

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.

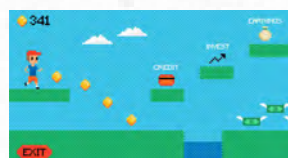
This report shows some of the findings of the exploration carried out from January 25, 2023 to February 23, 2023.

1 ESSENTIAL CORE SOFT

Soft skills are related to the implementation of a combination of social and communication skills, aptitudes and the ability to reach out to others, such as creativity, flexibility, problem-solving, critical thinking and teamwork. These practices begin to be developed in basic education and are strengthened and refined in middle and post-secondary education, as well as in adult and working life. 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.



**Gamification for financial education:
building resilience through play**

UNDP
30th of January 2023

In a changing world with increasingly uncertain economies, young people are exploring and looking for different types of financial alternatives, using digital wallets and becoming interested in cryptocurrencies. In this way, skills related to planning and managing personal finances are crucial to achieving a resilient and sustainable well-being. From Co_Lab, Accelerator Lab of UNDP Argentina, they point to gamification, that is, learning through play, as a powerful option to achieve financial literacy. This exercise has demonstrated the importance of experiential learning with simple and intuitive interactions focused on the user's experience. From there, it can be concluded that

combining gamification with apps can be a very powerful means of learning. Thus a partnership is made with Lufindo, a game that encourages the application of knowledge in concrete real-life situations; this sets in motion mechanisms that facilitate the internalization and development of competencies through gamification.



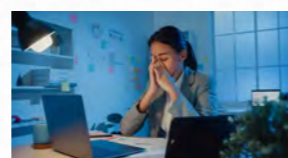
Emotions and reading: When reading is the best way to improve skills in adolescents

Frontiers
06th of February 2023

In recent years much research on reading competence in different languages has been published in parallel with the interest generated by the results of the Programme for International Student Assessment (PISA) and Progress in International Reading Literacy Study (PIRLS) reports. Which were disseminated in the media and which, have subsequently garnered the attention of public authorities in each country as a way of knowing the state of education in its young population. In terms of reading competence, there is still a long way to go in terms of research, in this way; studies that relate reading competence to emotional intelligence are less frequent. This study aims to deepen the relationship between both constructs, using a quasi-experimental¹ longitudinal approach² that observes the evolution of 389 high school students in Spain from 16 to 18 years old. The results showed evidence of a direct relationship between reading competence and emotional intelligence was obtained, particularly in the experimental group in which reading habits were stimulated.

¹ Empirical study used to estimate the causal impact of an intervention on a population.

² This is a type of data study that involves repeated measurements (more than twice) of a unit of observation.



Critical thinking is great, but in a world full of information we need to learn 'critical ignoring'

World Economic Forum
07th of February 2023

Competition for our attention has accelerated over the past decade, which is why we need strategies to help us reclaim some cognitive space. Critical thinking helps us to evaluate the information we come across, but it may not be enough in a digital world that contains more information than the world's libraries combined. This is why we also need to learn 'critical ignoring' – the ability to choose what to ignore and where to invest our limited attentional capacities. The philosopher Michael Lynch has noted that the Internet "is both the world's best fact-checker and the world's best bias confirmer – often at the same time" and therefore, navigating it requires new competences that must be taught at school in order to achieve critical ignorance.

2 QUALITY EDUCATION

Education is one of the tools that best opportunities to break the poverty circles of millions of people and to create better possibilities for just and democratic societies. Although progress has been made to improve access, quality, continuity and permanence, new local and global challenges are constantly emerging such as the emergence of the COVID 19 pandemic, emerging migratory processes in different territories and the continuation of wars as a way of dealing with differences and conflicts. These conditions have made it difficult, as stated in goal number four of the Sustainable Development Goals (SDGs) to ensure an inclusive, equitable and quality education that promotes lifelong learning opportunities for all.

Sapiencia is committed to the democratization of knowledge in the Special District of Science, Technology and Innovation of Medellín, and therefore has a wide range of programs, including scholarships and forgivable credits, which allow students to access and permanence of students in the different levels of post-secondary education, providing programs focused on the professional level (EPM Fund, Participatory Budget, best athletes and best high school graduates) and Postgraduate (Extending Educational Frontiers, Enlaza Mundos, Advanced Training) and specialized continuing education with training in Specialized Talent.

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



Bridging the gap: Holistic education policy to foster opportunities for girls in rural Pakistan

Brookings
07th of February 2023

This policy brief presents findings from on-the-ground research in rural settlements in Sindh province that explores the disparities between boys and girls in enrollment and continuation of schooling in addition to overall inadequate education outcomes. It also provides policy recommendations to support all children and particularly girls in meeting their education needs and aspirations, since seven out of ten girls in the region do not attend school. Education policy must respond to these challenges of unmet education needs and aspirations by taking a holistic, welfare-based approach that supports children to overcome the effects of exclusionary conditions to meet their education needs. However, the benefits of such an approach can only be realized if teaching practices and learning experiences are contextualized, build a connection with local knowledge, question root causes of exclusion, and support and prepare all children in negotiating pathways beyond education.



School internet access improved student learning in Peru...but it took time!

VoxDev
06th of February 2023

The promise of boosting modern-day digital competencies, promoting interactive student-centred teaching models, and providing up-to-date learning materials even in remote areas has encouraged low- and middle-income countries (LMICs) to invest considerably in Information and Communication Technologies (ICTs) in schools. However, as with many new technologies,



benefits materialise only after a period of learning and adaptation, demonstrating the importance of understanding the dynamic effects of ICT interventions over time. In this article is examined the impact of Internet access on the performance of students who attended public elementary schools in Peru and who acquired the Internet between 2007 and 2016. With the construction of a panel or longitudinal dataset of about 2.3 million second-grade students, these data were used to study their evolution over the test scores before and after schools obtained Internet, finding that cohorts who attended after the school obtained this resource, moved up in the distribution of average official test scores.



The climate crisis disrupts 40 million children's education every year. Here's how we could fix it

World Economic Forum
14th of february 2023

A new research paper from the UK Foreign, Commonwealth and Development Office called Addressing the Climate, Environment, and Biodiversity Crises in and Through Girls' Education highlights the case for improving youth education – particularly for young girls, who are often most impacted by educational disruption. This can help build resilience and mitigate climate and environmental breakdown. For the purpose of developing a two-way relationship between education and the climate and environment crises, communities under threat could become part of the solution.



Racism and classism in elite universities are deliberate mechanisms used to maintain privilege

London School of Economics and Political Sciences
20th of february 2023

The authors state that a lot has been heard about classism and racism in the Academy being a covert practice. Inequalities are blamed on institutional or systemic biases. They are identified as the consequence of failings within the system rather than expressions of individual prejudice. In the new book, Elite Universities and the Making of Privilege the authors argue that elite universities share many characteristics of institutional racism and institutional classism. They are exclusive organizations that have historically restricted access to ethnic minority and poorer students in both the UK and the US. Students from less privileged backgrounds often feel out of place and when they leave it is often with less successful grades than white, privileged peers. At the same time there is a raft of evidence detailing the poor experiences of academics at elite universities, who do not fit the institutional mould. They face similar experiences of exclusion and often find it hard to progress their careers.

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.

the first of which is the Citadel of the Fourth Revolution and the Transformation of Learning (C4TA in Spanish) where training is given to the population of Medellín in different programs and levels as specialists in various technological processes. The focus of the second citadel Arroba 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,

Below there are international news related to continuous training programs



How teaching kids energy efficiency in schools can benefit families at home

Yale Climate Connections
07th of february 2023

What kids learn at school doesn't stay at school. So by teaching students about energy efficiency in the classroom, a nonprofit hopes to help families save energy – and money – at home. "So it's things as simple as shutting down your classroom at the end of the day, taking light readings of the light levels in your classroom, and if you're over-lighting the classroom, which is very often the case, turning on a half or a third whatever the appropriate level of lights in your school room is," says Scott Thach, who helped develop the program. Thach says participating schools typically save five to 15% on energy bills, which can add up to thousands of dollars each year. And young people's enthusiasm about energy efficiency can ripple outward, so the impact multiplies.

4 PERTINENT POST-SECONDARY EDUCATION

From members of the business sector and graduates of post-secondary education programs have expressed the need to modify the curricula, as they point out that there is a gap between the knowledge acquired in educational processes and the skills required in the business sector, the result, among other things, of the different technological changes occurring in the world. For this reason, it is necessary to make a joint effort between educational actors and actors in the business, public and social sectors to reduce this gap and the risks that derive from it.

consolidation of Post-Secondary Education. In this way, Sapiencia is currently leading the construction of the public policy for post-secondary education (PPEP for the Spanish acronym), which proposes to establishing a system that integrates Secondary Education, Higher Education, Training for Work, and Specialized Continuing Education, through a modular and sequential. The policy seeks that people can achieve a degree of training according to the needs, interests and potentialities of the students, the productive sector and society in general.

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

Some international news regarding pertinent post-secondary education are shown below.



Accelerating women's digital inclusion through experimentation in Kazakhstan

UNDP
27th of january 2023

In December 2021, young women from the cities of Satpayev and Zhezkazgan in Kazakhstan had an opportunity to participate in a two-week bootcamp organized by the UNDP Kazakhstan Accelerator Lab. The experiment aimed to develop digital and leadership among women. Participants had hands-on workshops in graphic design, social media marketing, ICT skills, emotional intelligence and mental well-being, leadership and project management. They also heard from inspirational speakers from the country who are successful in ICT or STEM jobs. The bootcamp⁴ concluded with an in-person "Pitch Day"⁵ event that showcased the presentations participants had worked on during the period.

⁴ It is an intensive educational program that focuses on training people in specific skills in a short period of time.

⁵ It is an event where entrepreneurs or startups have the opportunity to present their ideas and projects to a group of investors, entrepreneurs and other interested parties in order to obtain funding and support for their business.



University rankings and their critics – a symbiotic relationship?

London School of Economics
06th of february 2023

Shock waves rippled through U.S. higher education recently, as prestigious law schools and medical schools announced their withdrawal from the U.S. News & World Report rankings. This immediately became news, because rankings and elite higher education institutions (HEIs) have developed a mutual dependence: rankings rely on the participation of elite HEIs and their prestige to enhance their own reputation. Elite HEIs rely on rankings because alumni, applicants, and policy stakeholders judge them based on their rank. However, the authors assert that critics should take up the offer and participate in public conversations. Methodological criticism, it seems, is the key lever to initiate and maintain such mutual engagement: even when becoming heated, these kinds of discussions always remain constructive in the sense that, according to their underlying logic, rankings should become more rigorous, reliable, and valid.



These are the best universities in Latin America in 2023

World Economic Forum
06th of february 2023

Latin America and the Caribbean represents 8.5% of the world population and produces 8.7% of the planet's GDP. "Latin America and the Caribbean faces an unprecedented education crisis, which could compromise our countries' future development," said Carlos Felipe Jaramillo, World Bank Vice President for Latin America and the Caribbean. However, higher education access has generally been improving. However, aspects such as access to higher education have improved overall, with the second highest enrollment rates in the world from 23% to 52% between 2000 and 2018, respectively. According to the Times Higher Education's (THE) university rankings 2023, LAC has seen a record 140 universities from 12 countries ranked this year, with many of the top region's universities situated in Brazil. The University of São Paulo, Brazil topped the list of Latin American universities in 2023, the second place is shared by the Pontifical Catholic University of Chile and the University of Campinas in São Paulo, Brazil.

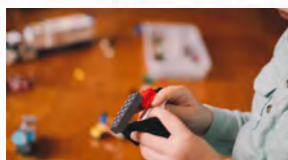
5 DIGITAL FLUENCY AND STEM EDUCATION

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 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 Valle del Software.

Some international news articles about the actual landscape of STEM education are listed below

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

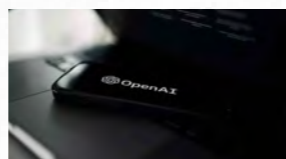


What is spatial thinking and how can children use it in education?

World Economic Forum
30th of january 2023

Spatial shape, as well as relationships between objects. Everyday activities such as giving directions, arranging shoes to fit in a box or parking a car require spatial thinking. Experts indicate that people who have strong spatial skills are more likely to be interested in science, technology, engineering and math (STEM) and to choose STEM degrees and STEM careers. This is because the skills required in STEM demand spatial skills, such as using graphs to visualize data patterns in mathematics, understanding the scale of a solar system

diagram, or using the spatial layout of the periodic table to understand chemical relationships. Thus, the authors propose that increasing spatial training, e.g., through Lego sets, especially in disadvantaged environments, can boost children's performance and motivate them to study mathematics in a more enjoyable and interactive way.



Here's why ChatGPT raises issues of trust

World Economic Forum
06th of february 2023

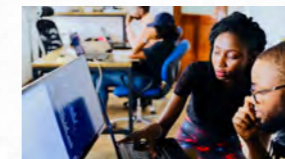
Associate Professor of Political Science Blayne Haggart from the University of Brock (Canada) critiques the generation and trust of content produced by ChatGPT. The author explains that, although the learning models appear sophisticated, they are just complex algorithms that autocomplete information from other authors as if it were something new, without understanding what it produces. The ChatGPT is only a statistical truth, since it produces the most statistically probable words, but it is not possible to verify the sources, as it is done in an academic work, where knowledge is produced from the condition of being an expert in a subject. Academic editors have moved to prohibit ChatGPT from being included as co-author and to issue specific guidelines under which it could be used. In addition, several institutions have banned its use, such as Science Pro in France and in some Australian universities. The author concludes that these academic bans are a proportional reaction to the threat posed by ChatGPT to our entire information ecosystem.



Digital skills development must keep evolving

International Telecommunication Union
09th of february 2023

Today, two-thirds of the global population, or 5.3 billion people, are online. The International Telecommunication Union (ITU) is working to connect the remaining 2.7 billion people. However, the Director of the Telecommunication Development Bureau (BDT), says that the physical infrastructure is only part of the picture, since without the necessary digital skills, people cannot take full advantage of the benefits of today's technology. With the rapid and accelerated pace of technology evolution, training and skills development must be constantly developed and improved to ensure that citizens, as well as information and communications technology (ICT) professionals have the appropriate skills and qualifications to make effective use of today's digital technology. To this end, ITU is working through the Academy Training Centres (ATC) programme where it offers more than 150 training courses to thousands of ICT professionals each year, almost 70% of whom are from developing countries.

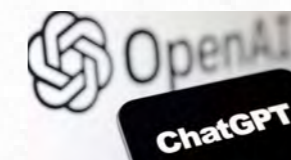


Here's how additional STEM teacher training encourages Black girls to pursue STEM

World Economic Forum
17th of february 2023

According with the study in the Journal of STEM Outreach (2023), continuing high school teachers generates academic benefits for their students, particularly for African-American girls. The study followed mathematics teachers who participated in an AMP (Applied Mathematics Program) in the state of Texas (U.S.) between 2014 and 2019. The research, conducted with econometric tools⁶ found that students who had classes with these teachers were more likely to pursue a STEM major in college, compared to those students who did not have classes with these teachers, and African-American female students were almost twice as likely to take the STEM relative to other population groups. The researchers perceive that this is likely to occur because of the high participation of African-American teachers in the program, referencing that there are many studies that show that role models are important to follow.

⁶ They are statistical and mathematical techniques used to analyze and model data, mainly economic, in order to make predictions, estimates and take informed decisions.



How does ChatGPT differ from human intelligence?

World Economic Forum
21th of february 2023

In a February 8 conversation organized by Brown University's Carney Institute for Brain Science, two Brown scholars, Ellie Pavlick y Thomas Serre from different fields of study discussed the parallels between artificial intelligence and human intelligence. From the contributions highlight that the predictive learning model has been around for decades, as computer scientists have long to build models that show this behavior and can talk to humans in a natural language, what is new is the way in which ChatGPT is trained or developed, as it has access to a large amount of data, as Pavlick states "all the sentences on the internet". Another new factor that has enabled its success is the free access to the public, since previously access to specialized and paid platforms. The authors explore here some considerations of how ChatGPT acts similar in some aspects to the human brain.

6 EDUCATIONAL INNOVATION

Educational processes have been undergoing changes, which were accelerated after the COVID 19 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 students, even those with specific needs.

From the Observatorio de Sapiencia, 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 international news about educational innovation:



Engaging with teachers unlocks the potential of technology in schools: Evidence from Pakistan

VoxDev
21th of february 2023

In 2016 in partnership with the government of the Punjab province, Pakistan, the authors conducted research involving the use of two randomized controlled trials with two models of eLearn implementation: eLearn Classrooms and eLearn Tablets. Both versions had similar math and science content linked to the existing curriculum, but were targeted to students and teachers at different grade levels. Eighth grade teachers implemented eLearn Classrooms, while sixth-grade teachers implemented eLearn Tablets. In eLearn Classrooms, teachers were involved as providers. In addition to the tablets and training, the classrooms of the eLearn Classrooms schools received 40-inch LED TV screens. Teachers projected eLearn content from their tablets onto the screens. In eLearn Tablets, in addition to teachers receiving tablets and training, each student received a tablet for their personal use. The classrooms did not receive screens and teachers were not able to show the content to their students. After approximately 4 months of exposure, results show that eLearn Classrooms increased student learning, while eLearn Tablets decreased student learning.

7 FUTURE OF WORK

The world of work is changing fast - and mapping out healthy new work models is necessary to channel that change into the creation of stronger, sounder livelihoods and sufficient safeguards. Job creation was already high on the global agenda before a pandemic upended labour markets in different territories. In this context, the education sector recognizes the need for articulation with the different actors of society in the elaboration of policies that can ideally help both workers and their employers. The most successful approaches will take into account changing demographics and changing job roles, and will leverage disruption as a means to design workplaces that genuinely serve everyone's needs.

Sapiencia offers programs focused on improving the employment profile of its beneficiaries in order for them to achieve a more harmonious transition to the labor market, for this has a wide range of offerings to cover the most pressing needs of the labor market and industry 4.0. in the short and medium term. It offers disruptive courses on technological megatrends that will impact the vast majority of jobs such as: Artificial Intelligence, Data Science, Blockchain, among others.

Some international news articles about future of work are listed below



What is generative AI? An AI explains

World Economic Forum
06th of february 2023

After years of research, it appears that artificial intelligence (AI) is reaching a sort of tipping point, capturing the imaginations of everyone from students saving time on their essay writing to leaders at the world's largest tech companies. Excitement is building around the possibilities that AI tools unlock, but what exactly these tools are capable of and how they work is still not widely understood. At this article an AI explains what AI is, how it works, its most common uses (images, text and audio) and some applications in the advertising, arts and design and entertainment.



These are the key takeaways on jobs and skills that came out of Davos 2023

World Economic Forum
07th of february 2023

The future of work, jobs and skills were topics on the agenda at the World Economic Forum 2023 Annual Meeting in Davos. On the event, the International Labor Organization (ILO) launched its latest report: World Employment and Social Outlook: Trends 2023. The ILO projects employment growth of 1% in 2023, and expects productivity to decline; in addition, the entity expressed its concern about the "quality of jobs" and the geographical division that is developing. Among the conclusions of the space in Davos 2023 are: a) invest in people "because when they are secure they show more resilience", said Denis Machuel, CEO of the Adecco group, said; b) opportunities exist in the clean energy transition sector, LinkedIn Vice President Allen Blue said that demand for green skills is outstripping supply, c) employers can contribute to improving the skills of their employees, therefore, companies need to get involved in the training of their human talent, and finally d) connectivity is crucial for education and reskilling⁷ therefore, it is necessary to make investments that guarantee access to the entire population.

⁷ Also known as reskilling, it is the process of learning new skills in addition to those you already have, in order to perform a different job, either within the same organization or between companies. For more information see Issue Note No. 16 https://sapiencia.gov.co/wp-content/uploads/2022/11/issues-note-16_july-publicar_anonymus.pdf



Why older talent should be a consideration for today's inclusive leader

World Economic Forum
16th of february 2023

Around one third of the US workforce are aged between 18 and 34 years, and another third are aged between 35 and 49. The remaining third are 50+ years. This includes working adults over the 'traditional' retirement age of 65, who have more than doubled over the past 20 years to represent 7% of the labour market. This means that most firms now have five generations working side by side. In leading firms, diversity, equity, and inclusion (DEI) strategies are high on

the agenda, touted in value statements as central to innovation, decision-making, and talent acquisition. Yet, these strategies are primarily focused on gender and race, and ignore generational-diversity altogether. This is due to leaders underestimate the benefits of generationally diverse perspectives. The text reflects on some of the most deeply held misbeliefs about older people in the workplace.

EDUCATION IN THE WORLD

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