Quadro europeo delle competenze digitali per i cittadini:

le novità di DigComp 2.2.

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Formez

L'uso di **DigComp**

La creazione di **moduli didattici** sulle **competenze digitali**

QUADRI DI RIFERIMENTO

valutazione/monitoraggi o delle attività didattiche

formulazione delle politiche

definizione di obiettivi

pianificazione

comprensione - vocabolario

DigComp

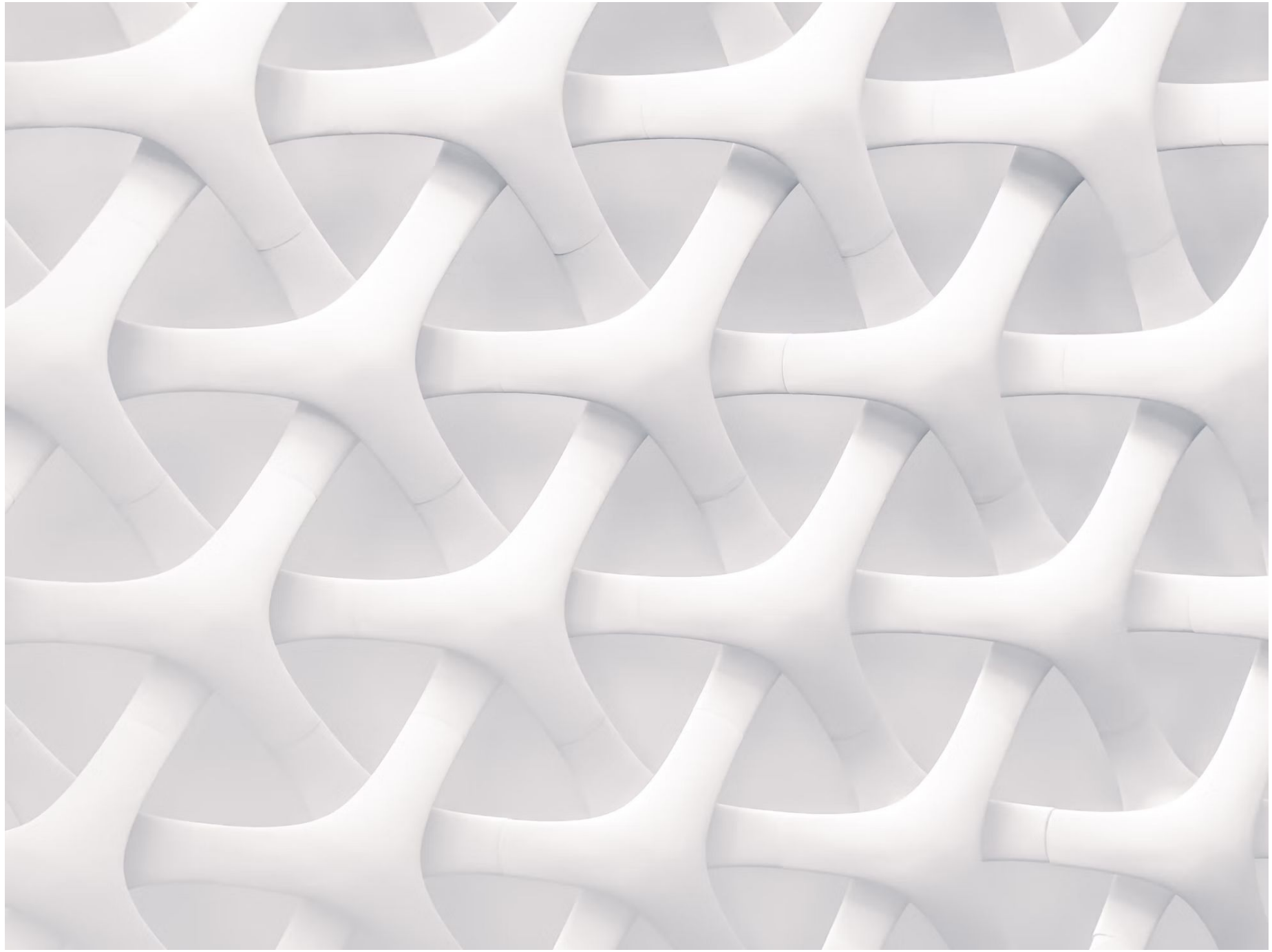
utenti, istituzioni, intermediari, sviluppatori delle iniziative

GreenComp

DigComp Consumer

EntreComp

LifeComp



QUADRI DI RIFERIMENTO

utenti

istituzioni

intermediari

sviluppatori

adattano

il quadro di riferimento alle proprie esigenze

(programmi di studio, moduli didattici, esigenze specifiche dei gruppi target)

DIMENSION 1 • **COMPETENCE AREA**

1. INFORMATION AND DATA LITERACY

DIMENSION 2 • **COMPETENCE**

1.2 EVALUATING DATA, INFORMATION AND DIGITAL CONTENT

To analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content. To analyse, interpret and critically evaluate the data, information and digital content.

DIMENSION 3 • **PROFICIENCY LEVEL**

FOUNDATION	1	At basic level and with guidance, I can:	• **detect** the credibility and reliability of common sources of data, information and their digital content.
	2	At basic level and with autonomy and appropriate guidance where needed, I can:	• **detect** the credibility and reliability of common sources of data, information and their digital content.
INTERMEDIATE	3	On my own and solving straightforward problems, I can:	• **perform** the analysis, comparison and evaluation of the credibility and reliability of **well-defined** sources of data, information and digital content. • **perform** the analysis, interpretation and evaluation of **well-defined** data, information and digital content
	4	Independently, according to my own needs, and solving well-defined and non-routine problems, I can:	• **perform** the analysis, comparison and evaluation of sources of data, information and digital content. • **perform** the analysis, interpretation and evaluation of data, information and digital content.
ADVANCED	5	As well as guiding others, I can:	• **carry out** an evaluation of the credibility and reliability of **different** sources of data, information and digital content. • **carry out** an evaluation of **different** data, information and digital content.
	6	At advanced level, according to my own needs and those of others, and in complex contexts, I can:	• critically **assess** the credibility and reliability of sources of data, information and digital content. • critically **assess** data, information and digital content.
HIGHLY SPECIALISED	7	At highly specialised level, I can:	• **create solutions to complex problems with limited definition** that are related to analysing and evaluating credible and reliable sources of data, information and content in digital environments. • **integrate** my knowledge **to contribute to professional practices and knowledge** and to **guide others** in the analysis and evaluation of the credibility and reliability of data, information and digital content and their sources.
	8	At the most advanced and specialised level, I can:	• **create solutions to solve complex problems with many interacting factors** that are related to analysing and evaluating credible and reliable sources of data, information and content in digital environments. • **propose new** ideas and processes to the field.

DIMENSION 4 • EXAMPLES OF KNOWLEDGE, SKILLS AND ATTITUDES

NEW IN 2.2

KNOWLEDGE

16. Aware that online environments contain all types of information and content including misinformation and disinformation, and even if a topic is widely reported it does not necessarily mean it is accurate.
17. Understands the difference between disinformation (false information with the intent to deceive people) and misinformation (false information regardless of intent to deceive or mislead people).
18. Knows the importance of identifying who is behind information found on the internet (e.g. on social media) and verifying it by checking multiple sources, to help recognise and understand point of view or bias behind particular information and data sources
19. Aware of potential information biases caused by various factors (e.g. data, algorithms, editorial choices, censorship, one's own personal limitations).
20. Knows that the term "deep-fakes" refers to AI-generated images, videos or audio recordings of events or persons that did not really happen (e.g. speeches by politicians, celebrity faces on pornographic imagery). They may be impossible to distinguish from the real thing. (AI)
21. Aware that AI algorithms might not be configured to provide only the information that the user wants; they might also embody a commercial or political message (e.g. to encourage users to stay on the site, to watch or buy something particular, to share specific opinions). This can also have negative consequences (e.g. reproducing stereotypes, sharing misinformation). (AI)
22. Aware that the data, on which AI depends, may include biases. If so, these biases can become automated and worsened by the use of AI. For example, search results about occupation may include stereotypes about male or female jobs (e.g. male bus drivers, female sales persons). (AI)

SKILLS

23. Carefully considers the top/first search results in both text-based and audio searches, as they may reflect commercial and other interests rather than be the most appropriate results for the query.
24. Knows how to differentiate sponsored content from other content online (e.g. recognising advertisements and marketing messages on social media or search engines) even if it is not marked as sponsored.
25. Knows how to analyse and critically evaluate search results and social media activity streams, to identify their origins, to distinguish fact-reporting from opinion, and to determine whether outputs are truthful or have other limitations (e.g. economic, political, religious interests).
26. Knows how to find the author or the source of the information, to verify whether it is credible (e.g. an expert or authority in a relevant discipline).
27. Able to recognise that some AI algorithms may reinforce existing views in digital environments by creating "echo chambers" or "filter bubbles" (e.g. if a social media stream favours a particular political ideology, additional recommendations can reinforce that ideology without exposing it to opposing arguments). (AI)

ATTITUDES

28. Inclined to ask critical questions in order to evaluate the quality of online information, and concerned about purposes behind spreading and amplifying disinformation.
29. Willing to fact-check a piece of information and assess its accuracy, reliability and authority, while preferring primary sources over secondary sources of information where possible.
30. Carefully considers the possible outcome before clicking a link. Some links (e.g. compelling titles) could be "clickbait" that takes the user to sponsored or unwanted content (e.g. pornography).

DIMENSION 5 • USE CASES

FOUNDATION 1

EMPLOYMENT SCENARIO: job seeking process

With help from an employment adviser

- I can identify in a list of job portals and apps a friend has found in an employment office's blog, those that are commonly used because they have credible and reliable job offers.

LEARNING SCENARIO: prepare group work with my classmates

With help from my teacher

- I can identify, from a list in my textbook of blogs and digital databases containing available literature, those that are commonly used because they are credible and reliable.

CREAZIONE MODULI DIDATTICI

Descrizione della competenza
DIMENSIONE 2

Individuazione subcomponenti / temi

ItemID	Competence components
1.1	To articulate **information needs**
1.1	To **search** for data, information and content in digital environments
1.1	To **access** them and to **navigate** between them
1.1	To create and update **personal search strategies**
1.2	To analyse, compare and critically evaluate the credibility and reliability of **sources** of data, information and digital content
1.2	To analyse, interpret and critically evaluate the **data,** information and digital content.
1.3	To organise, **store and retrieve** data, information, and content in digital environments.
1.3	To organise and **process** them in a structured environment.

CREAZIONE MODULI DIDATTICI

DIMENSIONE 2

1.2 Valutare dati, informazioni e contenuti digitali

➔ Analizzare, confrontare e valutare in maniera critica la credibilità e l'affidabilità delle **fonti dei dati, delle informazioni e dei contenuti digitali**.

➔ Analizzare, interpretare e valutare in maniera critica **dati, informazioni e contenuti digitali.**

1.2	To analyse, compare and critically evaluate the credibility and reliability of **sources** of data, information and digital content
1.2	To analyse, interpret and critically evaluate the **data,** information and digital content.

CREAZIONE MODULI DIDATTICI

DIMENSIONE 3 - Livelli di padronanza

1 – Base

A livello base e *con l'aiuto di qualcuno*, sono in grado di:

2 – Base

A livello base, *in autonomia e con un supporto adeguato, laddove necessario*, sono in grado di:

rilevare la credibilità e l'affidabilità delle **fonti** comuni di dati, informazioni e contenuti digitali.

1.2	To analyse, compare and critically evaluate the credibility and reliability of **sources** of data, information and digital content
1.2	To analyse, interpret and critically evaluate the **data,** information and digital content.

CREAZIONE MODULI DIDATTICI

DIMENSIONE 3 - Livelli di padronanza

3 – Intermedio

Da solo e risolvendo problemi diretti, sono in grado di:

- **eseguire** l'analisi, il confronto e la valutazione della credibilità e dell'affidabilità di **fonti ben definite** di dati, informazioni e contenuti digitali,
- **eseguire** l'analisi, l'interpretazione e la valutazione di **dati, informazioni e contenuti digitali ben definiti**.

1.2	To analyse, compare and critically evaluate the credibility and reliability of **sources** of data, information and digital content
1.2	To analyse, interpret and critically evaluate the **data,** information and digital content.

NUOVI TEMI E FENOMENI

DIMENSIONE 4

- ➔ *intelligenza artificiale*
- ➔ *realtà virtuale e aumentata*
- ➔ *la robotizzazione*
- ➔ *Internet delle cose*
- ➔ *datafication*
- ➔ *disinformazione*
- ➔ *misinformazione*
- ➔ *lavoro in remoto*

POSSEDERE CONOSCENZE (fatti, principi, teorie…)

KNOWLEDGE

It means the outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study.

→ In DigComp 2.2, **knowledge examples** follow the wording of: ***Aware of***..., ***Knows about***..., ***Understands that...***, etc.

AGIRE utilizzando conoscenze, pensiero logico - creativo, strumenti…

SKILLS

They are the ability to apply knowledge and use know-how to complete tasks and solve problems. In the context of the European Qualifications Framework, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments).

→ In DigComp 2.2, **skills examples** follow the wording of: ***Knows how to do***..., ***Able to do***..., ***Searches***..., etc.

Alla base dell'azione (interesse, valori,...)

ATTITUDES

They are conceived as the motivators of performance, the basis for continued competent performance. They include values, aspirations and priorities.

→ In DigComp 2.2, **attitude examples** follow the wording of: ***Open to***..., ***Curious about***..., ***Weighs the benefits and risks*** ..., etc.

DIMENSION 4 • EXAMPLES OF KNOWLEDGE, SKILLS AND ATTITUDES

NEW IN 2.2

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21. Aware that AI algorithms might not be configured to provide only the information that the user wants; they might also embody a commercial or political message (e.g. to encourage users to stay on the site, to watch or buy something particular, to share specific opinions). This can also have negative consequences (e.g. reproducing stereotypes, sharing misinformation). (AI)
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SKILLS

23. Carefully considers the top/first search results in both text-based and audio searches, as they may reflect commercial and other interests rather than be the most appropriate results for the query.
24. Knows how to differentiate sponsored content from other content online (e.g. recognising advertisements and marketing messages on social media or search engines) even if it is not marked as sponsored.
25. Knows how to analyse and critically evaluate search results and social media activity streams, to identify their origins, to distinguish fact-reporting from opinion, and to determine whether outputs are truthful or have other limitations (e.g. economic, political, religious interests).
26. Knows how to find the author or the source of the information, to verify whether it is credible (e.g. an expert or authority in a relevant discipline).
27. Able to recognise that some AI algorithms may reinforce existing views in digital environments by creating "echo chambers" or "filter bubbles" (e.g. if a social media stream favours a particular political ideology, additional recommendations can reinforce that ideology without exposing it to opposing arguments). (AI)

ATTITUDES

28. Inclined to ask critical questions in order to evaluate the quality of online information, and concerned about purposes behind spreading and amplifying disinformation.
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Non solo **esempi di K, S, A** ma anche un **repertorio di nuovi temi**

Da nuovi temi, **nuovi scenari per nuove esperienze di apprendimento significative**

al centro il **quotidiano** e…il **futuro** *(valenza orientante)*

Nuovi fenomeni

misinformazione

disinformazione

nuovi e maggiori requisiti
di **alfabetizzazione digitale**
#cittadini

Piano d'azione per l'istruzione digitale 2021-2027

Iniziativa politica dell'Unione europea (UE)

Sostenere l'**adeguamento sostenibile ed efficace** dei sistemi di istruzione e formazione degli Stati membri dell'UE **all'era digitale**.

1: promuovere lo sviluppo di un **ecosistema educativo digitale** ad alte prestazioni

2: migliorare **le capacità e le competenze digitali** per la trasformazione digitale

Piano d'azione per l'istruzione digitale 2021-2027

...tra i settori prioritari:

migliorare le competenze e le abilità digitali per la trasformazione digitale

- ➔ capacità e competenze digitali di base sin dall'infanzia
- ➔ **alfabetizzazione digitale, compresa la lotta alla disinformazione**
- ➔ insegnamento dell'informatica
- ➔ **buona conoscenza e comprensione delle tecnologie ad alta intensità di dati, come l'intelligenza artificiale (IA)**
- ➔ competenze digitali avanzate, per disporre di un numero maggiore di specialisti del digitale
- ➔ garantire che le ragazze e le giovani donne siano equamente rappresentate negli studi e nelle carriere digitali

Piano d'azione per l'istruzione digitale azione 7

Aumentano le sfide legate alla **diffusione della disinformazione** e dei contenuti dannosi, cosa che **mette a dura prova le nostre democrazie e il benessere dei cittadini.**

DigComp 2.2

3 competenze digitali necessarie per il XXI secolo

- ➔ l'identificazione di fatti tratti da informazioni false,
- ➔ la gestione del sovraccarico di informazioni
- ➔ la navigazione online sicura

Commission Expert Group on Tackling Disinformation and Promoting Digital Literacy Through Education and Training

Piano d'azione per l'istruzione digitale azione 8

I cittadini devono acquisire una **conoscenza di base delle tecnologie nuove ed emergenti**, **compresa l'intelligenza artificiale (IA)**, per poterle **usare in modo sicuro e con fiducia e spirito critico**.

DigComp 2.2

Obiettivo

fare in modo che **tutti i cittadini siano in grado di utilizzare le tecnologie digitali guidate dai sistemi di IA** e da un processo decisionale autonomo dando prova di dimestichezza, senso critico e responsabilità, ma anche **migliorare la loro comprensione dell'IA, delle sue potenzialità e dei suoi limiti.**

Conoscenze

Esperienze di apprendimento

DigComp 2.2

17. Understands the difference between disinformation (false information with the intent to deceive people) and misinformation (false information regardless of intent to deceive or mislead people).

DIMENSION 2 • COMPETENCE
1.2 EVALUATING DATA, INFORMATION AND DIGITAL CONTENT

17. Comprende la **differenza tra disinformazione** (informazioni false con l'intento di ingannare le persone) **e misinformazione** (informazioni false senza l'intento di ingannare o fuorviare le persone).

Dimensione 4

gli esempi **non** sono in ordine per livello di padronanza

Compiti concreti per **rendere osservabile la competenza** (K, S, A)

Conoscenze

Esperienze di apprendimento

DigComp 2.2

20. Knows that the term “deep-fakes” refers to AI-generated images, videos or audio recordings of events or persons that did not really happen (e.g. speeches by politicians, celebrity faces on pornographic imagery). They may be impossible to distinguish from the real thing. (AI)

DIMENSION 2 • COMPETENCE
1.2 EVALUATING DATA, INFORMATION AND DIGITAL CONTENT

20. **Sa che il termine "deep-fakes" si riferisce a immagini, video o registrazioni audio generate dall'IA** di eventi o persone che non si sono verificati realmente (ad esempio, discorsi di politici, volti di celebrità su immagini pornografiche). Sa che può essere impossibile distinguerli da quelli reali. (AI)

Dimensione 4

gli esempi **non** sono in ordine per livello di padronanza

Compiti concreti per **rendere osservabile la competenza** (K, S, A)

Abilità

Esperienze di apprendimento

DigComp 2.2

25. Knows how to analyse and critically evaluate search results and social media activity streams, to identify their origins, to distinguish fact-reporting from opinion, and to determine whether outputs are truthful or have other limitations (e.g. economic, political, religious interests).

DIMENSION 2 • COMPETENCE
1.2 EVALUATING DATA, INFORMATION AND DIGITAL CONTENT

25. Sa come analizzare e valutare criticamente i risultati di ricerca e i flussi di attività dei social media, per **identificarne l'origine**, per **distinguere i fatti dalle opinioni** e per **determinare se i contenuti sono veritieri o hanno altre limitazioni** (ad esempio, interessi economici, politici e religiosi).

Dimensione 4

gli esempi **non** sono in ordine per livello di padronanza

Compiti concreti per **rendere osservabile la competenza** (K, S, A)

Abilità

Esperienze di apprendimento

DigComp 2.2

27. Able to recognise that some AI algorithms may reinforce existing views in digital environments by creating "echo chambers" or "filter bubbles" (e.g. if a social media stream favours a particular political ideology, additional recommendations can reinforce that ideology without exposing it to opposing arguments). (AI)

DIMENSION 2 • **COMPETENCE**
1.2 EVALUATING DATA, INFORMATION AND DIGITAL CONTENT

27. In grado di riconoscere che **alcuni algoritmi di IA possono rafforzare i punti di vista esistenti** negli ambienti digitali creando **"camere dell'eco"** o **"bolle di filtraggio"** (ad esempio, se un flusso di social media favorisce una particolare ideologia politica, suggerimenti aggiuntivi possono rafforzare tale ideologia senza esporla ad argomenti opposti). **(AI)**

Dimensione 4

gli esempi **non** sono in ordine per livello di padronanza

Compiti concreti per **rendere osservabile la competenza** (K, S, A)

Attitudini

Esperienze di apprendimento

DigComp 2.2

29. Willing to fact-check a piece of information and assess its accuracy, reliability and authority, while preferring primary sources over secondary sources of information where possible.

29. Disposto a **verificare un'informazione** e a **valutarne l'accuratezza**, **l'affidabilità e l'autorevolezza**, preferendo, ove possibile, le **fonti primarie** a quelle secondarie.

DIMENSION 2 • COMPETENCE
1.2 EVALUATING DATA, INFORMATION AND DIGITAL CONTENT

Dimensione 4

gli esempi **non** sono in ordine per livello di padronanza

Compiti concreti per **rendere osservabile la competenza** (K, S, A)