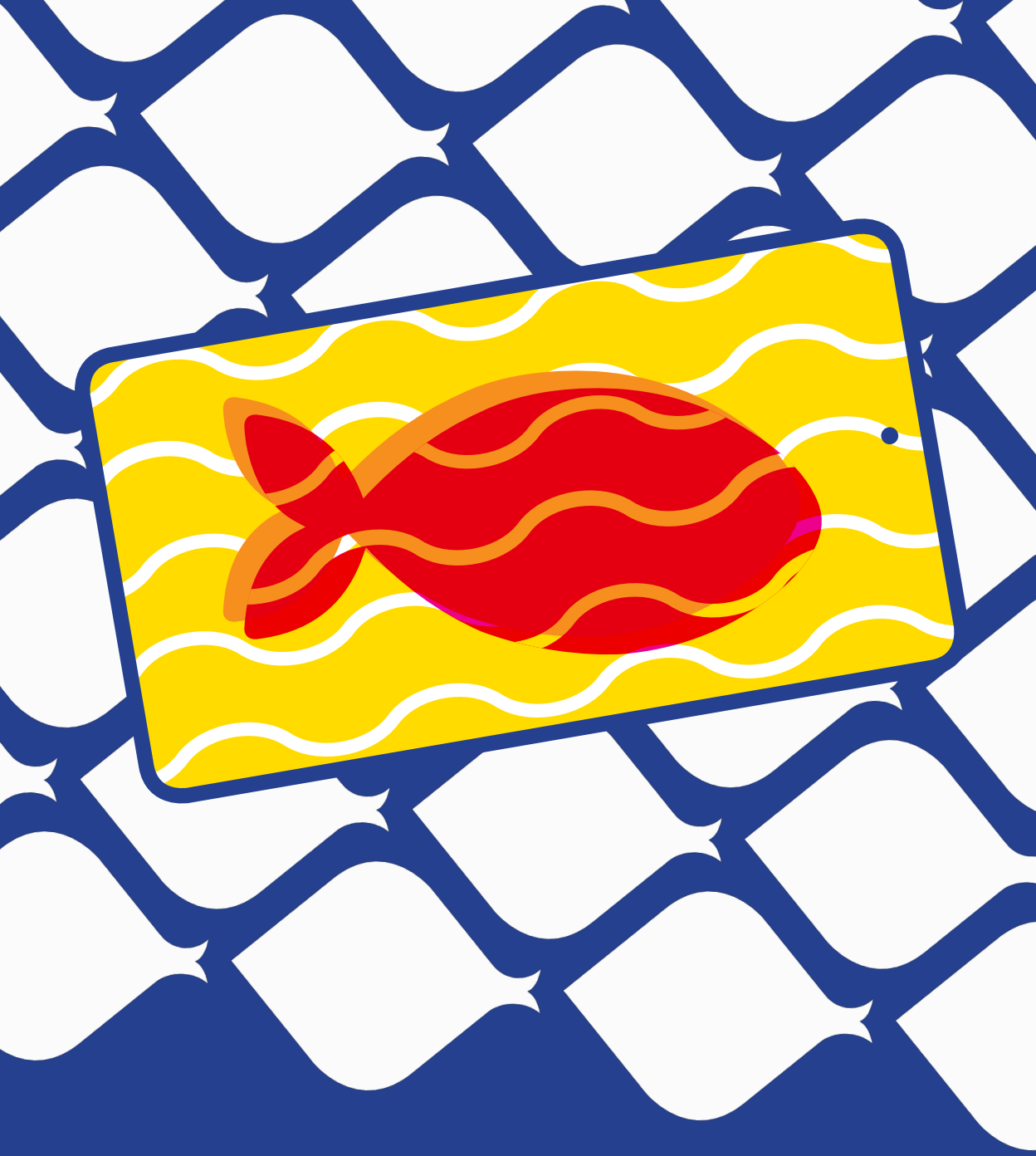

Competendo Facilitator Handbook

MORE THAN GO WITH THE FLOW

From Platform Users to Active Citizens

Competendo Facilitator Handbook

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From Platform Users to Active Citizens

This handbook is part of the series “Facilitator Handbooks“. Democratic. DARE – Democracy and Human Rights Education in Europe.

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2026

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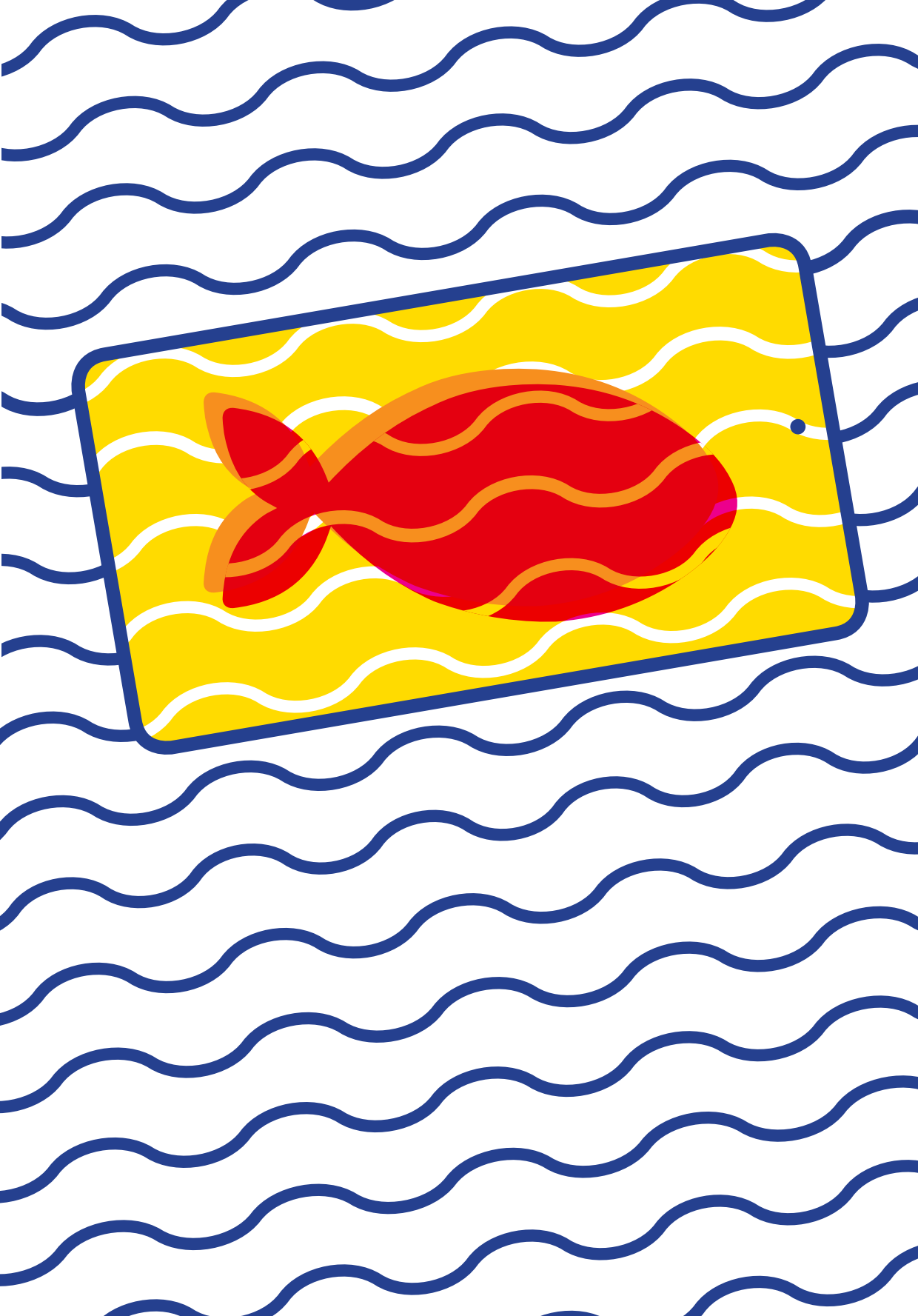
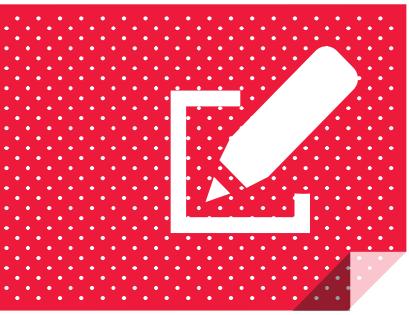




THE SOCIO-POLITICAL IN DIGITALISATION

A different focus on digital education and youth work

Education for Democratic Citizenship empowers learners to participate and co-create democratic decision-making, to develop the competence to be a critical thinker in regards to the political and to contribute to democratic culture. In line with the perspective of the Council of Europe, it is clear that such a pedagogy addresses both the (analytical) ability to think and judge, as well as the (also practical) skills and attitudes needed to participate as an active citizen.

> *"Education for democratic citizenship means education, training, awareness-raising, information, practices and activities which aim, by equipping learners with knowledge, skills and understanding and developing their attitudes and behaviour, to empower them to exercise and defend their democratic rights and responsibilities in society, to value diversity and to play an active part in democratic life, with a view to the promotion and protection of democracy and the rule of law."*
>
> Charter on Education for Democratic Citizenship and Human Rights Education (Council of Europe CM/Rec(2010)7)

Such a pedagogical approach, to which we are committed, achieves this by opening up socio-political learning opportunities. It seeks out the political in everyday life and at the same time addresses socio-political debates and developments through the lens of democracy and human rights. This creates a link between the everyday acts of politically effective action as citizens (my own actions and actions in my immediate environment) and the structurally effective spheres of politics (such as governance, lawmaking and law enforcement, fundamental decisions and guiding principles).

The digital is political

It is obvious that education that focuses on "the political" cannot be satisfied with a discourse on digitalisation that largely ignores the social, political, economic and cultural impacts of digital policy and digital development. In recent years, awareness has risen on the political character of developments such as platformisation, AI, structural decisions in the information ecosystem and competitive decisions in the digital market. Education must take decisive action here. It must take learners seriously as **citizens** and address them as such, rather than merely as consumers or so-called "users".

This is what we refer to in the title "More than going with the flow". If one always goes with the flow, at some point one will no longer know what it means to swim against the tide. Maybe one would also like to learn more about water and the ecosystem or perhaps experiment with forms of coexistence, aquariums and swimming variations that are not traditionally envisaged.

Of course, the normative frame of reference in which education operates is not cyberspace, the future or the digital world. Essentially, it is about the future of democracy in the digital and analogue worlds and in their intersections.

With its imagery, attitude and focus on the "new" and "into the new", the digital world still harbours the adventurous mindset of (European and North-American) coloniser-explorers, which are otherwise viewed critically. Many position digitalisation against considerations that lean towards what Beck describes as **reflexive modernity**:

> *"We are therefore concerned no longer exclusively with making nature useful or with releasing mankind from traditional constraints, but also and essentially with problems resulting from techno-economic development itself. Modernization is becoming reflexive; it is becoming its own theme. Questions of the development and employment of technologies (in the realms of nature, society and the personality) are being eclipsed by questions of the political and economic 'management' of the risks of actually or potentially utilized technologies..." (Beck, 1992, p. 19).*

If digitalisation were the **rebirth of solutionism (**and the engineering spirit that can solve everything), what consequences would this have for society, interpersonal and human-machine relations? The entry into a "risk-ignorant society", led by global super-platforms and managed by engineering problem solvers? Would that be civilisatory progress?

On the other hand, there is no reason to paint an overly dark picture. A **decentralised, open, free and accountable internet exists** and is growing, albeit largely under the radar of the public in the machine room of digitalisation. Discourse and counter-discourse are essential for progress. This makes it all the more important for our societies to inform themselves about debates concerning technology policies and to engage in them.

Digitalisation and the **state**: Depending on the civic culture we grew up in, we have different perspectives on the state, politicians, law enforcement or the legal system. In democracies, the state plays a fundamental role in decision-making and **digital governance.** So the point is not to promote trust or mistrust in the state, but to encourage critical thinking about how the state, the economy, civil society, media and citizens complement and balance each other. As digital technology becomes an important factor in all areas of life, the **general capacity of a democratic state** to act is increasingly measured by how well it manages to achieve good and efficient digital governance: from concrete decisions about a smart city or digitalisation projects of a public administration to far-reaching platform governance.

Because digital policy in Europe is largely shaped at the supranational level, an approach outlined in this way is also an example of how **education about Europe** can be conceptualised beyond a basic understanding of institutions. However, because European public opinion is very weak, governments and polarisers have long exploited this. Ground-breaking European projects e.g. are debated far too little on a national level. Sometimes, the opposite of what is announced in the national political arena is being proclaimed in Europe. Populists take every opportunity to stir up sentiment against Europe. This is particularly problematic for European digital policy in the European Union and the Council of Europe. Citizens usually only hear about the respective projects when the lobbying battle is almost over. That is why the editors of this brochure believe that European democracy depends particularly on more European-oriented education on digital issues. Educators, familiarise yourselves with digital policies. Read the newsletters of the digital civil society and listen to

European experts and researchers, particularly those with a critical political understanding of digitalisation.

In addition to the European dimension, digitalisation has a **global** dimension. The internet itself, transnational infrastructures and global value chains of digital capitalism and hardware production should be integrated into global citizenship education. Critical research provides global perspectives on developments and highlights asymmetries and inequalities. The exploitation of raw materials and rare minerals has long been a topic in some educational practices, often in the context of development aid . However, youth work and education must keep pace with current scientific and social debates. **Data colonialism** points to the irregular or badly paid workers that make the "miracle" AI work, e.g. and to the fact that platform capitalism depends on unfair and often immoral appropriation – "placing datafication within the longer history of colonial appropriations of territory and natural resources on a global scale" (Couldry & Mejias, 2019, p. 11). A short look at who delivers our food or who has to fight for basic workers' rights in the factories of the IT industry also makes it clear that this is not a matter of academic debate.

What about the **environment** and the **climate**? Although it is widely recognised that e-waste, raw material mining and their devastating ecological consequences are part and parcel of IT hardware, the opposite picture is projected on the software side. Politicians often want something similar to the EU's climate law, with variations:

> "*Digital transformation, technological innovation and research and development are also important drivers for achieving the climate-neutrality objective*" (EU Regulation 2021/1119).

Data and developments, as explained in the respective chapter of this handbook, point in a different direction: currently, digitalisation is jeopardising climate targets, the achievement of a circular economy, the longer use of resources and more ethical supply chains. For education, this means examining data and strategies, initiating discourse and supporting it: Which types of digitalisation, hardware and services can contribute to greater sustainability and which threaten general societal sustainability goals?

The digital economy

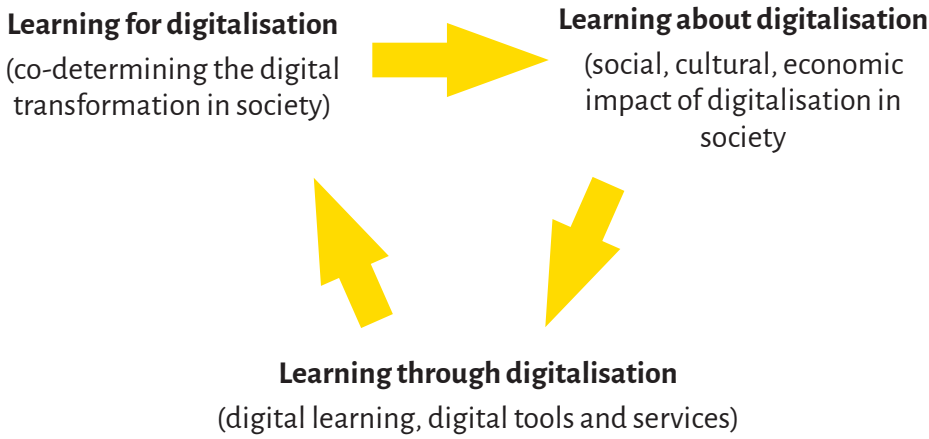
Datafication and platformisation have become culturally formative. However, they can only be understood by addressing the economics behind them. If "data is the oil of the digital economy," then we are talking about economics and economic management, and therefore about IT engineering based on economic premises. Education and youth work should discuss the different suggestions how to understand the economy of the digital such as: data capitalism, platform capitalism, surveillance capitalism, European data space, "GAFAM" or "big tech". We could also sharpen our awareness of the real and still viable alternatives to these models – the resilience of the free, interoperable, open and diverse internet ecosystem.

Of course, economics education also includes practical **financial education** and **consumer education**. Consumer protection services regarding purchasing decisions, the risk of debt, consumer rights, decision-making and dark patterns in the online context should not be reserved for the privileged few. For we see that increasingly young people are acting as producers, as providers of content (e.g. content creators) or traders of goods or speculating with financial products.

The digital is an experiential space

Some people may consider our approach to be very intellectual, but that is not the case. On the contrary, we are **enthusiastic users of digital technology** and believe that curiosity and a critical attitude go very well together. Digital education should always be a field of experimentation and an empowering space – game-based, working with media, experimental, interactive, fun. Curiosity should not only extend to what others set as a standard, but also to alternative digitalisation, that which is growing between the mainstream platforms.

We hope we have made it clearer where we see the difference between education with digital tools and socio-politically conscious education about digital technology: learning with digital tools, services and platforms; learning about these services and platforms, the interests associated with them and their impact on society; and learning that empowers people to advocate for the kind of digitalisation and digital policy that corresponds to their wishes and values.



This perspective highlights what other concepts of digital literacy often fail to address or only address peripherally: critical thinking, independent action, self-directed change and questions about the ethical and political framework of any digital policy and digital capitalism.

We would therefore like to invite the readers to view the guidelines and models for strengthening digital skills that they encounter through a political lens. Even though we have the impression that this political perspective is often overlooked, we firmly believe that young people are grateful when they are given the opportunity to think fundamentally about digitalisation, to learn how it all works in the engine rooms of tracking and analysis and to understand their rights and opportunities.

The control paradox

One paradox of digitalisation is that people accept it and use digital services and devices because they believe it gives them control and security – such as access to their bank account, to information or to their social network at any time.

At the same time, the risk of losing control increases. The more ubiquitous technology is, the less people feel able to actively intervene. They have learned to live with the fear of losing control, but it does not go away.

Rethinking technology in a non-deterministic way

When asked about your relationship with technology, what do you say? What does your partner say and what do your students say? From our experience, we know that the answers can vary widely, but they **rarely correspond to the narrative** surrounding digital technology – exciting, revolutionary, magical. If we want to get a balanced picture and not just reinforce the hype, we need to break away from such determinism.

Let's listen to **people's authentic (and often contradictory) feelings** about devices, platforms and services. People who believe they are not competent enough tend to apologise for it. But are they or are they just being too self-critical? Is the need to learn clever prompts at all proof of the technical imperfection of supposedly intuitive systems or of those sitting in front of the screen?

Building on this, we can turn to **critical digital literacy**: how do young people learn to be more than just "users" – how do they question, design, hack or use IT differently? We need citizens, not just users.

Digital reflections: reflective dialogue on media use

A dialogical card game that combines personal media experiences with structural mechanisms. Participants discuss their individual experiences in the digital world and reflect together. Developed by *mediale pfade* and published in the toolkit: Unlearning Anti-Feminism on TikTok.

→ https://competendo.net/en/Card_Game:_Digital_Reflections

Barriers to talking about digitalisation in a more political way

"Digitalisation" or "AI" are trigger words. They refer to a dominant digitalisation discourse that is deeply implanted in our culture that says: Digitalisation is "too complex" and "too technical".

→ Build analogies to other complex socio-political topics where people feel less triggered. Would they think "mobility" is too complex as well? Or would they think, that only motor engineers should discuss, how many cars should be able to enter a city centre or how many bicycle paths should be built?

"Digitalisation" addresses beliefs. The technical perspective on the world is often synonymous with "modernity". Depending on who is speaking, digitalisation can be: "dangerous and a threat to humanity" or, in opposite, the technology of today that gives us insight in our future or a powerful tool to solve all problems related to other transformations like social, migration, work, climate…

→ If necessary, start with a unit on **beliefs about digital technology**, both the groups' own and those of people they know. The means of an ideology-critical methodology should not denounce these feelings, but rather make them visible as important contextual factors. Being aware of them would help to ensure that they do not overshadow the discussion on regulation. If one thinks digitalisation is totally terrible, one would not be ready to compromise on regulation. If one thinks digitalisation is wonderful without reservation, one would see all regulations as stifling its pure beauty.

Lacking knowledge about role models. The personalities presented in regards to digitalisation are all representatives of the dominant platform model – growth through scaling and data capitalism. The heroes of the alternative internet ecosystem are being pushed into the background and even more so those fighting for democratic and intelligent regulation. Without them (and alternative and open-source software), the internet would not function.

→ Share information about these real innovators and maintainers of a diverse and open internet ecosystem.

Advocates for a Free and Democratic internet

GOAL: Learn about individuals who influenced the democratic development of the internet.
This playful research introduces influential figures who shaped the development of digitalisation and the internet. The method can also be used during the introduction to the topics of digitalisation or the governance of the digital sphere.

→ https://competendo.net/en/Advocates_for_a_Free_and_Democratic_Internet

We learnt to analyse power structures. Did we learn to shape them? We have a feeling for what is problematic but there is nearly no discourse on how to systematically assess systems of governance. For example: There is nearly no education on the bigger picture of how the EU and its member states aim to address hate speech in social media in the breadth of their policies. If it is talked about, then only about single elements: Right-wing influencers criticise the "trusted flaggers" foreseen in the Digital Services Act as censorship NGOs. NGOs advocate against weakening encryption of messenger apps ("chat control"). Oftentimes, only shortly before a major decision takes place the topic gets public attention. Or we hear that one platform has set up an advisory board that includes a famous person belonging to the world of NGOs. Or that another has reduced the number of employees responsible for content moderation or made it more difficult for researchers to access their data. This will also be a major problem for politicians, as many of them have also learned little about governance in a systematic way.

→ In order to prevent overwhelming, **focus on things that are important to young people** and that they themselves bring up. If additional expertise is required, it can be provided by external experts, for example.

→ Focus on the **perspective of young people**. Not: We are talking about social media regulation, but: Let's talk about how we really experience moderation and help on platforms. Who supports us? What kind of support do we want?

→ **Choose an area**: Don't ask for regulating "the internet" as a whole, but think, which area you want to address in particular. "Let's think about what electronic payment should be like" or "what needs to happen so that I can express myself on controversial topics and feel safe?"

→ As an entry point, **use methods that simulate or replay elements of reality** in the training space. How amplification in social media works e.g. or the difference between information and disinformation with real examples that reflect action strategies in concrete situations… Then draw more general conclusions from these specific experiences and observations – pedagogically leading from the experience of challenges to analyses and conclusions about governance.

Distorted discourse. The reason we often turn to surveys and statistics is the frustration that public debates – as reflected in discussions, media and political proposals – give a distorted impression of people's attitudes toward digitalisation. Survey data do not suggest that everyone is alarmed or that things cannot go fast enough for them or that they are uncritical users or that they fear their country (whichever it may be) will fall behind due to a lack of digital resilience.

Even before Elon Musk's takeover of Twitter, tech companies were already being viewed critically. People have always considered effectively enforceable digital rights to be important. At the same time, society has also consistently demonstrated openness. Public opinion is therefore generally somewhat more balanced than the **communication of companies**, which often portray the problematic aspects of digital transformation as necessary disruption and digitalisation itself as a universal solution to social problems.

Impact of digitalisation on daily life

In your view, what impact do the most recent digital technologies currently have? Values in brackets show the **change since 2017.**

	Very positive	Somewhat positive	Negative overall	Very negative
Economy	**12 %** (-11 %)	**50 %** (- 2 %)	**18 %** (+8 %)	**5 %** (+2 %)
Quality of life	**12 %** (-4 %)	**50 %** (=)	**19 %** (+5 %)	**5 %** (+1 %)
Impact on society	**10 %** (- 5 %)	**49 %** (- 3 %)	**26 %** (+6 %)	**7 %** (+2 %)

Source: Special Eurobarometer 554, QB 1 (2024); In brackets: Change in relation to Eurobarometer 460 (2017)

We can see a longer **trend toward greater criticism**: in 2017, people generally welcomed digital transformation with more enthusiasm, but by 2024, the very positive assessments had slightly declined (the changes between 2017 and 2024 are shown in brackets). At the same time, more critical attitudes increased, especially regarding the impact of digitalisation on society and on the labour market/economy. In 2024, the topic of AI was very prominent. There was debate about the EU AI Directive and ChatGPT and other large language models became very well-known and widely used. Furthermore, it is worth noting that Europeans in general tend to view digitalisation more critically than people in other parts of the world.

Youth perspectives

One consideration that guided the editors' actions was that when a young generation grows up with digitalisation, they generate, analyse, share and store digital data from early childhood onwards. This data cloud is no longer just a fragmentary reflection of the self, but part of it. How can we give them more control and agency in relation to their digital selves? While this question is not new for other generations, it is less fundamental for "us'" whose lives are not yet completely digitalised. In this sense, greater data protection and privacy contribute to "intergenerational empathy".

For a long time, there was debate over whether the so-called "digital natives," the generation that has grown up naturally with digital technology, handle this technology more wisely or more carelessly. Empirically, it cannot be confirmed that this generation possesses higher competence. Young people have a rather more positive and optimistic attitude than other generations, as the following statistic on AI in the workplace illustrates. On the one hand, this can be explained by the **everyday nature of the digital for them**; on the other hand, by the fact that, compared with other generations, they have so far had relatively **little experience in work contexts**.

Youth on AI applications in the job

Improving **working conditions**	**77 %** (Ø EU 67 %)
Allocating tasks for workers/scheduling	**62 %** (Ø EU 49 %)
Collecting & storing **personal data**	**57 %** (Ø EU 44 %)
Gathering **additional information about job applicants**	**53 %** (Ø EU 43 %)
Selecting job applicants	**46 %** (Ø EU 36 %)
Assessing **workers' performance**	**49 %** (Ø EU 36 %)
Monitoring workers	**44 %** (Ø EU 31 %)
Automatically **firing workers**	**23 %** (Ø EU 16 %)

Source: Special Eurobarometer 554, p. 58 (2024); n=26.415; age group: 15-24

Compared to other generations, young people's **concerns** are also somewhat more moderate, broken down here by groups of actors. They express significantly less intense worries regarding employers, advertisers, criminals/fraudsters, other governments or intelligence services:

Youth concerns: Access to data without permission by...

	Highly concerned	Moderately concerned	Not concerned
Employer	13 % (Ø 17 %)	43 % (Ø 36 %)	43 % (Ø 46 %)
Advertisers/ businesses	23 % (Ø 31 %)	44 % (Ø 42 %)	32 % (Ø 26 %)
Government	17 % (Ø 20 %)	40 % (Ø 41 %)	42 % (Ø 39 %)
Criminals/ fraudsters	46 % (Ø 55 %)	36 % (Ø 30 %)	18 % (Ø 14 %)
Law enforcement agencies	16 % (Ø 17 %)	37 % (Ø 36 %)	46 % (Ø 45 %)
National secret services	21 % (Ø 26 %)	37 % (Ø 36 %)	40 % (Ø 37 %)
Foreign governments	23 % (Ø 30 %)	37 % (Ø 33 %)	38 % (Ø 35 %)

Source: FRA Fundamental Rights Survey 2020, Europeans (n=4.195), age group: 16-29, Ø: EU 27 results for all age groups, n=20.930

As mentioned above, young people often perceive the digital environment that has surrounded them naturally since birth only little or unconsciously, just as Nicholas Negroponte anticipated in 1998:

> *"Like air and drinking water, digital existence will be noticed only in its absence, not in its presence." (N. Negroponte 1998)*

- Empirical data helps us to understand our fears, concerns, hopes and political interests better. In particular, it helps us to gain a critical perspective on the representativity in the discourse, who drives it and whose voices are underrepresented.

- It should also be emphasised that one of the greatest achievements of recent decades has been the **growth of publicly accessible data**. This distinguishes democracies from authoritarian systems. What would the environmentalists of the 1980s have given for the opportunity to access public data and share data themselves!

  - Sources and links to socio-political data: https://competendo.net/en/Data_and_Reports

From an intergenerational perspective arises a **productive (generational) tension for education**: on the one hand, the youth perspective is essential. At the same time, an educational mission emerges particularly from those aspects of digitalisation that are perceived by the younger generation as natural or not even as "digital," because they generally overlook the social and political constructedness of it.

- Digital youth work must reflect controversy and dilemma. Often the socio-political character of the digital becomes visible only within this very controversy.

Background of this handbook

This handbook is aimed at professionals as non-formal educators or youth workers, but is also intended to offer added value for teachers. It therefore has both theoretical and practical aims. That is why we have repeatedly tried to inspire readers with concrete suggestions for implementation.

We also know that conditions in the fields of youth work and non-formal education vary greatly. Some explicitly engage in democracy-related educational work, while others integrate democracy as an additional incentive for reflection, for example in open youth work. Some pursue a process-oriented approach that integrates the topics of democracy and human rights education as needed, while others consciously and specifically plan with these topics at the centre. In addition, the spatial conditions differ. Those who travel to many different locations experience different conditions than those who work with a school class or in an NGO education centre.

However, we wanted to address all of you with this book. We must also admit self-critically that we probably assume the standard conditions of non-formal education to a large extent–being able to design the space freely, divide and bring groups together, work creatively...

This handbook was developed by the DIYW ROAD project, which stands for **Digital Youth Work – rights-sensitive, open, accessible, democratic**. It is a collaboration between the Arbeitskreis deutscher Bildungsstätten AdB with Sozialprofil – Verein zur Förderung individueller, institutioneller und gesellschaftlicher Entwicklung (AT), DARE – Democracy and Human Rights Education in Europe vzw. (BE), Partners Bulgaria Foundation (BG), Fundación CIVES (ES) and Associação Dinamo (PT). Made possible by funding from the European Union.

We would like to thank all our partners and everyone who contributed to the content–especially those who develop good practices. Special thanks go to our colleagues at *mediale pfade*.

The authors
Markus Plasencia-Kanzler, Elisa Rapetti, Nils-Eyk Zimmermann

PS. We wrote our texts by hand. During the editing process we used Deepl, Claude, ChatGPT and Perplexity for different purposes, sometimes successfully, sometimes with disappointment.

Further materials from us

COMPETENDO - The Digital Citizenship Education Toolbox

→ https://competendo.net

Learning the Digital

Digital competence and educating digital competence. Digital transformation from the practice of Education for Democratic Citizenship and Human Rights Education

→ https://competendo.net/en/Learning_the_Digital

Analysis: European Youth in the Digital Transformation

How Education for Democratic Citizenship/Youth Work could contribute to pedagogies of digitality and digital empowerment.

→ https://dare-network.eu/digital-youth-work/

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IDENTITY

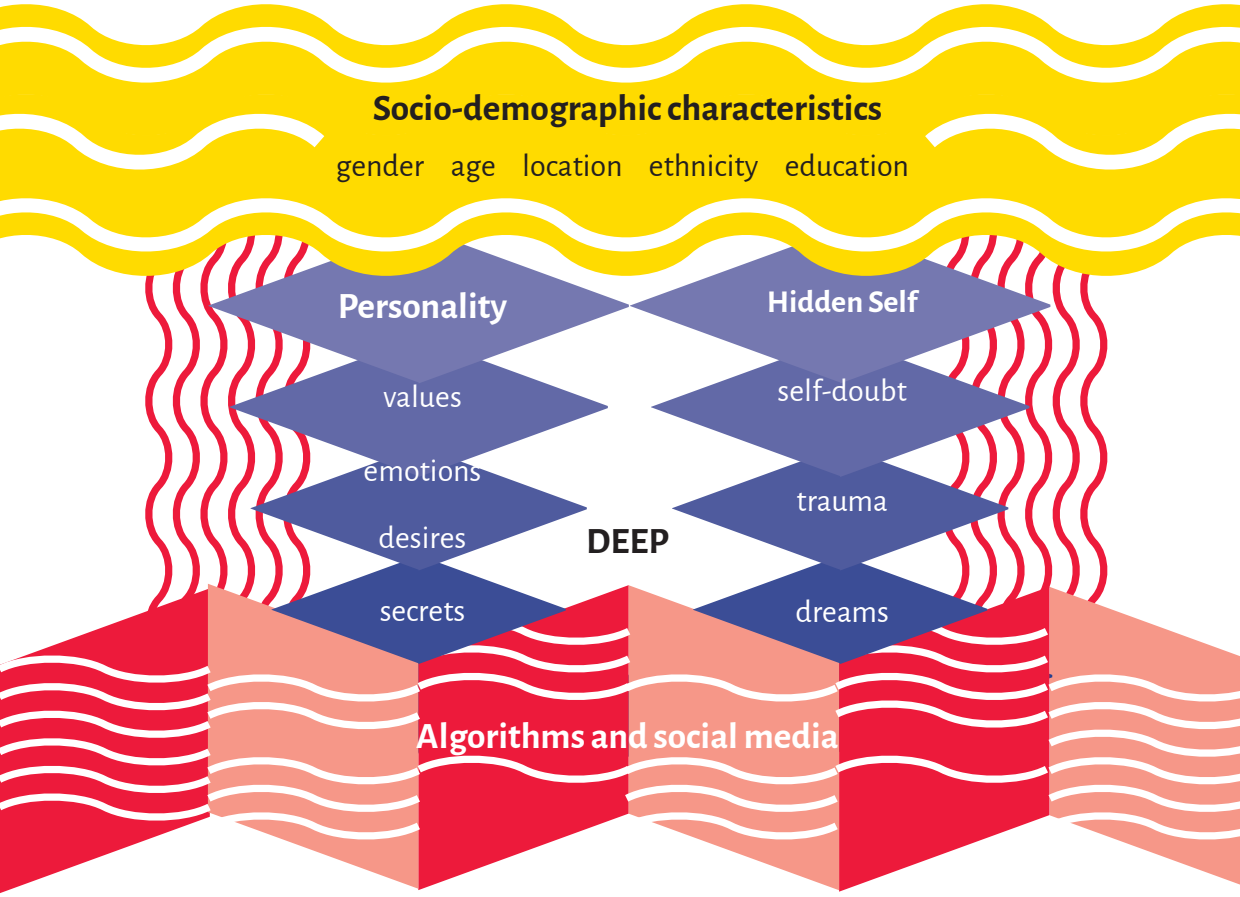
Let's rethink identity in a connected world

By Elisa Rapetti

Our identities, both individual and collective, flow like rivers – never still, never the same twice. They are born from countless sources: springs of memory, tributaries of experience, rains of encounter. Along the way, the current gathers sediments of meaning, sometimes clear, sometimes muddied, shaping the riverbed as it moves. To build an identity is to **navigate this current** – to recognise where the waters come from, where they merge and where they might lead. The river of the self is always in motion, carving through time, tracing its path between the banks of past and future.

With digital transformation, this river has found new courses. It branches into unseen channels, flows through virtual landscapes and reflects countless mirrored images of itself. Our identity today runs not only through the physical terrain of our lives but also through the vast delta of the digital world – where every interaction, every trace of data, is a droplet that joins the flow. In this expanded ecosystem, who we are is no longer defined solely by the waters we see or feel, but also by the hidden currents of our digital presence, converging into an ever-changing confluence of selves.

The flow becomes **both natural and engineered**, guided not only by our choices but also by the unseen banks built by algorithms. These digital currents collect fragments of our passage – reflections, echoes, sediments of our actions – and, through their own invisible design, remix them into new shapes. Some channels mirror the true course of our river, others invent new ones, carving paths that diverge from who we believe we are. Yet, all these waters belong to the same basin. The digital does not flow apart from the real – it seeps into it, reshaping its course, deepening its bed. Our offline and online selves are tributaries of the same identity river: they meet, influence and transform one another through the stories we



tell, the reflections we receive and the images that return to us from others – and from the algorithms that, like subtle cartographers, redraw the map of our journey.

On the one hand, this process mirrors the very nature of identity: a continuous flow of redefinition, adaptation and reworking. On the other hand, however, it can produce rigid patterns, stereotypes and simplifications necessary to **make our identities 'readable'** in the eyes of others and digital systems. This game of mirrors can generate recognition and empathy, but also conflict: currents that do not fit together become differences and these differences, if not understood and accepted, can lead to mechanisms of exclusion or discrimination.

Technology mediates identity

Identity evolves over the lifespan and varies depending on the roles the person takes on in different contexts of daily life – within the family, at school, at work, with friends, during sports, book clubs and so on. The digital dimension intersects with how we express ourselves and gain perspective on who we are. The digital dimension is an **in-between space** that includes how we exist simultaneously in both online and offline environments, relationships and settings.

Adolescence and young adulthood are crucial moments in a person's life course, when each individual, even if not explicitly, asks themselves: "Who am I?"; "How do I appear to others?"; "Who can I be and become?" and, "Where do I belong?" (Hällgren, 2019). This period of growth helps define the adult the person will become.

Digital technology...

...is understood to provide spaces for representing and expressing identities and should also be viewed as mediating identity as an existential practice (Hällgren and Björk, 2023).

Already in the analogue world, identity was multifaceted. It is possible to be a tyrant at work and sensitive and gentle at home. In the digital world, there are additional facets, especially those that platforms allow us to see in others. Furthermore, self-definition and image complement each other, but sometimes also conflict with each other.

The generational dimension

From a youth work and citizenship education perspective, offering learning opportunities on identity and digital transformation presents an opportunity to update our approach to these topics with the new generations – in particular, Gen Z and Gen Alpha. Like every generation, they experience and interpret the world in ways specific to their time.

Baby Boomers grew up in a post-war world of relative stability, with analogue technologies like TV and radio defining cultural reference points. Generation X witnessed "the transition from industrial to digital society", experiencing the early internet, video games and MTV culture as formative elements of identity and social life.

Millennials, born between the 1980s and mid-1990s, came of age during "the explosion of the internet, mobile phones and social media"

Generation Z, born after 1995, are "the first digital natives": online and offline life are no longer separate. Their experience of reality is "already augmented and hybridised" and they have grown up with "the platformisation of life", where much of their social interaction is shaped by algorithms.

We can ask how deep the shift is connected with AI: "Gen Alpha grows up in a world shaped by artificial intelligence, where prediction, recommendation and surveillance shape choices before they are even made".

Unlike Gen Z, whose digital identities are still somewhat curated by choice, the AI gen's identities are increasingly co-constructed by algorithms – shaping not just what they see, but who they think they are and could become (Spaticchia, 2024).

Technological co-determination vs. self-determination

The proposal here is to focus on the changes brought by technology that **affect every dimension of society i**n education and youth work – but these changes cannot be explained through a technological determinism lens. As we know, society shapes technology and technology shapes society in a dialogical relationship that is now impossible to separate. Technological systems, indeed, are built on human decisions, values and social norms. As educators, it's essential to support learners in developing a **critical understanding of technology**–not just how it works, but *why it exists*, *who developed and commercialised it* and *whom* it serves (Huyskes, 2024). *See page 12*

In this chapter, we use the **Johari Window** model (Luft & Ingham, 1955) as a **point of reference** to reflect on various dimensions of identity, offering a framework to understand how we see ourselves, how others see us and how technologies increasingly "see" and shape identities.

The "post-digital" identity grid

	Known to Me	Not Known to Me
Known to Others	Known Self	My blind spot
Not Known to Others	Hidden Self	Unknown Self
Known to Machines	Quantified Self	Predicted Self

Source: Elaborated based on the Johari window, a graphic model of interpersonal awareness by Luft, J. Ingham, H. (1955).

The **Known Self** and **Hidden Self** point on what we choose to show or hide in digital and social spaces, which is key to understanding representation and intentionality.

The **Quantified Self** relates to tracking personal data for self-optimisation, promoting awareness but also reinforcing pressure to perform.

The **Predictive Self** and **Unknown Self** include data we don't consciously share but is collected and used to analyse behaviour and create profiles – shaping how we're categorised online.

The **blind spot** refers to how others perceive us, including aspects we're unaware of – which can build connection or lead to exclusion in digital contexts.

Me, you, us and the wheel

Over the past decade, identity has become a key theme in youth work, especially in democratic and citizenship education. Linked to inequality and intersectionality, it requires a careful and critical approach. Educational methods can support young people in exploring identity in inclusive and reflective ways. **Me, You, Us and the Wheel** explores identity, privilege and power from personal and collective perspectives. Using the Power and Privilege Wheel, participants reflect on how perception, digital life and experience shape identity. The method fosters awareness of intersectionality and inclusion through individual, pair and group dialogue.

→ https://competendo.net/en/Me,_You,_Us_and_the_Wheel

Identity river

Invites participants to reflect creatively on their life journey and identity through visual expression. Using a river drawing, individuals represent key choices, commitments and experiences across time. The river symbolises flow and continuity and highlights the connection between past, present and future. This method fosters self-awareness, encourages reflection on personal and social roles and links individual growth to future aspirations.

→ https://competendo.net/en/Identity_River

Known & hidden selves: how we present ourselves online

The first column refers to information that I know about myself. The **known self** describes aspects of myself that I am aware of and that are also known by others – such as my behaviours, preferences, values or skills that I openly share or demonstrate in social settings. This is the area of transparency, mutual understanding and trust.

The **hidden self** represents aspects that I am aware of, but choose not to reveal to others – such as private thoughts, feelings, fears or personal experiences. This area represents boundaries, privacy or things we may choose to disclose over time.

The "post-digital" identity grid

	Known to Me	Not Known to Me
Known to Others	Known Self	My blind spot
Not Known to Others	Hidden Self	Unknown Self
Known to Machines	Quantified Self	Predicted Self

Paul, 14: I tell you who I am

"I'm Paul, a 14-year-old boy – very slim compared to others. That's why I never post pictures that show my whole body on Insta. I know I look smaller than my friends and for me it's important not to show that. At least online, I can pretend not to be.

I'm a really good gamer – I spend hours playing Apex Legends and some of my friends even ask me for tips. I'm proud of that and I often share my best moments in my stories.

I also love music. Since I live far from where my friends usually hang out, I spend a lot of time alone in winter. Music helps me stay connected – I send songs to my classmates and sometimes they say I'm a real DJ. Actually, I don't think of myself as a DJ, but I never say that to them.

There's something I've never told anyone – only Amazon seems to know. When I grow up, I want to be a photographer. I love taking pictures of funny moments and capturing people's feelings. But it's hard to share that dream. Some boys, such as Martin, might say I'm too sensitive or "not a real man." I've never told my parents either. I think they would strongly disagree – they're very old-fashioned and already try to limit my use of social media. To them, being a photographer doesn't seem like a "real" or professional job.

So I keep that part of myself hidden – it's mine and for now, it stays with me and my best Discord friend Andrew."

And what about you?

- **Where do you express your identity online?** Think about the platforms, apps or games where you show parts of who you are.
- **How do you express your identity online?** Consider the images, words, emoji, videos or avatars you use to present yourself.
- **Why do you choose to express yourself online?** What motivates you: connection, recognition, creativity, belonging?
- **What kind of freedom of expression do you feel online?** Are you truly free to be yourself in digital spaces?
- **What constraints or limitations affect how you express yourself?** Think about social pressure, platform rules, algorithms or fear of judgment.
- **How do different digital spaces influence your self-expression?** Do you behave or present yourself differently on a game platform versus a social media app?
- **Is your identity the same on TikTok, Instagram and Snapchat?** If not, why do you adapt your identity across platforms?

A lot of identity aspects, indeed, in these domains of our digital image is intentionally crafted by ourselves, carefully choosing what to show and what to hide across different digital spaces and social circles. The aspects of ourselves we display online and offline vary according to the specific context in which we interact. The **hidden self** is a matter of conscious choice; however, digital platforms and tools inherently shape how we present ourselves through their specific features and contextual constraints.

Online identity expression, much like identity itself, is an ongoing, dialogic process – continuously shaped by the interaction between the self, others and the digital environment. As detailed in subsequent sections, the way we express ourselves online is shaped not only – but strongly – by platform functionalities too. Also our communication habits, behaviour within digital communities and the nature of our contacts have an effect: people we know exclusively online or also offline can have different roles in our life.

- **Identity expression** refers to the picture I choose, the way I describe myself and the information I intentionally share – about my studies, travels, preferences and so on.
- **Online interactions and behaviours** – such as the posts I like or dislike, the comments I write or the content I engage with – are also part of this expression. These actions are often not recognised as elements of identity, yet they are deeply connected to how we construct and communicate who we are. (Kannen and Langille, 2023, p.38).

Moreover, how we present our identity to others, through social interaction by a dual process of self-categorisation and comparison that in return reinforces that identity (Kannen & Langille, 2023, p.46). Indeed, our online self-representation consists of multiple elements:

1. **Visual representation**: constructed through photos, videos and avatars shared on social media.
2. **Verbal expression**: based on how verbal communication through written content, videos and other media takes place.
3. **Interests**: demonstrated by the fan pages and content users engage with.
4. **Personality and behaviour**: shown through social interactions and responses to other users' content, as well as in the digital representation of a person that a platform creates.

Online environments offer young people opportunities to build and express their identities–through self-exploration, social comparison and the development of a sense of belonging. Digital technologies have enabled the creation of **new private and autonomous spaces**, which come with both opportunities and risks. A young person might use a private Instagram account to share personal reflections or creative work – such as poetry, drawings or music – that they don't feel comfortable posting publicly. On TikTok or YouTube, they might follow or emulate influencers or

engage in social comparison that shapes how they perceive their own value or attractiveness. In group chats or Discord servers, they can find a sense of belonging with peers – something that might be missing in their local community. These online contexts are particularly relevant for exploring aspects of identity that may be constrained in offline settings. At the same time, young people often adopt image management strategies to align with how they believe others perceive them, limiting their capacity for genuine self-expression.

From the youth 2020 report by UK Safer Internet Centre, based on a survey of young people in the UK aged 8–17, two in five respondents (38%) said they find it easier to be themselves online than offline–a figure that rises significantly to 54 percent among disabled children. This suggests that technology plays a crucial role in shaping young people's willingness and ability to experiment with identity.

However, these possibilities are often constrained by social expectations and norms surrounding online self-presentation. Some young people deliberately curate a false version of themselves online as a protective strategy–a behaviour especially common among disabled youth (UK Safer Internet Centre, 2020).

Who sets the rules?

A 60-80-minute workshop exploring how digital platforms shape identity, visibility and expression through algorithms and social norms. Using fictional personas, participants analyse what is shown or hidden online and reflect on platform influence. Group discussion and a voting exercise reveal how engagement-driven systems amplify some identities while marginalising others.

→ https://competendo.net/en/Who_Sets_the_Digital_Rules

Moreover, the degree of freedom a person experiences is influenced by various factors, including their level of privilege and the forms of control exercised in specific contexts–such as family, school, peer groups, sports clubs–as well as by society at large. In digital environments, control often becomes even more dominant, as every "move" made online is recorded, monitored and used to influence our behaviour – both online and offline – and the ways in which we express ourselves.

Who can be seen? Comments, identity and social perception

A 60-90-minute activity exploring how digital audiences respond differently to online content based on the perceived identity of the poster. Participants analyse anonymised real posts, coding the tone and targets of public comments. Through observation, mapping and discussion, the workshop uncovers how social norms, bias and platform culture influence online visibility and expression. It promotes critical awareness of privilege, representation and the role of algorithms in shaping digital interactions.

→ https://competendo.net/en/Who_Can_be_Seen_in_Social_Media_Content

Youth work should raise awareness and foster **critical thinking** around digital self-presentation and platform power dynamics. Educators can help young people reflect on the benefits and risks of online expression, encouraging more intentional and healthy self-representation.
By exploring the impact of sharing content, they support youth in understanding how digital choices affect identity, relationships and long-term well-being.

Educational packs designed for young people aged 3-18, fostering reflection on managing online identity and exploring the internet's influence on self-perception and perceptions of others. Each pack includes resources such as assemblies, lesson plans and brief activities, accompanied by guidance for educators.

→ https://www.childnet.com/resources/online-identity/

The quantified self: how we track our lives

The quantified self describes the behaviour of individuals who actively measure themselves with devices and apps to generate knowledge based on analytics to help optimise lifestyle and fitness, wellness and health behaviours (Meidert et al., 2018).

The "post-digital" identity grid

	Known to Me	Not Known to Me
Known to Others	Known Self	My blind spot
Not Known to Others	Hidden Self	Unknown Self
Known to Machines	Quantified Self	Predicted Self

Digital health tools and body tracking are becoming everyday practices among (young) people. Fitness apps, wearable devices, menstrual tracking apps and other forms of **quantified self** are widely used. For instance, **39 percent of female internet users in Germany** use a period tracking app (Antezana et al., 2022).

However, many of these tools lack medical reliability: only 5 out of 21 period apps tested were considered "acceptable" and none were recommended by the German consumer protection agency (Stiftung Warentest, 2023). These tools often collect personal data, which is accessed by app developers and used in ways that are not always transparent–raising concerns about **data privacy, consent and the risk of de-anonymisation** (European Commission, 2025, European Health Data Space Regulation EHDS)

While such tools can empower users, they also shape perceptions of **what health and well-being should look like**, sometimes reinforcing pressure to track, control or "optimise" the body. Youth with disabilities face a complex reality: while some technologies (like smart prosthetics) increase autonomy, others may **reinforce stigmas** and exclude non-normative bodies.

An effective digital body education must address three levels:

- **Awareness** of the medical accuracy (or lack thereof) of apps and devices.
- **Critical reflection** on one's own body image, tracking behaviours and self-perception.
- **Understanding platform dynamics**, including how they influence self-representation and well-being.

The quantified self is not just about the body–it's **about performance in all areas of life, including well-being.** From tracking menstrual cycles to counting study hours, steps walked, calories burned or the number of books read per year, we are increasingly encouraged to quantify everything we do or experience. In essence, the Quantified Self captures the visible part of our digital identity – shaped by our choices, yet deeply embedded in systems that may reinforce comparison and control.

Anna. 16: My data tells who I am

I'm Anna, I'm 16 and I'm part of the national running team. I train every day – about two hours running, plus three gym sessions per week. My smartwatch tracks everything: distance, pace, calories burned, heart rate, recovery time and even how many steps I take in a day. At the gym, the connected machines record the weights I lift and my repetitions, showing me clear progress charts.

I also use apps to monitor my nutrition, hydration, sleep quality, menstrual cycle and daily mood. I study around two hours a day and my focus app helps me manage breaks; my productivity app shows I concentrate best in the morning. I even track my grades – my average has improved by 12 percent this year.

Sometimes I think about how all these data live in separate apps. I wish there were a system that could combine them – not just to measure my performance, but to understand me: how emotions, sleep, food and training connect.

And what about you?

- **What aspects of your life do *you* already track** – consciously or unconsciously (for example: steps, messages, screen time, grades, emotions, sleep)?
- **What motivates you to track these things?** What feelings do you get from seeing your data – pride, curiosity, pressure, control?
- **What would you like to be able to track that current technologies can't measure yet?**
- **How could tracking your life help you improve** and when might it become too much or too controlling?
- **Who owns and sees the data you collect?** How much control do you really have over it?
- Finally, **what could it mean to "slow down"** in a world that constantly asks us to measure and improve?

Draw your week in data

A creative workshop inspired by *Dear Data (Giorgia Lupi and Stefanie Posavec)*, where participants collect small data from daily life and turn it into hand-drawn visualisations. The method explores data as personal storytelling, fostering self-awareness and emotional insight. It challenges performance-driven data culture and supports reflection, creativity and human connection.

→ https://competendo.net/en/Draw_your_Week_in_Data

The mind and the body: well-being and technology

Digital technologies shape not only how young people express themselves, but also how they feel. Well-being is influenced by the interaction of social dynamics, psychological needs and platform design features such as infinite scroll and notifications. To explore more deeply the connection between **mind, body and technology** and how the topic can be facilitated intergenerationally.

→ https://competendo.net/en/Mind-Body-Technology

Mapping my digital day

...is an engaging method that helps young people reflect on their daily digital routines and emotional connections with technology? Combines self-awareness tools and playful activities to support digital well-being, identity exploration and balanced tech use.

→ https://competendo.net/en/Mapping_my_Digital_Day

Risky digital habits – A glossary for digital well-being

A reflective method that invites young people to explore everyday online behaviours through a shared vocabulary of risks and impacts, aiming to promote emotional awareness and healthier digital habits.

→ https://competendo.net/en/Risky_Digital_Habits

Predicted & unknown selves: how algorithms shape identity

Platforms today don't just host content–they collect, analyse and act upon massive amounts of user data. These mechanisms influence how identities are perceived, shaped and predicted, making it crucial for educators and youth workers to understand the systems behind the screens.

The "post-digital" identity grid

	Known to Me	Not Known to Me
Known to Others	Known Self	My blind spot
Not Known to Others	Hidden Self	Unknown Self
Known to Machines	Quantified Self	Predicted Self

Both the Predicted Self and the Unknown Self are digital constructs that emerge from the increasing ability of algorithms and big data systems to observe, track and forecast aspects of our identity. However, they serve different functions and represent different stages in the process of algorithmic profiling.

The predicted self

is a constructed digital identity generated by algorithms based on probabilistic inference. It emerges when systems collect and analyse data about an individual–not only from their own behaviour (e.g., online interactions, purchases, geolocation, etc.), but also by correlating it with data from others who exhibit similar patterns. This form of identity is not descriptive, but predictive: it estimates future actions, preferences or risks.

Predictive algorithms don't just anticipate what users might do–they contribute to shaping user identity by assigning probabilities to behaviour, preferences or characteristics. For youth, this can mean being categorised in ways that influence access to opportunities or reinforce stereotypes, often without transparency or consent. Technologies, especially AI-driven systems, that use large datasets and statistical analysis to predict future behaviour. These models can shape decisions in areas such as advertising, hiring, insurance, credit, policing and even political messaging (Mayer-Schöneberger, 2015; Geuter, 2024).

For instance, platforms may predict what products you are likely to buy, whether you are a "good" candidate for a loan or how you might vote. In this sense, the Predicted Self is operationalised in systems like recommender engines, credit scoring, predictive policing, personalised advertising and political profiling. This embodies the tension between personal autonomy and algorithmic governance.

The Predicted Self includes those **machine-generated identities and profiles** that are:

- Unknown to us,
- Invisible to other people,
- But **used by algorithms** to make decisions about us (e.g., credit scoring, targeted ads, job application filtering, content recommendation, surveillance).

Datafication

The transformation of everyday activities, expressions and interactions into quantifiable data and it plays a central role in shaping digital identity. As platforms – that are not neutral spaces - convert everyday actions into data, they also generate profiles that reflect and influence how individuals–especially young people–are seen by others, by themselves and by the system itself. These data profiles can define what is visible, valued or excluded, making it critical for youth to understand how their identities are being extracted, codified and sold. *Data extractivism* refers to the systematic harvesting and commodification of this data, often without informed consent, to fuel profit-driven digital economies. (Zuboff, 2015, 2019; Mayer-Schöneberger, 2015)

These profiles can influence **real-world opportunities and limitations**, even when they are **inaccurate or biased**. This shift challenges the assumption that identity is constructed only through human interaction. Instead, it shows how **automated systems are actively shaping how we are perceived, categorized and treated** – without our awareness or control.

Privacy

is key to understanding how algorithms use information about us to construct the predicted and Unknown Self. Think carefully about your choices.

To better understand the relationship between **privacy** and **datafication** and their impact, we can reflect on key questions such as:

- What data **am I sharing** and with whom? (personal, behavioural, biometric, emotional, sensitive data)
- **Where** does this data go, **who** accesses it and **for what purposes**?
- How is **my data used** to shape content, profiles or decisions about me? (metadata, tracking data, data from biometric surveillance…)
- Who holds the power **to regulate or control** my data? (platforms, governments, EU laws like GDPR)
- What actions can I take to **protect** my privacy and digital rights?

➔ https://competendo.net/en/Privacy_Protection

How prediction algorithms work – and how to play with them

In a world increasingly shaped by algorithms, our personal data is used not only to reflect who we are – but also to predict who we might become. This **method invites adolescents to explore how digital systems interpret identity by experimenting with AI-generated "future self" portraits.** See the Predictive self of Paul how AI algorithm work.

→ https://competendo.net/en/Prediction_Algorithms_at_Work

Paul at 35: A predictive portrait by an AI algorithm

Name: Paul M.
Age: 35
Profession: Digital Content Strategist / Freelance Photographer
Location: Medium-sized urban city, working remotely from a compact apartment
Personality tags: Introverted – Creative – Consistent – Tech-savvy – Independent
Digital behaviour score: 8.4/10 (High engagement, high consumption, moderate sharing)

Predicted life path summary:

Paul works remotely in digital marketing, leveraging his skills in gaming and online communities to build a stable career in content production and analytics. While he initially pursued tech-related roles, his side passion for visual storytelling led him into freelance photography and video editing, especially for social causes and music events. Paul is active on multiple platforms but maintains strong control over what he shares – using pseudonyms and visual branding to avoid full personal exposure. He's a regular contributor to online creative communities, with a decent following on Behance and Instagram (visuals only, limited personal presence). He has not married but maintains a few deep friendships – mostly online – and attends occasional photography meet-ups. He listens to curated music playlists daily and follows several AI-curated art

channels. He uses biometric wearables to track his health but avoids video calls and visual posts involving his body. He still identifies as slim and while it's no longer a central concern, he avoids "public" visibility, opting instead for representation through his work.

The unknown self

The **"Unknown Self"** refers to aspects of ourselves that are unknown both to us and to others – potential, emotions or tendencies we have not yet discovered. In the digital age, however, this quadrant takes on **a new layer of meaning**. Today, much of what we do online leaves behind data traces – clicks, locations, behaviours, biometrics and metadata – that are collected and **analysed by digital systems**. These systems can detect patterns and make inferences that go beyond our and our fellow citizens' **conscious awareness**. This means that **machines may 'know' or assume things about us** based on correlations and predictions drawn from large-scale data.

For example, predictive models may attempt to forecast future migration flows, public health crises or economic instability–not based on intentions expressed by individuals, but by analysing indirect signals at scale. Critics argue that this approach promotes a **data-driven determinism**, where the future is seen as calculable, stripping away the unpredictability, ambiguity or **contingency** inherent to human life. The Unknown Self thus raises deep epistemological and political concerns: when predictions replace lived experience, serendipity or deviation from norms, there is a risk of narrowing the scope of freedom and reinforcing existing biases–especially when past data reflects systemic inequalities [add icon to connect to data colonialism concept in the introduction chapter]. Furthermore, questions about discrimination and bias appear with systems that come to conclusions in automated ways. *See page 9*

In short, while the **Predicted Self** is a probabilistic profile applied to the individual, shaping how they are seen and treated by systems, the **Unknown Self** reflects the ambition (or illusion) that **everything unknown can be rendered knowable** through data.

Youth workers cannot limit themselves to encouraging privacy awareness or offering tips for a cleaner digital footprint. Instead, it should empower young people to **understand the logic of data extraction, algorithmic decision-making, behavioural prediction and targeted advertising**. As

digital presence becomes embedded in all spheres of life—from education and employment to leisure and relationships—these technical processes have direct implications for autonomy, self-expression, participation in democratic life, as well as for access and discrimination.
A truly empowering digital education integrates this understanding into citizenship and identity work.

Data detox kit

Tactical Tech developed combined exhibitions and educational kits to help young people take control of their tech. This interactive toolkit encourages young people to think about different aspects of their digital lives, from their social media profiles to their passwords, with simple activities for reflection and play. The activity book includes sections on digital privacy, digital security, digital well-being and misinformation.

→ https://datadetoxkit.org/en/families/datadetox-x-youth/

Your data mirror

The website supports digital natives, especially Generation Z, to better understand the dangers of data misuse and political manipulation and to raise their awareness for the need to protect their personal data. Your Data Mirror is an entry space to learn about the mechanisms of data collection and the impact this practice can have on society. Find out how to protect yourself and others from manipulation - strengthening democracy in the process!

→ https://yourdatamirror.com/

The blind spot: how others shape our identity

Refers to identity-related information that others know about me, but that I am unaware of – what is often called the "blind spot." A classic example is the tomato stain on my shirt: everyone else at the table can see it, but I remain unaware unless someone points it out.

In the context of digital technologies, this "blind spot" includes not only how others perceive me – but also the vast amounts of data that is findable by others that platforms and technologies collect about me without my knowledge. From search history to behavioural patterns, algorithms continuously gather, process and act on information I may not even realise I'm giving away.

Thus, this quadrant highlights two intertwined dimensions:

- **Social perception** – how others see me, which shapes my digital and social identity, even if unspoken;
- **Algorithmic profiling** in often opaque and inaccessible ways to me (in the process of data collection and in the results of data analysis).

Together, these aspects challenge the idea that we fully control or understand how our identity is constructed – both socially and digitally.

The "post-digital" Johari Window

	Known to Me	**Not Known to Me**
Known to Others	Known Self	My blind spot
Not Known to Others	Hidden Self	Unknown Self
Known to Machines	Quantified Self	Predicted Self

Of prosumers, produsers & influencers

Identity is built through continuous dialogue with others: we define who we are made up of words, images, gestures and exchanges. This dialogic process, whether occurring in the physical or digital world, helps shape not only our individual identity but also our collective one. The communities we feel part of, the relationships we build and even the culture we live in all stem from this dynamic of mutual recognition. In our **post-digital society**, as emphasised by Kannen and Langille (2023), it no longer makes sense to separate the physical from the digital world: we live constantly immersed in both, deeply influenced by each. Digital platforms, such as social media, online games and dating apps, structure our relationships by affecting who we can meet, how we present ourselves and which aspects of our identity are highlighted or overlooked.

In this environment, we become **prosumers** (producers and consumers) or **produsers** (users who produce content), actively contributing to the construction of our identity and that of others through the continuous flow of content. Our online identity increasingly resembles a **personal brand**, shaped both by how we want to be perceived and by the implicit or structural rules of the platforms we use (Grande Branger, 2023).

Web reputation

Web reputation is shaped not only by what a person shares directly, but also by what others post about them – including tagged photos, shared content and public interactions. These elements contribute to an individual's digital image, often revealing more than expected. They also play a role in defining the social circles and communities with which a person is associated.

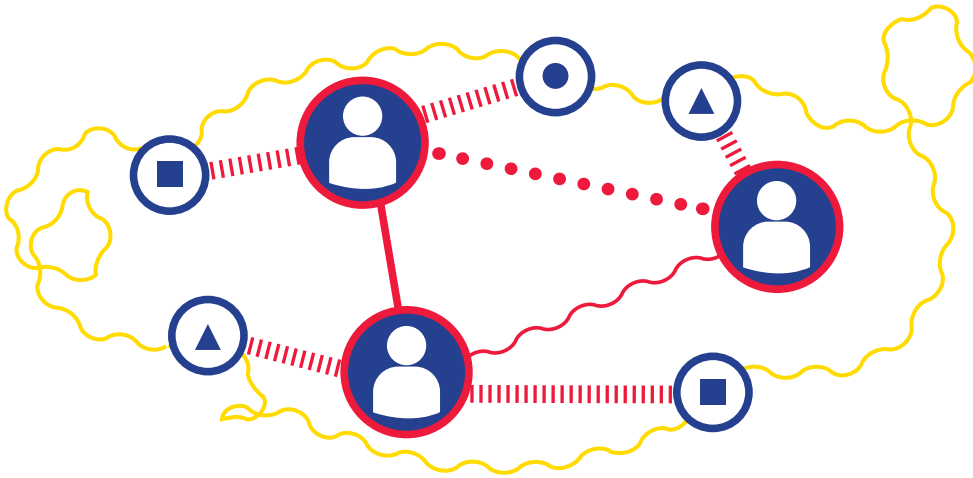
The prosumer or produser character of platforms is the result of intentional design to foster constant user engagement–inviting users to **consume content, products and even personalitie**s. Within this framework, we often occupy a dual role: both **consumer and product**.

In order to make engagement also monetarily attractive, the platforms developed revenue schemes ("monetisation"). This gave **rise to the influencer**, a figure that blends personal identity with strategic branding. Being an influencer has evolved into a recognised form of labour, often

shaped by intentional, value-based choices. Some influencers build a following by revealing intimate aspects of their private lives, while others craft a public persona around specific themes–such as literature, climate activism, body positivity or science communication. Others use their offered role models as a reach-out tool to youth – see **incels or tradwives**. These are not just performance strategies, but also forms of **digital self-narration** and **cultural positioning**.

A crucial role in this process is played by **social media logic**, defined as the set of processes and dynamics that determine how content is created, distributed and consumed on social media and in the platforms more in general. According to Van Dijck and Poell (2013), this logic is based on four key elements:

Social media logic



- **Popularity**: likes, shares and comments act as social currency, incentivising certain behaviours and types of content.
- **Connectivity**: platforms connect users not only with each other but also with brands, influencers and sponsored content.
- **Datafication**: every interaction is transformed into data, used to analyse, predict and often influence user behaviour (see section before).
- **Programmability**: algorithms and interfaces guide the type of content users produce and consume (see section before).

Active entrepreneurs & buyers

Moreover, young people today are deeply embedded in the **digital economy** –as consumers, creators and increasingly, as workers. From early adolescence, they are exposed to online shopping and content creation. Their consumption habits are shaped by platform logics, algorithmic targeting and peer influence–especially through the lens of influencer culture. This often blurs the line between consumption and self-expression, turning personal identity into a commodity.

Within this system, several risks emerge:

- **Overconsumption and debt** from impulse-driven purchases.
- **Commercial manipulation**, especially when identity is influenced by advertising disguised as content.
- **Pressure to perform**, often linked to self-promotion or monetised attention-seeking.
- **Blurred boundaries** between authenticity and marketable personas.

An important dimension of this landscape is **targeted and personalised advertising**. These ads are crafted based on users' data–search history, behaviour, even the emotional tone of posts–often reinforcing specific identities, moods or aesthetic ideals. As Shoshana Zuboff (2015) argues, this model of surveillance capitalism turns **identity into a commercial asset**, shaping behaviour not just to reflect preferences, but to predict and influence future actions.

Young people are not passive in this system. Many engage critically–reselling products, experimenting with crypto or becoming micro-influencers themselves. But their **economic participation** is increasingly entangled with self-branding and emotional labour.

Parasociality

Another dimension of digital identity concerns parasocial relationships–**one-sided human connections** between users and public figures, celebrities or influencers, mediated by technology. These relationships can offer a sense of belonging, role models and emotional connection, especially among youth. As Bond et al. (2024) note, adolescents of different genders develop distinct forms of parasocial attachment, reflecting needs for identification, affiliation and recognition.

It also includes performative self-presentation in digital spaces and the preference for mediated communication–such as messaging apps–when managing personal relationships. The app-based nature of young people's interactions makes it easier to connect with like-minded individuals and form communities beyond physical or social boundaries.

Extimacy

Refers to the voluntary exposure of one's private life in public spaces, particularly on social media, as a way of constructing identity and seeking validation (Tisseron, 2011).

Digital intimacy

In the evolving landscape of youth culture, digital spaces are central arenas where identity, relationships and well-being are explored, challenged and shaped. To explore the topic of digital intimacy and sexuality in depth and learn about methods that help youth workers and educators understand the opportunities and tensions involved, see https://competendo.net/en/Redefining_Intimacy:_Sexuality,_Relationships_and_Technology and https://competendo.net/en/Romantic_AI. For example, the mechanism of extimacy has gained new strength with social platforms and influencers who base their popularity on constantly showing their private lives. This concept refers to the voluntary exposure of one's personal life in public spaces, particularly on social media, as a way of constructing identity and seeking validation (Tisseron, 2011). This trend is part of a broader process that is reshaping how we understand private and public space in contemporary societies.

Flirt, share, think:

Digital intimacy without regrets is a storytelling-based method that helps young people explore the risks and realities of digital intimacy. It encourages reflection on trust, consent and emotional safety in online relationships through age-appropriate, non-judgmental dialogue.

→ https://competendo.net/en/Digital_Intimacy

Gaming

The world of digital games offers powerful spaces for **exploring identity** too. In video games, users can create avatars, choose physical traits different from their real selves and assume alternative roles. This **playful construction of the self** allows many to express themselves in ways not always possible offline. According to Kannen and Langille (2023), play is not just escapism, but also a way of constructing meaning, belonging and relational possibilities.

To deep-dive into gaming culture and explore methods aimed at supporting youth workers and educators in understanding the opportunities and the tensions within this domain.

→ https://competendo.net/en/Gaming_Culture

Play, reflect, transform

A flexible method that uses video games to explore identity, freedom and democratic values. Combines gameplay and guided reflection to promote critical thinking, empathy and human rights awareness among young people.

→ https://competendo.net/en/Video_Games:_Play,_Reflect,_Transform

Gaming also shows us that, while digital spaces foster the creation of identity and community, they also open the door to **toxic dynamics**, for example in gaming communities or on gaming platforms, where trolling, disinformation, harassment and manipulation can occur. The very logic of social media can amplify these behaviours, privileging provocative and polarising content.

Stay informed

Educators and youth workers need to stay up to date with the media trends shaping young people's lives – since the generational experience diverges remarkably. Talk about:

- Who are their role models?
- Who do they follow on what platforms?
- What kind of people do they admire or want to be like? Including people they know from their everyday lives.
- What content creators make them laugh, think, feel inspired – or insecure?

These questions not only help educators but can also be seen as material for a pedagogic dialogue around identity, aspiration and influence in digital culture (revealing sometimes more than any trend report).

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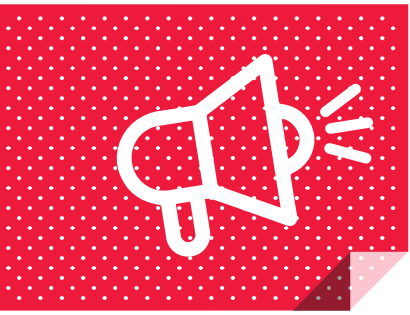


ENFORCE MORE DEMOCRACY…

Aspects of democratic governance of ‘the digital’

By Nils-Eyk Zimmermann

You close the door and hop on your bicycle. Ahead of you on the street lies a deep pothole. Someone has to take care of it; at some point, it was decided who is responsible for repairing it and who will pay.

At the next corner, a turning car takes your right of way. A police officer admonishes the driver.

In the neighbourhood there is a very active citizens’ initiative. They want to have the long straight road, which encourages speeding, converted into a play street. With this idea, they approached their local administration. They organised meetings and public discussions.

Traffic experts from the university and the cycling association took part. They discussed fundamental questions: What kinds of streets will we need in the future? What would be a fair division of road space between cars, trams, bicycles and pedestrians? Should parking remain free when space is increasingly scarce? We already have far too much traffic – are more highways really the solution? Where should the billions in the state’s transport budget be invested?

This chapter is not actually about traffic. But the example makes clear that questions of rules and of societal control are by no means purely technical. What characterises democracy in particular is that these rules and decisions cannot be made by a small group alone and that, in principle, everyone – from politicians to neighbourhood initiatives – has the right to propose new rules.

Governance is political and without proper education on questions of rule-making and enforcement, including in relation to digitalisation, digital empowerment in democracy is unimaginable.

Governance

A framework and system of rules (consisting of principles, rules and norms), the transfer of power and responsibility to authorities and the exercise of power and control.

For the digital sphere as well, we must ask how and by whom power should be constrained, supervised and regulated. Here too it is partly about **infrastructure** – the equivalents of new streets are 5G or 6G networks or the expansion of fibre cables. Or plans to digitally control all networks in a city (Smart City).

But we also refer to the **rules** for how digital infrastructure should be used. Who should have a say in this? Who should be allowed to see and use the data? What rules should prevail in the many digital spaces of the future? What **kind of digitalisation** do we actually want to pursue?

It must also be clarified who pays for the cables and services and who should **own** them, along with the data used and generated within them.

This may sound abstract, but the example of streets illustrates how important governance is in our everyday lives. For drivers – to use a digital issue close to the traffic analogy – it may be of great interest whether the state, civil society or businesses are allowed access to the engine data of their cars and of all new cars. Those who trust the state more will have fewer concerns with state access than those who see it as a threat to their freedom. Equally fundamental and controversial is the question of whether the state should, for example, prescribe how engines are to be built or whether blueprints must be disclosed. After all, the goal is to prevent future (digital) manipulations such as the Diesel scandal. Cyclists and car manufacturers are likely to have very different views on this.

A fitting example from the digital world would be so-called **interoperability**. Laws and regulations can require that a platform or software be able to process files that were created and saved with another programme. Or standard file formats can be defined – whether by companies, states or both together. For example, the EU has decreed that in the future there should be only one charging plug (USB-C) (European Commission, 13/10/2025).

“That’s too technical!”

Some might say: “The example with streets and schools feels more plausible!” But when we talk about digital technologies like AI, many people quickly feel overwhelmed and unable to join the discussion.

Yet the more digitalisation permeates everything, the more we realise we can no longer afford that stance. It is true that the digitalisation of schools has often been driven by companies, nerds and politicians. But when suddenly a new platform is to be introduced or an AI system is proposed, the question arises whether we have adequately empowered students, teachers and parents – those who will live and work with these tools – to position themselves and respond.

And beyond that – how can we speak about the consequences of technology and about which technologies we want to develop if we immediately deny ourselves the competence to take part in the conversation?

The ambition of Education for Democratic Citizenship is not to prepare people to go with the flow but to understand the flow dynamics in the water too.

That is why it is also about dismantling barriers and inhibitions. The subject must be presented in a way that enables young people to feel capable of speaking. In this text, we have drawn an **analogy between digitalisation and traffic**. After all, everyone is familiar with streets – in different roles (pedestrian, driver, passenger…) and everyday situations (in an ambulance, on the way to school, on vacation, going to sports practice or jogging…). The example of the USB-C charging standard is also clear to anyone who owns a charger.

Or consider the **“right to be forgotten,”** introduced by the GDPR of the EU. The “digital footprint” and the “data shadow” thus grow. With the ever-increasing accumulation and interlinking of databases, deletion requires ever greater effort from data-collecting entities. They will not disclose this valuable data voluntarily and will attempt to prevent its deletion. So if the right to be forgotten is to be enforced seriously, very strict, user-centred solutions must be **mandated and implemented**. Digital governance

here means quite concretely: how do we force ourselves, through law and oversight, into our own good fortune?

Different ideas behind governance

Rules and mechanisms are shaped by **fundamental ideological assumptions**. When everyone talks about “freedom,” “security,” or “independence,” what do they actually mean? Education on digital governance must encourage people to take a closer look at these issues.

The political ideas behind governance

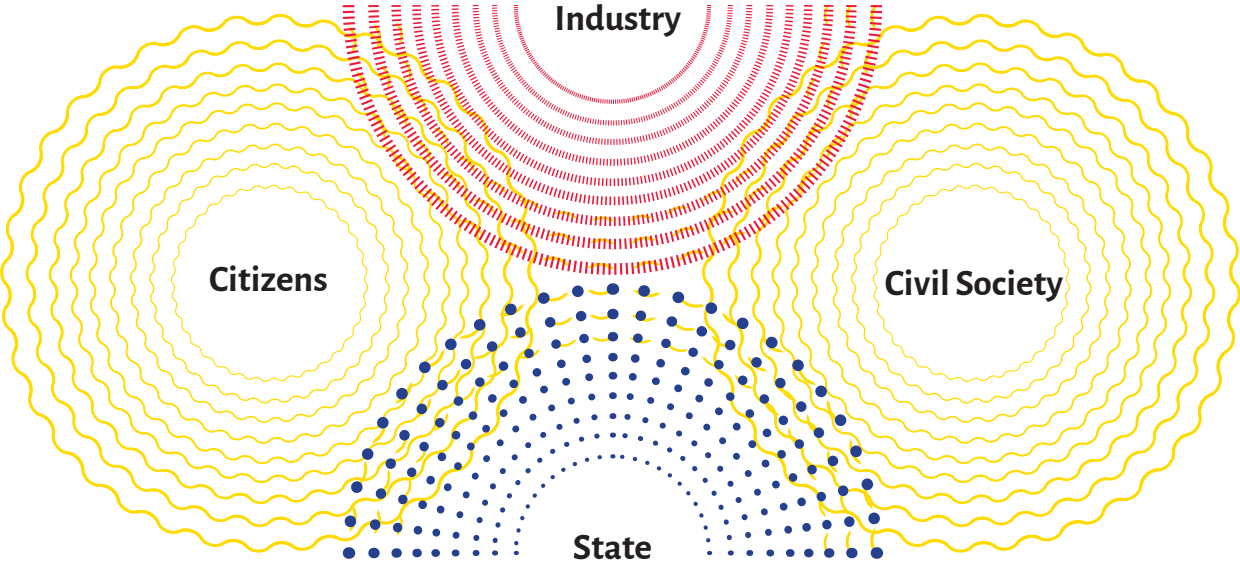
Different societies and entities have developed governance models and structures based on different worldviews and ideas. This method introduces some of these ideas and initiates an exchange about the internet and ideology.

→ https://competendo.net/en/The_Political_Ideas_Behind_Digitalisation

Who do we trust?

Also one's own ideas of democracy – and of who should have a say – shape how people view governance. Assigning responsibility and thus power, is partly a matter of **attributing competence** and partly of assessing someone's **moral trustworthiness**.

In reality, control and self-control tasks are balanced. Thus, 1) **government** regulations and frameworks, 2) the self-imposed rules and principles of **companies** and 3) the perspectives of **citizens and their intermediaries** in various roles (consumer protection services for consumers, unions for employees, youth councils for youth, etc.) complement each other.



Who we find likeable or whom we trust also depends on cultural influences. Around two-thirds of people in India and China feel comfortable with companies that use AI. In Europe, this figure is no more than one-third (i.e. Edelman 2024, Edelman 2025b). Attitudes toward the state depend on civic culture, where traditions also play a role. Generational attitudes can also change. Whereas people used to fear the computer state, today they are more likely to fear that global platforms could abuse their power.

Because the image of the economy has also changed in recent decades. Increasingly and in connection with globalisation, awareness has grown worldwide that large corporations – especially digital companies – are not simply neutral service providers or platforms without their own interests,

but have themselves become weighty, power-conscious global market actors. The economy is generally attributed a high level of competence, though some parts of the digital economy are also assumed to have little ethical awareness.

Citizens' attitudes toward civil society remain relatively stable in that civil society is assigned comparatively high ethical standards, though relatively low competence.

Trust in state, companies, civil society, digital economy

	DE	ES	IR	SE	FR	NL	IT
Media:	44	40	40	43	45	57	52
NGOs:	40	52	51	46	54	50	51
Government:	35	33	48	54	37	58	40
Economy:	45	53	53	55	56	62	56
Tech industry:	66	69	60	62	67	72	76
AI Industry:	34	44	30	32	35	38	50

Distrust < 50 | Neutral > 50 | Trust > 60

most ethical: NGOs **most competent**: Economy

Source: Edelman Trust Institute, 2025. Global Report 2025.
(For tech industry: Edelman Trust Institute, 2024) | index values

Who's in charge of the internet?

A discussion on power relations in a digitalised world. Participants engage in a moderated, open-ended discussion on the question "Who actually controls the internet?" Their ideas will be visualised and clustered in a shared mind map. This provides a broad overview and reflection on which actors play a role in digitalised capitalism and what (power) relations exist between them.

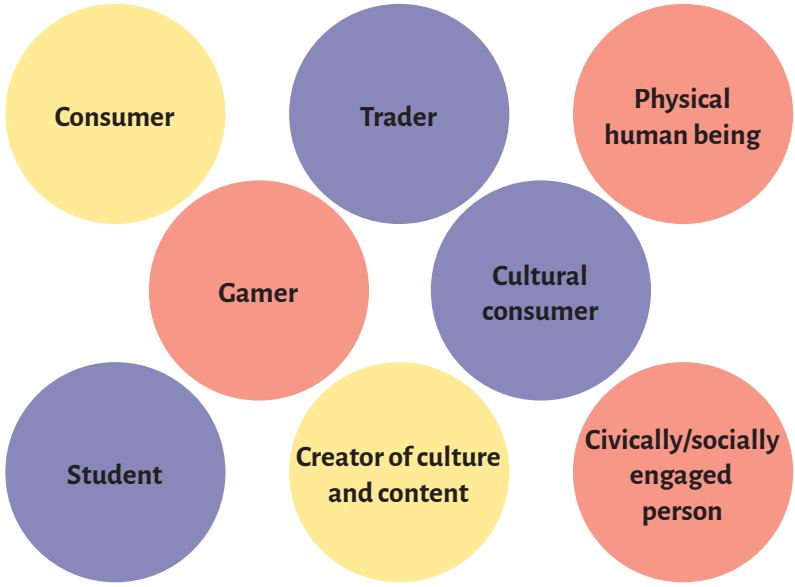
→ https://competendo.net/en/Who_is_in_Charge_on_the_Internet%3F

Handbook: Shaping the economy democratically: Digital Capitalism. Material to global issues, socio-ecologic impact and alternative ways of digitalisation. By Attac, Rosa Luxemburg Foundation & Konzeptwerk Neue Ökonomie (German).

→ https://konzeptwerk-neue-oekonomie.org/publikation/digitalisierter-kapitalismus/

Transfer

We recommend looking at the extent of participants' digital entanglement from **the perspective of different roles.**



- Which apps do you use and what do they collect?
- Which activities do you conduct digitally?
- Where did you think something needed to be regulated? Are there any issues that affect multiple roles?

In addition, we can ask ourselves which **actors and sectors we trust** in general or in these different roles. The answers depend on political and civic culture or social context.

- Why do we trust? Do we have a trusting or distrusting attitude?
- Which indicators would show us that the trustworthiness of actors is increasing or decreasing? Give examples from the digital sphere
- What would we need to do to earn more trust?

You can also describe the trust paradox according to Piotr Sztompka: A feature of democracy is that it is "institutionalising distrust for the sake of trust" (Sztompka, 1997, p. 16). By introducing control mechanisms, rules and principles that promote critical thinking, democracy thus strengthens trust in the system in the long term. In this sense, trust and distrust stand in a tension to each other but balance each other too.

Steps toward adequate governance

From the specific, we move in iterative steps to the general. However, we must also keep in mind that even politically well-informed people would usually fail if asked how "environmental legislation", "pensions" or "social security" should be regulated in detail, although these people rely strongly on their proper implementation. In other words: The luxury of a functioning democracy is that our survival does not depend on being politically informed on everything. But this is precisely why pluralism is important. We can present the different perspectives and interests on a topic and help a group to develop their own questions based on this tension. Cooperation with advocates of young people and interest groups representing different views is important in this regard.

Impact assessment

To view technology politically means shifting the focus away from merely technical understanding toward its intended social, ecological or economic impact. Civic education on mobility does not focus centrally on engines, but rather on what a car enables and causes in society. Civic education on the digital does not aim to provide a detailed understanding of all storage and analysis techniques, but to reflect on the consequences and effects of each within a social context of application. Concretely, by developing scenarios, weighing dilemmas and interests, discussing and defining conditions and considering alternatives.

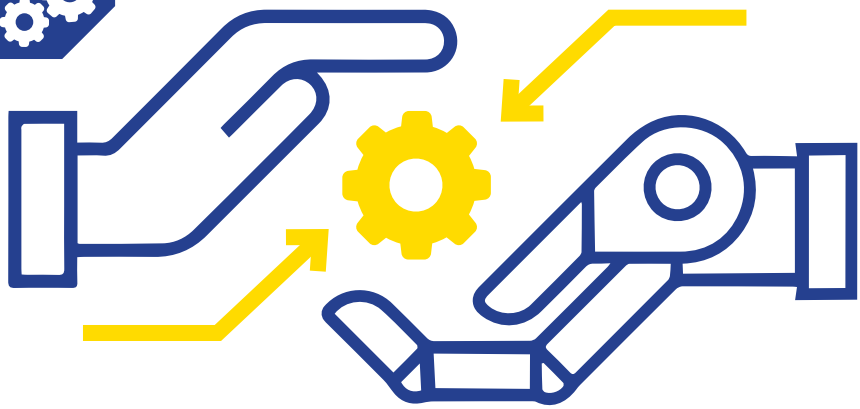
The Internet Universality Indicators - also ROAM-X Indicators – by UNESCO provide governments and other stakeholders (also youth work and non-formal education) with a frame to **assess their national internet environments** and make recommendations for improvements (UNESCO 2024).

R – that the internet is based on human RIGHTS
O – that it is OPEN
A – that it should be ACCESSIBLE to all and
M – that it is nurtured by MULTISTAKEHOLDER participation.

These key principles are set alongside X-cutting indicators concerned with transversal themes such as gender and the rights and needs of children, sustainable development, environmental impact, trust & security and technologies.

➔ More:
https://www.unesco.org/en/internet-universality-indicators/roam-x

Technology impact assessment



Guiding questions:
Applications: For what purposes? What will be replaced? What can or will newly emerge?
Potentials: What added value could the development bring – economically, socially, ecologically? Challenges: What dangers and risks are involved? Including financial, social or ecological factors that might prevent potentials from being realised.

How to:
Build different scenarios, for example, one optimistic and one conservative (=extreme scenarios), as well as one balancing aspects of both (see scenario method).
Data basis: The assessment is conducted on a data basis and along a transparent methodology.

Related methods: Future workshop, scenario technique, Delphi study

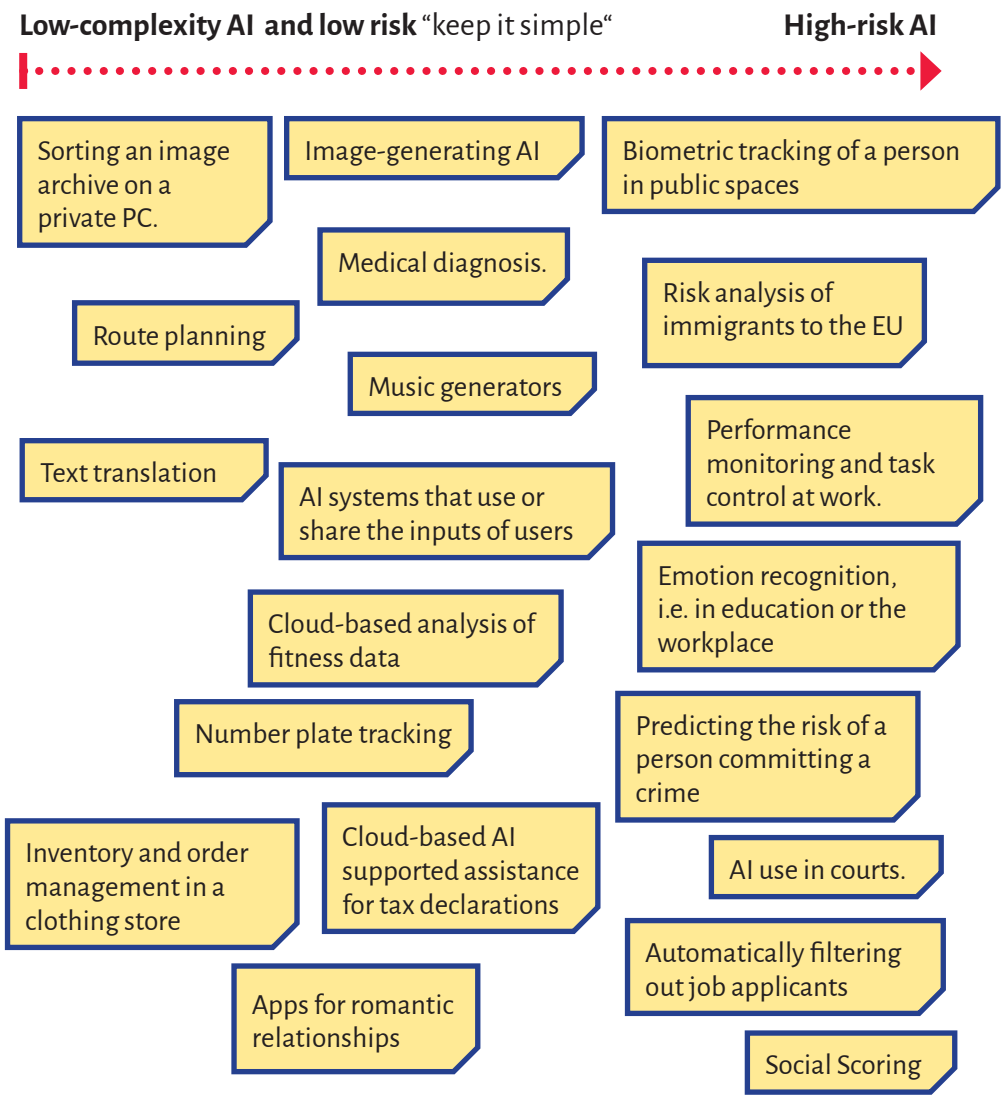
Criticise your utopia

Develop a realistic future. Work on concrete ideas for digital futures related to one of the 7 clusters of the "Making sense of the digital society" compendium, created by the Humboldt Institute for Internet and Society. Follow the principle of the Future Workshop method. Part of the toolkit "Making sense of the future" (DE & EN).

→ https://www.hiig.de/en/making-sense-of-the-future/

Complexity of regulation

Because cars are inherently more dangerous than bicycles, there are more regulations surrounding their production, sale or operation than there are for bicycles. The more risky and complex a system is, the more closely we must examine it and learn to understand it



Banned in the EU: social scoring, indiscriminate harvesting of facial images, drawing conclusions about emotions in the workplace, real-time biometric tracking of a person in public spaces, purely machine-based prediction of the likelihood that a person will commit a crime.

No risk, no AI

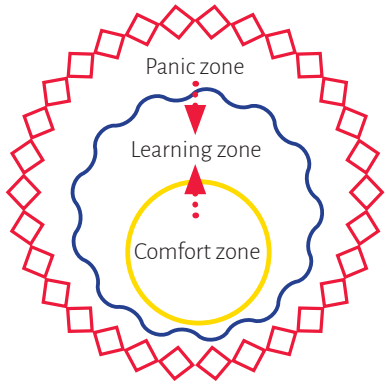
Artificial intelligence systems have varying degrees of impact on people and society. They also vary in terms of complexity and controllability. The way in which they are to be contained and controlled depends in particular on the potential damage they can cause (risk). Participants should rank AI systems from the examples along the scale.

→ https://competendo.net/en/No_Risk,_no_AI

Transfer

The challenge for youth work and education is to set the right scope. Understanding learning as individual and transformational, it is clear that individual learners experience different challenges and that the challenge should be adequately high: Not letting learners stick in the learning zone but also not pushing them immediately in the panic zone.

Panic zone
(Must) design a system that regulates digital technology across the whole spectrum. Business studies about digitalisation. Crash course in data science. The EU digitalisation policy system....



Learning zone
Learning about specific aspects (i.e. how personal profiles are created by datafication – which psychological models, which data, how the image of the self appears to platforms). How amplification works,... Exploring, reviewing and positioning towards concrete existing legislative elements, i.e. the rights of minors in the Digital Services Act (DSA) and AI Act. How can I enforce my rights in concrete terms? Who can help me?

Comfort zone
Discussing what Meta's consultative Oversight Board (responsible for Facebook, LinkedIn and Instagram, https://www.oversightboard.com/ should discuss, whom they should listen to, who should be a member.

Assessing and discussing if and what things work or not from the own perspective.
Discussing the ideas behind governance
Learning to use services and devices

→ https://competendo.net/en/Learning_Zone

The fields of artificial intelligence and big data

Big data and artificial intelligence pose new challenges for regulation. Algorithms in digital contexts are sets of instructions for computers. They make programming of machines possible, instructing computers to conduct various tasks, in contrast to only processing limited calculations. If you give them a **large amount of different social and personal data,** you can develop algorithms that can make more complex statements. For example: 'Customers who bought this also like to buy that.' Or, with the appropriate computing power and a lot of data, climate models can be created.

If these algorithms are also designed to learn from their results and experiences, things get really interesting. Because then it would also be possible to understand and **predict human behaviour, as well as control it**, which is fundamentally risky from a democratic perspective. *See page 22* Municipalities, mobility providers, energy suppliers and insurance companies could then efficiently build and manage systems. While up until this point, systems have depended on human decisions and programmes written by humans, artificial intelligence (AI) is opening further opportunities – letting machines decide.

If one then **links data from very different sources and ensures a steady influx of new data** (for example, by purchasing it from third parties or encouraging people to share large amounts of sensitive data), these models become more accurate. The vision that systems could support or replace human decision-making in a specific context is more tangible than ever – from car rides to decision-making in courts to automated communication with customers.

Sorry! You won't learn prompting in this manual.

The dominant position of digital capitalism

Investments such as those in AI and in complex and far-reaching analysis and prediction models are particularly interesting for financially strong players who have multiple uses for this information, especially those whose business model is based on expansion and scaling. The current AI trend, for example, would be difficult to achieve without an understanding of the economic dimension.

Staab (2019, p. 144) highlights that the "growth tandem" between the financial and IT sectors was the driving force of digital capitalism. The financial sector fostered the growth of IT companies with a huge demand for digitalisation, on the basis of which the financial sector created new business and operating models (financialisation of the economy). These then became the template for the IT sector, fuelled by private venture capital as the "central fuel" for the expansion of large platform systems. At the same time, the role of the state as a purchaser (e.g., operating systems, platforms for administration, law enforcement or education) and co-financier should also be mentioned.

In this sense, a socio-political education of 'the digital' includes **elements of economic education**. This digital economic literacy is also important in other areas. After all, there are also market participants who are only peripherally connected to the large platform ecosystems or not connected at all, because they represent other interests (e.g., interoperability, decentralised systems, open software). It would be too simplistic to be satisfied with the popular contradiction between global data capitalism on the one hand and tech idealists oriented toward the common good and non-monetary goals on the other. Instead, one could ask, for example: How are they interdependent? How do sovereign software ecosystems arise? In this sense, governance of the digital is competition policy (in particular, in the European Union).

Rejection of growing use of AI

Citizens are very sceptical at this point that companies and governments will handle their data responsibly and confidentially and that they will not suffer any negative consequences from this data analysis.

	Europeans that embrace more AI	Europeans that reject more AI
DE	17 %	50 %
FR	17 %	56 %
IR	16 %	54 %
NL	14 %	54 %
SE	21 %	45 %
IT	21 %	43 %
ES	23 %	42 %

Source: Edelman Trust Institute, 2024, p. 26 | CHG_TEC_COM.

But should AI be banned for social purposes? It's not that simple, since also "democratically governed, non-proprietary AI systems and those intended for the common good are based on big data. In this sense, sceptical citizens could also have an interest in feeding AI systems with (their) data." (Zimmermann, 2020, s.56).

Game: AI compass

You take on the role of AI experts and assist citizens with their inquiries. Your mission: to find out which problems can truly be solved by AI systems. But caution! Not every task is suitable for AI. It is up to you to uncover which challenges are best managed without artificial intelligence. Whoever among you proposes the most convincing solutions and ends up with the most AI cards played in front of them becomes "Employee of the Day" and wins the game!

→ https://www.hiig.de/en/ai-compass/

To return to the regulatory precision that will be necessary for AI: There are AIs that essentially run on personal computers and make little to no use of sensitive personal data. The chapter *Identity* describes for the "Predicted Self" systems that require more attention – especially AI systems built precisely to **capture as much personal data** as possible from someone and make concrete predictions about their behaviour. Also **foundational models** or **General Purpose AI** (GPAI) systems can be used for many purposes. In this sense, the risks increase with the quantity of purposes.

Initial questions to AI governance

- What do you think are some of the worrisome aspects of using AI, especially from a human rights perspective? Right to privacy, freedom of information, non-discrimination, etc.
- How might we try to prevent the worst from happening? Principles, policies, laws
- Who are some of the actors that might be involved in this? They could be on the international, national and local levels. Governments, international governmental organisations, such as the UN and other actors either developing or using AI, such as educational institutions, technology companies

Source: Bamberg, N.; Pier, J., Tibbits, F. (2025). AI, Human Rights and Education. Pedagogy Futures and HREA.

→ https://hrea.org/resources/ai-human-rights-and-education/

Transfer

In addition to the most perspectives on AI, the editors advocate for a critical AI literacy. Even the somewhat more balanced digital competence models and concepts of AI teaching reveal significant gaps in terms of socio-political issues, governance or the psychological dimension of application of AI. In other words: They are moving hesitantly beyond the educational goal of producing skilled users, towards empowering critical, active citizens who are aware of their rights.

Digital Citizenship Education: The Council of Europe's perspective on digital citizenship education provides an orientation path. Applied to AI, this means: to learn about rights dimension in the context of AI and how youth can exercise their rights towards platforms and services. To learn to engage for human-centred AI and appropriate regulation and to involve in the relevant processes of legislation, governance or assessment. To understand how rule of law, democracy relate to the digital transformation. More: https://www.coe.int/en/web/education/digital-citizenship-education

The EU commission's **DigComp framework** struggles with this critical perspective on technology and in particular AI, although main activities are currently focused on bringing AI in the centre of the framework.

→ More: https://doi.org/10.2760/7379058

The UNESCO's **AI competency framework for students** can be an inspiring source. Broadening UNESCO's vision with a EDC/HRE focus, we'd like to put emphasis on the fact that in a post-digital democracy, everyone needs the chance to develop critical awareness and ability to act. "Citizenship in the era of AI" is from this point of view an issue to understand and to act for – in contrast to UNESCO, the editors would say, such awareness and competence should not be taught especially to future academics but to all. A challenge for formal education and youth work.

→ More: https://doi.org/10.54675/JKJB9835

Exploration: AI in schools

AI systems are now also found in schools and the workplace. They could be used for assessing learning progress, providing "tailored" content, predicting students' future performance, mood measurement, for translation tasks and much more. Education policymakers are discussing how more AI could compensate for the **shortage of teachers.** It is obvious that there are **very different opinions** about such a solution. There is limited scope for moral argument here. Opponents and proponents of AI, large corporations and small initiatives alike, claim to be acting in accordance with fundamental rights. This can be illustrated with the above example of the data collection of students.

On the one hand, there is the goal of taking the health and well-being of minors seriously, data collection can be understood as a solution. Furthermore, technology would support more quality in education in times of teacher shortage.

On the other hand, there is the claim that students also have the right to privacy in school and the freedom not to be monitored. When faced with seemingly objective data, they may find it difficult to argue against it if they disagree with the conclusions drawn from that data. The data collected are also personal and could cause long-term harm if they fall into the wrong hands (for example, if in 2050 a medium would leak that the opposition candidate in the election had already been described in school as neurotic…).

Which arguments should be given more weight? Various questions also arise: How well does this system actually work? What is the ratio of effort to result? What is the social goal? What would be technical and non-technical alternatives? Who benefits most?

Who should decide how AI is used in education?			
18,9 %	**20,2 %**	**24,2 %**	**36,7 %**
Students	Tech companies	The state	Educational institutions

Source: Gagrčin et al. 2021, S. 23 | n=3.000 (DE, FR, GR, IT, PL, SL), age group: 18-30

From the perspective of democratic governance, the principle that matters affecting pupils should also be decided with pupils should be taken seriously. All the more surprising, then, that young people themselves assign themselves the least say.

- The more youth has the opportunity to participate in 'the little things' it increases the ability and self-esteem to tackle the more abstract sphere of governance.
- Create interlocking learning opportunities that gradually build complexity.

Accountability

However, when things need to work for everyone, you cannot rely on participation alone to ensure this. What if the media were not bound by their own ethical standards, but only applied them when there was a bit more protest? Citizens, institutions, economic and scientific actors must take on a special responsibility. They have an **accountability to society**.

> *"Trustworthiness cannot be targeted directly by any policies. But there is one possible indirect measure: making people and institutions accountable and raising the costs of breaching trust."* (Sztompka, 1997, p. 24)

Specifically, 'holding accountable' means assigning further duties to someone. With regard to the interests of young people, this means that companies and the state should not be able to use the following as an excuse by saying that they would have liked to include the voice of young people, but unfortunately young people are too incompetent to assess technical and political issues correctly, nor do they show the necessary commitment.

Accountability turns the tables: when young people are affected**,** the accountability perspective asks: **how do state and enterprises ensure** that they give youth voices appropriate consideration? This can take the form of information, consultation, participation or control mechanisms.

The media & information ecosystem out of balance

Many of the problems we discuss with the development of digitalisation have to do with the information ecosystem – such as the fragmentation of public discourse, polarisation, the disintegration of democratic publics, the upheaval of the media landscape, the deliberate release of harmful information and hate. It therefore makes sense to treat **governance as an essential part of media literacy**.

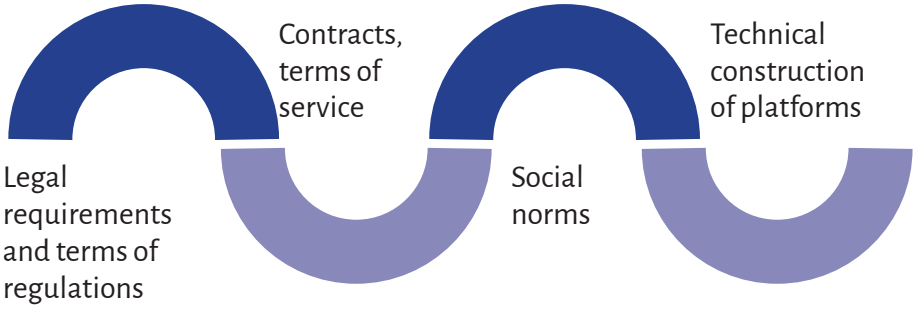
For quite some time now, the way we consume and share information has been changing. With computers, one can, in principle, share unlimited copies of cultural artifacts: music, games, films, books. In the **tension between the interests of users and rights holders**, new solutions have emerged over time, which have also shaped the development of internet culture. These range from informal self-organised networks (often via decentralised systems), to peer-to-peer networks for sharing and downloading (in more and less legal form) about twenty years ago and finally to today's streaming, where no physical copies are exchanged, but rather **access to offerings is monetised**.

This example shows changes in the **revenue structure of media offerings**. In particular, the information ecosystem cannot be understood without its technological and economic context. Newspaper circulations have halved over the last thirty years. High costs for editorial salaries and printing contrast with declining revenue from traditional advertising. This has led to the takeover of small newspapers or the closure of print media and the transition to online offerings (apps, freemium or premium subscription models, online advertising revenues, etc.).

Because of their important role for democracy as the so-called "fourth power" (after legislature, executive and judiciary), the independent press is subsidised in Europe. By "fourth power" it is meant that the media are essential for creating a democratic public sphere and for critically monitoring developments in the other powers– thus enabling citizens to form their own judgments and to participate democratically. The press also

provides checks and balances whenever actors in one of the other powers seek to shift that balance: by providing information, issuing warnings, offering context and asking critical questions.

Regulatory areas of media



Source: After Schmidt, 2022.

While traditional newspapers transformed into digital media, digital services that initially presented themselves as (supposedly neutral) media intermediaries have increasingly developed into media actors in their own right. It becomes clear that the classification of how the algorithmic curation of content by platforms is assessed is both a political and a competition law matter. The more platforms are **used politically by their users or their owners**, the more blurred the boundaries become – –posing a challenge for the governance of both. Platforms are not neutral. Rather, they exert influence in the "unbundling and rebundling" of information (Schmidt, 2022, p. 35).

Youth: Sources for information on social & political issues

42 %	39 %	26 %	25 %	23 %	16 %
Social media	TV	Online press and news	Friends, family, colleagues	Video platforms	Radio

Source: European Union 2024b | Q7, n=25.863, EU citizens, age group: 16-30

Media landscape

Learners explore and draw their media landscape – the media and sources where they receive and share social and societal information: Print, online presence of "press" and online news services, radio, TV, online presence of public broadcasters, multimedia content platforms, social networks… They explore the intergenerational differences and discuss also their information needs, especially in regards to societal information.

→ https://competendo.net/en/My_Media_Landscape

Transfer

Young people primarily obtain their socio-political information through the "new" actors. 58% of young people believe that **truly important information will find its way to them,** meaning they do not necessarily need to actively seek it out themselves (Gagrčin et al. 2021, p. 40). For this reason, they may be less interested in preserving traditional print editorial offices and a diversity of printed newspapers and more concerned that there be platforms that operate reliably in this sense. For governance the guiding question would arise then: How can they ensure independent, plural and democratically and human rights–oriented information also in the future?

If we pursue this thought further, education should centrally address the function of media, while subordinating form (e.g., digital or print) to it, in line with the principle of "form follows function": What do we need media for in a democratic Europe?

In addition, one can discuss how socio-political information must be designed in order to reach young people and what this means for those providing the information (politicians, interest groups). For example, how are topics that sound technocratic but are objectively very far-reaching presented?

What do we need media for?

Media take on important functions in a democracy. From this arise both privileges and obligations toward the democratic order. How can independent, plural and democracy- and human rights–oriented information be structurally ensured in the digital age? The learners collect the tasks and functions of media in a democracy. In a further step, they reflect on aspects of governance and structural support of independent media.

→ https://competendo.net/en/Media_in_Democracy,_for_Democracy

Inspiration

Newswise. Programme by the Guardian Foundation across Europe.

→ https://theguardianfoundation.org/programmes/newswise

Guidebook: Media and Information Literacy. Guidebook for trainers by Deutsche Welle (English, Spanish and French).

→ https://akademie.dw.com/en/media-and-information-literacy-a-practical-guidebook-for-trainers-third-edition/a-42423367

Reuters Institute Digital News Report. The 2024 report shows the growing importance of platforms for news consumption and production.

→ https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2024/dnr-executive-summary

Algorithms – your friend and your problem

The curation of content (that is, the selection of what a person sees, in what context and in what order) differs significantly from older forms of media. In newspapers, for example, the sections already indicate clearly whether a page contains political, economic or cultural content. Streams, however, function differently.

> *"On the one hand, users themselves directly influence the selection of posts they want to see, because they follow other accounts, subscribe to content or deliberately search for offerings. On the other hand, most platforms assume that people want to see more of what, according to the very extensive and detailed usage data from the past, they have already viewed often or for a long time."* (Mahrt, 2024, p. 6)

For example, a platform could make highly emotional, radical content especially attractive to users and motivate them to dive deeper and deeper into it (this is often referred to as "rabbit holes"). Or it could do the exact opposite, by recognising such content early and suppressing it.

The decision about which principles are used to curate or recommend content depends on various considerations – platforms generally have a strong interest in user interaction and engagement, as well as in delivering highly targeted advertising. In addition, platforms may also favour a particular political orientation.

From a systemic perspective, responsibility for problematic communication cannot be assigned to a single actor, but rather to all those involved in creating, processing and sharing: "the 'agent' who creates a fabricated message might be different to the agent who produces that message–who might also be different from the 'agent' who distributes the message. Similarly, we need a thorough understanding of who these agents are and what motivates them" (Wardle & Derakhshan, 2017, p. 6).

Wardle and Derakhshan distinguish here between mis-information, dis-information and mal-information as the three main aspects of what they call "information disorder."

Information disorder

A digital information ecosystem thrown out of balance by mal-information, dis-information and mis-information.

- **Dis-information**. Information that is false and deliberately created to harm a person, social group, organisation or country.
- **Mis-information**. Information that is false, but not created with the intention of causing harm.
- **Mal-information**. Information that is based on reality, used to inflict harm on a person, organisation or country. (Wardle & Derakshyan, 2017, p. 20).

If one wants to act effectively against the further spread of problematic content, it is also necessary to understand how curation works and to learn strategies for curbing such content effectively. Moreover, the intentions behind a message and its partial dynamics play a crucial role. Learning

fact-checking is therefore sustainable only when it is **embedded within an education that addresses information disorder**. Activities that merely teach individuals, through text analysis, to distinguish between fake and reliable content or between hate propaganda and engaged contributions to debate, reach their limits here.

Although current research on "filter bubbles" or "echo chambers" suggests that one should not be too pessimistic, the **amplification** of viral and emotionally charged content can nevertheless contribute to the polarisation of discourse. In such a context, information that is relevant from the perspective of democracy but not attractively prepared may find it more difficult to reach readers.

Mahrt points out that under circumstances such as Brexit, "even a small influence on opinions can have major consequences," even if one cannot generally speak of a systematic manipulation of opinion formation. In addition, "people with a very narrow or already radical repertoire of news sources" may radicalise more easily (Mahrt, 2024, p. 13). Platforms seem to act as **accelerators**. Radical actors in particular take advantage of this in youth-oriented forums and platforms. Political communication also adapts to the rules and incentives of social media.

Method: Amplify my love and anger

The group reads content from different areas and reacts to it in similar ways it would do in social media streams. Participants have the following reaction options:

Different posts related to socio-political information are shared. A scoring system reveals unequal weight of different reactions:

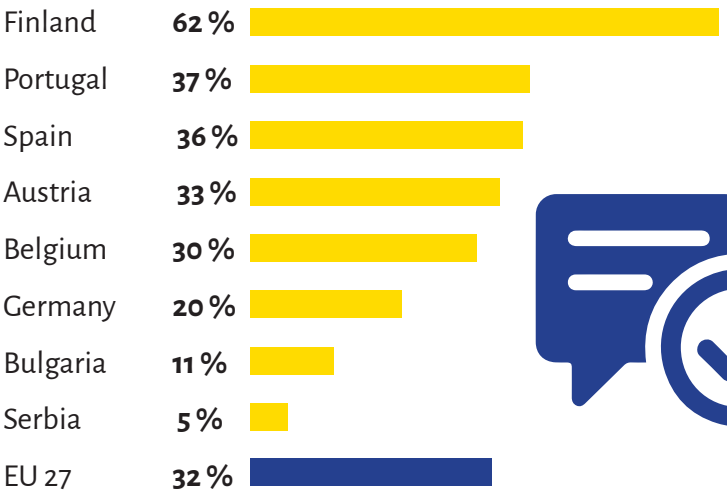
Amplification factor	4	3	3	2	1	1	2	3	4
									

The reflection focuses on platform interests and mechanisms, hate speech, the conditions for political content and rules for platforms.

→ https://competendo.net/en/Amplify_My_Love_and_Anger

Fact-check practice of youth

Checked truthfulness of media:



Quelle: Eurostat: Evaluating data, information and digital content (2021 onwards) isoc_sk_edic_i21__custom_14948721

Artificial Intelligence: A trustworthy source of information?

Chatbots such as ChatGPT have revolutionised the way we search for information - it is now possible to get detailed answers to all our questions within seconds, create images that we do not draw or photograph ourselves and even have code written for us. But are so-called large language models (LLMs) trustworthy? Is it possible that artificial intelligence (AI) gives discriminatory answers? In this workshop, participants explore bias in AI and learn how it is created by AI training data. They consider what AI can be used for in everyday life and learn in a playful way how targeted prompting works. Created by *mediale pfade* (DE).

→ https://competendo.net/en/AI-Trustworthy_Source_of_Information%3F...
→ https://medialepfade.org/

Authoritarianism and populism

Even in European countries, we see how media policy is used to restrict pluralism and the rule of law. Journalists and activists in small civil society organisations are often the first to feel the effects of authoritarian policies. The Polish example illustrates how lasting the interventions in media freedom are and how great the structural damage can be. "Press freedom is being tested by the ruling parties in Hungary (67th), Malta (73rd) and Greece (88th) – the lowest-ranked countries in the EU. Giorgia Meloni's Italy (46th) has also slipped five places." (Reporters Without Borders, 2024). On the other hand, Portugal and also Bulgaria – though the latter still at a comparatively low level – show that positive development is possible.

Freedom of press in Europe

	2024	2019	2014
NL	4 →	4	2
PT	7 ↑	12	30
DE	10 ↑	13	14
ES	30 ↓	29	35
IT	46 ↓	43	49
PL	47 ↑	59	19
BG	59 ↑	111	100
HU	67 ↑	87	64

Source: Reporters without Borders (2024)

At the same time, states also **support the independent press**. For example, they reduce taxes on print products or provide direct subsidies for journalism (DIW Econ, 2022, p. iv).

The general trend of inequality in European societies also leaves its mark. Young people have always been particularly affected by social upheavals and crises such as economic crises, conflicts, budget cuts and the housing crisis. This does not automatically foster confidence in democracy's ability to provide solutions. In contrast to many of the older generations, they also no longer have first-hand experience of life under authoritarian regimes or military dictatorships.

This is where **populism** takes hold. Under this term, various political strategies are grouped that construct and emphasise an **alleged natural division** between artificial politics and the "normal" people. They reject deviations from the so-called norm – deviations that, however,

constitute the very core of a pluralistic public sphere and its representative democracy. They create the impression of standing for a more direct connection between politics and the "popular will" of the "normal" people oppressed by the system . In its more extreme forms, populism expresses distrust not only toward "politics," but toward all institutions.

> "*Populists are […] not opposed to the principle of political representation, but merely sceptical of all mediating institutions – not only in politics, but also in relation to the mediated and thus always mediated, public sphere*" (Müller, 2016, p. 199).

However, one must also be aware of the difference between reality and how it is presented on social media. Mau et al. (2023) show that the social centre is less polarised than it appears. The strength of these ambivalent centrist forces depends on the political culture. Mau coined the term **"polarisation entrepreneurs"** for actors who, with the help of platform mechanisms, have an incentive to escalate tensions or deliberately use platforms as part of their outreach strategy.

Polarisation entrepreneurs, as particularly active platform users, can be found in all areas – in the state, the economy, the media or in churches, citizens' initiatives or NGOs. With the takeover of X by Elon Musk, a polarisation entrepreneur has become an active platform operator. Others may follow.

Polarisation as a trend
and as a result of social inequality, of conflicts and crises. The established centrist solutions seem to be failing.

Polarisation entrepreneurs
Populism, antagonistic debate culture, anti-pluralist authoritarians or foreign malicious actors together paint the picture of a society in a state of emergency. This is a society that could be best helped by overcoming or curtailing democracy and the rule of law.

Collection: Unlearning anti-feminism on TikTok

Anti-feminist narratives have become increasingly visible across social media platforms – especially on TikTok. Framed as humour, lifestyle or "common sense," these messages often mask worldviews that undermine democratic values and gender equality. The method set contains 13 modular activities, which can be used independently or in sequence. Each method explores specific aspects – from analysing multimodal TikTok posts to understanding algorithmic distribution of content and developing empowering counter-strategies (methods are in German). Sample method in English: Digital Reflections

- → https://www.antiantifeminism.org/oer/ (in German)
- → https://competendo.net/en/Card_Game:_Digital_Reflections

Transfer

Pedagogies of media literacy must take these broader developments into account. Young people do indeed recognise polarisation, but they tend not to relate the larger socio-political context strongly to their own actions, instead attributing it to others. They are therefore not uncritical, as Gemkow emphasises:

"For this development, young people – in contrast to their own media practices – see social media as partly responsible. In particular, consumer-oriented platform operators, with their algorithmically personalised offerings and an undefined exploitation of the human psyche, are cited here as reasons." (Gemkow, 2023, p. 51)

From this it can be concluded that young people are aware of the impact of platforms on their perception of society. At the same time, however, they show relatively little interest in the impact of their own behaviour and that of their friends, on public space and on pluralistic democracy.

Effectively counter conspiracy narratives and fake news. Educational material by *aktuelles forum* (German) → https://politischbilden.de/material/pocket-workshop-verschwoerungserzaehlungen/

Unravel the conspiracy behind conspiracies. Guide on essentials of conspiracy narratives, amplification, language by Dare to be Grey (Dutch, English). → https://www.daretobegrey.com/unravel-conspiracies

Addressing conspiracy theories: what teachers need to know. Published in 2022 by UNESCO.

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ENVIRONMENT

Critically examining the impact of digitalisation

By Markus Plasencia-Kanzler

Every smartphone we hold in our hands carries an invisible backpack. It contains raw materials from mines in Africa, working conditions in factories in Asia, electricity costs from European server farms – and often ends up in a landfill in the Global South. This backpack is heavy, even if we cannot see it.

The "ecological backpack" concept reveals an important truth: Digital devices are physical products, not virtual ones, carrying ecological and social burdens that far outweigh their physical mass. In fact, around 44 kg of natural resources are used to produce a single smartphone. Even one hour of streaming has a measurable carbon footprint, around 36 g of CO_2, roughly the same as a kettle uses when boiling water. This value, according to estimates by the International Energy Agency (IEA, 2022), can be regarded as a reasonable approximation, but actual emissions vary depending on the calculation method.

Some studies consider only the electricity used by data centres, while others also include the energy required for networks, end devices or production processes. Factors such as video quality, network type (Wi-Fi or mobile data) and the regional electricity mix further influence the result. According to the German Environmental Agency (Umweltbundesamt, 2023), the carbon footprint of one hour of video streaming ranges between 20 and 120 grams of CO_2, depending on these parameters. What all studies agree on: **digital services are not immaterial** – they consume energy and resources, and their environmental impact is measurable.

Whether typing WhatsApp messages, streaming or opening an app, all of this generates emissions that are directly comparable to those from fossil fuels. This three-dimensional interplay of material, energy and digitality often remains invisible. It only becomes visible when we look at it critically.

For young people, this means that their everyday digital lives have a subtle but significant impact on the environment and climate. Digital devices and services appear sleek, transparent and convenient, but their ecological footprint is clearly noticeable. That is why youth work needs clear images, opportunities for understanding and spaces for reflection: for example, about the "backpack" that every device carries, or about the fact that seemingly inconspicuous streaming has a real CO_2 value.

This chapter explores three interconnected dimensions of digital technology and sustainability. First, it examines the material foundations of our digital world. From resource extraction and raw material processing to waste generation. Every smartphone, computer and data centre depends on complex global supply chains with substantial environmental impacts. Second, it addresses the dual role of digitalisation in the climate crisis. While energy-intensive technologies drive emissions, they simultaneously enable innovative, data-driven approaches to climate protection. Finally, it considers how digital lifestyles, streaming, gaming, online consumption, shape everyday behaviours with environmental consequences. By understanding these connections, young people can critically reflect on their digital habits and discover more sustainable ways of engaging with technology. Each section combines background facts with practical examples from youth work and ends with stimulating open questions ("blank spaces"), ideal for use in projects, workshops or everyday life.

Material aspects of digitalisation

When young people hold their smartphones in their hands, they appear to be light, clean and everyday devices. But in reality, they carry a pocket-sized mine of raw materials. Every smartphone contains over fifty different metals and minerals. From copper and gold to cobalt and rare earths. These materials are usually mined in distant regions, often under conditions associated with child labour, hazardous working environments and massive interference with ecosystems. The device itself seems immaterial, almost weightless, but its material history is heavy and complex.

This image offers an important approach to youth work: making the invisible visible. By addressing the material dimension of digital devices, we give young people the opportunity to connect their own lives with global contexts and to critically question the costs behind their daily use.

Raw materials

Raw Materials are naturally occurring substances extracted from the earth that are used as inputs in the production and manufacturing of goods. They are unprocessed or minimally processed materials that serve as the foundational components for creating finished products. In the context of digitalisation, raw materials specifically refer to critical raw materials (CRMs) like rare earth elements, cobalt, lithium, and copper that are essential for manufacturing electronic devices and digital infrastructure.

Why materiality matters

In public debate, digitalisation is often described as "intangible" or "virtual". But every click, every message and every video has a material basis: raw materials, energy, transport routes, waste. Devices are not made of "data", but of metals, plastics and rare minerals. Data centres are not clouds, but energy-intensive huge buildings with kilometres of cables and gigantic cooling systems.

It is particularly important to consider these material aspects in youth work. This is where the apparent contradiction between "digital" and "ecological" becomes tangible: the smartphone is not only a means of communication and entertainment device, but also a product that consumes natural resources and raises social issues.

When young people recognise this connection, new questions arise: Where do the raw materials in my mobile phone come from? Who works on them, and under what conditions? What happens to the device when it breaks or is replaced? These questions are not purely technical in nature – they touch on issues of justice, sustainability and responsibility. This topic opens up many points of contact for youth work. It connects everyday experience (the mobile phone in your pocket) with global issues (raw material extraction, fairness, labour rights). When young people understand that their device does not come "out of nowhere" but has travelled a long way, they become aware of connections that normally remain invisible.

Raw materials & mining

Smartphones, laptops and tablets consist of much more than glass and plastic. Each device contains a complex mixture of over fifty different metals and minerals. (Fraunhofer IZM; see also Tecnología Libre de

Conflicto, 2017) These include copper and aluminium for cables and casings, gold and silver for contacts, lithium for batteries, cobalt for rechargeable batteries, and a range of so-called rare earth elements such as neodymium, lanthanum and tantalum, which are indispensable for microphones, loudspeakers and vibration motors. These materials are essential for the digital world and at the same time highly problematic to extract.

These raw materials are mainly mined in countries in the Global South. One example is cobalt mining in the Democratic Republic of Congo, which accounts for around 70% of global cobalt production. (Bundesanstalt für Geowissenschaften und Rohstoffe, 2023) Reports document massive environmental destruction, water poisoning and hazardous working conditions, which often affect children. Similar stories can be told about lithium mining in the so-called "lithium triangle", Chile, Argentina and Bolivia. Thousands of litres of water are used to extract one kilogram of lithium. In regions that already suffer from water shortages.

In addition to the ecological consequences, questions of global justice are also coming to the fore. While young people in Europe or North America eagerly await the next smartphone update, people in other regions bear the ecological and social costs of this consumption. This asymmetry makes it clear that digitalisation is not only a technical issue, but also a political and ethical one.

Another problem is the lack of transparency in supply chains. Even large companies such as Apple and Samsung are often unable to guarantee that the raw materials in their devices come from fair and environmentally friendly sources. Although there are certification approaches such as the OECD Due Diligence Guidance (OECD, 2026) and initiatives for "conflict-free minerals", in practice the traceability of materials remains largely opaque. It is almost impossible for consumers – including young people – to trace where the individual components of their mobile phones come from.

"Digitalisation is not just a question of technology and resources, but also of power." Researchers use the term **"digital colonialism"** to describe the dependence of many countries on the Global North:

- **Raw materials are extracted in the Global South, often under precarious conditions.**
- **Data and platforms** are in the hands of a few international corporations (mainly from the US and China).

- **E-waste** is often exported to poorer countries, which have to live with the consequences.

Just as traditional colonial structures determined access to raw materials, the digital world is also shaping new dependencies. For youth work, this term can open a door to talking about **global justice** in the context of smartphones, apps and the internet." (cf. Dachwitz & Hilbig, 2025)

Top 5 global e-waste producers

1.	Norway	**27 kg**
2.	United Kingdom	**24 kg**
3.	Switzerland	**23 kg**
4.	France	**22 kg**
5.	Iceland	**22 kg**

Global average: **7,8 kg per capita**

Source: Baldé et al 2024, p.10

Digital colonialism

Researchers and authors using the term digital colonialism refer to the dominance and control by major tech corporations or states, primarily from the Global North, over digital infrastructure, data, platforms, and markets in other regions, especially the Global South. This leads to new forms of dependence and exploitation in the digital age, where the extraction and commercialisation of data perpetuate global inequalities.

Production & energy

Once the raw materials have been extracted, the next stage begins: manufacturing. Digital devices are created in highly complex supply chains that span several continents. By the time a smartphone reaches the shelves in Europe as a finished product, it has already travelled a long way. Metals from Africa or South America, components from East Asia, software development from North America or Europe. The manufacture of a smartphone alone involves several hundred production steps. From smelting the metals to chip production and final assembly.

The manufacture of semiconductors and microchips is particularly energy-intensive. It requires clean rooms that are constantly cooled and operated under high pressure, and it consumes enormous amounts of water and chemicals. Studies refer to "embedded energy". Even before

a device is switched on for the first time, it contains a large amount of energy, significantly more than it consumes during subsequent use. (FMD Kompetenzzentrum Mikroelektronik, 2024) This means that the largest part of the ecological footprint is not created during use, but already during production.

Another aspect concerns working conditions in manufacturing facilities. In countries such as China and Vietnam, devices are often assembled under precarious conditions. Long shifts, low wages, high dependence on global corporations. This dimension is relevant for young people because it shows that digitalisation is not "neutral" but embedded in social and economic power relations.

Closely linked to production is the question of design decisions. Many devices are designed in such a way that they are difficult or impossible to repair. Glued-in batteries, special screws, missing spare parts or software updates that are discontinued after a few years. All of this means that devices are replaced more quickly than would be technically necessary. This principle is known as obsolescence: the planned or at least consciously accepted shortening of the service life of products. It is a major reason why new devices have to be produced all the time, with the associated environmental and social costs.

There is great learning potential here for youth work: making production and energy visible. Young people can ask themselves: what does it mean if my mobile phone has already consumed more energy during its manufacture than I can ever save through energy-saving modes? (Fraunhofer IZM, 2022; RTR, 2024) Why is my device designed in such a way that I have to replace it after three years? And what alternatives are there – from modular devices such as the Fairphone to political initiatives for a "right to repair"?

But even devices with a short lifespan do not simply disappear. When they are replaced, they become electronic waste, one of the fastest growing waste streams worldwide. (Forti et al., 2020; Global Ewaste Monitor, 2024)

Fairphone

Fairphone is producing modular, repairable smartphones designed for longevity and ethical sourcing. Founded in 2013 in the Netherlands, Fairphone prioritizes fair labor conditions, conflict-free minerals, and environmental sustainability. Its modular design allows users to easily replace individual components like batteries or displays, extending device lifespan and reducing electronic waste. Fairphone challenges the industry's planned obsolescence model by combining ethical manufacturing with user-repairability.

The secret life of AI

This workshop challenges popular, technology-centered narratives about Artificial Intelligence (AI) by shifting the focus from science-fiction imaginaries and technical definitions toward the social, economic, ecological, and material conditions that shape AI systems. Instead of treating AI as an autonomous or purely digital phenomenon, participants explore AI as a **sociotechnical assemblage**—a complex system involving human labor, global infrastructures, natural resources, corporate interests, and cultural dynamics. Through guided impulses on the philosophy, design, and deployment of AI technologies, as well as four thematic task sets, participants critically investigate contemporary trends, discourses, and real-world implications of AI. They collaboratively document their insights in a zine that highlights the often-hidden material and political dimensions of digital technologies.

→ https://competendo.net/en/Secret_Life_of_AI

E-waste & recycling

When a device has reached the end of its useful life, its story is far from over. More than 50 million tonnes of electronic waste are generated worldwide every year, and the trend is rising. Forecasts predict that this figure will grow to more than 70 million tonnes by 2030. (Global Ewaste Monitor 2020) Only around 20% of this waste is officially recycled. The rest ends up in landfills, is incinerated or exported to the Global South, where devices are often dismantled under dangerous conditions. (Global E-Waste Monitor 2024)

A well-known example is the Agbogbloshie electronic waste dump in Ghana, where children and young people burn cables with their bare hands to extract copper. This produces highly toxic fumes that permanently pollute the soil and air. Similar scenes can be found in India, Nigeria and China. E-waste is therefore not only an ecological problem, but also a massive health and human rights issue.

E-waste

E-waste (electronic waste) refers to discarded electrical and electronic equipment such as computers, smartphones, televisions, and household appliances. It is one of the fastest-growing waste streams globally and contains both hazardous materials and valuable recyclable resources. Proper management of e-waste is essential to protect human health and the environment.

→ Learn more: https://globalewaste.org/map/

Recycling could be a solution, but the reality is complicated. Many devices are designed in such a way that they are difficult to dismantle. Batteries are glued in place, metals are used in tiny quantities, software updates are discontinued – all of which makes it difficult to recover raw materials. Although innovative processes exist for recovering metals such as gold and cobalt, the costs are high and recycling rates are low. This raises the question: how can we close the loop?

There are promising approaches that can also be taught to young people in an educational context:

- Reuse & Refurbish: Refurbishing and reusing devices instead of throwing them away.
- Right to repair: Political movements that demand that manufacturers must enable repairs.
- Modular devices, which are specifically designed so that components can be easily replaced.
- Sharing models: sharing devices to save resources.

For youth work, e-waste is a topic that can be easily linked to concrete experiences. Almost every young person knows the feeling of having an "old mobile phone" lying around in a drawer. This can be used to spark a discussion: Why do we keep old devices? Why don't we recycle them? What responsibility do we have as consumers?

The world inside your smartphone

resources, global justice, sustainability, consumption, digitalisation, inequality

This exercise makes visible how strongly digital devices are connected to global supply chains, social conditions and environmental issues. Participants locate the most important raw materials of a smartphone on a world map (analog or digital). This reveals that behind every device lie complex production and exploitation relations that also touch on questions of global justice, sustainability and political responsibility.

After the mapping exercise, students discuss different questions.

Goals

- Raise awareness of the global dimension of digital devices
- Recognize connections between raw material extraction, production and consumption
- Reflect on how social and ecological justice are linked to digitalization
- Critically question what political and individual action options exist

→ https://competendo.net/en/The_World_inside_a_Smartphone

Future workshop: The mobile phone of the future

sustainability, digitalisation, innovation, critical thinking, global justice, responsible consumption

In this "Future Workshop", young people explore the problems caused by today's smartphones and develop creative ideas for a more sustainable and just digital future. Starting from critical reflection, they move toward positive visions and end with concrete actions that can be implemented in their own lives or communities.

Goals

- Strengthen critical awareness of environmental and social issues linked to digital technology
- Encourage creative and solution-oriented thinking
- Empower young people to imagine sustainable alternatives
- Promote participation and shared responsibility for digital transformation

→ https://competendo.net/en/Mobile_Phone_of_the_Future

Repair café for young people

repair culture, sustainability, self-efficacy, circular economy, right to repair, resource conservation

In this hands-on workshop, young people open up and explore broken digital devices to understand how they are made and to see what can be repaired. They experience self-efficacy and teamwork while discovering that extending the life of devices is a tangible contribution to sustainability and resource conservation. The activity links practical skills with reflection on consumer habits and the "right to repair".

Goals

- Foster practical understanding of how digital devices are built
- Strengthen confidence and problem-solving skills through hands-on repair
- Encourage awareness of sustainability and the value of extending product lifespans

- Promote critical thinking about design, consumer rights, and planned obsolescence
- Connect young people with local networks (repair cafés, FabLabs, DIY initiativ)

→ https://competendo.net/en/Repair_Café

Transfer

The three practical examples presented can be used flexibly. They can be adapted depending on the circumstances, resources and target group.

School vs. open youth work

- Compact formats (45–60 minutes) such as the raw materials kit or a short version of the future workshop are suitable for schools. These can easily be linked to subjects such as geography, political education or physics.
- Youth centres and clubs often offer more space for experimental formats. A Repair Café or an extended Future Workshop can easily be integrated into project weeks or thematic action days. In such non-formal contexts, young people can explore sustainability through hands-on experience and teamwork, developing key competences such as creativity, responsibility, and collaboration.

Urban vs. rural contexts

- In cities, there are often partners such as FabLabs, repair cafés or environmental organisations that can contribute expertise and materials.
- In rural areas, cooperation with regional waste management associations or local craft businesses can be valuable. Especially for strengthening the repair culture and bringing young people into direct contact with experts.

Cooperation & networks

- Municipal waste management: collecting old appliances, making recycling cycles visible.

- NGOs and environmental initiatives: contributing expertise on global raw material chains.
- FabLabs, makerspaces, repair cafés: enabling practical implementation and promoting self-efficacy.

Didactic guidelines

- Don't overload young people with numbers, but enable them to gain experience.
- Always link global problems with local opportunities for action (e.g. collection campaigns, petitions, creative campaigns).
- Instead of moral appeals, ask open questions – "What surprises you?", "What alternative would you use?"
- Methods such as the repair café require clear safety rules (e.g. no independent battery work without experts).
- The following applies to all formats: repairs do not have to be "perfect". The focus is on the learning effect.

Food for thought

- How can we make the invisible materiality of digital devices tangible for young people without overwhelming them?
- What creative methods help to translate facts and figures into experiences and stories?
- How can young people themselves create spaces for action? From repair cafés to political action?
- What local resources (e.g. waste management, craft businesses, NGOs) can be involved in the work?
- How can we bridge the gap between individual behaviour (using devices for longer) and structural issues (right to repair, fair supply chains)?

Yet the material consequences extend beyond production and energy. E-waste takes us from industrial supply chains back to everyday life. For young people especially, digital devices are not merely tools, they are constant companions that shape daily routines. This raises a critical question: how do these digital lifestyles affect the environment and climate?

Digitalisation and climate change

When young people think digitally, they often associate streaming, gaming or social media. But behind every stream, click or chat is a huge, energy-hungry building. The data centre. It works quietly, but it consumes electricity like a medium-sized city, which is why it is often referred to as the "new coal-fired power plant".

The Öko-Institut reports that data centres in Germany consumed around 20 billion kilowatt hours of electricity in 2024, which corresponds to approximately 3.9% of Germany's total electricity consumption. On a European level, the Joint Research Centre (JRC) of the European Commission estimates that data centres in the EU consumed 45-65 TWh of electricity in 2022, representing 1.8-2.6% of total EU electricity consumption. According to the European Commission, this figure is expected to rise from 76.8 TWh in 2018 to 98.5 TWh by 2030, an increase of 28 percent. (European Commission Joint Research Centre, 2024)

The trend is upwards. With the hype surrounding AI, streaming and cloud services, energy demand is also growing rapidly. To address this challenge, the EU has introduced mandatory reporting requirements through the Energy Efficiency Directive (European Commission, 2023), requiring data centres with an installed IT capacity of at least 500 kW to report their energy performance and sustainability indicators to a European database.

Experts such as Ralph Hintemann from the Borderstep Institute warn that data centres could soon account for the largest share of CO_2 emissions from digitalisation – particularly due to the rapidly growing demand from AI applications. (Hintemann, 2023; Borderstep Institut, 2019)

These figures make it clear that digital is not climate neutral. For youth work, this means: Digital education is also climate education. Young people should learn that their streaming, chatting and uploading does not just come "out of nowhere", but has an ecological footprint. Quiet, invisible, but real. Addressing this requires what the EU's GreenComp framework (Bianchi, Pisiotis & Giraldez, 2022) calls "embodying sustainability values", helping young people recognize that convenience and environmental responsibility must be balanced, even in the digital sphere.

Digitalisation as a driver of climate change

Digitalisation is also often portrayed as immaterial, but in reality, digital services are massive consumers of electricity and resources. Three areas in particular are the focus of attention: data centres, streaming and artificial intelligence (AI).

Data centres: In Germany, data centres consumed around 20 billion kWh of electricity in 2024 – equivalent to almost 4% of national electricity consumption. This share is growing rapidly due to the boom in cloud services and AI applications. (ÖkoInstitut)

Streaming: According to the German Federal Environment Agency, one hour of video streaming generates an average of 100 to 200 grams of CO_2, depending on the quality and the device used (Umweltbundesamt, 2023). Ultra HD streaming increases consumption dramatically.

Artificial intelligence: A single training session for large language models can consume hundreds of thousands of kilowatt hours of electricity. Experts such as the Borderstep Institute warn that AI could account for a major share of the CO_2 emissions from digitalisation in the future. These facts make it clear that digitalisation is a driver of climate change and not a "green zero-sum game".

GreenComp – European sustainability competence framework

Understanding these interconnections requires **systems thinking,** one of the core competences in the GreenComp framework. Young people need to see beyond individual actions and grasp how digital infrastructure, energy systems, and climate change are linked.

→ GreenComp https://doi.org/10.2760/161792

Building competences for sustainable digitalisation

To empower young people to navigate this complex landscape, educational approaches like the **GreenComp framework** are essential. GreenComp's 12 competences across four areas, embodying, enabling, enacting, and engaging, provide a structured pathway for developing digital sustainability literacy:

Embodying sustainability values: Helping young people recognize that digital convenience and environmental responsibility must be balanced. Every click, every stream, every upload has consequences.

Enabling through critical thinking and systems thinking: Questioning the necessity of energy-intensive services and understanding the complex connections between our digital habits, data centre infrastructure, and climate impacts.

Enacting through futures literacy and problem-solving: Understanding long-term environmental consequences of current digital trends, and actively seeking alternatives to high-carbon digital practices.

Engaging through collective action: Participating in discussions about sustainable digitalisation policies, supporting companies that prioritise green IT, and advocating for renewable energy-powered data centres.

By integrating GreenComp's vision into digital education, we can help young people become not just digitally literate, but **digitally sustainable** citizens who understand that their online choices have real-world climate impacts. The invisible infrastructure of the internet becomes visible, the abstract becomes concrete, and young people gain the competences to act responsibly in an increasingly digital world.

The challenge is clear: we need a generation that thinks digitally and sustainably, because the future is both.

Digitalisation as a beacon of hope

As much as digitalisation contributes to climate change, it also opens up opportunities for greater sustainability. Many approaches are considered enablers for climate protection: they can help to use energy more efficiently, reduce CO_2 emissions or use resources more intelligently.

- Smart grids: Intelligent power grids balance out fluctuations in renewable energies. Fraunhofer ISE shows that smart grids can significantly increase the share of renewable energies in the grid by shifting loads and optimising storage. (Fraunhofer ISE)
- Environmental data & monitoring: Digital sensor technology makes it possible to measure environmental pollution in real time – from air quality and traffic flows to energy consumption in buildings. The Umweltbundesamt refers to this as a "decisive lever" for ecological transformation.
- AI for climate protection: Algorithms can control solar systems more efficiently, predict wind power or optimise the energy requirements of cities. According to the Borderstep Institute, in the best case scenario, AI can save more CO_2 than it causes itself – provided it is used in a targeted manner.

These examples show that digitalisation is ambivalent. It can be a driver of the crisis – or a tool for solutions, depending on how it is designed.

Digital detox - nature as a counterworld

Digital Detox, mindfulness, nature experience, sustainability, well-being, ecological awareness

This method creates a deliberate contrast to the digital world. When young people set aside their devices and connect with nature, they rediscover attention and presence through silence and observation as foundations of a sustainable digital lifestyle.

The aim is not to reject technology, but to cultivate critical distance: Which technologies serve us and the planet, and which exploit both? Youth work must empower young people to question corporate narratives and consciously choose which digital tools align with their own values.

Goals

- Experience the link between well-being, attention, and ecological awareness
- Reflect on what is lost or gained when life is mediated by screens
- Understand that "digital sustainability" also means making space for offline experiences
- Recognise the value of nature connection as motivation for climate protection
- Strengthen resilience and mindfulness in times of information overload and climate anxiety

→ https://competendo.net/en/Digital_Detox

Rebound effects

Digitalisation is often presented as a gain in efficiency: apps save travel, smart homes reduce heating costs, video conferencing replaces business trips. But many of these advances are offset by so-called rebound effects.

The principle: greater efficiency=greater use.

- Take streaming, for example: better data compression allows for HD and 4K quality. The result: people stream more and for longer, energy consumption still rises.
- Take mobility, for example: online booking systems make flying easier and cheaper. Instead of fewer flights, this often leads to more travel.
- Take smart homes. Heating systems can save energy. But if this creates the feeling that "it's efficient anyway," comfort demands increase. For example, higher room temperatures or longer usage times.

The Wuppertal Institute refers to an "efficiency paradox": digitalisation can support climate protection if its overall use is taken into account. However, without clear political guidelines, many technologies increase resource consumption. (Wuppertal Institut; see also Jevons, 1865)

This is an important insight for young people: not everything that sounds smart is automatically sustainable. Youth work can effectively demonstrate rebound effects because it draws on everyday examples: "What happens when Netflix uses less data?" or "Why do we buy a new mobile phone

more quickly if it is technically more efficient?" The effect becomes understandable when it is played out together.

The efficiency paradox (Jevons paradox)

When technological progress makes the use of a resource more efficient, this paradoxically often leads to an *increase* in total consumption rather than conservation.

In 1865, British economist William Stanley Jevons observed that improved steam engines consumed less coal per unit, yet total coal consumption still rose. The higher efficiency made coal cheaper, making its use attractive across an expanding number of industries.

Higher efficiency lowers the cost of using a resource. This increases demand so significantly that it overcompensates for the original savings effect. The resource is not only used more frequently but also applied in new areas.

Efficiency gains alone do not guarantee resource conservation. Only when combined with targeted conservation policies can the rebound effect be avoided and actual consumption reduction be achieved.

Streaming challenge

digital lifestyle, carbon footprint, media consumption, responsibility, behaviour change

In this playful and reflective activity, young people calculate and visualise the ecological footprint of their streaming habits. By comparing data, discussing results and imagining more sustainable alternatives, they develop a concrete understanding of how digital lifestyles affect the environment — and what individual and collective action can look like.

Goals

- Raise awareness of the environmental impact of digital media use
- Encourage reflection on personal consumption habits and realistic alternatives
- Promote critical thinking about responsibility and systemic change in the digital sector
- Inspire practical steps towards more sustainable everyday media behaviour

Transfer

Addressing digitalisation and climate change offers a variety of approaches for youth work. It is crucial to connect young people's everyday experiences (streaming, gaming, social media) with ecological issues and to highlight possible courses of action.

School vs. open youth work

- School: Short, fact-based units (e.g. streaming challenge as a 45-minute module in geography or politics lessons). Can be linked to curricula (sustainability, energy, economics).
- Open youth work: More time for experimental and participatory formats (e.g. smart city simulation game or efficiency paradox game). Here, young people can be more creative and contribute their own perspectives.

Urban vs. rural contexts

- Urban: Cooperation with universities, NGOs or environmental initiatives that provide data and expertise on digitalisation and climate.
- Rural: Connection to specific living environments – e.g. regional energy suppliers or communities that are considering smart grids, solar energy or mobility projects.

Cooperation & networks

- Federal Environment Agency, Öko-Institut, Wuppertal Institute, provide materials and studies that can be simplified for educational purposes.
- As there is a lack of educational materials in many EU countries addressing competencies for sustainable digitalisation and the environmental impacts of digitalisation, the English- and German-language educational materials provided by Greenpeace, Germanwatch and the WWF can offer a valuable starting point. These organisations already provide well-prepared teaching and workshop materials ond igitalisation, consumption and climate protection (e.g. Greenpeace: "Digitalisation and Sustainability:

A Contradiction?", Germanwatch worksheets on climate change, and WWF materials on energy and climate).

- Local energy suppliers or communities: include practical examples (e.g. pilot projects for smart grids or digital energy measurement).

Didactic guidelines

- Use concrete images: "Data centre = new coal-fired power plant" or "1 hour of Netflix = boiling a kettle" → stick in young people's minds.
- Don't moralise, encourage reflection: let young people discover for themselves where digital routines have an impact on the climate.
- Anchor global issues locally: from the smartphone in your pocket to the electricity consumption of the youth centre.
- Enable action: Small steps (reducing streaming quality, repair café, petition for "right to repair") convey that behavioural change is possible.

Food for thought

- How can we convey to young people that digital routines are also climate routines?
- What images or analogies help to make the invisible energy consumption of digital services comprehensible?
- How can young people themselves develop ideas for climate-friendly digital practices – without moralising?
- Which local partners (energy suppliers, environmental initiatives, communities) can support youth work on this issue?
- Where is the point at which individual responsibility ends and political action must begin – and how can this be discussed with young people?

Digital lifestyle

Digital devices have long been more than just tools. Smartphones, streaming and gaming shape young people's everyday lives. They **reflect their lifestyle** and have an ecological footprint. According to the JIM Study 2023 (Medienpädagogischer Forschungsverbund Südwest, 2023) young people spend an average of **224 minutes online every day**, often using their smartphones. Social media such as WhatsApp, Instagram and YouTube play a central role in this. Globally, demand is increasing more and more. Driven by growing usage and AI growth.

These figures make it clear: digital lifestyle is climate lifestyle. Everyday life, long streaming sessions, permanent online access, has a very concrete impact on the environment. For youth work, this means that a device in the hand is a starting point for climate awareness in everyday life, without pointing fingers.

Sophie, 15, trendsetter

Sophie invites young people to discuss the connection between digital consumption, social pressure and sustainability. By putting themselves in Sophie's shoes and considering her lifestyle and decisions, they examine how status symbols influence behaviour and think about more sustainable alternatives that are still in line with youth culture and self-expression.

Consumption, sustainability, youth culture, status symbols, digital devices, empathy, behavioural change

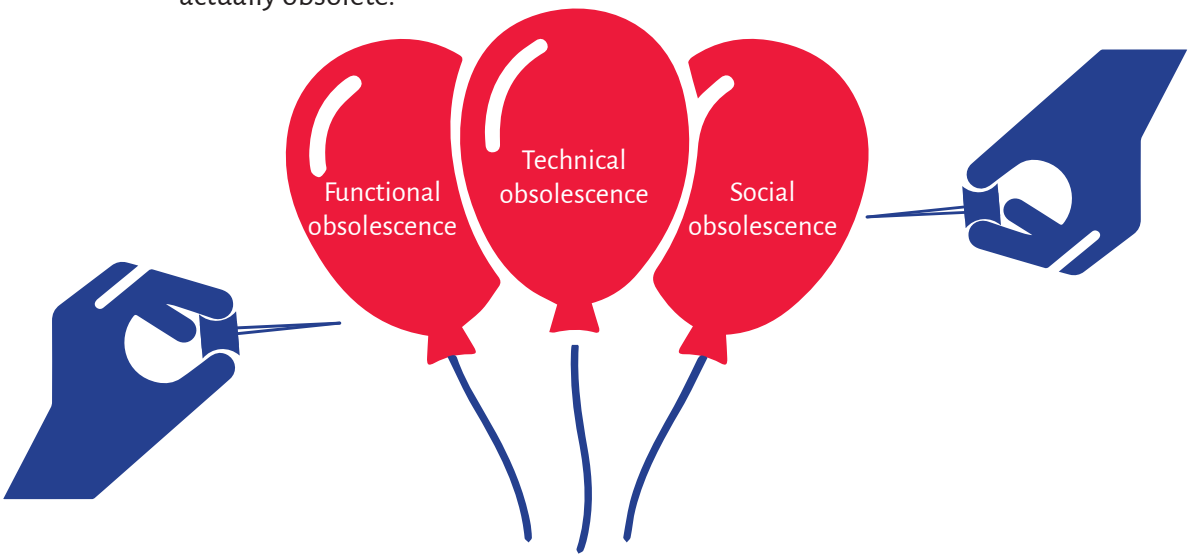
Goals

- Promoting critical reflection on consumer and status behaviour among young people
- Raising awareness of the environmental and social impacts of digital devices
- Promoting empathy and perspective-taking through personalised discussions
- Exploring realistic and creative ways to combine sustainability with personal style
- Strengthening communication and argumentation skills in discussions with peers

Consumer culture & obsolescence

Digital devices have long been status symbols – especially smartphones. For many young people, the latest model symbolises belonging, style and "being cool". This social pressure means that devices are often replaced more often than necessary. Obsolescence manifests itself on three levels:

- Technical obsolescence: devices are difficult to repair (e.g. glued batteries).
- Functional obsolescence: software updates are discontinued, apps no longer work.
- Social obsolescence: a model is considered "old" long before it is actually obsolete.



Facts and figures:

- In Germany, just under 25% of smartphone users keep their device for two years or longer. (Bitkom, 2023)
- Around 195 million old mobile phones are stored unused in German households. (Bitkom, 2025)
- Depending on the model and study, the manufacture of a new smartphone often generates between 40 and 70 kg of CO_2 and requires a significant amount of resources; a longer lifespan can therefore save a considerable amount of emissions (Fraunhofer IZM, 2022; RTR, 2024).

These data suggest that we need not only technical solutions, but also reflection on consumption patterns – a key issue for youth work.

Ali, 17, gamer & streamer

Ali represents a digital lifestyle characterised by intensive gaming and streaming. His continuous upgrading of hardware highlights how digital practices are linked to resource consumption, data economics and global inequalities. Through discussions and fact checks, young people discover how digital leisure and performance culture contribute to environmental pollution and explore realistic alternatives for more sustainable gaming without losing the fun or social contact.

Gaming, streaming, sustainability, consumption, digital culture, energy consumption, behavioural change

Goals

- Encourage reflection on consumption habits and performance pressure in digital culture
- Raise awareness of the impact of gaming and streaming on energy and resource consumption
- Promote critical thinking about sustainability in leisure activities
- Identify realistic behavioural changes and technical alternatives
- Strengthen data literacy by analysing energy and CO_2 statistics

Streaming, social media & everyday life

Digital media dominate young people's everyday lives: according to the JIM Study 2023, young people aged 12 to 19 in Germany spend an average of 224 minutes online every day. Video streaming on platforms such as YouTube and TikTok, which are among the most popular leisure activities, dominates this time.

This usage is not climate neutral:

- Video streaming: In Full HD via a landline, one hour of streaming causes around 100–200 g of CO_2, which is roughly equivalent to a kilometre's drive in a car.
- End device & infrastructure: Emissions are generated not only in the data centre, but also in particular by the end device and the network. Bandwidth plays a key role here.

For youth work, this opens up an educational approach that combines everyday digital practices (streaming, social media, cloud use) with environmental awareness – but without moralising.

Mia, 16, influencer

Mia explores the environmental impact of social media use, from streaming and uploading to cloud storage. By discussing Mia's habits and identifying practical adjustments, young people reflect on how digital self-expression and sustainability can coexist and what it means to act consciously in an always-on culture.

Social media, sustainability, digital identity, awareness, consumption, data footprint, behavioural change

Goals

- Raise awareness of the energy and resource use behind social media platforms
- Encourage critical reflection on personal digital routines and identity management
- Develop understanding of the link between data storage, streaming and CO_2 emissions
- Explore realistic strategies for more sustainable digital behaviour
- Promote balanced media use without moralising or losing creative expression

Alternative models & utopias

In addition to consumer pressure and energy hunger, there are also alternatives: young people and initiatives show that a different approach to technology is possible. This involves durability, a culture of repair and new forms of participation.

- Fairphone & Shiftphone: modular smartphones that are repairable and rely on fair supply chains. They show that there is another way – even if they are still niche products.
- Refurbished & sharing models: platforms such as refurbed or municipal rental systems give devices a second life.

- Open source & free software: Linux, F-Droid & Co. enable young people to learn how to break free from the update pressure exerted by large corporations.
- DIY & maker culture: FabLabs and repair initiatives show that technology can be designed and rebuilt by users themselves.

This is linked not only to ecological but also to social utopias: less dependence on large corporations, more self-determination and co-creation.

Jonas, 18, tinkerer & hobbyist

Jonas introduces an alternative digital lifestyle. Instead of chasing trends, he repairs, reuses and experiments with open-source solutions. In this activity, young people discover that sustainability can be creative, innovative and even "cool". They explore how curiosity, DIY culture and technological awareness can challenge consumer pressure and inspire a more responsible approach to digital life.

Sustainability, maker culture, repair, innovation, open source, creativity, digital responsibility, empowerment

Goals

- Show that sustainable and resource-conscious digital lifestyles can be attractive and innovative
- Encourage critical thinking about consumerism, technology and self-expression
- Introduce open-source culture, repair movements and fair technology initiatives
- Strengthen creativity and agency through design-based thinking and future scenarios
- Motivate young people to become active participants in shaping digital sustainability

Suggested activities involving the characters Sophie, Ali, Mia and Jonas:

→ https://competendo.net/en/My_Digital_Lifestyle_Today_and_Tomorrow

Transfer

The topic of digital lifestyle is particularly relevant to young people's everyday lives. This makes it all the more important to design methods that can be used in both formal education (school) and open youth work.

School vs. open youth work

- Short modules (45 minutes) with clear facts and figures work well, e.g. the persona Sophie (smartphone as a status symbol) or a streaming footprint exercise.
- Connection to subjects: geography (resource consumption), ethics (responsibility), computer science (technology & society).

Open youth work

- More space for participation and creativity, e.g. the future workshop "Mobile phone of the future" or Jonas' DIY approach.
- Methods such as persona workshops can be used in a more playful way here, e.g. in youth centres or project weeks.

City vs. countryside

- Urban contexts: Cooperation with repair cafés, FabLabs or NGOs is possible. Young people can try out real alternatives there.
- Rural contexts: Links to municipal facilities such as libraries or youth centres. Repair workshops or sharing projects can also be organised with limited resources.

Cooperation & networks

- Organisations such as Greenpeace have educational materials on "digitality & climate".
- Refurbishing platforms (e.g. Refurbed) or companies such as Fairphone can serve as external inputs.
- Municipal partners: Waste management (old mobile phone collection campaigns), local energy suppliers (CO_2 calculators).

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ACTIVE CITIZENSHIP

Engagement for democratic digital transformation

Young people are exposed to the instrumental influence of technology from early childhood (through entries in electronic health records, social media posts by their parents and relatives, platforms at school, files in state registers, self-created contributions on various platforms...). As they grow into a post-digital world, the question becomes increasingly important: How can they actively **gain autonomy, control and oversight** under these conditions?

Here, too, it becomes clear that democracy does not only mean developing rights, humanitarian principles or ideal governance models (even if these are, of course, necessary). Rather, democracy is about strengthening contacts and advocates for their interests, opening up concrete decision-making processes and strengthening the legal position of young people: from the governance of social media to the introduction of a messenger system in a primary school. The aim is digital empowerment and a trustworthy digital society – where trustworthiness grows with a functioning system of accountability.

Empowerment here means enabling them to exercise their rights. Accountability means influencing other actors in such a way that they enable young people to exercise their rights. They experience democratic self-efficacy because their actions and commitment have led to something.

A **youth policy for the digital world** is necessary because a culture of youth participation in digital policy has not been developed. Great hope lies with those involved in consumer protection and data protection. However, those who claim to speak for young people themselves are also called upon to act. Youth associations and organisations must build up expertise in digital policy.

Alternative and resistant practice

At the same time, being an active citizen also means drawing your own conclusions–and embracing technology that is not so data-hungry, capitalist and surveillance-oriented.

If we were to pursue democracy education using undemocratic methods, we would be criticised for being unprofessional. In this sense, human-centred and political education in the digital realm is also called upon to **use the tools and services that better serve its goals.**

In a way, open and non-formal education always requires us as educators to find ways to adapt and change learning spaces based on pedagogical goals. We also need to get used to doing this with digital tools and services: creatively selecting, arranging and repurposing things. Above all: get started.

Making and hacking

'Making', roughly understood as technically supported craftsmanship and design, has enormous potential for youth work. Many publicly accessible maker spaces or Fab Labs (open workshops with several different devices) have opened recently in Europe – some commercially, but many that are also maintained by non-profit associations and public authorities. Some public libraries have also broadened their activities in this direction. Making also includes drawing and digitally editing sketches, sewing with and without assistance and creatively working with materials by hand and with machines, both individually and in combination.

> *"Maker culture is perceived as DIY culture on the surface. What sets maker culture apart from the traditional culture of crafts is that the artistic and creative elements are often complemented by digital components. The global economy and the latest technologies are utilised in learning and networking as well as in production and distribution. Interest in maker culture has grown as technology has become more affordable and accessible. Equipment that is now within the reach of hobbyists can be used to carry out projects that were previously restricted to the realm of professionals."* (Karppinen, 2019, p. 21)

Making applied to the field of IT also emphasises this **creative goal**. For example, a famous programme in Germany is called "Youth Hacks" rather than "Youth Programming" to emphasise that it's about **open** learning, self-imposed goals and self-determination.

Originally native to computer science, the term **hacking** spread to other areas of society with digital transformation: Giving things new purpose – from furniture to computers. The terms "life hacks" and "hacking" have made it into everyday language and left the digital environment. Essentially, they describe an approach to transformative learning - problem solving, experiential learning, challenging and changing habits and sometimes the system from the ground up.

Youth hacks

For young people interested in social issues and technology. The events and activities offer them opportunities to try out technical skills, learn new ones and discuss social issues.

→ Youth hacks https://jugendhackt.org/

Working with data

Organisations, researchers and public institutions collect data. They analyse the state of democracy, civil society, fundamental rights, the internet and other social developments. Their data and reports inform and support democracy and human rights education in a variety of ways – and offer a source for training in data literacy too. Thanks to digitalisation, an increasing amount of data is available for youth work and civic education.

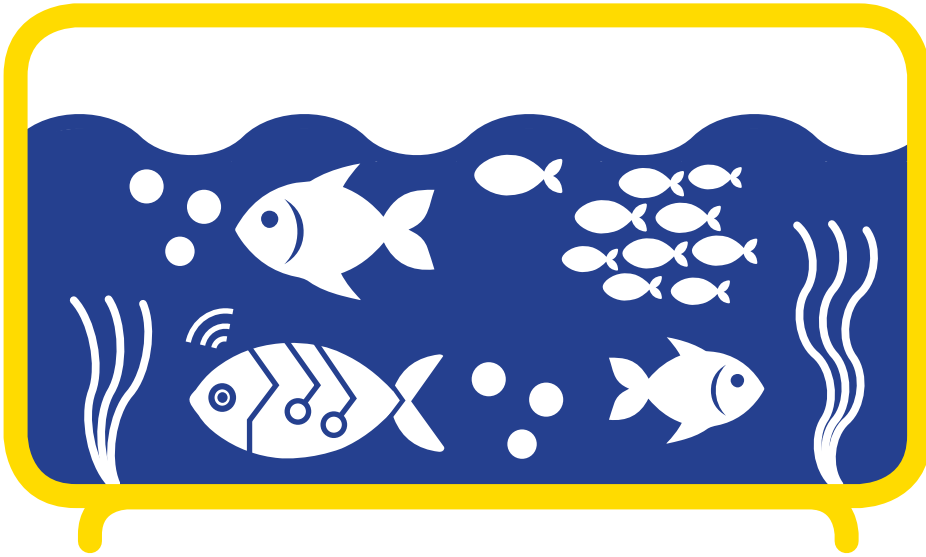
→ https://competendo.net/en/Data_and_Reports

→ EU: DESI dashboard for the Digital Decade https://digital-decade-desi.digital-strategy.ec.europa.eu/

Strengthening diversity in the internet ecosystem(s)

The internet is organised in a decentralised and open way. It was created as a network and as such, under the premise that each part of the network, author and user, is an equal participant. Looking from this perspective at the platform economy, the impression might be that its proprietary conception competes with this generally non-centralised, open-sourced (and some say: more democratic) vision of networks. From this perspective, openness is an important feature for alternative innovation to the growth models of proprietary platforms.

Competitors and governance strengthening and reinforcing the idea of openness are also a condition for balancing these two paths of digital transformation. If you imagine the internet and the digital ecosystem as an aquarium, it is by no means the case that only a few large, well-fed fish swim around in it. The big ones depend on many smaller ones. Sometimes there are joint symbiotic projects (like open-source operating systems or shared standards), sometimes they have to fear each other. Nevertheless, the balance must be maintained and the more resources some accumulate, the more attentive friends of balance must be to the needs of the smaller fishes and to fair rules.



> *"A healthy balance of power in our global internet ecosystem depends on a delicate interplay between governments, companies and civil society. We need effective competition standards and technical interoperability – between the products of different companies – to ensure that the internet grows and evolves in ways that accommodate the diverse needs of people around the world."* (Mozilla Foundation, 2019, p. 98)

→ Openness- the foundation of the Internet https://competendo.net/en/Openness_-_the_Foundation_of_the_Internet

Try openness!

Open and free operating systems, software and services (FOSS), content (open educational resources OER, Creative Commons CC) and open and modular hardware are, on the one hand, ideal allies. On the other hand, they are necessary for the continued existence of a vibrant and diverse internet ecosystem and for sustainability in the digital world.

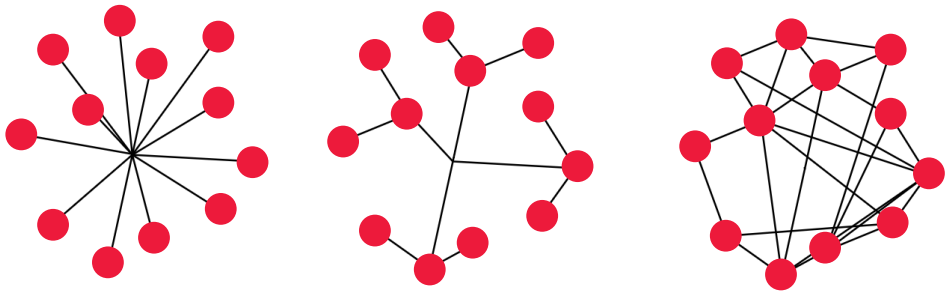
What tools and apps educators use says a lot about them. Democratic civic education in particular is called upon to make conscious choices based on critical thinking not only in its content but also in its tools. We are convinced that Open Software, Open Educational Resources and applications that do not inappropriately and unconsentedly commercialise user data are better than others. This makes educational processes sometimes more complicated, but fairer and perhaps more creative. That is why, in particular, solutions developed in this spirit can be found here.

Selection criteria

- Open Source
- Non-Profit
- High privacy level
- No monetisation of user data

Free and open software

Free and Open Source, often created in a non-central way and for non-central usage, are also contributing to diversity in the internet ecosystem. However, this also has consequences for us users. We regularly hear that



Centralised Decentralised Federated

democracy-sensitive tools don't just work out of the box. That's often true, too. But why and when not?

Centralised services, often provided with the help of large investment capital, can scale to many users, create the same conditions in different places of the world, provide updates quickly and introduce new functions quickly. They have centralised servers and users (clients) do not necessarily have to meet complex requirements.

In contrast, non-centralized solutions rely on several different "nodes" or servers around them that they do not directly affect. For instance, a team is creating new updates or new versions of an open-source software and publishing it on a central website. However, they cannot guarantee that the updates are installed on all regional servers by independent webmasters or, if we talk about apps and desktop software, on all local computers by all end users. Furthermore, they cannot integrate everything in one platform, so we users have to know more different small tools, softwares or platforms.

Getting familiar with the software alternatives

We recommend investing some time and creativity in order to get to know alternatives in the internet and how they can work. Creativity is needed to think about all the things you can use them for in your own work. For example: often it doesn't have to be a Googledoc, an Etherpad could be the better solution. Because with an Etherpad you can do different things without a login or strong internet connection: Dynamically log a workshop (sharing protocols from sessions, notes), share a workshop programme, work together on a text, collect thematic impulses from participants...

What for?

- Rights-sensitivity
- Supporting a diverse and non-centralised internet
- Consciously adapt and use technology instead of just applying what is given
- Contribute to a culture of sharing and collaboration. The open-source community, but also well-done democracy education, shows us how this can succeed

→ https://competendo.net/en/Apps_and_Tools

De-google-ify the Internet

Tools and practice for a better internet:

→ https://degooglisons-internet.org/en/

Creative commoning – sharing as a principle

Commoning is a term coined by the Commons movement, describing a social practice of empowering people to create, share and manage resources collectively, saving them from appropriation through a few and from scarcity through commercialisation. Digitalisation offers many opportunities for digital commoners, since it enables sharing on a new scale.

Creative Commons are to the knowledge society, what free and decentralised software is to the internet.

→ https://competendo.net/en/Creative_Commons_-_Why_and_How
→ https://creativecommons.org

European Digital Rights

Whether it's the introduction of cashless payments, standard charger cables, electronic IDs or health data, workplace regulations or the next big technological innovation – digital policy is at home in Europe. But you don't usually hear much about it – or only once everything has already been negotiated.

That's why digital policy is an essential part of a good Europe-related education. It teaches us who has campaigned to protect children from personal tracking by platforms or how digital sovereignty is being conceived for tomorrow. What else is needed besides the standard charging cable to make hardware greener…

For more than twenty years, the EDRi network has been lobbying for data protection and digital civil rights. Among others, you can find out about digital policy issues through them and their members.

→ European Digital Rights (EDRi) https://edri.org

The aim of this manual is to inspire and encourage critical thinking, as well as a conscious and reflective use of digital technologies. What you have read offers only a brief insight into our vision of how politics and digital tools can be intertwined and integrated into meaningful critical digital education.

What does your own educational practice look like? How should digital education evolve beyond mere 'industry standards'? And how can we collectively strengthen freedom and openness in our digital environments?

We look forward to hearing your reflections and continuing this conversation together.

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Competendo – the digital toolbox

The toolbox offers and shares experience, methods and inspiration for active citizenship-related learning and empowerment in communities, schools, or non-formal learning spaces, in organizations, or initiatives.

→ https://competendo.net