

Mirror world(s) — the next generation learning environments?

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Teemu Leinonen – Mikko Mäkelä

Kuinka rakentaa oppimiselle tilaa? Miten nykyisiä ympäristöjä voidaan hyödyntää paremmin ja monipuolisemmin? Miten ympäristöt, oppiminen ja hyvinvointi linkittyvät toisiinsa?

Oppimisympäristö käsitetään useimmiten fyysiseksi ympäristöksi, vaikka siihen kuuluu myös psyykinen, sosiaalinen ja kulttuurinen ympäristö. Myös käytetyt menetelmät ja välineet ovat osa oppimisympäristöjä.

Tämä tarinallinen tietokirja herättää katsomaan maailmaa uudenlaisista näkökulmista ja laajentamaan oppimisympäristön käsitettä uusille alueille. Teos näyttää, miten voi edistää oppimista niin että oppimisympäristö ja pedagogiikka tukevat toisiaan.

Teos on suunnattu opettajille niin varhaiskasvatukseen, perusopetukseen, toiselle asteelle kuin vapaaseen sivistystyöhönkin. Se tarjoaa uusia ajatuksia myös arkkitehdeille ja muille ammattiryhmille, jotka ovat oppimisympäristöjen kanssa tekemisissä ja niistä vastuussa.

Teemu Leinonen työskentelee Aalto-yliopiston taiteiden ja suunnittelun korkeakoulussa ja Mikko Mäkelä Vantaan kaupungin varhaiskasvatuksen johtajana.

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Teemu Leinonen: E-learning is dead. Long live learning!

Datum 21/12/2004 Auteur [Teemu Leinonen](#)



(afb. Teemu Leinonen)

Memorizing or cultivating knowledge

With the term e-learning most scholars, educational practitioners and technology developers mean learning that is facilitated and enhanced with information and communication technology. The little "e" - the electronic - is easy to define. However for many of us the other part of the word, the "learning" seems to be extremely difficult to conceptualize.

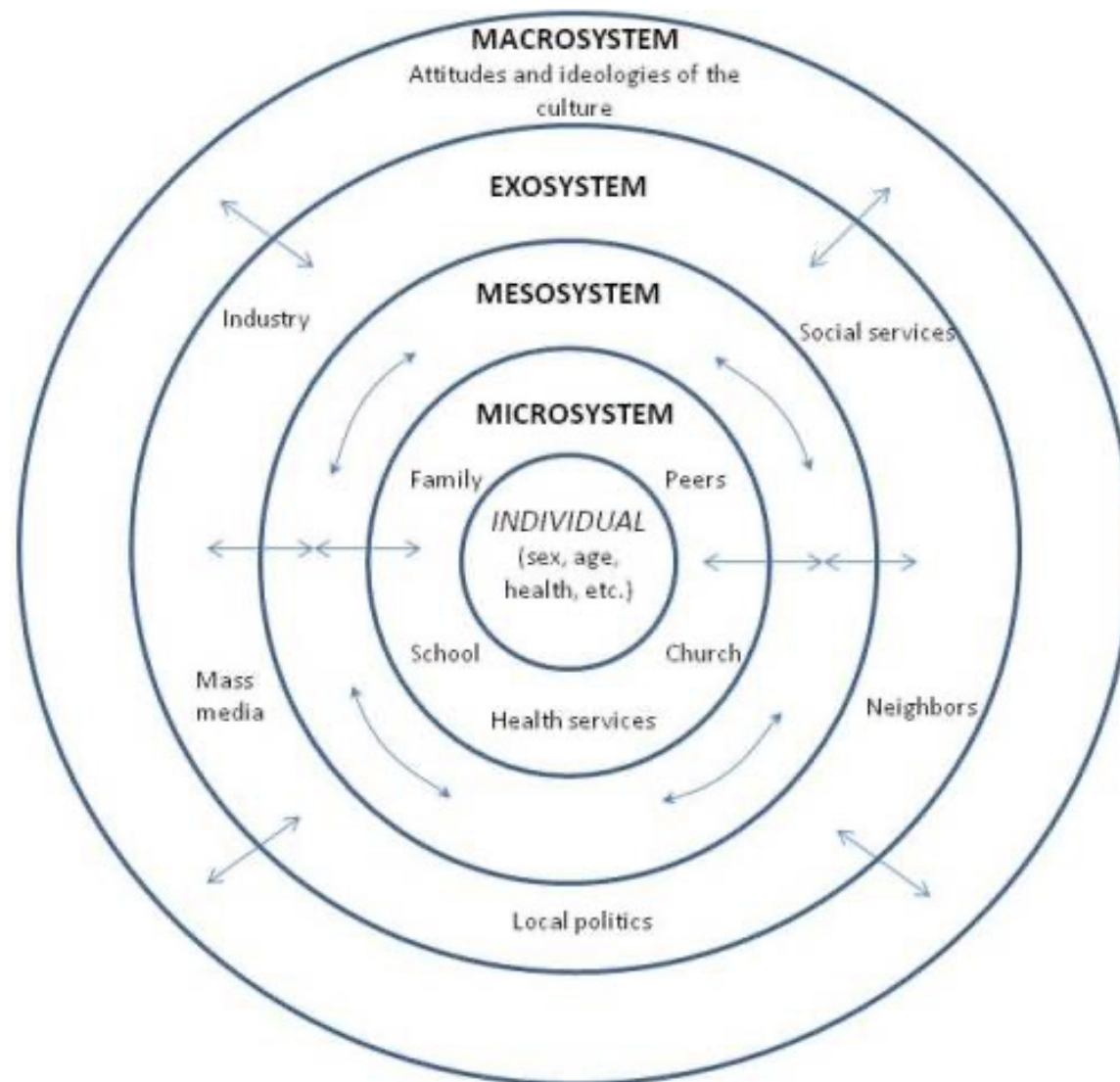
First of all it is important to recognize that there are different levels of learning: starting from the classical conditioning and mechanical route memorizing to processes of meaning making and acquisition of skills to create knowledge. The results of different types of learning have different value.

In deze rubriek geven mensen uit de ict- en onderwijswereld hun mening over de rol van ict in het hoger onderwijs. De meest recente columns staan bovenaan.

Meld een column aan

- [Herbert Blankesteyn: Tussen citaat en plagiaat](#)
- [Twan Huys: iPods Dirty Little Secret](#)
- [Lotte Asveld: autonomie en internet](#)
- [Paul Kirschner: Not-Invented-Here? Van syndroom naar geuzennaam!](#)
- [Mark Rutte over e-learning: "Blended learning heeft de toekomst"](#)
- [Peter Sloep: 'SCORM-](#)

What is learning?

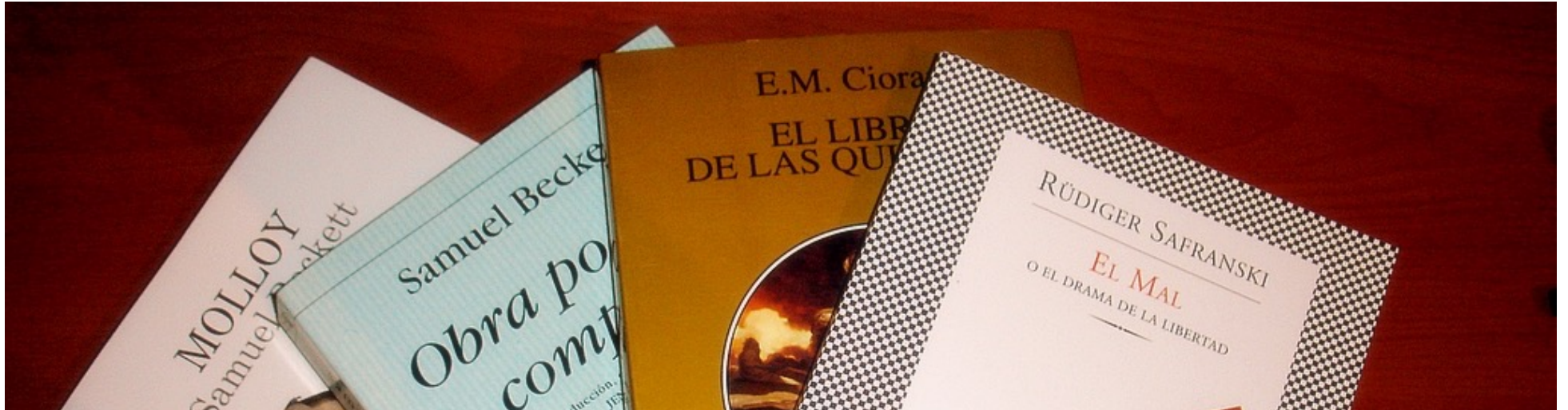


Metaphors of learning

1. Knowledge acquisition

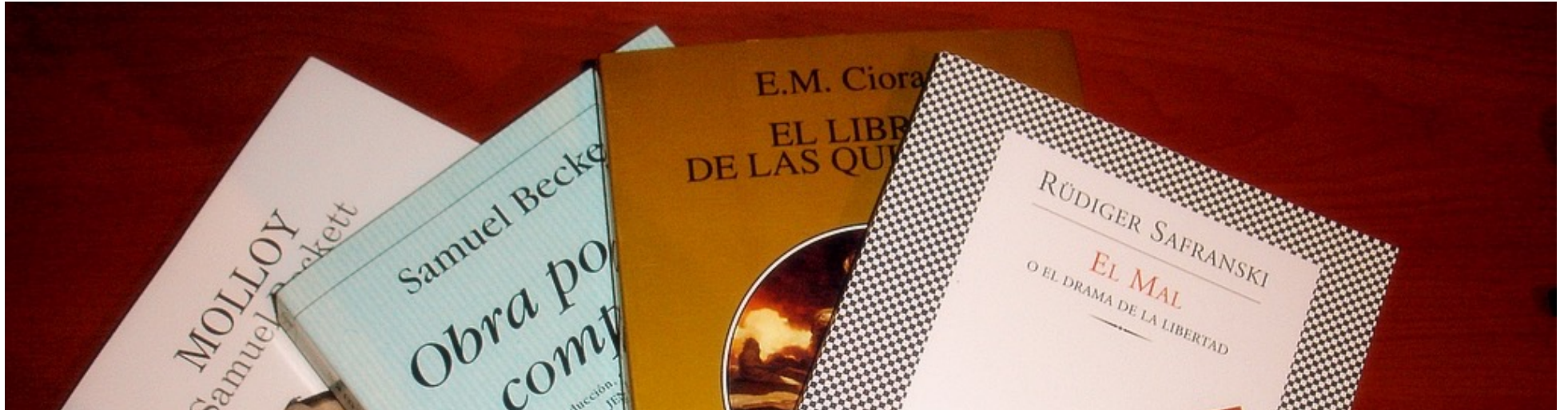
2. Participation

3. Knowledge creation



1. Knowledge acquisition





Learning is an individual cognitive process





2. Participation





Learning is a socio-cultural process





3. Knowledge creation





Learning is a socio-cultural process with an intention to produce artefacts





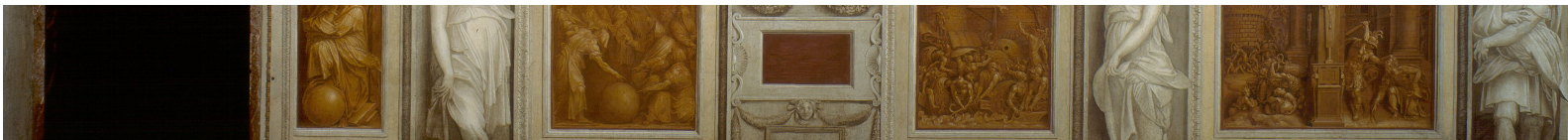
Learning is a socio-cultural process with an intention to produce artefacts



Learning is a socio-cultural process with an intention to produce artefacts



Learning is a socio-cultural process with an intention to produce artefacts





Learning is a socio-cultural process with an intention to produce artefacts







Knowledge
acquisition

Participation

Knowledge
creation



(Paavola, S., & Hakkarainen, K. (2005). The knowledge creation metaphor –
An emergent epistemological approach to learning. *Science & Education*, 14(6), 535-557.)



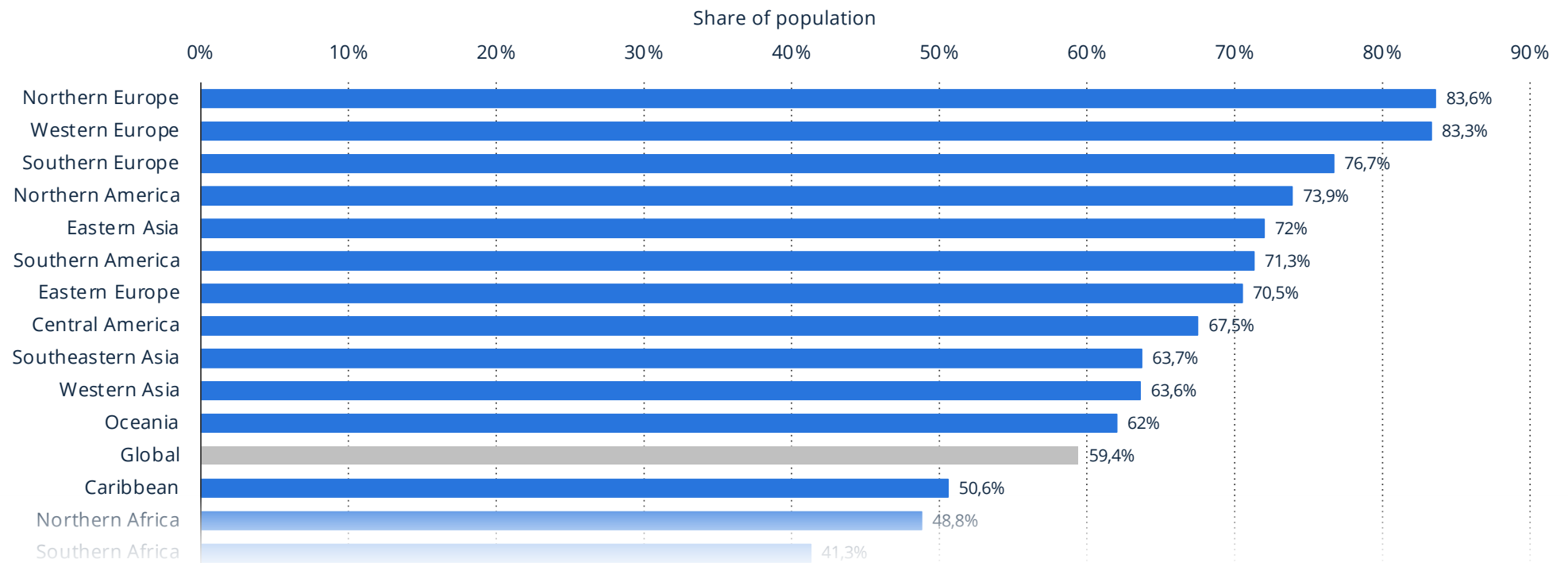
Year 2020+

A black and white photograph of a man in a suit sitting at a desk with papers. The man is looking directly at the camera with a serious expression. He is wearing a dark suit jacket, a white shirt, and a patterned tie. The desk is cluttered with various papers and documents. In the background, there are bookshelves filled with books. The overall atmosphere is professional and academic.

Statistics

Global social network penetration rate as of January 2023, by region

Social media: global penetration rate 2023, by region



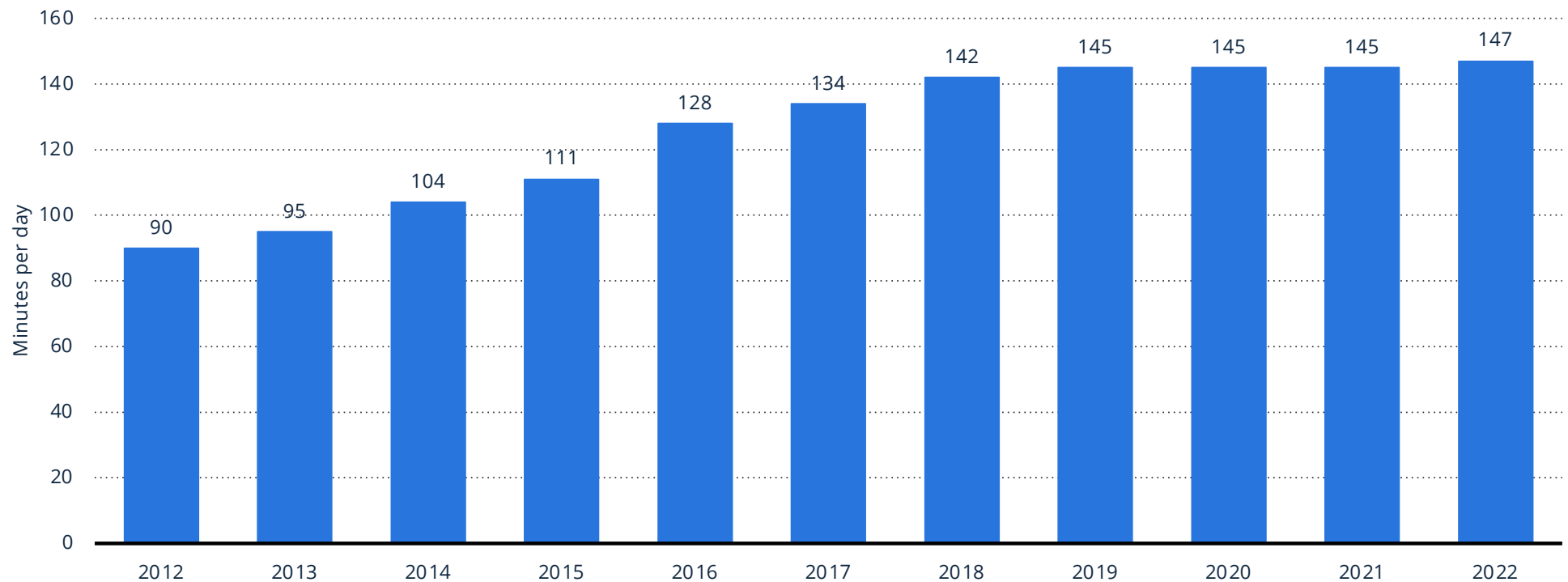
Description: As of January 2023, Northern Europe was the region with the highest social network penetration rate, with a reach of 83.6 percent. Western Europe followed closely with 83.3 percent, and Southern Europe ranked third with a penetration rate of 76.7 percent. In Eastern and Middle Africa, social media penetration stood at 8.4 percent and 7.4 percent, respectively. Globally, approximately six out of every ten people use social media. [Read more](#)

Note(s): Worldwide; January 2023; social media users as a share of total population

Source(s): DataReportal; Meltwater; We Are Social

Daily time spent on social networking by internet users worldwide from 2012 to 2022 (in minutes)

Average daily time spent on social media worldwide 2012-2022



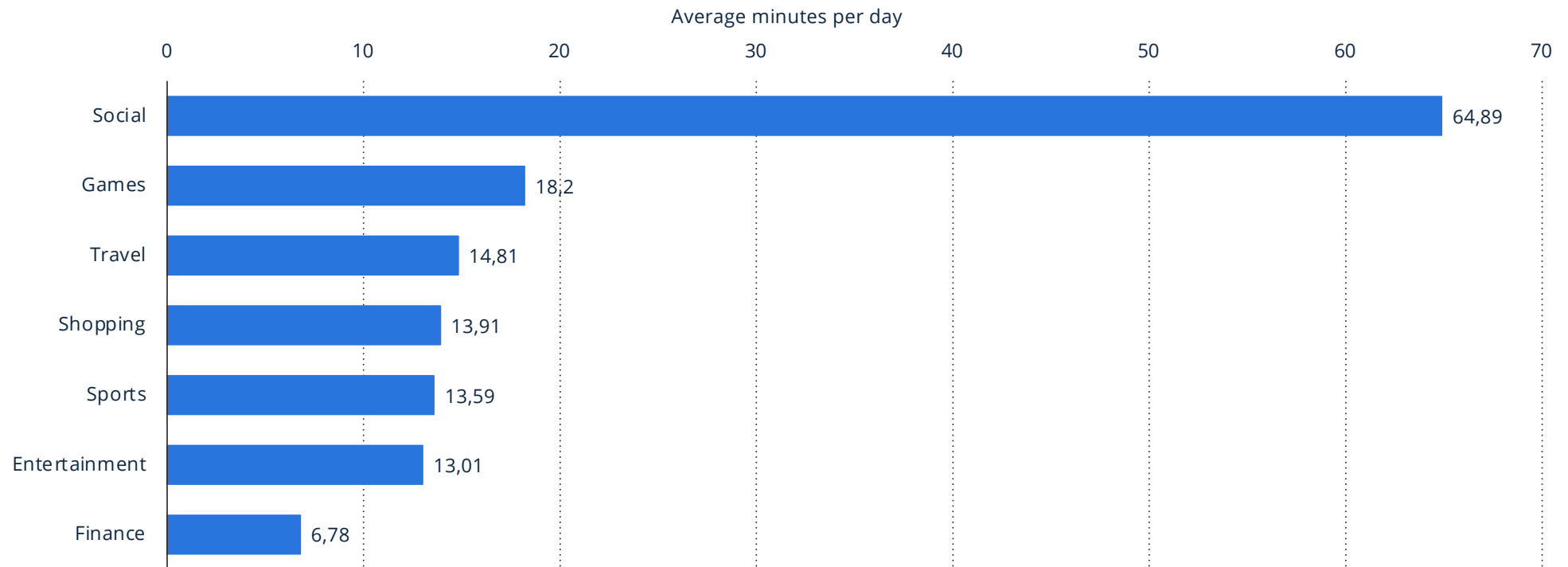
Description: As of 2022, the average daily social media usage of internet users worldwide amounted to 147 minutes per day, up from 145 minutes in the previous year. Currently, the country with the most time spent on social media per day is the Philippines, with online users spending an average of three hours and 53 minutes on social media each day. In comparison, the daily time spent with social media in the U.S. was just two hours and three minutes. [Read more](#)

Note(s): Worldwide; 2012 to 2022; 16-64 years; social media and messaging

Source(s): DataReportal; GWI; Hootsuite; We Are Social

Average daily time spent by users in Europe on mobile apps from October 2020 to March 2021, by category (in minutes)

Europe: users daily time on apps 2020-2021, by category



Description: Between October 2020 and March 2021, users in Europe spent an average of 64.89 minutes daily in social media apps. Gaming apps were the second most popular app category based on users' daily engagement, with 18.2 minutes spent daily on average playing mobile gaming apps. Users in Europe spent 14.81 minutes on average per day on travel apps, and approximately only 13 minutes on entertainment apps in the examined period. [Read more](#)

Note(s): Europe; October 2020 to March 2021

Source(s): adjoie GmbH

Technology mega-trends

internet-based networks

growing computing capacity

automation and robotics (AI)

Learning mega-trends

formal and informal learning

social environments

analytics, self-regulated
learning (SRL) and reflection

Learning mega-trends

formal and informal learning

social environments

analytics, self-regulated
learning (SRL) and reflection

Formal

Non-Formal

Informal

Context

Institutions

Work +
GLAMs +
NGOs

All the rest
(more and
more on
Internet)

Formal

Non-Formal

Informal

Context

Institutions

Work +
GLAMs +
NGOs

All the rest
(more and
more on
Internet)

Power and
Control

Curriculum &
Degrees

Pseudo-
voluntary

Voluntary
(or not ?)

Formal

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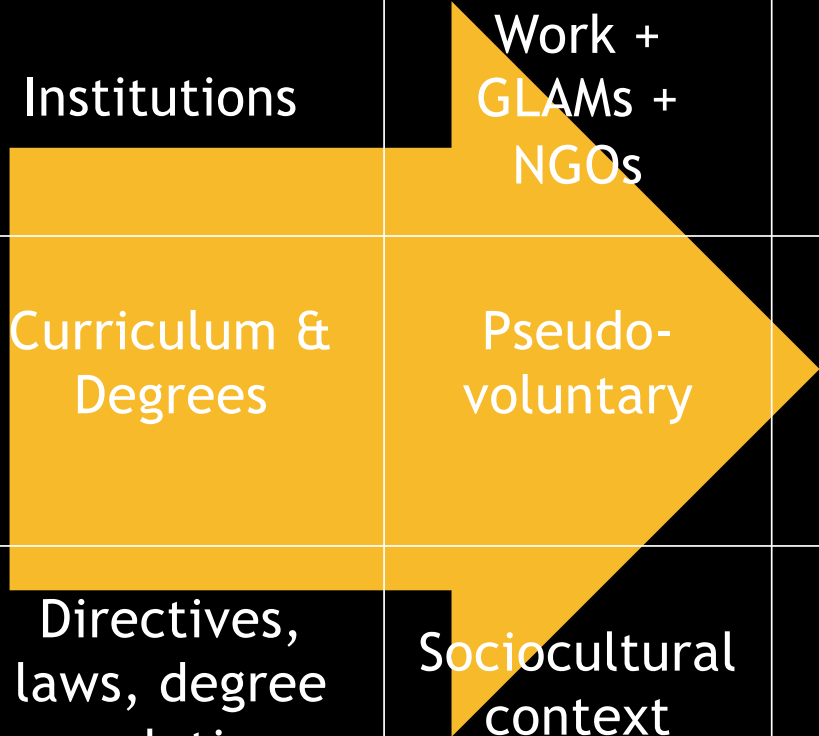
Regulation

Directives,
laws, degree
regulations

Sociocultural
context

Self-
regulation

	Formal	Non-Formal	Informal
Context	Institutions	Work + GLAMs + NGOs	All the rest (more and more on Internet)
Power and Control	Curriculum & Degrees	Pseudo- voluntary	Voluntary (or not ?)
Regulation	Directives, laws, degree regulations	Sociocultural context	Self- regulation



Learning mega-trends

formal and informal learning

social environments

analytics, self-regulated
learning (SRL) and reflection



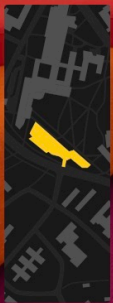


Mirror Worlds

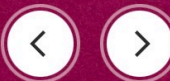








Life on campus





School of Arts, Design and Architecture





Learning mega-trends

formal and informal learning

social environments

analytics, self-regulated
learning (SRL) and reflection



We need more research.



Thank you - Kiitos.



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