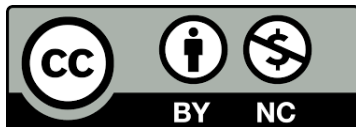


IP, AI & VET

ReferNet annual plenary meeting
Thessaloniki, Greece
PhD Kari Kivinen
20/11/2024



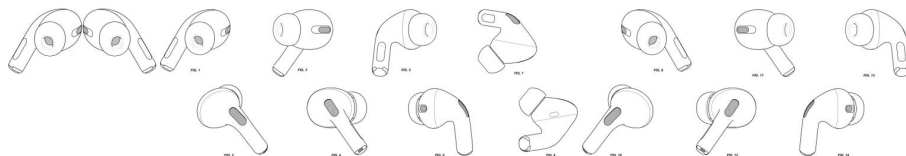
EUIPO



European Union Intellectual Property Office (EUIPO) is situated in Alicante, Spain

- is responsible for managing the EU trade mark and the registered Community design
- employs about 1250 EU civil servants





**STAR
WARS**

EUTM: 018080699



EUTM: 00149333



EUTM: 004084471

Harry Potter



EUTM: 006543516



EUTM:004104626



EUTM: 018025774



EUTM:001843077

007

EUTM: 009141037



EUTM:010931715



ABBA



MESSI

TRADE MARKS

- Brand
- Start-up tone

DESIGN

- Form of overall phone
- Arrangements and shape of buttons
- Position and shape of screen

TRADE SECRETS

- Some technical know how kept 'in-house' and not published



PATENTS & UTILITY MODELS

- Data-processing methods
 - Operating system
- Operation of user interface

COPYRIGHT

- Softwares
- User manual
 - Ringtone
- Start-up tune
- Images



IP in Europe

Interactive map with facts and figures

[View](#)

IP facts and evidence

IPR-intensive industries in the EU

- generate 47% of GDP
- create 39% of the employment, and
- 75% of trade inside of EU

Home / Facts Figures and Case Law / IP in Europe

IP in Europe

Click on any one of the EU
Member States for IP facts
and figures

Or

Select Europe-wide figures

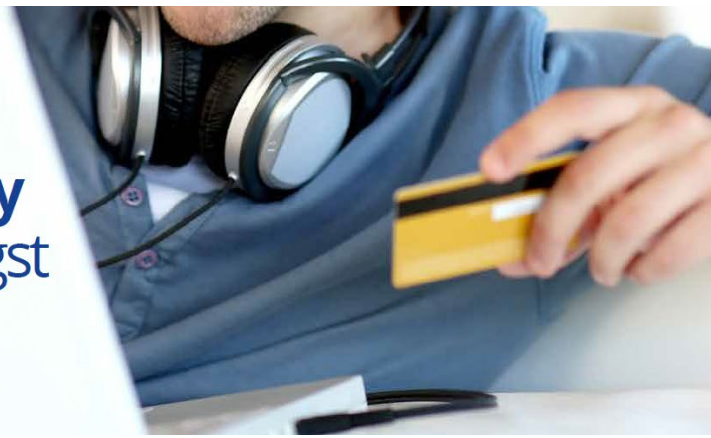


Check your country figures from:
<https://www.euipo.europa.eu/en/observatory>

IP and young people in the EU

Young Europeans buy more fake products and continue to access pirated content

- **37%** of young people bought one or several fake products intentionally
- **21%** of young people say they intentionally use illegal sources of digital content

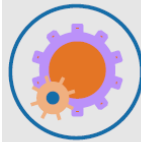


What kind of intellectual property rights are there?



Trade mark

Protects the commercial origin of goods and/or services.



Patent

protects products or processes that offer a new technical solution.



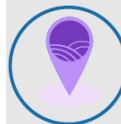
Design

Protects the appearance of products.



Copyright

Protects creative works, including software.



Protected geographical indications

Protects foodstuffs, spirits, wines and agricultural products with a specific geographical origin, reputation and/or characteristics.

Do you know your intellectual property rights in your institution or organization?

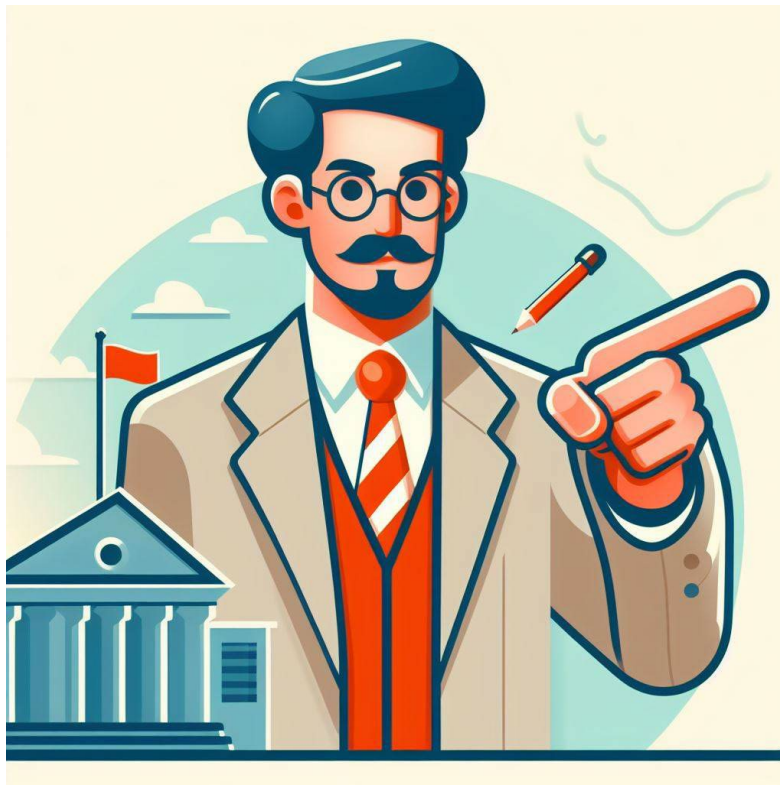


Illustration generated by DALL-E 3

Prompt:

Create a simple and minimalistic illustration about university professor pointing you with the finger. Make the finger to be central element in the image!

Education exception of copyright rules



The increasing use of digitalised e-learning materials has prompted teachers to question their rights to their lesson plans, teaching materials, presentations, and other creative works.

- While the creator normally owns the copyright to their work, an employer may acquire rights to an employee's work through a separate agreement.
- The copyright directive provision aims to provide teachers and students with the legal certainty to use protected content in their digital teaching activities.
- **However, due to the territorial nature of copyright laws, EU member states have implemented this exception in slightly different ways.**

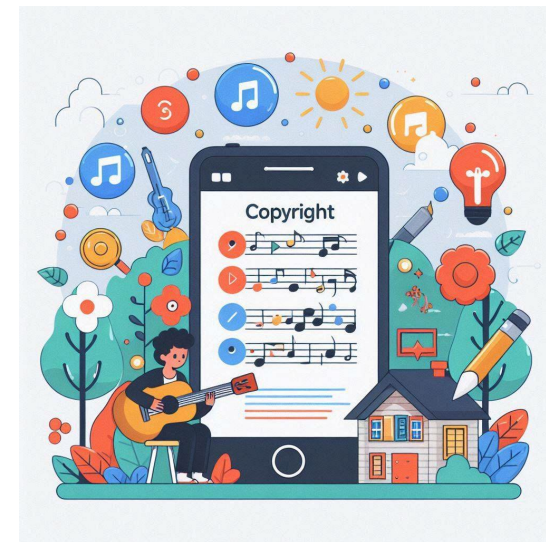


Illustration generated by AI

Copyright



Copyright protection **arises automatically** from the moment of the creation and does not require registration to be protected.

There are 2 cumulative conditions:

1. **Originality:** “author's own intellectual creation” expression of his “free and creative choices”, “personal touch”
2. **Expression:** identifiable with sufficient precision and objectivity

Copyright protects **expression of ideas - not ideas, concept**

Two types of exclusive rights under copyright: **To authorise – to prohibit**

1. **Economic rights:** Reproduction, communication, distribution, translation, adaptation
2. **Moral rights:** Paternity, disclosure, integrity

Main principle: An authorisation is needed to use copyright protected work.

Teaching exception: Purpose of illustration for teaching or scientific research.

Mandatory teaching exception (Article 5 C-DSM Directive) - Use of works and other subject matter in digital and cross-border teaching activities

Beneficiaries? Educational establishments' pupils or students and teaching staff

Which uses?

- Digital uses: scanning, uploading, streaming of copyright material (image, text, videos)
- Uses of works in the classroom or other venues through digital means
- Uses at a distance through secure electronic environment

Where it is applicable?

- Uses which take place under the responsibility of an educational establishment, on its premises or at other venues
- **Educational establishments recognised by a Member State:** Open list - primary, secondary, vocational and tertiary education.
- **For online uses:** through a secure electronic environment digital teaching and learning environment.
 - Access limited to teaching staff and pupils/students enrolled in a study programme.
 - Appropriate authentication procedures (e.g. password-based).

Which purpose?

Illustration for teaching

- To support, enrich or complement teaching activities, including learning activities
- In most cases: use of parts or extracts of works

Non-commercial purpose

- Non-commercial purpose of the particular teaching activity
- Organisational structure and means of funding are not decisive criteria

Frequently asked questions (FAQs) on copyright for teachers

FAQs on copyright for teachers

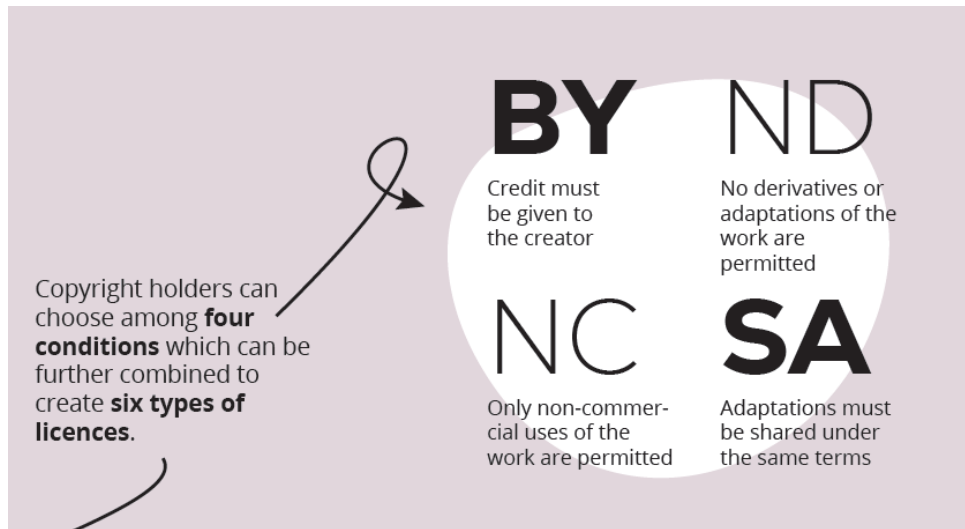
- 15 questions from teachers on copyright for all EU Member States
- Aim is to provide clear and accurate information on uses of protected content allowed in the context of education – online
- In the language of each country + in English

One stop shop for all teachers in the EU

<https://www.euipo.europa.eu/en/observatory/awareness/faqs-on-copyright>



Creative Commons licences



Creative Commons licenses help creators retain copyright while allowing others to copy, distribute, and make some uses of their work — at least non-commercially.

<https://creativecommons.org/>

IP Essentials MOOC

- Three modules have been created and they are available in the Academy Learning Portal
- Each module can be done separately.
- After each module it is possible to print a certificate.
- Entrepreneurship module is targeted especially for young entrepreneurs
- Spanish translation of the two first modules are on the way

IP Essentials MOOC

Module 1 IP Basic

<https://euipo.europa.eu/knowledge/course/view.php?id=4933>

Module 2 Copyright

<https://euipo.europa.eu/knowledge/enrol/index.php?id=5066>

Module 3 Entrepreneurship and IP

<https://euipo.europa.eu/knowledge/enrol/index.php?id=5200>



KEY COMPETENCES & INTELLECTUAL PROPERTY 2018

Digital competence.

- to acquire information in intellectual property related questions...

Citizenship competence

- ‘...act as responsible citizens...’

Entrepreneurship competence

- ...know how to transform ideas into values for others...’

Cultural Awareness and Expression Competence

- ..develop an ethical and responsible approach to intellectual ownership...’

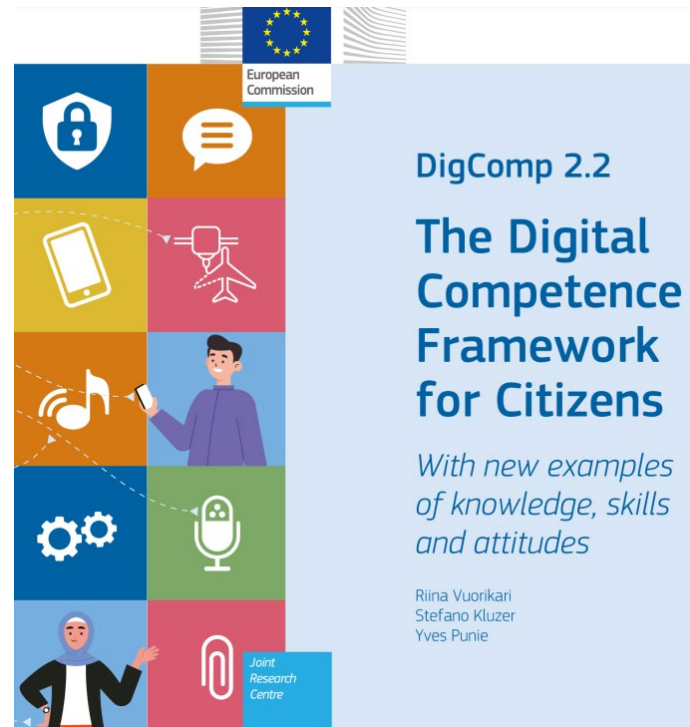


DigComp 2.2.

The EU has set ambitious targets for at least 80% of the population to have basic digital skills by 2030.

- DigComp 2.2. provides a common understanding of which are the key areas of digital competence.
- Digital Literacy competences are considered as basic civic skills

<https://publications.jrc.ec.europa.eu/repository/handle/JRC128415>





DIMENSION 1 • COMPETENCE AREA

3. DIGITAL CONTENT CREATION

DIMENSION 2 • COMPETENCE

3.3 COPYRIGHT AND LICENCES

To understand how copyright and licences apply to digital information and content.

DIMENSION 4 • EXAMPLES OF KNOWLEDGE, SKILLS AND ATTITUDES

NEW
IN 2.2

KNOWLEDGE 	138. Knows that digital content, goods and services might be protected under intellectual property (IP) rights (e.g. copyright, trademarks, designs, patents). 139. Aware that the creation of digital content (e.g. pictures, texts, music) when original is considered protected by copyright as soon as it exists (automatic protection). 140. Aware that certain copyright exceptions exist (e.g. use for the purpose of illustration for teaching, for caricature, parody, pastiche, for quotation, private uses). 141. Knows different models of licensing software (e.g. proprietary, free and open-source software) and that some types of licences need to be renewed once the licence period expires. 142. Aware of the legal limitations of using and sharing digital content (e.g. music, movies, books) and the possible consequences of illegal actions (e.g. sharing copyrighted content with others can give rise to legal sanctions). 143. Aware that mechanisms and methods to block or limit access to digital content exist (e.g. passwords, geo-blocking, Technical Protection Measures, TPM).
SKILLS 	144. Able to identify and select digital content for downloading or uploading legally (e.g. public domain databases and tools, open licences). 145. Knows how to use and share digital content legally (e.g. checks the terms and conditions and licensing schemes available, such as the various types of Creative Commons) and knows how to assess whether limitations and copyright exceptions apply. 146. Able to identify when uses of copyright-protected digital content fall under the scope of a copyright exception so that no prior consent is needed (e.g. teachers and students in the EU can use copyright protected content for the purpose of illustration for teaching). 147. Able to check and understand the right to use and/or re-use digital content created by a third party (e.g. knows about collective licensing schemes and contacts the relevant collective management organisations, understands the various Creative Commons licences). 148. Can choose the most suitable strategy, including the licensing, for the purpose of sharing and protecting one's own original creation (e.g. by registering it in an optional copyright deposit system; choosing open licences such as Creative Commons).
ATTITUDES	149. Respectful of rights affecting others (e.g. ownership, contract terms), only using legal sources for downloading digital content (e.g. movies, music, books) and when relevant, opting for open-source software. 150. Open to consider whether open licences or other licence schemes are more suitable when producing and publishing digital content and resources.

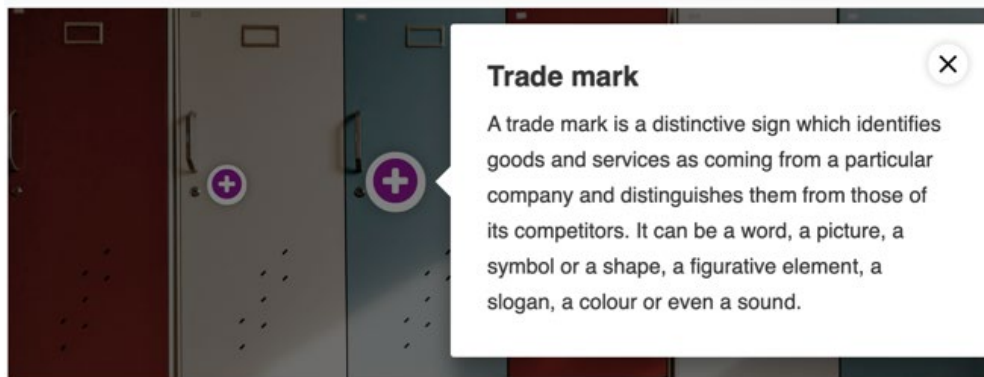
INTELLECTUAL PROPERTY IN EDUCATION INITIATIVE

Intellectual Property (IP) in Education,
promotes creativity, innovation, entrepreneurship and
responsible digital engagement among young
Europeans.

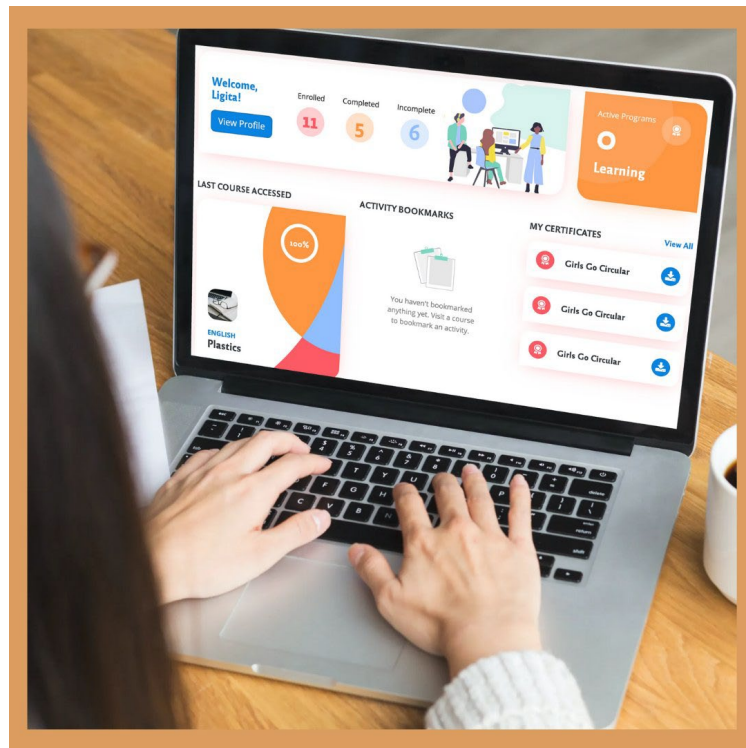
IP in Education Network:
27 Ministries of Education / Culture
27 Intellectual Property Offices
Among our partner organisations:



IP IN EDUCATION AND EIT'S GIRLS GO CIRCULAR



Circular Learning Space
with 5 IP modules



IP NextGen 2025 Report

Chapter 1: IP in education and training in the EU

Chapter 2: IP in tertiary education in the EU

Chapter 3: Influencers and IP



Illustration generated by AI

Report: IP in education and training in the EU

The aim of the report is to analyse how Intellectual Property Rights (IPR) and IP-related issues are covered in

- primary,
 - lower secondary,
 - upper secondary
 - **vocational education and training** and
 - tertiary education
- curricula in the 27 EU Member States.

IP areas

- Copyright
- Trade mark
- Designs
- Patents
- Geographical indications

Other IP related issues such as:

- ownership,
- authorship,
- originality,
- licensing,
- confidentiality,
- trade secrets and
- branding

Artificial intelligence is part of our everyday life



- Search engines
- Navigators
- Household appliances
- Car assistance systems
- Translation machines
- Chatbots
- Product recommendations (e.g. on e-commerce sites)
- Voice recognition (e.g. virtual assistants),
- Image recognition (e.g. tumour detection in X-rays)
- Facial recognition (e.g. in surveillance systems)
- Cameras and image processing software
- Digital music
- Microsoft Office co-pilot
- Siri, Alexa etc.
- Loan application bots
- Claims handling (insurance)
- Snapchat AI friend

AI Literacy definition (Bozkurt, 2024)

“Ai literacy is the comprehensive set of competencies, skills, and fluency required to understand, apply, and critically evaluate AI technologies, involving a flexible approach that includes foundational knowledge (**Know What**), practical skills for effective real-word applications (**Know How**), and a deep understanding of the ethical and societal implications (**Know Why**), enabling individuals to engage with AI technologies in a responsible, informed, ethical and impactful manner.”

Students are already using GenAI

Ofcom, UK: (28.11.2023)

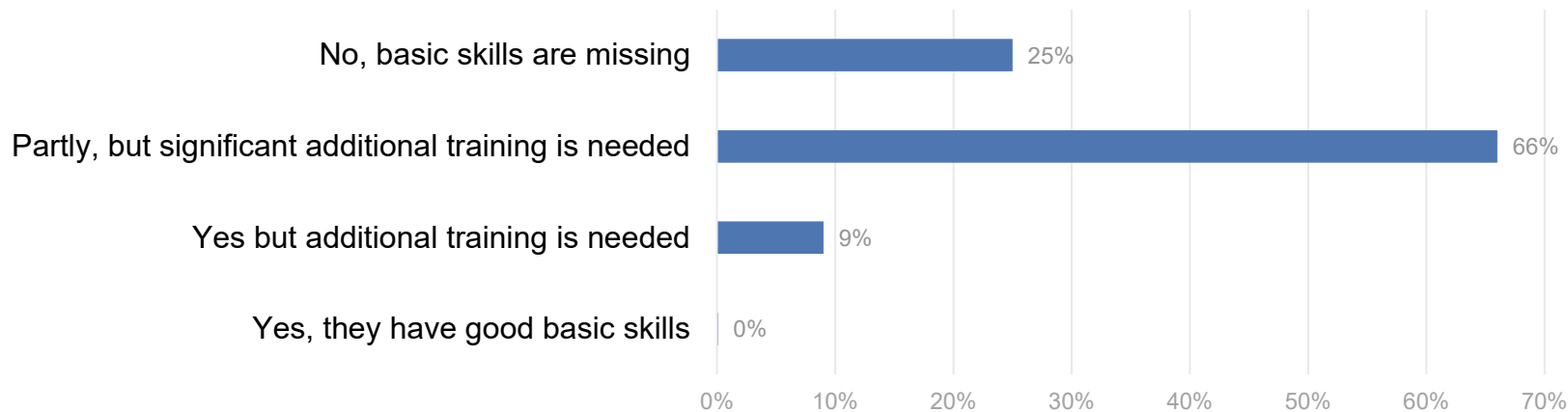
- 79% online teenagers aged 13-17 use generative AI tools and services,
- 40 % children aged 7-12 are adopting the technology

<https://www.ofcom.org.uk/news-centre/2023/gen-z-driving-early-adoption-of-gen-ai>



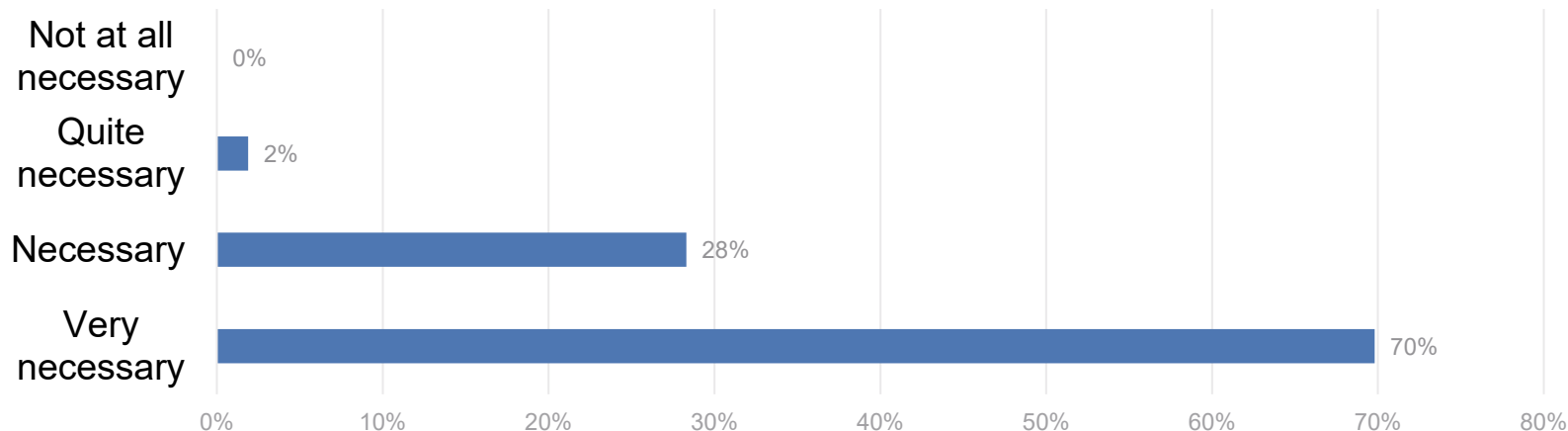
How about teachers? Finnish sample N=100, November 2024

Do teachers have sufficient AI skills? N=100, November 2024



Do teachers expect recommendations on the use of AI? N=106, November 2024

How necessary do you think the Finnish National Board for Education's recommendations on the use of AI are? N=106



UNESCO AI COMPETENCY FRAMEWORK FOR TEACHER

- AI has the potential to reshape societies, economies and education systems.
- AI raises unique ethical and social challenges, such as fairness, transparency, privacy and accountability.
- AI mimics human behaviour, which affects human agency.
- **These challenges require specific skills / competences beyond digital literacy.**

<https://www.linkedin.com/pulse/how-do-teachers-students-prepare-world-ai-unesco-lrzve/>



AI competency framework for teachers



Some ethical considerations for teachers 1

Management and care

- Teachers should be trained in the use of AI tools and they should be informed about their risks.
- AI tools used in teaching and assessment should be appropriate and safe.
- The use of AI tools should be in line with the curricula.

The principle of human-centred AI

- Teachers should not release any AI output without review.
- The use of AI tools should be discussed with students.
- AI tools should be used at pedagogically appropriate age levels
- Students should have clear guidelines and boundaries for the use of AI in tasks.



Some ethical considerations for teachers 2

Transparency and accountability

- AI tools should be based on pedagogical principles and add value to students' learning.
- Students and their parents should be informed about the purposes, functions, opportunities and risks of AI tools used in the classroom.
- Teachers should ensure that AI applications are used responsibly and that copyright infringement and plagiarism do not occur.

Privacy

- Teachers should have a basic understanding of what information AI tools store
- Teachers should be informed about the data collection and use.

Security

- Staff should instruct students to follow the school's policy on the use of AI tools.
- Staff should monitor potential data breaches and know how to report them.



Potential Benefits of AI in Education

Content development and **differentiation**

Assessment design and timely, effective feedback

Tutoring and **personalized** learning assistance

Aiding **creativity, collaboration, and skill development**

Operational and administrative **efficiency**

Plagiarism and academic dishonesty

Diminished student and teacher agency and **accountability**

Compromised student **privacy** and unauthorized data collection

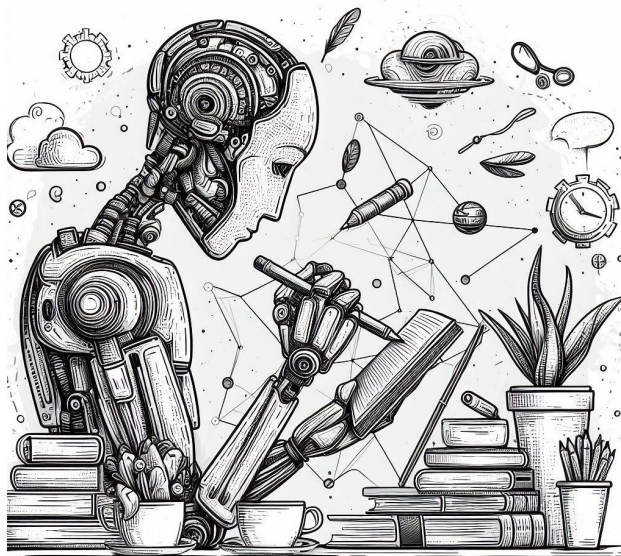
Overreliance and loss of critical thinking

Perpetuating **societal bias**

Potential Risks of AI in Education

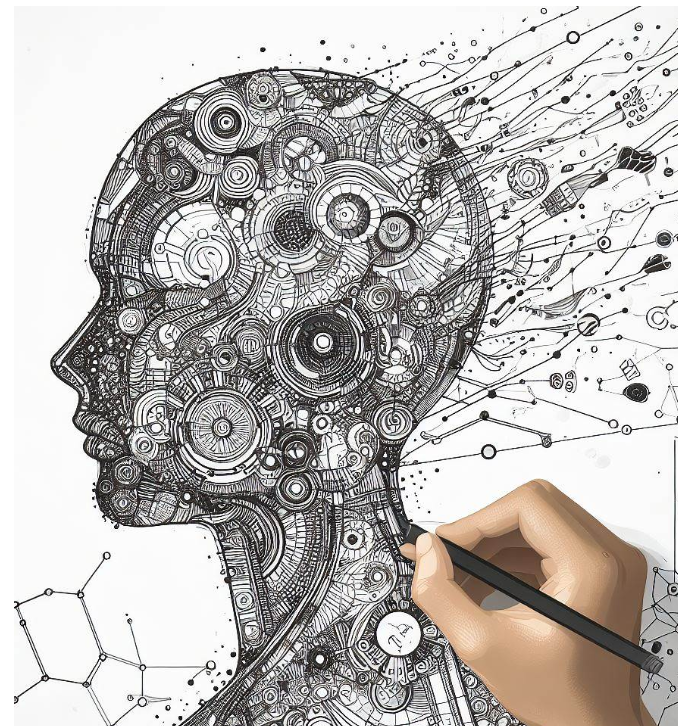
GenAI: Copyright INPUT issues

- ❑ Nobody knows what materials have been used to train GenAI tools. There is a **lack of documentation and transparency**.
- ❑ Copyright covers virtually every sort of human expression – including blog posts, photographs, video etc.
- ❑ GenAI companies have admitted that they have used copyright protected materials without permission.
- ❑ **Developing case law:** rights holders have brought a number of lawsuits against GenAI companies that have already used their content as training material
- ❑ Under new EU legislation, General Purpose **AI systems must comply with EU copyright laws** and provide summaries of the content used for training.
- ❑ Users should **avoid feeding AI tools with copyright protected materials**.



Generative Artificial Intelligence: OUTPUT issues

- GenAI can be a new tool in the hands of human creators, but **work generated entirely by AI with limited or no human input cannot be protected by copyright.**
- Sometimes the outputs of the GenAI tools are nearly identical with the original copyright protected work. That might create a legal copyright issue.
- Some rightsholders have launched legal actions to protect themselves from competition from outputs based on or imitating their works.



Blocking AI Bots

There are technical solutions to prevent scraping of copyrighted content from the web such as robots.txt procedure.

- In summer 2023, OpenAI gave the possibility for media houses to use technical solutions to prevent scraping.
- US News outlets are increasingly blocking AI crawlers, which has created new types of worries. According to Wired:

“New data shows that over 88 percent of top-ranked news outlets in the US now block web crawlers used by artificial intelligence companies to collect training data for chatbots and other AI projects. One sector of the news business is a glaring outlier, though: Right-wing media lags far behind their liberal counterparts when it comes to bot-blocking.”

WIRED BACKCHANNEL BUSINESS CULTURE GEAR IDEAS MORE ▾ SIGN IN SUBSCRIBE 🔍

Most Top News Sites Block AI Bots. Right-Wing Media Welcomes Them

Nearly 90 percent of top news outlets like *The New York Times* now block AI data collection bots from OpenAI and others. Leading right-wing outlets like NewsMax and Breitbart mostly permit them.

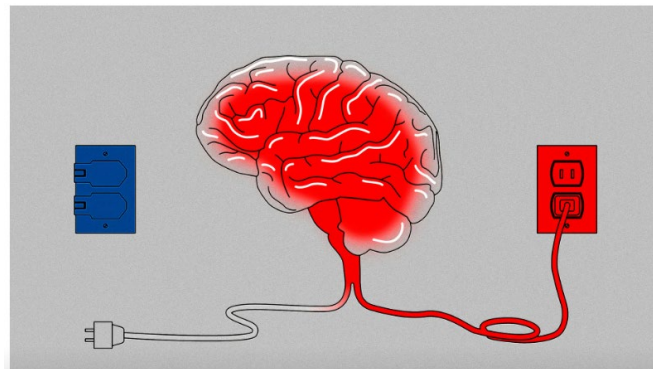


ILLUSTRATION: JACQUI VANLIEW; GETTY IMAGES

<https://www.wired.com/story/most-news-sites-block-ai-bots-right-wing-media-welcomes-them/>

AI Bot blocs



[Home](#) > [Research](#)

How many news websites block AI crawlers?

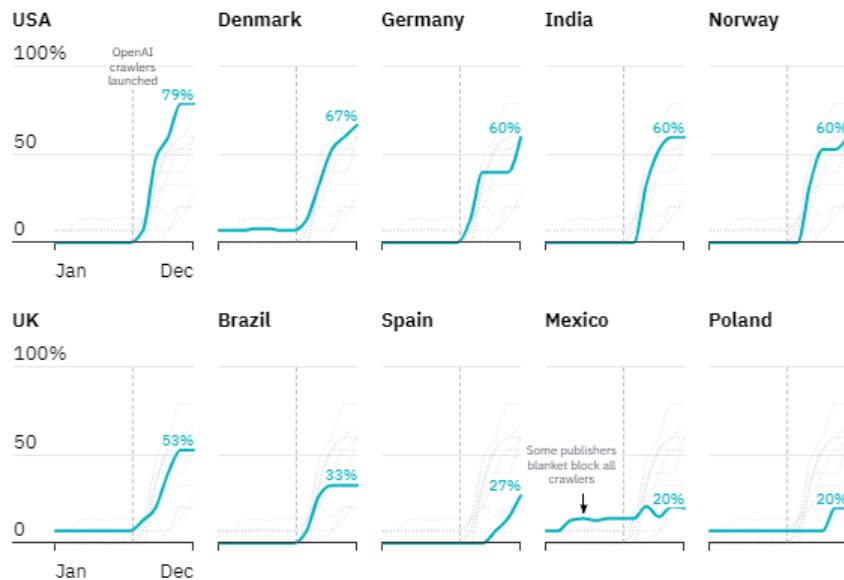


Illustration by Microsoft Copilot

Dr Richard Fletcher

22nd February 2024

Proportion of top news websites blocking OpenAI's crawlers during 2023



Note: Based on analysis of the robots.txt files from the 15 most widely used online news websites in each country (according to the 2023 Reuters Institute *Digital News Report*) sourced from the Wayback Machine. December 2023 data available for all websites except the *Washington Post* in the USA.

Generative Artificial Intelligence: Data protection

- ❑ ChatGPT and many other apps are **not** compliant with the EU General Data Protection Regulation (GDPR), at least at the time of writing.
- ❑ It is important to remember that sensitive material, such as student data, **cannot be shared** on these platforms.
- ❑ GPT systems may also be in conflict with other parts of the GDPR. One should remember that it is impossible to delete data from a GPT model at present.



GenAI can hallucinate and spread invented content & disinformation

- ❑ GenAI tools have been trained on material from the internet, which often contains nonsense information, disinformation and sometimes a bit questionable content.
- ❑ GenAIs may therefore produce and disseminate incorrect information and unethical material.
- ❑ GenAI can also invent "facts" that sound entirely correct
- ❑ This phenomenon is often called **hallucination**.



Hallucinations

GenAI & high quality deep-fakes

- GenAI can be used to modify or manipulate images or videos.
- These **deep-fakes** are difficult to distinguish from real images or videos.
- GenAI makes it easy for disinformation providers to create very realistic-looking fakes, using someone's face and voice, for example, without permission.
- GenAI thus might facilitate the spread of disinformation.



AI Act will enter in force 2026



The [European AI Office](https://digital-strategy.ec.europa.eu/en/policies/ai-office), established in February 2024 within the Commission, oversees the AI Act's enforcement and implementation with the member states. It aims to create an environment where AI technologies respect human dignity, rights, and trust.

It also fosters collaboration, innovation, and research in AI among various stakeholders.

<https://digital-strategy.ec.europa.eu/en/policies/ai-office>

Education area is considered to be a high-risk area. Practical instructions for school providers are still in progress in many countries.

Generative AI & Copyright



Generative AI in Education

Understanding copyright implications



Generative AI
Facts

Responsible use of
GenAI in education

Tips for teachers on
responsible use of GenAI

GenAI and
copyright

How can teachers help
students avoid copyright
infringement

What is AI?

Artificial intelligence refers to programs or machines that simulate tasks that typically require human intelligence.

What is it?

AI-based applications have long been integrated into our daily lives. We all use navigators, search engines, spell checkers and various types of AI-powered tools every day without even realizing it.

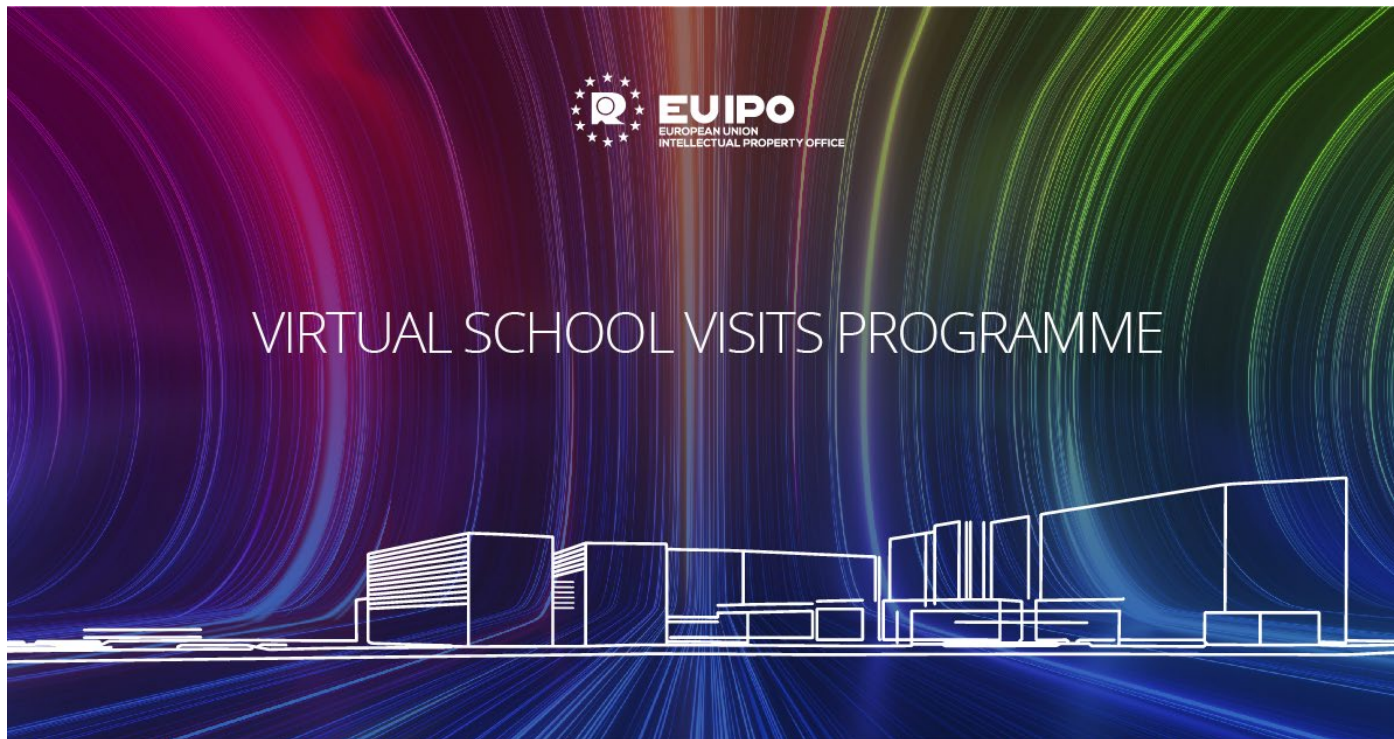


Instructions to AI users (an example)

- Give AI a chance: try it out. It might be an excellent assistant in many fields.
- Familiarise yourself with your institution's AI guidelines.
- Always verify all AI outputs. Do not use any AI output as such.
- Check what information is safe to enter into the GenAI system.
- Consider intellectual property rights when using AI.
- Maintain your skills as an AI user.



Virtual School Visits



Come visit the EUIPO here: <https://euipo.europa.eu/knowledge/course/view.php?id=4296>



www.euipo.europa.eu

 [@EU_IPO](https://twitter.com/EU_IPO)

 [EUIPO](https://www.linkedin.com/company/euipo)

 [EUIPO.EU](https://www.facebook.com/EUIPO.EU)

 [@EUIPO](https://www.instagram.com/EUIPO)

 [EUIPO](https://www.youtube.com/EUIPO)

THANK YOU

Presentation

Status

DRAFT / APPROVED

Approved by owner

Authors

Contributors

Revision history

Version	Date	Author	Description
0.1	XX/XX/XXXX		
0.1	XX/XX/XXXX		
0.1	XX/XX/XXXX		