November 2021

The brief provides insights on key considerations for governments, policymakers, and institutions in adopting MOOC accreditation for higher education programs. The shift to a blended learning approach that combines online and in-class learning is expected to have a lasting impact on education systems, especially since the (COVID-19) pandemic. This brief examines how the accreditation of massive open online courses (MOOCs) in tertiary education can benefit a blended learning approach as applied in the European Union, India, Indonesia, and Malaysia.

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Dynamic Report
**November 2021**

## STEM
## 5. Education

Technology has provided an important social lifeline during the time of COVID-19, connecting people to loved ones and jobs, signaling an even greater digitization in the near future. Young people need to develop digital fluency and Science, Technology, Engineering and Mathematics (STEM) skills if they are to be equipped to thrive in contemporary work dynamics. This digital fluency builds on basic digital literacy, adding the ability to apply critical thinking and ethical considerations when using or developing digital technologies and/or data processing.

**LSE BUSINESS REVIEW**

**How 21st century skills in secondary school can bridge the gender gap**
19th of November 2021

Critical thinking can support women professionally, and it should be taught in secondary school. Jukka Tulivuori and Talal Rafi argue that higher-level thinking skills such as problem solving, communication, critical thinking, collaboration, and creativity — all considered 21st century skills — can be developed through the study of STEM subjects (science, technology, engineering, and mathematics)

**HARVARD BUSINESS SCHOOL WORKING KNOWLEDGE**

**5 principles for scaling change from IBM's high school innovation**
18th of November 2021

Pathways in Technology Early College High School P-TECH has bolstered graduation rates for students of color while creating a new tech hiring pipeline giving them knowledge in cybersecurity. Rosabeth Moss Kanter and program architect Stanley Litow discuss the social impact lessons for other organizations. They highlight five principles that have allowed this school to achieve such a feat: Plan for change at scale, get on the ground and build coalition, foster a culture that assumes success, be flexible to replicate success and focus on the shared benefits.

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## 6. Educational Innovation

Before the pandemic, initiatives were being generated to create educational materials and content in a more technological and intuitive way. Different technology companies like Amplify and Knewton have been digitizing textbooks and creating content based on gamified learning, and others like Coursera, edX and Khan Academy have revolutionized education through massive open online courses (MOOCs). However, many challenges remain at the primary and secondary levels of school, as put by in evidence the pandemic, when more than half of the population in 71 countries did not have access to the internet for remote learning purposes. Also, more innovation is required in the schools curricula, balancing hard skills like reading, writing, and math with soft skills like problem solving and creativity. Therefore, it is profitable to expand the investigation of pedagogy, to make use of data and tests that allow the best performance with all types of groups of students, even those that are difficult to access.

**FRONTIERS**

**Educational robotics and tangible devices for promoting computational thinking.**
15th of November 2021

Recently, efforts have been made to add programming activities to the curriculum that promote computational thinking and foster 21st-century digital skills. One of the programming modalities is the use of Tangible Programming Languages (TPL), used in activities with 4+ year old children. In this article, professors from the University of Azores, Portugal, analyze the proposed solutions for the TPLs in different contexts, crossing them with non-TPL solutions, such as Graphical Programming Languages (GPL). The proccess begins by characterizing the features of linguistic interaction, their use and what learning activities are associated with them. Then, the relationship between the complexity of the languages with factors such as the age of the recipient and the types of output devices is shown in a diagram.

**FRONTIERS**

**360º Video integration in teacher education: A SWOT analysis**
1st of November 2021

In teacher education (TE), video is a common tool used by facilitators for preparing students' internships or during method course learnings (Gaudin and Chaliès, 2015). Christ et al. (2017) identified a range of uses in TE for different types of video use in self-reflection, peer discussion, professor-led discussion and case studies. First experimentations with video use in TE were conducted at Stanford University in the 60s and were based on a micro-teaching approach (Allen and Eve, 1968)2. Since these initial integrations of video into TE, a wide range of video tools have been developed. In recent years, facilitators have begun to use various forms of extended reality in TE such as immersive mediums including virtual reality (VR), augmented reality (AR), mixed reality (MR), or more recently 360° video.