



IFCU

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EDUCATIONAL INEQUALITIES

Digital divide in higher education

BACKGROUND

The term digital divide refers to “the gaps in access to information and communication technology (ICT)” (OECD). Today, digital divide has become a form of poverty and social exclusion, depriving some citizens of essential resources for development and wealth generation.

The numerical revolution has pushed universities to digitize their services, by implementing online learning platforms, for example. This process has created inequalities in access to digital technology. The disparity happens at different levels: disparity between students inside the same university, disparity between universities within the same country and geographical disparity within countries.

DIGITAL DIVIDE FOR STUDENTS

Today, 826 million of pupils and students, or half of the total number of learners, do not have access to a computer at home and 43 %, or 706 million do not have access to the internet at home (UNESCO, 2020). In addition, only 47 % of the population in developing countries use the Internet, in comparison to 86 % of the population in developed countries (UITNU, 2019).

The COVID-19 pandemic has aggravated division, as many students found it difficult to work from home and follow classes online. Indeed, the closure of campuses has made internet and computers essentials to education, and the lack of access to these latter have consequences:

DIGITAL DIVIDE CAN TAKE DIFFERENT FORMS

- **ACCESS TO EQUIPMENT AND MATERIALS**
Many students can not afford the technology that allows full access to university resources
- **ACCESS TO INFRASTRUCTURE**
The access to Internet requires very costly investment and infrastructures that some countries can not afford. This includes broadband penetration and reliable access to technology.
- **ACCESS TO DIGITAL SKILLS**
The lack of control of fundamental skills and knowledge for the use of ICT and the exploitation of their content can be a source of inequalities between students
- **LINGUISTIC ISSUE**
English language dominates the software and the internet, making it a difficulty for non-English speaking students

a) Lack of communication and isolation

Students who do not have access to the Internet are disconnected, which causes social isolation. Isolation can have serious consequences for physical and mental health.

b) Barrier to studies and knowledge

Many students have dropped out or abandoned their education since the beginning of the Covid-19 crisis due to a lack of equipment, of skills or of connection suitable for distance learning.

c) Aggravation of social differences

Digital illiteracy can reduce the chances of finding a job and accessing quality employment because digital technology is today an inevitable tool in social life, socio-professional integration and access to training or employment.

d) Gender discrimination

Women in many societies are much less likely overall than men to have effective access to ICT. Of the estimated 3.6 billion people still unconnected, the majority are girls and women. On average, 52 % of women remain totally offline, compared with 42 % of men (ITU, 2019).

KEY FIGURES AND ADVANCES

a) Internet access on the rise

An estimated 4.1 billion people are using the Internet in 2019, reflecting a 5.3 % increase compared with 2018. (ITU, 2019). However, most of the offline population lives in least developed countries (LDCs): 19 % of individuals use the internet versus 87 % in developed countries.

b) Infrastructure access on the rise

The number of Internet users increased from nearly 17 % in 2005 to over 53 % in 2019. These numbers illustrate a better access to infrastructures and a rise of connexion points.

c) Mobile-broadband subscriptions on the rise

The number of active mobile-broadband subscriptions per 100 inhabitants continues to grow, with an 18.4 % year-on-year growth. (ITU,2019). Today, 97 % of the world population lives within reach of a mobile cellular signal.

d) Electricity access on the rise

Since 2010, more than a billion more people have been connected to electricity. Thus, in 2018, 90 % of the planet's population had access to it. However, 789 million people still live without electricity.

e) Decrease in the cost of internet access

For entry-level broadband services to be made affordable in developing countries, the cost must be less than 2 % of monthly gross national income (GNI) per capita (Broadband for sustainable development, 2018). In 2019, a fixed broadband subscription with 5 GB of data costs less than 2 % of GNI per capita in 61 countries. A mobile broadband subscription with a 1.5 GB data

plan costs less than 2 % of GNI per capita in 89 countries, including four least developed countries (ITU, 2019).



CONCLUSIONS AND RECOMMENDATIONS

We draw attention to all the inequalities and injustices caused by the digital divide, which have significant consequences not only in the short term but also in the medium to long term. It is clear that most initiatives can only come from the governmental level. However, we urge our university leaders to put in place internal measures to improve the situation of the most vulnerable.

To facilitate access to equipment and to the network, universities can:

- **Set up a computer equipment loan or rental program** for students who can not afford to buy their own computer equipment;
- **Provide mobile broadband modems** to students in need or help them to pay for an internet package, whether it is directly through the university or by setting up a solidarity fund;



- **Create a space in universities** where students can freely access digital technology on campuses;

- **Encourage the recording of lessons** to allow students with poor internet connection or living in areas prone to power outage to participate in distance-learning classes;

To increase digital skills, universities can:

- **Develop free computer science classes for students**, particularly on the use of digital and communication tools, on digital language and on the use of Internet resources;

- **Develop free computer science classes for professors**, so that they can acquire the skills and training methods allowing the full use of digital technology in their teaching, particularly on the creation of electronic courses and on the use of digital tools;

- **Set up spaces for dialogue and meetings** between parents, students, teachers, etc. to identify the users' real needs.

More generally, universities can provide in their budget a **fund dedicated to the digital divide** within the university.

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This document has been written in the framework of the Policy Briefs collection implemented by CIRAD-IFCU. Statements and remarks only involve the author not the Federation.

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