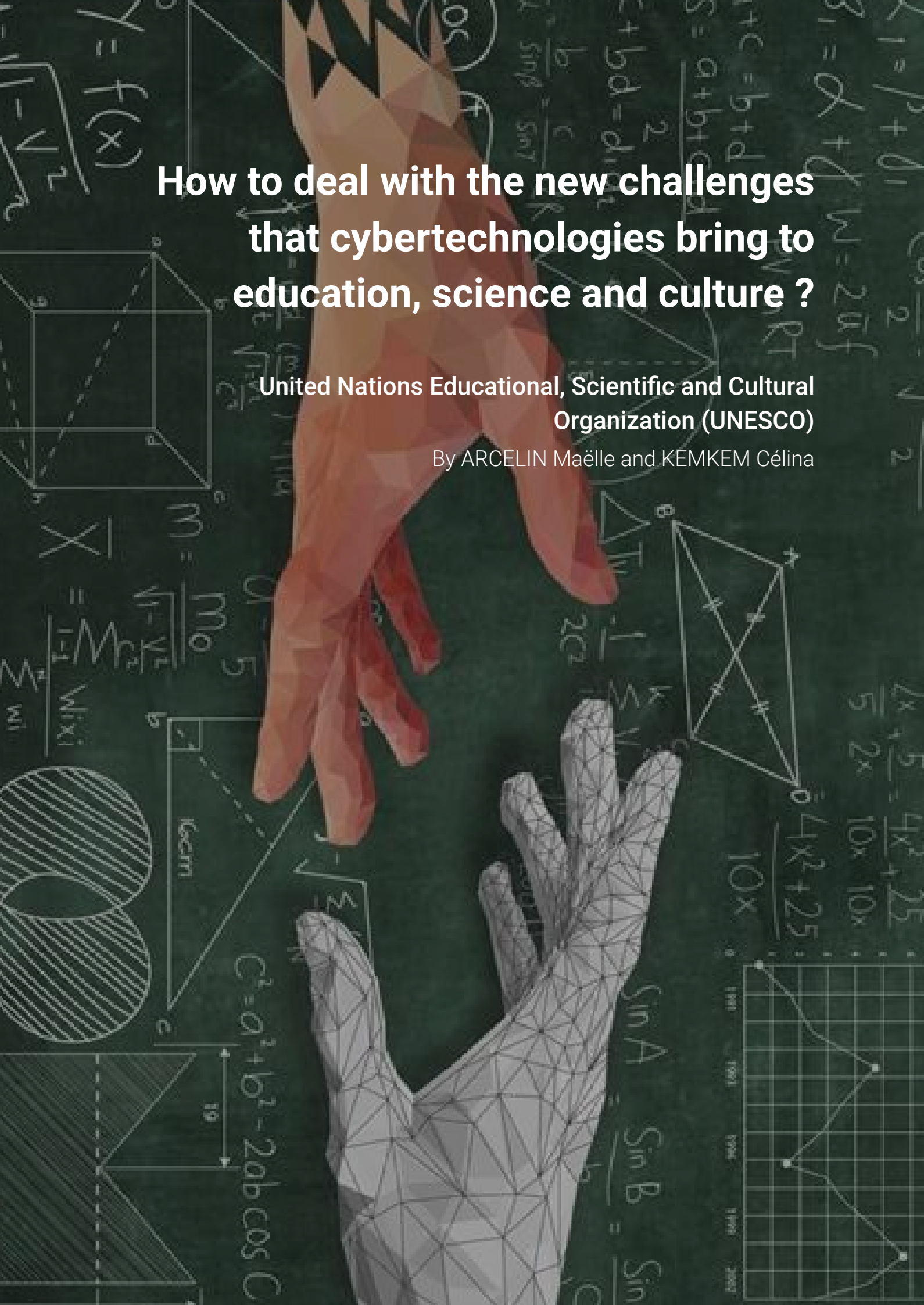

How to deal with the new challenges that cybertechnologies bring to education, science and culture ?

United Nations Educational, Scientific and Cultural Organization (UNESCO)

By ARCELIN Maëlle and KEMKEM Célina

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INTRODUCTION TO THE COMMITTEE

Welcome to UNESCO, the United Nations Educational Scientific and Cultural Organisation. It is one of the most important and prestigious committees of the United Nations. This committee regroups 194 nations, but only 20 nations founded UNESCO, including: South Africa, Australia, China, France, USA and the UK (among others). UNESCO is located in Paris and has a French Director-General, Audrey Azoulay. It was created on the 16th of November 1945 in order to maintain peace through education, science and culture after the disaster the Second World War brought. UNESCO allows countries to communicate peacefully with one another and to collaborate in order to ensure the respect of the law, justice, human rights and freedom for everyone no matter their race, gender, language or religion. The organisation had an important role in keeping peace and civility during the Cold War, the decolonisation and the dissolution of the USSR. UNESCO's notable actions concern mostly racism with the *Declaration on race and racial prejudice* in 1978, and access to education in forcing members to install a free, mandatory and universal primary education. One of UNESCO's current education goals is to promote education through the Sustainable Development Goal 4 (SDG), which is part of the committee's 2030 Agenda for Sustainable Development. SDGs are made of 17 precise goals aiming to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". As for scientific matters, UNESCO's programs mainly concern the protection of the planet. As a result, many natural reserves have been created since 2001. Lastly, UNESCO is known for its programs aiming at protecting and preserving world heritage sites, such as the 1972 International Convention concerning the Protection of the World Cultural and Natural Heritage. The number of monuments and sites placed under the protection of this treaty adds up to 1199 properties today.

FLAG OF THE UNESCO: United Nations Education, Science and Culture Organisation website

Human and social sciences are one of UNESCO's main concerns, it implies questions linked to ethicality, political sciences and human dignity, which regroups subjects such as discrimination, slavery and inequalities. A notable event related to this subject is the *Global conference against racism*. However, UNESCO is most famous for its cultural programs such as material and immaterial heritage between 1948 and 2005. Moreover, UNESCO promulgates cultural diversity with the help of the *Universal declaration of UNESCO on cultural diversity*. Between 2022 and 2023, UNESCO benefited from a US$1.5 billion budget. However, in the past, UNESCO had trouble with its budget, being affected by geopolitical concerns. For instance, In 2011, Palestine became a recognised member of UNESCO. The US, followed by Israel, both took their fundings back, and in 2012, the US announced their withdrawal from UNESCO, accusing the organisation of being "anti-Israeli". However, they still held a seat in the assembly as an observer until June 2023 when the US got re-admitted in the assembly as a voting and active member.

INTRODUCTION TO THE SUBJECT

The Assistant Director-General for Social and Human Sciences of UNESCO, Gabriela Ramos says *"In no other field is the ethical compass more relevant than in artificial intelligence. These general-purpose technologies are re-shaping the way we work, interact, and live. The world is set to change at a pace not seen since the deployment of the printing press six centuries ago. AI technology brings major benefits in many areas, but without the ethical guardrails, it risks reproducing real world biases and discrimination, fueling divisions and threatening fundamental human rights and freedoms."*

The 20th century has been marked by many inventions in cybertechnologies, from the very first idea of the Internet in the late 1960s, to the creation of the first mobile phones in the 1980s. The commercialisation of cybertechnologies has created many challenges in the past and still nowadays. The proliferation of these technologies started a continuation of issues, making education, culture and science much more complicated, multi-faceted matters. When COVID 19 hit and the schools closed, technologies became primordial in order to maintain education during lockdown. Since then, edtechs, such as MOOC for instance (Massive Open Online Course), have increased considerably, producing new challenges left for UNESCO to solve.

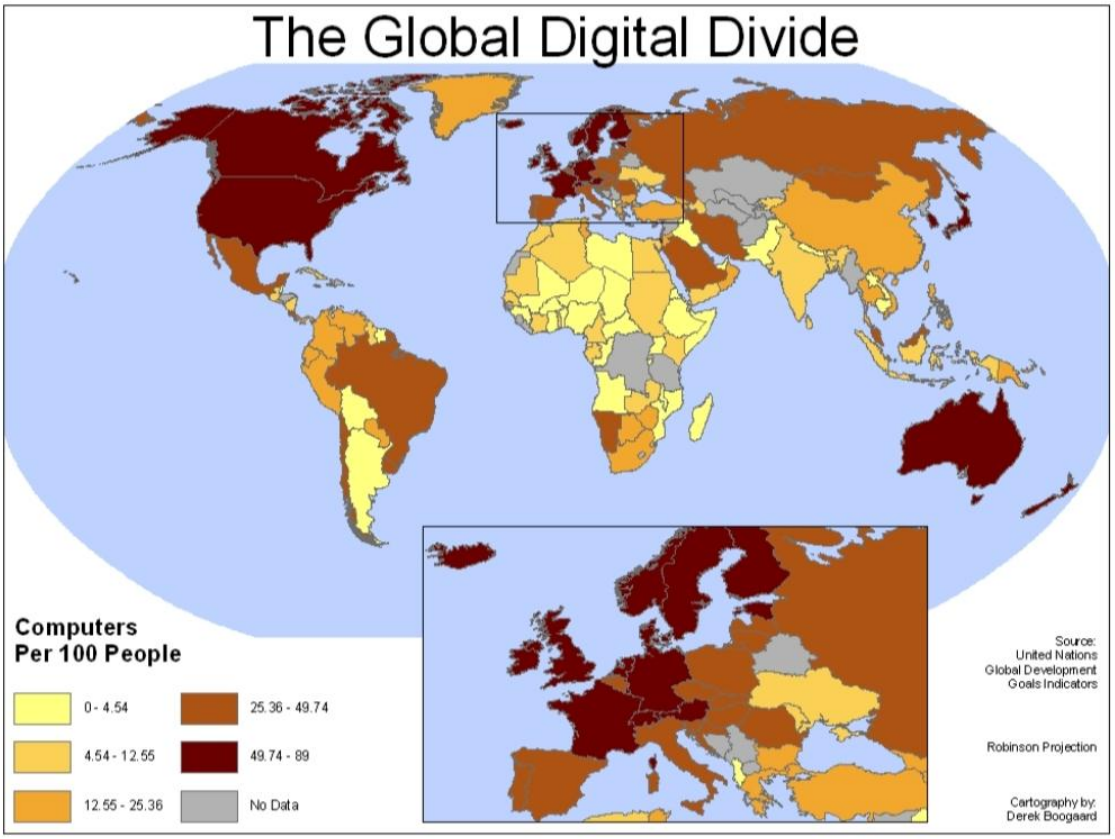
Noting the amount of **benefits** online education brings to both the students and teachers, edtechs are not entirely criticizable.

- According to a study by *the Pew research centre*, 94% of teachers believe that technology has a good impact on student's skills in communication.
- Moreover, online classes offer a personalised learning in which students can receive an education that fits them better and lessons which are tailored to their own learning methods. This more interactive and engaging form of learning can lead to an increase in student's motivation in learning.
- The educational technologies offer some students to access education when they could not before, for instance, students living in rural areas, with disabilities or unable to afford it.

However, the implementation of technologies in education does not have only positive impacts. With the use of edtechs in classrooms and the popularisation of online classes, there are **growing concerns** in cyber security, student privacy and copyright.

- Since more sensitive information is stored and shared online, measuring and assuring the teachers and student's security on the internet has become an important issue. Solutions must be implemented to raise awareness regarding intellectual property.
- The students doing their exams online can injure their integrity in the future, as online exams are more exposed to risk of cheating, even though measures are being taken to limit that risk (such as having a certain amount of time to fulfill the exam). Yet, edtechs do not only impact the students, but also their teachers.

- Besides, studies have shown that teachers find it difficult to manage their home life and their work life simultaneously. A right to disconnect, i.e. a legal right not to reply to work emails outside working hours, must be implemented.
- Eventually, one of the major issues concerning educational technologies still remains the deepening of inequalities between third-world countries and richer countries, in other words: the widening of the Global Digital Divide (i.e. the unequal access to technologies and the internet) Those disparities in the rare opportunities children from poorer countries receive concerning education must be addressed.



Map of the Global Digital Divide: the United Nations Global Development Goals indicators

While technologies have a significant impact on education, it is not the only impact they have. The development of science through technologies raises many **ethical questions**.

UNESCO started promoting the ethics of life science in the late 1970s, and it continues to link different ethicists, scientists and journalists in order to answer the question of what is ethical in science. Since the rapid proliferation of **artificial intelligences** (AIs), UNESCO has delivered global standards to maximise the benefits from AI, hence ensuring that they contribute to a more inclusive, sustainable and peaceful world. AIs permit many opportunities globally, such as the standardisation of a large range of processes, facilitating healthcare diagnosis and enabling human connections through social media. The rapid changes offered by AIs raises many questions concerning its ethics though. Some AIs seem

to threaten human rights (workers' rights for instance) or contribute to the worsening of global warming (*clouds* maintenance requiring an enormous amount of energy). Considering the possible danger AI may display, UNESCO gave a list of recommendations for AIs to follow for the good of society and science: respecting human rights and dignity,, ensuring diversity and inclusiveness, living peacefully, preserving the environment and helping it flourish.

While every nation has its own community, identity and culture, the advances in technology have raised up the people's living standards, thus altering **traditions and culture**. Culture can appear in many forms, through art, language, communication, religion and education. However, cybertechnologies largely participate in globalisation, making each other more connected to one another and changing traditions. The dominance of western culture on the internet can alter other cultures. Cybertechnologies have connected people together, making information pass on easily, however it has been blamed to replace traditional media such as TV, newspaper and other. During lockdown, cybertechnologies became one of the only ways to access culture and entertainment online. A notable increase in the use of social media can be noted in order to keep social contact with other people and since the beginning of the decade.

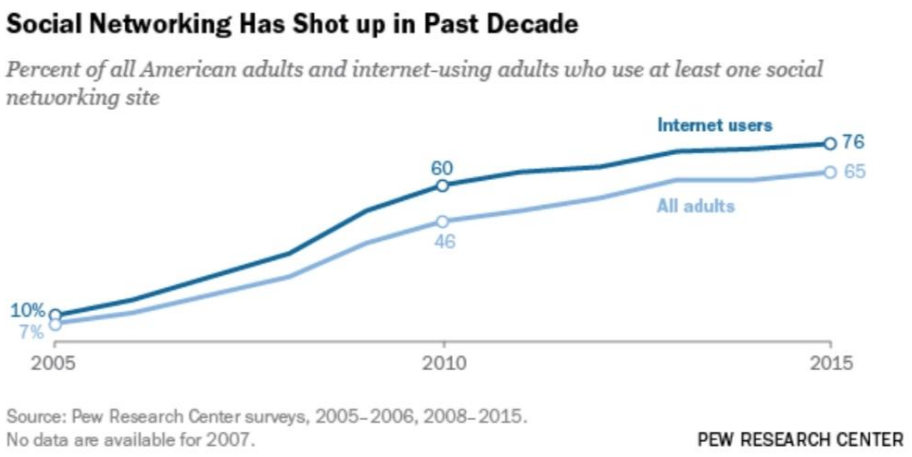


Diagram of the percentage of American adults using the internet compared to adults not using the internet in the last decade: the Pew Research centre

Thanks to cybertechnologies, accessing information online has never been easier, with information platforms like Wikipedia or newspaper websites. However the **threat of disinformation** is present and is causing multiple problems along with hateful speeches which can be found on the internet. Hate speeches regroup hate towards different minorities such as women, members of the LGBTQA+ community, hate regarding ethnicity and race and much more. For instance, in order to counter hate speeches on the internet, the UN has put in place the United Nations Strategy and Plan of Action on Hate Speech on 18 June 2019. The purpose of such a plan is to suppress and reduce hate whilst maintaining freedom of speech.

Considering **art**, since the beginning of lockdown, there is a growing interest in starting amateur art, music, painting, sculpture and even filming and editing videos. Digitization has made online art events more popular and helps some artists to get views and publish their work on a wider scale. Another concerning issue is the question of cinema. With

more and more streaming platforms appearing online, cinemas take a hit. Wealthy companies such as Hollywood or Bollywood monopolise fundings dedicated to cinema, hence risking the progressive disappearance of cultural and local cinema. Moreover, wrongful representations of some cultures, genders, ethnicities, sexual orientation etc produced on a wide scale by some companies can cause issues in normalising certain aspects of society like some inequalities. Same goes for music, the disappearance of cultural music and traditional music because of the globalisation social media brings and the popularisation of streaming platforms raises questions on the security of diversified music.

DEFINITIONS

Artificial intelligence: the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans, such as the ability to reason, discover meaning, generalise, or learn from past experience. (https://www.britannica.com/technology/artificial-intelligence)

Bioethics: branch of applied ethics that studies the philosophical, social, and legal issues arising in medicine and the life sciences. It is chiefly concerned with human life and well-being, though it sometimes also treats ethical questions relating to the nonhuman biological environment. (Such questions are studied primarily in the independent fields of environmental ethics) (https://www.britannica.com/topic/bioethics)

Digital divide: term that describes the uneven distribution of information and communication technologies (ICTs) in society. The digital divide encompasses differences in both access (first-level digital divide) and usage (second-level digital divide) of computers and the Internet between (1) industrialised and developing countries (global divide), (2) various socioeconomic groups within single nation-states (social divide), and (3) different kinds of users with regard to their political engagement on the Internet (democratic divide). In general, those differences are believed to reinforce social inequalities and to cause a persisting information or knowledge gap amid those people with access to and using the new media (“haves”) and those people without (“have-nots”). (https://www.britannica.com/topic/digital-divide)

Edtechs: EdTech (a combination of "education" and "technology") refers to hardware and software designed to enhance teacher-led learning in classrooms and improve students' education outcomes. (https://www.investopedia.com/terms/e/edtech.asp)

Digitization: Digitization is the process of changing from analog to digital form, also known as digital enablement. Said another way, digitization takes an analog process and changes it to a digital form without any different-in-kind changes to the process itself. (https://www.gartner.com/en/information-technology/glossary/digitization)

ICT: ICT is an abbreviation for information and communication technology. It corresponds to the use of computers and other electronic equipment and systems to collect, store, use, and send data electronically. (https://dictionary.cambridge.org/dictionary/english/ict)

IoT: The Internet of Things refers to a network of physical devices, vehicles, appliances and other physical objects that are embedded with sensors, software and network connectivity that allows them to collect and share data. These devices — also known as "smart objects" — can range from simple "smart home" devices like smart thermostats, to wearables like smartwatches and RFID-enabled clothing. (https://www.ibm.com/topics/internet-of-things)

TIMELINE

Date	Event
1843	Ada Lovelace, Countess, mathematician and pioneer of computer science, wrote the first computer programme ever. She ran it on Charles Babbage's "Analytical Engine".
1911	Foundation of the International Business Machine (IBM) in New York.
1950	Alan Turing releases an article entitled 'Computing Machinery and Intelligence'.
June 2nd 1953	The coronation of Elizabeth II, first worldwide TV broadcast
June 1953	University of Houston made the first televised college classes.
1955	First computer program 'Logic Theorist' written by A. Newell, C. Shaw and H. Simon.
1956	The term "Artificial Intelligence" was first coined (Dartmouth University conference)
1964-1966	The first AI program, ELIZA, was developed by scientist and MIT professor Joseph Weizenbaum.
1970	The invention of the first personal computer, Kenbak-1, by John Blankenbaken.
1972	Shakey the Robot, first AI based robot, created at SRI.
1983	Birth of the Internet.
1983	First cell phone, the Motorola DynaTAC 8000X.
1997	First social network, "Six Degrees".

1992	Launch of the first touchscreen smartphone, the Simon Personal Communicator (SPC) by IBM.
September 4th 1998	Creation of Google by Stanford University Students Larry Page and Sergey Brin.
2001	First camera phone, J-SH04, commercialised by SHARP in Japan.
2005	Creation of Youtube
2012	1st holographic concert (Tupac Shakur's virtual performance at Coachella Valley Music and Arts Festival in 2012, rapping alongside Snoop Dogg during his set with Dr. Dre).
2015	UNESCO's 38th General Conference broaching the universality of the internet.
2017	The European Commission's I-REACT Project: Improving Resilience to Emergencies through Advanced Cyber Technologies.
June 2018	International conference "Tangible and Intangible Impact of Information and Communication in the Digital Age".
2022	Launch of ChatGPT, first large language model-based chatbot.

HISTORY OF THE TOPIC

History of modern cybertechnology supposedly started around the 1950's, with the famous work of **Alan Turing** entitled 'Computing Machinery and Intelligence'. In his paper, the British mathematician conjectured that computers can be used to solve problems if we teach them how to do it. He explained that humans use reason and knowledge that is already acquired to solve and overcome problems and that it is possible to inject this competence into machines, that we will later call robots. However, what is said to have given birth to the field of AI is the Logic Theorist, a computer program developed by Allen Newell, Cliff Shaw, and Herbert Simon in 1955, and the term **"artificial intelligence"** was coined by John McCarthy and Marvin Minsky during the 1956 conference DSRPAI (Dartmouth Summer Research Project on Artificial Intelligence) where the LT was presented to the scientific community for the first time.

One year later, in 1957, the famous **IBM** (International Business Machines) invented the FORTRAN computer language used to run programs for projects like the design of aircrafts or bridges but also factory automation control. That was also the year when hard

drives were invented, which will contribute a lot to the improvement of computer performances later.

One of the first Artificial Intelligences and probably the most famous is **ELIZA**, a program written by the German American computer scientist and MIT professor Joseph Weizenbaum, from 1964 to 1966. ELIZA was designed to conduct Rogerian therapy sessions by transforming patients' affirmations into questions that a therapist would ask during a session. A few years later, when the command storage capacity of computers increased and scientists benefited from enough funds, machines started to integrate concepts such as deep learning (John Hopfield and David Rumelhart), expert systems (Feigenbaum). Japan, for instance, invested almost half a billion dollars to develop AI technology, improve machine processing and logic programming. This new field of research inspired a lot of young scientists and engineers to address it, until in the 1990's, MIT Dr. Cynthia Breazeal developed the first 'robot head' named Kismet, an experiment for testing emotion recognition and expression by an AI.

During the Cold War (1950s) , the United States developed the ARPANET, which will later evolve into the **Internet** as we know it nowadays. Everything started with the desire of ensuring safe communication across the State, without the threat of signals being affected by the nuclear attacks of the enemies, the Soviets. The US Air Force commissioned engineer Paul Baran to create this network capable of resisting an offensive. In 1969, this project was reused to try and connect 4 American universities together and finally became accessible to everyone in 1991.

Before the invention of microchips, computer terminals were huge machines used for "time-sharing access" to computer sessions or to the internet. This was very expensive and not efficient at all, besides the fact that only research centres, universities and large wealthy companies owned them. After the implementation of microprocessors, many companies started developing new models of computer use. One of them was Kenbak Corporation, which, according to the Computer History Museum, was the company who developed the very first personal computer, the **Kenbak-1**, in 1971. Only about 40 Kenbak-1s were produced, as the company went bankrupt in 1973. After that, IBM became the leader in microcomputers, and in 1890 the company formed a partnership with **Microsoft** to develop the OS/2 operating system, which later led to Microsoft exceeding IBM in terms of sales after developing its own operating system in competition with OS/2. Microchips being more and more used to produce all sorts of electronic devices, personal computers rapidly became popular since they were more easily manufactured. About 8% of US households owned a personal computer in the mid 1980s, this figure evolving to 23% a decade later.

The **music industry** benefited from technological advances too. The first song to ever be uploaded online was "Tom's Diner" by Suzanne Vega, during the summer of 1991, and this achievement was made by a German electrical engineer named Karlheinz Brandenburg, who was one of the founders of MP3. Following on this, we can note that the first streaming service for music was IUMA (Internet Underground Music Archive) that allowed unsigned artists to share their music and connect with their audience without the need of having a record label.

Museums also started to adopt the practice of virtual visits since the Australian artist Jeffrey Shaw created the world's first Virtual Museum in 1991. (Recently, due to the Covid-19

pandemic, art galleries rediscovered the use of what is called 'immersive media', also known as augmented reality or virtual reality, and concerts were cancelled, but many were broadcasted by live-streams.)

Starting from the early beginning of the 21st century, technological progress skyrocketed, offering for instance **camera phones**, Bluetooth, USB flash drives and a whole new way of playing video games. The BBC, on the 18th of September 2001, announced the launch of the first ever camera phone, the J-SH04, a phone manufactured by the Japanese company SHARP. Meanwhile, in the gaming industry, the race for 3D games started, along with improvements on console capacities, image definition and motion-sensitive remotes.

The streaming hype continued and soon the first **streaming service** using internet browsers launched: YouTube, in April 2005, and it is still the most popular streaming site to this day (first viral video: Nike commercial featuring Ronaldinho) .

Nowadays, cybertechnology represents a wide field of concepts that scientists are still studying and a variety of new aspects yet to be discovered. It includes for instance Artificial Intelligence, which is updated almost every day and mostly serves as digital assistants (Siri, Cortana, Alexa, etc) but is predicted to have various applications in the medical/healthcare field in the years to come. The IoT is also a developing sector, aiming to facilitate our everyday lives by improving the tools we use on a daily basis like watches, cleaning robots, etc. The research for the use of cybertechnologies has just begun, but it comes with a number of concerns expressed by many.

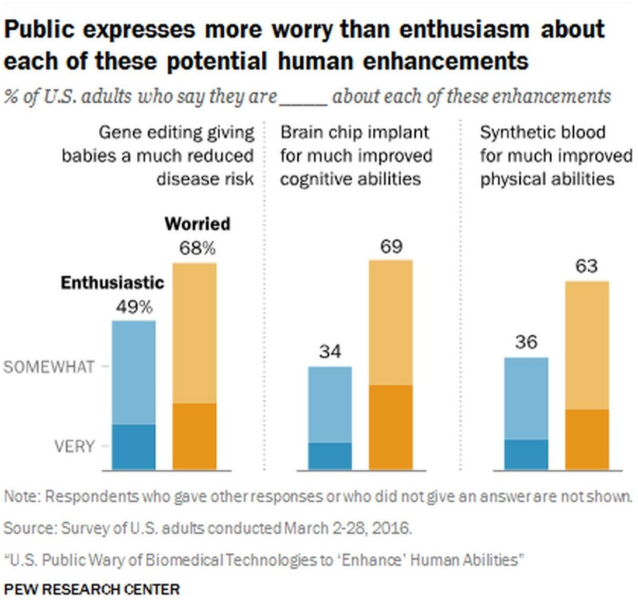
DISCUSSION OF THE TOPIC

The rise of fake news questioning governance and democracy

In many countries the access to the internet is relatively easy, which means having access to much information both true and false. For a few years, the media have participated in sharing fake news. The trust in the media world-wide has dropped by 8% between 2020 and 2021, showing the alarming increase of fake news on the internet. Among these fake news, a significant amount of them nourishes conspiracy theories, according to Social Science and Medicine in march 2020, 30% of U.S adults believed that the COVID-19 was created by the Chinese government and in June 2020, 25% believed that the pandemic outbreak was planned by people in power. Not only does the media participate in alimenting fake news and conspiracy theories, but the disinformation and the transformation of the information can lead to dangerous situations. The media is often very convincing and therefore triggers dangerous riots. In 2019, after a post on Facebook asking to raid area 51 in search of extraterrestrial life hidden by the government, 150 people reunited next to the doors of the military area, and 7 were arrested for trying to raid the area. In France, in 2023, the death of a teenage boy by a policeman was very publicised in the media. Many riots followed, which were mostly triggered by the hate on social media and the invitation to join the riots.

Cybertechnologies questioning ethicality and private data

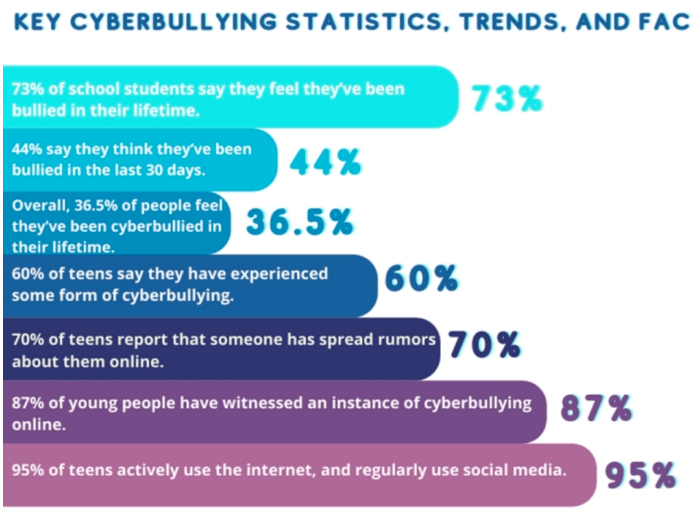
UNESCO has a standard-setting role in bioethics following the Universal Declaration on the Human Genome and Human Rights, adopted unanimously and by acclamation by the General Conference in 1997 and endorsed by the United Nations General Assembly in 1998, and the International Declaration on Human Genetic Data, adopted unanimously and by acclamation by the General Conference on 16 October 2003. Moreover, the depth of ethical science and extent of their roots in culture, philosophy and human sciences (with issues such as religion) made UNESCO take the lead on the subject of bioethics. Which is why the question of how far can we go became a major UNESCO issue since the rapid increase of technologies. In other words, the advanced technologies in the medical field raises questions on human rights, human dignity and fundamental freedoms. In this graph by the *Pew Research Center*, the question of the cybertechnologies in medicine and its ethicality is raised. Out of 100 American adults, 68% are worried about gene editing in order to reduce the risk of babies getting diseases, 69% are worried about a brain chip implant to improve cognitive abilities, and 63% are worried about synthetic blood to improve physical abilities. One of the possible tools for genome editing could be the recently developed Nobel Prize winning "CrispR Cas9", an RNA sequence paired with an enzyme capable of sectioning any DNA molecule in any living cell. Practical applications of this tool include enabling deeper research on genes, modifying defective DNA sequences, developing new therapeutic methods, etc... This subject has been deeply debated before and is still a current issue because of the question of morality and ethicality. Those technologies however, are still in the research stage, and their democratisation should not happen any time soon.



Cybertechnologies and the rise of cyberattacks and bullying at school

Cybertechnologies bring many questions to mind because of their impact on human lives and governance. While more and more technologies arrive in education, schools are victims of cyber attacks, putting the education and security of students and teachers at risk. In 2018, the investment in Edtech reached US$ 18.7 billion showing the rapid proliferation of edtechs. However, edtechs do not have only positive impacts on education, the number of cyberattacks on schools reach an all-time high. In 2020 in the US, the K-12 cybersecurity centre reported a record breaking incident, with 408 attacks on 377 school districts in 40 states. The presence of new technologies in schools, and the proliferation of online

education puts the security of children on the line. The presence of more technologies in schools therefore endangers children and teachers' privacy, and their ability to learn and teach properly.



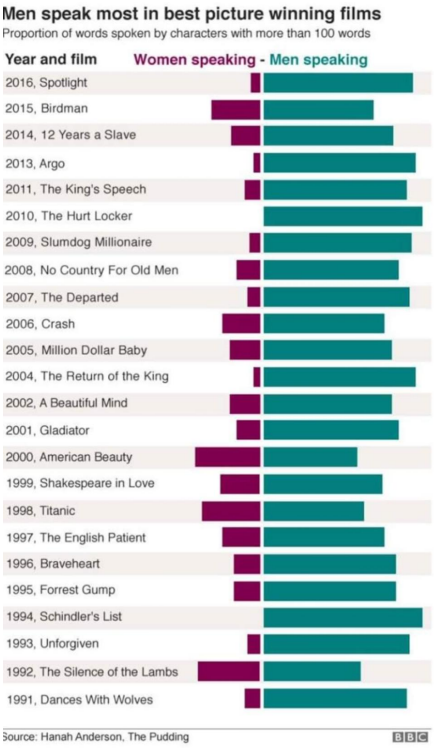
Key data regarding the spread of cyberbullying: ThriveMyWay, using several databases

The exposure of children to cybertechnologies favours cyberbullying on social media and the internet. The impact of cyberbullying on humans is extremely concerning. Internet users may suffer from anxiety, depression, and stop their online activity altogether, highlighting that cyberbullying leaves not only a digital but also physical and psychological footprint. Facebook is the platform with the most online hate, it removed close to 11 million hate related posts on their platform.

The rate of cyberbullying is very different according to different countries, varying with factors such as gender or sexual orientation. Globally, 76 % of adults believe that cyberbullying is a very different and serious type of bullying that deserves special attention from parents and schools. According to the Centers for Disease Control and Prevention, in the USA, 13.6% of cyberbullied children have committed a serious suicide attempt.

According to UNESCO, at least a third of the entire student population do not have access to the internet, mainly because of the lack of educational policies and the lack of equipment in some countries

The rise of cybertechnologies reinforcing gender inequalities?



Graph demonstrating the proportion of words spoken by either men or women in winning movies: The Pudding

As shown in the graph opposite, the content offered by the media does not give an equal representation between men and women, which often leads to further discrimination or not enough representation. For instance, the well known movie *Titanic* gives male characters a longer speaking time than female characters. The media therefore has the power to control many aspects of our society by allowing minorities to have access to representation. In the past few years, Hollywood has been highly criticised for not giving enough representation in its

movies. It has been targeted by the #MeTooMovement in order to shed light on the widespread mistreatment of actresses and the dominance of straight white men as actors. In 2017, In Hollywood's top 100 movies, 43 had no black female characters, 65 had no Asian or Asian-american female characters, and 64 had no Latino characters. As of the female roles, only 5 had characters of 45 years of age or older. UNESCO therefore worries about giving enough diversity and representation to every minority in the world. Cybertechnologies may be damaging regarding human rights, but their proliferation helped raise awareness on many social issues. As social media links people from all over the world together, it is easier to pass information from country to country, especially regarding political issues. Thanks to social media, it has become a lot easier to get informed on a topic such as the conflict between Israel and Palestine which is shown a lot in the media. However, as much as it gives visibility to the conflict and informs people about the conflict, the information can be easily transformed and twisted to flatter one side more than the other.

AIs challenging art production

Another impacted area of human lives, and probably one of the most important ones, is culture. With AI being more and more elaborate, it is now possible to create your own art even without prior experience and technique. AI requires existing data to generate new data, which means that it uses artworks that were already created to fuel its bank of references. This raises the ethical question of artists' copyright violation since the capital resulting from this algorithm-generated art is created in spite of the original artists. Besides, the latters are dissatisfied with seeing their skills being used in a way they believe to be inappropriate, and constituting a violation of the creative and artistic power proper to every artwork and its author. Harry Woodgate, author and illustrator, says: "These programs rely entirely on the pirated intellectual property of countless working artists, photographers, illustrators and other rights holders." This issue could become a threat to the movie and graphic animation industry, as well as illustrations used on media platforms with fake news that would go unnoticed.

This is why UNESCO put together a convention to put online immaterial cultural heritage (oral traditions, spectacle art, social traditions, rituals, festivities, knowledge on nature and the universe, knowledge on traditional crafts). 20 countries participated in the 2003 cultural heritage program by UNESCO. This program allows all cultures to be seen and discovered on the internet.

Because of COVID-19, cybertechs have become a significant part of public health, helping with population surveillance, case identification, contact tracing and evaluation of interventions on the basis of mobility data and communication with the public. Only, the question of cyberattacks on public health services remains. In 2019, the United States was hit by at least 759 cyberattacks on health services, it directly threatens the security of the patients and the health workers, while endangering the ability of the establishment to heal its patients. Moreover, according to PubMed Central, fake news can easily worry people and cause anxiety, panic disorders and much more

WHAT SHOULD RESOLUTIONS BE ABOUT?

- Is your country deeply affected by the digital divide, what can you do in order to change that?
- What can be done in order to reduce inequalities among countries regarding fair access to cybertechnologies and the internet?
- How can UNESCO play a part in helping your country? Can it fund any programs, for instance?
- How can countries regulate the advance of technologies in order to keep it secure and ethical, especially regarding science ?
- What can be done to support the installation of cybertechnologies in your country?
- With the digitisation of the world, how can we preserve and protect culture and traditions ? How can we preserve your country's heritage and patrimony?
- How does your country plan to use cybertechnology? Will it be for economic, social or cultural matters? How can you implement those strategies?
- What kind of restraints can we implement in order to control cybertechnologies in the scientific field, what can be considered immoral, illegal or not ethical?
- What can your country do in order to represent different cultures in media such as movies and TV shows? How can cybertechnologies promote cultural diversity in your country?

BLOC POSITIONS

Albania:

2023 GDP: US$ 20.177 Billions

Adult literacy rate: 98,4% (2021)

HDI: 0.796

Member of: United Nations, World Bank, UNESCO, NATO, WTO, COE, OSCE, and OIC

Nowadays, Albanians do not trust their journalists and media, and encourage the latter to become independent from the rich powers that govern it. In 2017, with UNESCO's help, the government opened an office to guarantee transparency and safety in the media. Moreover, the media in Albania is full of hateful speeches that are usually originated by the country's politics. The media occupy a significant role in multiple political issues and encourage extremism, notably among debates such as migration and trans-identity. Albania is one of the many countries that benefit from UNESCO's online immaterial cultural heritage program as the Gjirokastra folklore festival is part of the protection list.

Argentina:

2023 GDP: US$ 641.102 Billions

Literacy rate: 99,51% (2021)

HDI: 0.842

Member of: United Nations, World Bank, UNESCO, WTO, SCM, CELAC, OEI

For a few years, AI has been proven to be very useful for a country's economy. Now, Argentina is faced with a choice. The immersion of AI in the Argentinian economy has become a very real possibility since it became a rich developing country. AI could, in the future, bring more jobs and overall enhance Argentina's economy in order for it to become a richer and more powerful country that it already is. AI is an opportunity for Argentina to create better jobs and accelerate GDP growth. However, it requires new policies: a policy strategy that facilitates a rapid and massive adoption of AI and other technologies by companies, a significant investment in human capital to prepare future workers, and the development of a strategy that provides adequate social protection to those who face greater difficulty in transitioning to the new labour market. Although AI can provide a bright future for the Argentinian economy, it can also have a massive downside: the loss of many jobs for a lot of workers. Only 18% of the Argentinian working population have jobs which complement AI, which means that 82% of the working population are in danger of losing their jobs and need a rapid and urgent adoption of technology in their way of working. The adoption of AI in Argentina can easily lead to a question of ethics.

Brazil:

2023 GDP: US$ 2,130.100 billions

Adult literacy rate: 94.30%

HDI: 0.754

Member of: United Nations, UNESCO, BRICS, G20, IMF, MERCOSUR, OAS, USAN

Science education and the development of sustainable practices are themes of great interest to UNESCO in Brazil. The major challenge posed in the country is to have Science Teaching disseminated to the population in an increasingly homogeneous way capable of effectively improving people's quality of life. Brazil faces challenges in science education and cannot address them separately because of the cause-and-effect relations existing among them. Increment and encouragement of scientific education contrasts with a shortage of teachers in the fields of Mathematics, Physics, Chemistry, and Biology. Improvement of science education quality is slowed down by poor school infrastructures.

Burkina Faso:

2023 GDP: US$ 21.076 Billions

Adult literacy rate: 46 %

HDI: 0.449

Member of: United Nations, UNESCO, IMF, World Bank, WTO, UEMOA, BCEAO, OHADA

Burkina Faso represents the biggest number of radio listeners among Sub-Saharan countries with an average of 62% of the 15 year-old and more listening to the radio daily in 2019 according to UNESCO. The success of these programs can be explained by the need to change things and denounce a problem on the radio for it to be fixed. In fact, radios often

make people intervene in their programs so the companies can contact people capable of answering their audience's questions. They often discuss polemical debates. The proliferation of mobile phones in the last decade strengthened the proximity between the radios and their viewers, now everyone can react by texts or calls. The country has now a total of 154 active radio stations. On one hand, this type of media allows Burkinabés to speak up about their living conditions and their worries, but on the other hand, the inequalities in Burkina Faso remain. In high schools and middle schools, the students are often asked to submit homework requiring the use of the internet. The strong digital divide among students thus deepens the differences in access to knowledge and the inequalities between students concerning their chances of success in school.

Democratic Republic of the Congo:

2023 GDP: US$ 69.474 Billions

Adult literacy rate: 80.02%

HDI: 0.479

Member of: United Nations, UNESCO, WTO, African Union, IMF, ECCAS

The digital divide in Congo is extremely significant. Out of the 100.6 million citizens of the DRC, only 23.04 million used the internet during the beginning of 2023, which means 77.57% of the population stayed offline during that time. As we are now living in a globalised world, economic, social and environmental activities are more and more guided by cybertechnologies, leading to countries such as the DRC to open up on perspectives of "digital transformation" to allow developpement acceleration and digital divide reduction. The DRC therefore needs a strong adaptation to modern technologies and a significant financial help to implement cybertechnologies in the country.

Ecuador:

2023 GDP: US$ 121.291 Billions

Adult literacy rate: 94,48 %

HDI: 0.731

Member of: United Nations, UNESCO, OEI, FAO, OEA, CAN, USAN

With the help of Columbia, Bolivia, Mexico, Peru and Uruguay, Ecuador wishes to protect and promote latino-american cinema. The project aims to protect and project world-wide the Latin culture following the proliferation of western culture in cinema, to ameliorate the platform Retina Latina and the access to latino-american movies, strengthen commercial exchanges internationally, and integrate the latin culture among other cultures. Since the lockdown, the gap between the grades of students deepened. In response, the Ministry of Higher Education, Science, Technology and Innovation and with the help of the World Bank provided an AI to help students with their maths. The platform owns 400 lessons and offers help to 14,000 students.

Gabon:

2023 GDP: US$ 20.330 Billions

Adult literacy rate: 85.5%

HDI: 0.706

Member of: United Nations, African Union, UNESCO, ECCAS, OHADA, Commonwealth

Gabon is the leading ICT-connected country in central western Africa. Since 2012, it invested in a high-speed fibre optic network, allowing technologies to become part of its economy in order to diversify it. The digital industry represents 5% of the country's GDP, besides, more and more people subscribe to internet access services. Paired with continuous upgrades on digital technologies, Gaboneses are now able to enjoy services such as social media on a daily basis. This new-born industry has potential to grow even bigger, but Gabon needs financial help for it to happen and as it is now a very important sector in its economy, the country is trying to attract funders.

Ghana:

2023 GDP: US$ 66.622 Billions

Adult literacy rate: 80,4%

HDI: 0.596

Member of: United Nations, UNESCO, ECOWAS

Today, Ghana's digitization is one of the most advanced in Sub-Saharian Africa with digital being one of its best-performing sectors. Digital grew on average by 19 per cent between 2014 and 2020. Yet, in order to further accelerate digital growth in Ghana, the Digital Economy Diagnostic rendered in 2020 admits that a few issues need to be fixed. With the aid of investments from the World Bank, Ghana is working towards a better digital environment, and is promoting inclusion and innovation in cybertechnologies, streamline governance and delivery of public services; and facilitate smallholder engagement in data-driven digital agriculture. This project aims to increase access to mobile internet and broadband services of 6 million people by promoting private sector investment in underserved rural areas, promote inclusion for , disabled people and rural communities through regular updates and investment. This will supposedly help reduce the regional digital divide.

India:

2023 GDP: US$ 3,736.882 Billions

Adult literacy rate: 77,70%

HDI: 0.633

Member of: United Nations, UNESCO, Commonwealth, AIIB

Cybertechnologies brought a set of changes to India over a relatively short period of time, starting with a strong economic growth, explained by the ability to use online payment to found industries and companies, meaning there is no need to visit the bank thus making their creation process much faster. India is currently one of the worldwide leaders in technology, as it spends more capital on research than countries like France and the UK, trying to develop this sector. Technology has also had an influence on the execution of

government services such as health services and consumer rights, meaning the quality of life increased over the years, thanks to better data and information management.

Indonesia:

2023 GDP: US$ 1,391.778 Billions

Adult literacy rate: 99.76%

HDI: 0.705

Member of: United Nations, UNESCO, AIIB, GGGI, WTO

The lack of internet in Indonesia during the lockdown had disastrous consequences on students. According to UNICEF, 57% of households with children admitted that having access to reliable internet access. In 2008, the government passed a law to include supervision of the flow of information on the internet and a possible censorship of the information online. Between 2013 and 2014, UNESCO started a project to commercialise audio-visual media from Indonesia and train native population to audio-visual media. The River School Movement is another one of UNESCO's projects in Indonesia. Students are taught sustainability using WhatsApp, this project aims to protect the rivers in Indonesia. Lastly, Indonesia is part of the E9, the UN offers the possibility for the E9 countries to collaborate in order to quicken the progress concerning cyber technologies.

Ireland:

2023 GDP: US$ 594.095 Billions

Literacy rate: 99%

HDI: 0.945

Member of: United Nations, UNESCO, OECD, CoE, European Union, ESA

The Irish capital city Dublin is considered as one of the major tech hubs of Europe, with a great number of tech industries having their headquarters there. Irish technological development mainly focuses on AI and IoT. The Irish technology sector benefits from financial and material government support, besides being a leader of academic excellence. The future of cybertech is promising, and it might start there in Ireland.

Kazakhstan:

2023 GDP: US$ 259.292 Billions

Adult literacy rate: 99.80%

HDI: 0.811

Member of : United Nations, UNESCO, WTO, OSCE, NATO, CICA, CSTO, SCO, CITES

The Digital Kazakhstan state programme was approved in December 2017. It is an important programme that aims to improve the standard of living of every Kazakh citizen through the use of digital technologies. One of its goals is to update the education system in accordance with the best world practices. One of the projects to be implemented is on updating secondary education programmes by introducing new programming languages and STEM [science, technology, engineering and mathematics] elements. Elements of robotics, virtual reality, 3D printing, among others, will be introduced to the curriculum. This area also

includes a project on conducting training courses for the population on developing basic digital skills.

Mexico:

2023 GDP: US$ 1,663.164 Billions

Adult literacy rate: 99,50%

HDI: 0.758

Member of: United Nations, UNESCO, OEI, GGGI

Adopted by many other countries, the idea of digitising a country's industry in order to grow its economy has proven to be an efficient strategy. Mexico is one of those countries who decided to reinvent its use of technology mostly because of the Covid-19 2020 pandemic. Ever since, Mexico's economy started to grow, while focusing on digital banking, private healthcare and manufacturing. Moreover, approximately 68% of the Mexican population has a mobile device with access to Internet, showing a strong digital penetration compared to other countries. One area that is being developed more than the others is FinTech, technology supporting banking and financial services, and it is due to the fact that only 55% percent of Mexican adults own a bank account.

Mozambique:

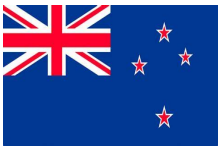
2023 GDP: US$ 19.909 Billions

Adult literacy rate: 63.42%

HDI: 0.446

Member of: United Nations, UNESCO, SADC

Mozambique is one of the few countries receiving help by the Youth mobile program from UNESCO. The program aims to train the youth to programmation and to the use of technologies to solve issues. With this program, UNESCO wishes to take into consideration the need for children to have access to information. In the beginning 2023, 79.3 % of the population stayed offline. However, between 2022 and 2023, the percentage of internet users grew 14%, showing the improvement in internet access in Mozambique. Yet, it means that almost 80% of the population do not have access to the internet and technologies.



New Zealand:

2023 GDP: US$ 251.969 Billions

Adult literacy rate: 99%

HDI: 0.937

Member of: United Nations, UNESCO, OECD, Commonwealth, AIIB, APEC,

In 2021, with the help of New Zealand's Tech exporters, the country's total global digital exports grew by 23%, mostly with the US and because of the report commissioned by the Ministry of Foreign Affairs and Trade named "The NZ-US trade relationship: Stability and

diversity in a Time of Change", resulting in NZ$682 million worth of exports to America. Besides, AI is being developed and put into operation at a rapid pace in New Zealand, especially to integrate it to the medical and health care services.

Niger:

2023 GDP: US$ 16.617 Billions

Adult literacy rate: 37.34%

HDI: 0.400

Member of: United Nations, UNESCO, OHADA, African Union

Only 5% of Niger's population has access to the Internet, and the country mostly relies on foreign technological expertise. To try and fix this issue, the Nigerien government developed a project named "Smart Villages", the first being the village of Borgou-Darey. The goal of these villages is to connect different areas - especially rural zones - of the country while promoting access to technology and ICT services. This would help upgrade basic social services such as health care and education, while also connecting the country to an already tech-globalised world.

Singapore:

2023 GDP: US$ 515.548 Billions

Adult literacy rate: 97.6 %

HDI: 0.939

Member of: United Nations, UNESCO, ASEAN, WTO, AIIB

Singapore is probably the top leader in technology, cybertech and innovative science, with about 17% of its GDP generated from this industry. Since 2018, 80 of the top 100 tech firms in the world have established a presence in Singapore, making the country stand as a worldwide tech hub. Technology is deeply rooted in the country's way of living and just like in Ireland, the number of excellent students that aim to work in the tech industry is significant. Many job offers are available and foreign countries also represent a great demand for Singaporean tech expertise, placing cybertech even more at the centre of the country's economy.

South Korea:

2023 GDP: US$ 1,721.909 Billions

Adult literacy rate: 97.97%

HDI: 0.922

Member of: United Nations, UNESCO, AIIB, GGGI

South Korea is the third country in the world that uses information technologies the most, 98% of the territory being connected to mobile networks. This country is well known for its soft power called Hallyu - literally meaning the Korean Wave - that englobes music, culture,

esports ect… With the help of cybertechnologies, South Korea is capable of reaching even larger targets, to attract people into its territory. Most South Koreans are proud that their culture is appreciated on a worldwide scale.

United Arab Emirates:

2023 GDP: US$ 498.978 Billions

Adult literacy rate: 98.1%

HDI: 0.911

Member of: United Nations, UNESCO, AAIB, GGGI, GCC, NAM

The UAE are one of the most leading hubs of international trade and business in MENA (Middle East and North Africa). In terms of cybertech, the country is already on the starting blocks, with leading sub-sectors including IoT, AI, cybersecurity, Smart Cities and 5G network. With this growing industry, the UAE plan on remodelling sectors such as transport, health, space, renewable energy, water, education and environment, putting AI at the service of the population's needs. Indeed, it was foreseen that AI will increase the national GDP by 14% by 2030, making UAE take part in the race for the newest technologies, alongside Gulf countries.

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