



Digital inequalities in children and young people: **A technological matter?**

INDIRE – OECD (CERI)
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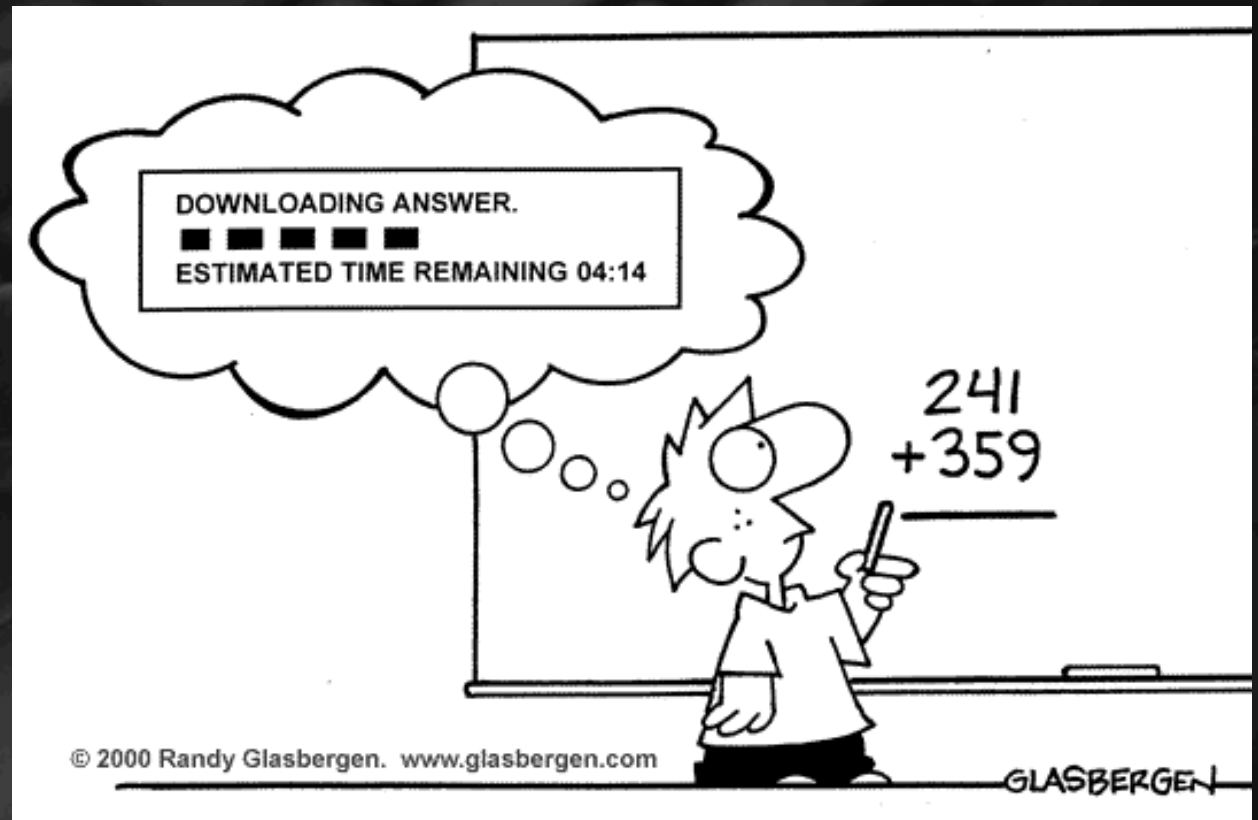
Technological fears...

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"YOUR MOTHER AND I FOUND OUT YOU'VE BEEN BLOGGING.
WE DON'T KNOW WHAT THAT MEANS, BUT WE'D LIKE YOU TO STOP."

... And technological promises



The unequal appropriation of the internet



Digital Divide



Digital Inequalities



Inequalities in what?

- ▶ Access
- ▶ Use
- ▶ Literacy

The unequal appropriation of the internet

Inequalities in terms of what?

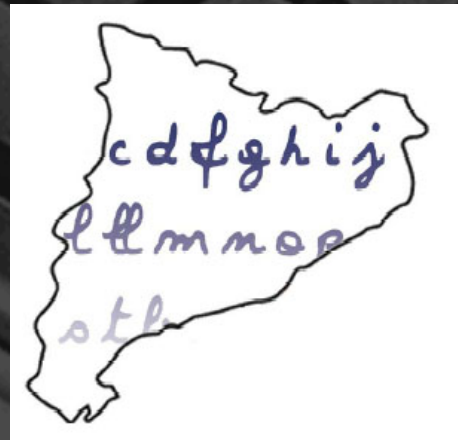
- Socio-demographic background
- Academic performance
- Influence of the Family
- contribution of the school

Old deterministic debates → Empirical research

Research programme

Catalonia Internet Project (PIC):
"Schools in the Network Society"

<http://www.uoc.edu/in3/pic>



Methodology



Multivariate analysis (logistic regressions)

6,602 children and young people between 11 and 18 years old

A statistically representative sample of 350 schools and high schools

Major research question

Is there sustained evidence regarding the effects of technology on academic performance?

Is there sustained evidence regarding the effects of individual differences on the appropriation of the internet?

Inequalities in internet access

The better their academic performance, the less connected the children are

Academic performance

Internet access

High difficulties
Some difficulties
Adequate progress

84.1%

83.6%

81.4%



Inequalities in internet access

The better their academic performance, the higher the odds of them accessing the internet

| | Internet access | |
|-----------------------------|-----------------|----------|
| | Exp(B) | % Change |
| Academic performance | | |
| High difficulties | - | - |
| Some difficulties | 1.507 | +50.7% |
| Adequate progress | 1.360 | +36.0% |

Inequalities in internet access

The more frequent users their parents are, the greater the likelihood of young people connecting to the internet

| | Internet access | |
|---------------------------------|-----------------|----------|
| | Exp(B) | % Change |
| Their parents' frequency of use | | |
| Never or hardly ever | - | - |
| Monthly | 3.218 | +221.8% |
| Weekly | 1.459 | +45.9% |
| Daily | 1.734 | +73.4% |

Inequalities in internet use

Statistically significant differences by socio-demographic variables are shown in internet use

| | Internet use: Educational purposes* | | Internet use: Leisure purposes* | |
|-----------------|---|---------------|------------------------------------|---------------|
| | Exp(B) | % Change | Exp(B) | % Change |
| Age | 1.120 | +12.0% | 1.053 | +5.3% |
| Gender | | | | |
| Female | - | - | - | - |
| Male | 0.604 | -39.6% | 1.970 | +97.0% |
| Language | | | | |
| Catalan | - | - | - | - |
| Spanish | 0.834 | -16.6% | 1.389 | +38.9% |
| Bilingual | 1.170 | +17.0% | 1.439 | +43.9% |
| Other | 0.806 | -19.4% | 1.163 | +16.3% |

*Significant relationships are marked in bolds.

Inequalities in internet use

The better their academic performance, the greater the likelihood of using the internet for educational purposes

Academic performance

High difficulties
Some difficulties
Adequate progress

| Internet use: educational purposes* | | Internet use: leisure purposes* | |
|---|----------------|------------------------------------|---------------|
| Exp(B) | % Change | Exp(B) | % Change |
| - | - | - | - |
| 1.452 | +45.2% | 1.022 | +22.0% |
| 2.041 | +104.1% | 0.787 | -21,3% |

*Significant relationships are marked in bolds.

Inequalities in internet use

The more frequent users their parents are, the greater the likelihood of young people using the internet for educational purposes

Their parents' frequency of use

Never or hardly ever
Monthly
Weekly
Daily

| Internet use: educational purposes* | | Internet use: leisure purposes* | |
|-------------------------------------|---------------|---------------------------------|----------|
| Exp(B) | % Change | Exp(B) | % Change |
| - | - | - | - |
| 1.093 | +9.3% | 1.092 | +9.2% |
| 1.249 | +24.9% | 1.032 | +3.2% |
| 1.270 | +27.0% | 1.090 | +9.0% |

*Significant relationships are marked in bolds.

Inequalities in digital literacy

There is a weak relationship between internet use in schools and digital skills' acquisition

| | Knows how to use a search engine* | | Knows how to download a file* | | Knows how to send an email* | |
|-----------------------------|-----------------------------------|----------------|-------------------------------|---------------|-----------------------------|---------------|
| | Exp(B) | % Change | Exp(B) | % Change | Exp(B) | % Change |
| Class-time internet | | | | | | |
| Never | - | - | - | - | - | - |
| Monthly | 1.878 | +87.8% | 1.033 | +3.3% | 1.223 | +22.3% |
| Weekly | 2.322 | +132.2% | 1.253 | +25.3% | 1.523 | +52.3% |
| Daily | 1.123 | +12.3% | 1.135 | +13.5% | 1.048 | +4.8% |
| School-time internet | | | | | | |
| Never | - | - | - | - | - | - |
| Periodically available | 1.273 | +27.3% | 1.083 | +8.3% | 1.349 | +34.9% |
| Always available | 1.366 | +36.6% | 0.722 | -27.8% | 0.872 | -12.8% |

*Significant relationships are marked in bolds.

Inequalities in digital literacy

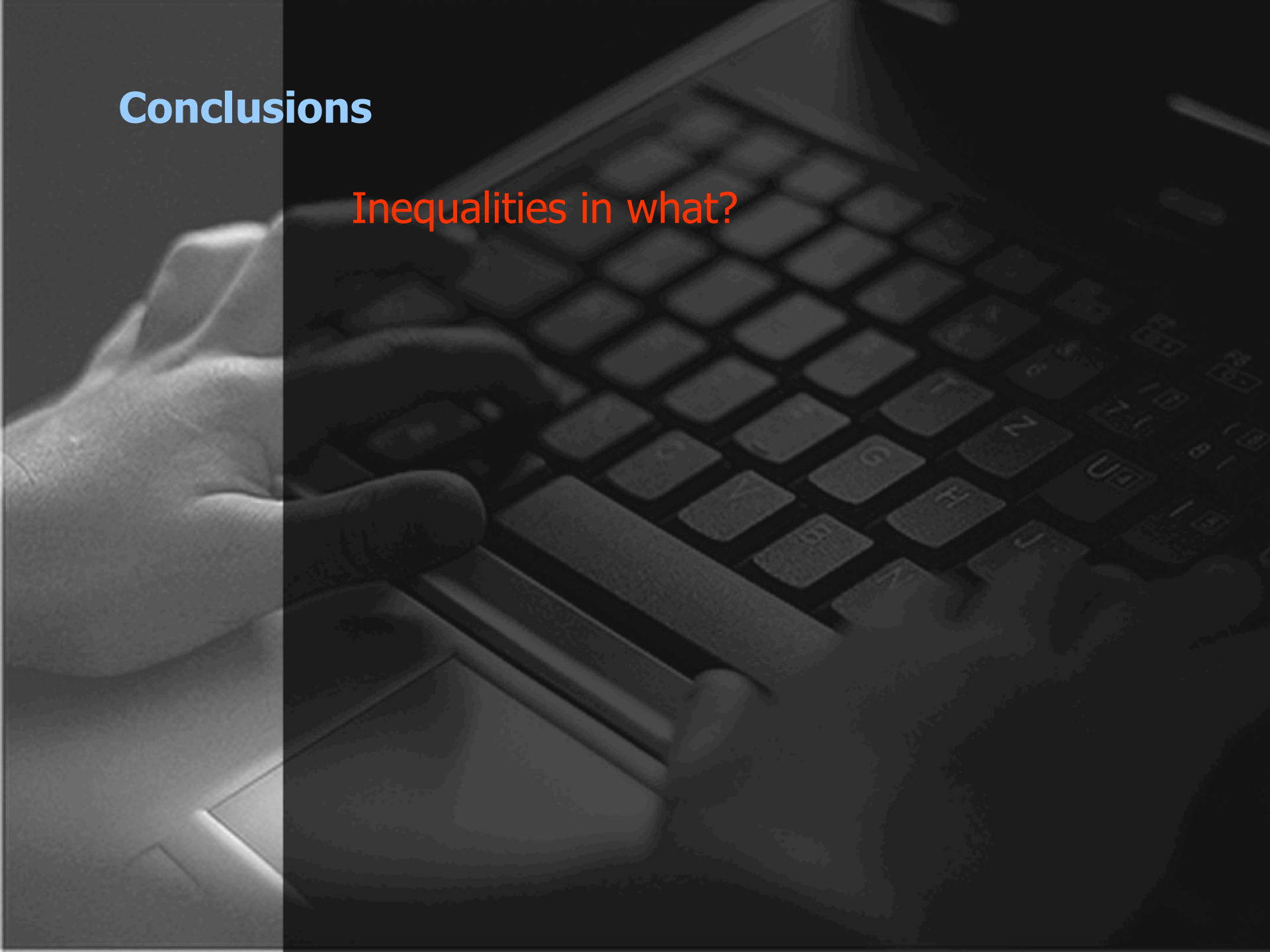
On the contrary, the more frequent users are outside of school, the greater the odds of them being digitally literate

| | Knows how to use a search engine* | | Knows how to download a file* | | Knows how to send an email* | |
|----------------------------|-----------------------------------|----------|-------------------------------|----------|-----------------------------|----------|
| | Exp(B) | % Change | Exp(B) | % Change | Exp(B) | % Change |
| Off-school internet | | | | | | |
| Never | - | - | - | - | - | - |
| Monthly | 2.536 | +153.6% | 1.713 | +71.3% | 2.643 | +164.3% |
| Weekly | 7.706 | +670.6% | 3.851 | +285.1% | 7.422 | +642.2% |
| Daily | 16.700 | +1570.0% | 13.400 | +1240.0% | 33.958 | +3295.8% |

*Significant relationships are marked in bolds.

Conclusions

Inequalities in what?



Conclusions

What are technologies doing to the children
and young people?



What they are actually doing with the
technologies?

Conclusions



Mathew Effect: the “rich” get richer, and the “poor” get poorer.

Conclusions



The issue of the digital inequality seems not to be strictly a technological matter

Conclusions

Inequalities in what?

- Internet access
- Internet use
- Digital literacy

What are children and young people actually doing with technologies?

Mathew Effect

The issue of the digital inequality seems not to be strictly a technological matter



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