May 19, 2025 – ITU ICT Development Index (IDI) EGTI Sub-group

Purpose

Discuss the use of traffic indicators in the ICT Development Index (IDI) model as of 2023.

Proposals

These are the proposals:

- Make no changes, or
- Mention that excessive usage of the internet may have undesirable consequences for cognitive abilities and physical well-being.

Rationale for the proposal

The access to the internet has had a significant impact on time spent on internet related activities in many countries. Recent research suggests that excessive internet usage may result in cognitive decline (and physical decay). The current scoring of traffic indicators for data usage rewards high amounts of data traffic which is most likely positively related to increased usage of the internet.

Background

The previous conceptual framework for the IDI was based on a three-stage model, see Figure 1:

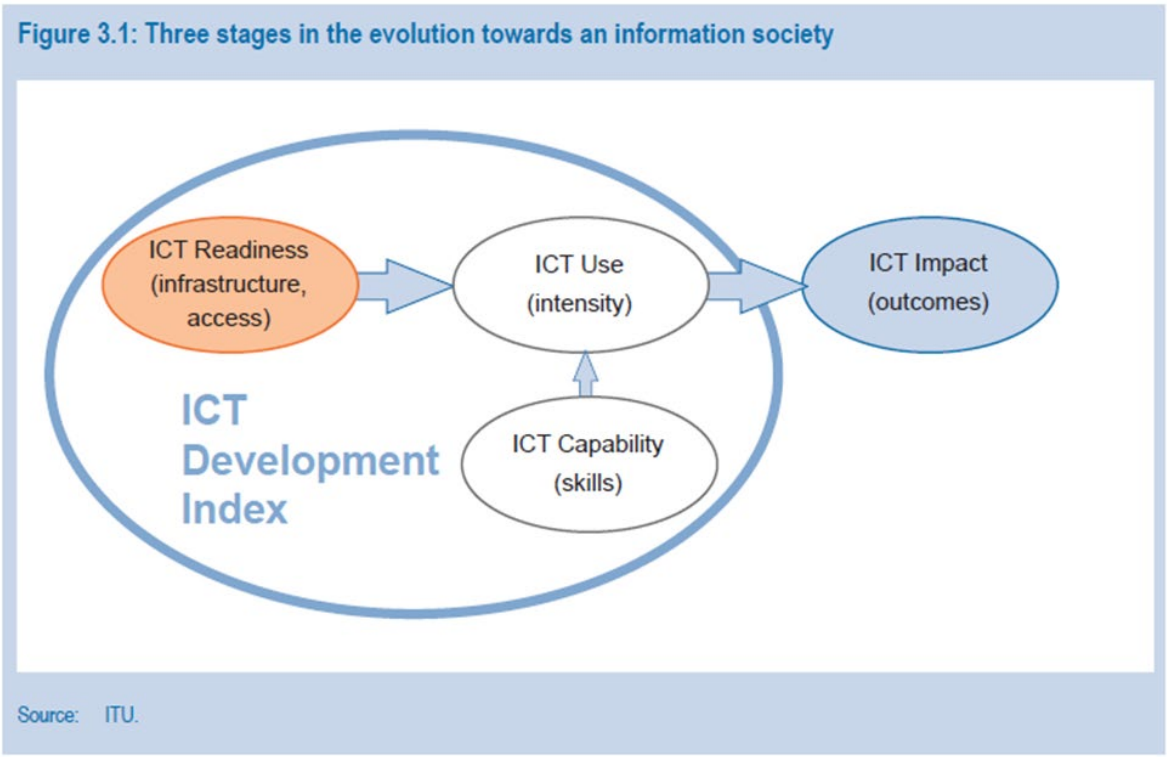

Figure 1 ITU Three stage model, Source ITU

ITU defined two ways to look at ICT use:

- Quantitative, e.g. data traffic per month/year
- Qualitative, e.g. accessed services like internet banking, E-Government services, etc.

Information on the quantitative element is more readily available as it can be sourced from the supply side, while the qualitative element is less available as it is often collected via demand side surveys. This is probably the main reason that ITU has chosen to only include quantitative traffic indicators in the IDI 2023 version.

Possible effects of excessive internet usage

On 14 March 2025, the Financial Times published an article with the title: “Have humans passed peak brain power”. The article highlights recent results from OECD’s PISA[1], an international benchmarking of how 15-year-olds perform in reading, mathematics and science tests, and OECD PIAAC[2], a household survey of the skills of 16–65-year-olds, both showing a decline in cognitive abilities among the surveyed individuals. The PISA scores recorded their latest peak around 2012.

The author proceeds to come up with possible explanations for the cognitive decline. As it seems unlikely that brain capacity has recently declined, it is proposed that increased exposure to especially visual stimulation from social network sites, and the associated decrease in attention span, results in an under-stimulation of concentration, deep studying and problem solving, ultimately resulting in cognitive decline. The author states that “there has been remarkably little consistent long-running research on human attention or mental capacity”. This means that this area still seems somewhat undiscovered.

Potential action points from ITU

The cognitive effects of internet usage appear to be beyond ITU's scope. Nevertheless, by granting higher scores for higher data consumption, ITU indirectly encourages increasing levels of internet usage, which potentially could result in cognitive decline.

It is therefore proposed that the EGTI/EGH sub-group explores avenues to address this issue.

[1] https://www.oecd.org/en/about/programmes/pisa.html
[2] https://www.oecd.org/en/about/programmes/piaac.html