

Source: Strategic intelligence
World Economic Forum



EDUCATION IN THE WORLD

Dynamic report of
strategic intelligence

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

With the purpose of contributing to the strengthening of post-secondary education in the City, Sapiencia carries out a tracking of the initiatives and the processes related to education in different international scenarios, through the Strategic Intelligence (SI) tool of the World Economic Forum. This brings the possibility to learn and identify projection opportunities for the educational processes of the city.

Some findings of the examination are shown below.

1 CORE SOFT SKILLS

Soft skills are related to the implementation of a combination of social and communication skills, aptitudes and the ability to approach others, 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 and post-secondary education, as well as in adult life in the workplace. They are important not only to achieve greater adaptability in future jobs, but also to improve people's quality of life.

Taking into account the importance of strengthening soft skills, Sapiencia has included, within its offer of the Arroba Medellín digital citadel, different courses focused on contributing to the well-being of individuals inside and outside work scenarios, also has included tools to improve the different skills of people, as well as fundamentals for entrepreneurship.

Some international news story that are related to the training of soft skills are shown below.



Learning-by-doing and productivity growth among high-skilled workers: Evidence from the treatment of heart attacks

VoxEu
10th of June 2022

Learning-by-doing is believed to be a major source of economic growth, human capital, and comparative advantage, but documenting learning curves has proven difficult since workers are usually not randomly assigned to tasks. This column explores learning-by-doing among Swedish cardiologists, who were quasi-randomly assigned to heart attack patients during night-time shifts. The results provide rare evidence on the existence of prolonged learning curves in a high-skilled task and support the notion that learning-by-doing can be a powerful engine for productivity growth



Collaboration Is a Key Skill. So Why Aren't We Teaching It?

MIT Sloan management Review
23rd of Jun 2022

The authors show that new research in the United States finds that despite the importance of collaboration, most organizations fall short when it comes to helping workers develop their relationship skills. They found that three-quarters of American workers perform collaborative tasks at least 41% of their work time; however, when asked about how much training they had received on the subject, 31% of the people surveyed answered that none, 6% indicated that they received a few minutes, 14% stated that an hour, 23% claimed to have taken a couple hours of training, and only 26% of the workers indicated that they had received substantial development.

2 QUALITY BASIC EDUCATION

Basic education is the educational level that lays the foundations for the learning process of girls and boys, however, although progress has been made in accessibility, new challenges have arisen with the appearance of the pandemic, which has made difficult, as stated in objective number four of the SDGs (Objectives of the Sustainable Development) to guarantee an inclusive, equitable and quality education, that promotes learning opportunities throughout life for everybody.

the quality of basic education, however, within its forgivable loan programs it offers a program aimed at partially financing master's and doctorate studies of teachers and teaching directors of preschool, basic and secondary education in the district of Medellín to study in Higher Education Institutions of the nation.

Some international news related to quality basic education are shown below.

Due to its nature, Sapiencia does not focus directly on projects related to improving



Public school funding, school quality, and adult crime

VoxEu
4th of June 2022

Policymakers often propose better funding for public schools as an early intervention to reduce adult crime, yet little causal evidence of its effectiveness exists. This column uses novel data on over one million students in Michigan to study this relationship, finding that greater school funding has a large causal effect on the likelihood of adult arrest. This is most likely driven by the positive effects of greater school funding on school quality, including better paid and more experienced teachers, and is not due to peer effects. The increase in school funding pays for itself, creating social benefits that exceed the cost.



Remote Education/Homeschooling During the COVID-19 Pandemic, School Attendance Problems, and School Return-Teachers' Experiences and Reflections

Frontiers
9th of June 2022

According to Norway's Educational Act, all children and youths from age 6 to 16 have a right and an obligation to attend free and inclusive education, and most of them attend public schools. Attending school is important for students' social and academic development and learning; however, some children do not attend school caused by a myriad of possible reasons. This article shows that interventions for students with school attendance problems (SAPs) must be individually adopted for each student based on a careful assessment of the difficulties and strengths of individuals and in the student's environment. In that sense, an explorative study was conducted that analyzed 248 teachers' in-depth perspectives on how to use and integrate experiences from the period of remote education for students with SAPs when schools reopen.

Moreover, teachers' perspectives on whether school return would be harder or easier for SAP students following remote education were investigated. The teachers' experiences might be useful when planning school return for students who have been absent for prolonged periods.



How teachers supported children and parents through COVID-19 school closures

The Conversation
22nd of June 2022

Researchers carried out research into primary school teachers' experiences of remote learning during the first and second COVID lockdowns. This involved an online survey of 271 teachers from schools across England and interviews with teachers from 24 schools in June and July 2020. School closures resulted in a dramatic shift in the role that parents were required to play in their children's learning. Teachers' expectations of parents shifted from supporting learning at home, based on what children were doing at school, to being integrally involved in schooling at home.





What will happen to our children?: The Impact of COVID-19 School Closures on Child Protection and Education Inequalities in Three Humanitarian Contexts

ReliefWeb
23rd of June 2022

The United Nations Educational, Scientific and Cultural Organization (UNESCO) estimates that school closures affected nearly 1.6 billion students in 169 countries. The majority of children in this study experienced school closures, partial or temporary reopenings, well into 2022. Education systems have very uneven capacities to respond to school closures with distance learning and support for children and the families.

Beyond this, little was known about how children living in humanitarian settings were experiencing school closures and remote learning due to COVID-19. This study aims to address this gap. It draws on qualitative data collected in humanitarian contexts across three countries and continents – Colombia, the Democratic Republic of the Congo (DRC) and Lebanon – to understand how children have experienced the impact of COVID-19 school closures on their protection, wellness and educational inequalities.

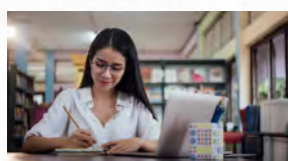
3 CONTINUING EDUCATION PROGRAMS

Due to the constant changes that the productive sector is going through, it is necessary to provide training that allows the updating of knowledge, skills, attitudes, rules and concepts for people of all ages, which implies continuing education inside and outside traditional schools.

Transformation of Learning (C4TA), where training is given to the population of the city in different programs and levels as specialists in various technological processes. The focus of the second citadel @Medellín is virtual education, where online programs of Post-secondary Education, Education for work and Specialized Talent are also offered.

Sapiencia runs a disruptive continuing education program, through the launch of two university citadels, one physical and one virtual, the first of which is the Citadel of the Fourth Revolution and the

Below there is an international news article related to continuous training programs:



5th World Report on Adult Learning and Education: Citizenship Education: Empowering Adults for Change: executive Summary

ReliefWeb
16th of June 2022

The main challenge for adult learning and education around the world is to reach those who need it most. This is the key message of UNESCO's Fifth Global Report on Adult Learning and Education (GRALE 5), which was released on June 15, 2022 at the Seventh International Conference on Adult Education to be held in Marrakesh (Morocco).

The UNESCO report shows that, although there is progress, especially in the participation of women, those who most need adult education -disadvantaged and vulnerable groups, such as indigenous students, rural populations, migrants, citizens of elderly and people with disabilities or prisoners – are deprived of access to learning opportunities.

4 PERTINENT POST-SECONDARY EDUCATION

The need to modify the curricula has been expressed by some representatives of the business sector and the graduates, since there is a gap between the knowledge acquired in the educational processes and the skills required in the business world, as a result of the different technological changes that occur in the world. For this reason, it becomes necessary to have joint effort between the actors of the educational society to reduce this gap and the risks that derive from it.

In 2020, Sapiencia modified its mission purpose through Decree 019, which has made possible to lead the formulation and the implementation of programs, plans and projects for the consolidation of Post-Secondary Education.

In this way, the public policy for post-secondary education (PPEP for the Spanish acronym) is being built, which consists of establishing a system that integrates Secondary Education, Higher Education, Training for Work, and Specialized Continuing Education, through a modular and sequential training model associated with the National Qualification System and its components, to achieve the highest degree of training according to the needs, interests and potentialities of the people, the productive sector and society in general.

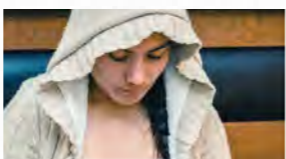
An international news regarding pertinent post-secondary education is shown below:



Digitalisation of secondary school education in Delhi during the COVID-19 pandemic: How does gender factor in?

Southern Voice
7th of June 2022

The study presents a qualitative analysis of the public secondary education service in India where an unequal access to the use of digital devices was found, which represented a barrier in all genders, with girls being more affected since they are less likely to have an adequate learning environment to study at home, and in several cases they were limited by a greater load of domestic work. These results are important for policymakers to promote the good use of digital technologies and the creation of supportive and empowering learning environments to promote learning for all.



Gender gaps in Peru: The effects of rapid digitalisation on tertiary-level education during the COVID-19 pandemic

Southern Voice
7th of June 2022

In Peru, the transition of public education from in-person schooling to online classes due to the COVID-19 pandemic has presented challenges for students, teachers, and state officials. This study

explores the difficulties of this process and its repercussions, the goal of which is to better understand the situation of public universities throughout the pandemic, specifically in the case of female students.



Responsabilidad social en la educación médica: la perspectiva de los y las estudiantes

Frontiers
9th of June 2022

Globally, there is a rising interest in the concept of social accountability (SA). The literature evaluating SA of medical schools is limited; however, some international studies have revealed a lack of understanding of SA by medical students. This study evaluated the perception of SA among medical students at a governmental university in Saudi Arabia.



Scholarships increase social mobility: Evidence from Colombia

VoxDev
20th of June 2022

Researchers conducted a study on Ser Pilo Paga (SPP), a scholarship awarded to 10,000 new students annually between 2014 and 2018 to finance all of their undergraduate education and living expenses at high-quality accredited universities. Among the findings, the authors found that one of the most important inputs for education is motivation and this can increase due to perceived opportunities; an unequal distribution of opportunities harms the accumulation of human capital of low-income students, not only because good students from vulnerable households cannot afford to go to college, but also because the lack of real opportunities discourages low-income students from pushing through the entire school process. Likewise, the researchers point out that the combination of criteria based on merit and needs in scholarship programs can provide equity and efficiency, and is a powerful tool to improve social mobility.

5 STEM EDUCATION

STEM education consisting of those areas of knowledge related to Science, Technology, Engineering and Mathematics, currently is presenting a high demand in the world of work, leading to plan how can students be equipped to acquire these skills that are necessary and transversal to all areas of knowledge. 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.

acquisition of skills for the so-called industry 4.0, which includes software development, programming languages, automation and intelligent manufacturing, among others, that allow a greater articulation with the technology industry. Likewise, a dissemination and awareness strategy is carried out to promote women's access to post-secondary education programs related to the software valley.

Sapiencia, through the Talento Especializado program offers a series of free and modular courses focused on these areas, which allows the

An international news article about the actual landscape of STEM education is listed below:



Tackling the digital gender divide in Asia

International Telecommunication Union
23rd of May 2022

Bringing more girls and young women into the tech sector could spur a faster growth of technologies with a gender perspective. This, in turn, could open up new career paths for women in the information and communication technology (ICT) field. But for this to happen, more girls and women need to be able to take advantage of the digital learning tools and devices available today. Since June 2021, UNICEF South Asia, the ITU (International Telecommunication Union) and the US-based non-profit organization Code.org have collaborated to promote the participation of women and girls in ICT. Together they have organized "ICT for Girls" events, along with "Hour of Code" workshops co-led by female ICT students and youth leaders.



How Might We Raise Interest in Robotics, Coding, Artificial Intelligence, STEAM and Sustainable Development in University and On-the-Job Teacher Training?

Frontiers
21st of June 2022

This article focuses on the questions: how teachers adopted both the STEAM approach and the use of digital tools while being supervised by researchers and students and how this changed their beliefs about technology in education. The aim of the authors was to connect Robotics, Coding and Artificial Intelligence (AI) with the fulfillment of the Sustainable Development Goals (SDGs) of the United Nations since

it is evident that technology will assume a dominant role in this development. Based on the STEAM paradigm and the 5E1 model of the Biological Sciences Curriculum Study (BSCS), the authors develop a pedagogical concept that encompasses both technological aspects, AI and the SDGs. This concept is put into practice as part of a training project with 60 science education teachers and 8 teachers in their classrooms, together with their 116 7th grade students. It was found that STEAM-based projects with a sixth phase in addition to the 5E approach can be carried out promisingly with the help of digital creativity tools. The study showed that the 5E model¹ with an additional sixth phase is very suitable for bringing STEAM into the classroom.

¹Promotes collaborative and active learning in students, they work together to solve problems and investigate new concepts by asking questions, observing, analyzing and drawing conclusions.



Second Language Teaching With STEM

Frontiers
21st of June 2022

Incorporating science, technology, engineering, and mathematics (STEM) as a connecting discipline can help language learners in STEM fields, and from other knowledge areas, to develop the ability to effectively communicate scientific and technical content within of global markets in the technology sector. This document discusses the justification and the need to use the standards of the ACTFL organization (American Council for the Teaching of Foreign Languages) through STEM tools to increase and maintain advanced language proficiency of students, as well as their employability, and effectiveness in a highly competitive global work environment.

6 EDUCATIONAL INNOVATION

Educational processes have been undergoing changes, which were accelerated after the pandemic and the mandatory use of virtual education, making it necessary to think about education in the short, medium and long term. Educational technologies are emerging around the world, and this represents great opportunities to improve access to education, but also poses challenges in terms of its application and evaluation. In this way, research in pedagogy is relevant, which can demonstrate the performance of the different technologies: their applicability and monitoring for all students, even those with specific needs.

From the Sapiencia Observatory, information search strategies are carried out that allow identifying the main technological initiatives that are carried out at an international level, in order to communicate and transfer knowledge that is useful to experts and/or decision makers, such is the case of the dynamic reports and the issues notes.

Below there's a summary of some international news about educational innovation



Can tech solve the global education crisis?

UNICEF
30th of May 2022

There is a global learning crisis – more than 600 million children and young people in school are unable to attain minimum proficiency levels in reading and mathematics. For out-of-school children, foundational skills in literacy and numeracy are further from grasp. UNICEF data shows that more than 1 billion children are at further risk of falling behind due to school closures aimed at containing the spread of COVID-19. Evidence shows that two years on from initial lock down measures, less than half of countries are implementing learning recovery strategies at scale to help children catch up. UNICEF Office of Innovation and the world's largest start-up competition, The Extreme Tech Challenge (XTC) through the UNICEF EdTech Awards tasked the global tech sector to develop solutions to improve or enhance the learning outcomes and experiences of 100 million children all around the globe.



Experiential learning and VR will reshape the future of education

World Economic Forum
23rd of May of 2022

Virtual reality supports more powerful visualization, enhances educational interaction and collaboration, strengthens the understanding of the students practice and offers services worldwide. Research and development must be aligned with maximum performance and full utilization of its benefits, as with any new technology.

It should be noted that virtual reality somewhat limits human interaction if it is not properly monitored and it is not introduced with a guided program, it can cause isolation in younger generations. Still, with the research, new developments, and the proper care, the benefits of virtual reality outweigh the risks. Virtual reality is a technology that can transform the skill set of graduates through practical applications. Learning through play, first-hand experiences, and applied knowledge creates a more engaging environment for students and results in a much stronger skill set.



How to reach the greatest learning potential in children with special needs

The Conversation
2nd of June 2022

Several computerized technological resources have shown good results in boys and girls, in adults, both young and old, and also in cases of people with different clinical conditions or neurodevelopmental disorders (autism spectrum disorder, attention deficit disorder and hyperactivity, acquired brain damage, among others). Some of these resources consist of web platforms that offer the user the possibility of facing challenges that allow him to progressively optimize the cognitive processes that he needs to improve.



The Inclusion of Children on the Autism Spectrum in the Design of Learning Technologies: A Small-Scale Exploration of Adults' Perspectives

Frontiers
9th of June 2022

This research explores the inclusion of children on the autism spectrum in the design of educational technology, an exercise carried out from the perspectives of adult co-designers.

A group of five verbally impaired children with a diagnosis of autism participated in a series of four learning technology design workshops over the course of six weeks at the Al Noor Center in Qatan, Saudi Arabia. Using a participatory design approach, a small team of three teachers and two technology developers worked together with infants to design an application for language and literacy development that can be used in a special education classroom. The result of this process was a stand-alone educational app that encompassed many of the contributions made by the children during the workshops. The inclusion of children with autism in the technology design ensures that the final product reflects their educational needs and requirements. Using a qualitative approach, this small-scale study sought to examine the participation of children with autism in the various stages of the technology design process.



Experience and Discussion on Introducing the "Internet Plus" Classroom Into Teaching Physiological Experimentation

Frontiers
9th of June 2022

The "Internet Plus" education model is a type of distance education model that promotes the transformation and updating of teaching methods, and creates a new way of designing, developing, using, managing and evaluating education. To explore the application of "Internet Plus" education in the teaching of physiological experimentation at Guilin Medical University, in China, clinical medicine undergraduate students from the classes of 2011 to 2013 served as the historical control group to teach an experimentation class using the traditional teaching model: "teacher-teaching + student-operation". Clinical medicine undergraduate students from the classes of 2014 to 2018 were the teaching treatment group, in which the "Internet Plus" educational model was used: "micro-reading-preview + test + feedback + student-operation". The authors found that this teaching model was effective and can improve the interest, confidence and practical skills of the students in the experimental classes, being favorably evaluated by both teachers and students.



¿Puede el aprendizaje digital personalizado poner fin a la crisis educativa mundial?

Frontiers
9th of June 2022

Digital personalized learning has shown promise in lower middle income countries (LMICs) in closing education gaps for lower-attaining students by allowing them to learn at their own pace and to their own proficiency, positioning it as a potential tool to address learning gaps as the worst of the pandemic recedes. EdTech² products can offer many solutions in low-income countries, so a new analysis by UNICEF shows good practices and areas for improvement to make these products more equitable and effective.

² Educational technology: is the area dedicated to the work in innovation and digitalization of learning.

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