



Youcheck! Research-Intervention in Media and Information Literacy (MIL)



Funded by the European Union

The YouCheck! project (LC-01244282) is funded by the European Union within the “Media Education For All” program and by the French Ministry of Culture.





AIM

Fighting online visual disinformation using the InVID-Weverify plug-in to reinforce online critical thinking with MIL.

TARGET

16 – 18 year-old student + teachers + general public

ACTIONS

- Creation of pedagogical itineraries out of InVID-Weverify
- Production of the serious game « Youcheck! Detectives »
- Organisation of sessions with adults for the validation of InVID-Weverify
- **Organisation of school interventions with high school students**
- Creation of a website providing a selection of resources
- Feedbacks to developers and contribution to the « classroom » tab of InVID-Weverify



Fighting visual
disinformation

European
project
DG-connect
2019-2020
France,
Romania,
Sweden,
Spain



ANALYSIS



KEYFRAMES

YouTube

THUMBNAILS



TW. SEARCH



MAGNIFIER



METADATA



FORENSIC



ABOUT



SURVEY



TUTORIAL

The tool InVID-Weverify allows for several functionalities including :

- ✓ Conducting a reverse image search comparing the results of several search engines (Google Yandex, Bing...),
- ✓ Analyzing fake images applying filters capable of detecting structure alterations (color, pixels, frequencies...)
- ✓ Using a magnifying glass to observe details in an image
- ✓ Fragmenting videos with keyframes
- ✓ Collecting metadata of images and videos



The intervention aimed to test whether a tool designed for professional fact checkers could stimulate students' attention to visual literacy and better prepare them to determine the credibility of information.

Pre- and post- tests enabled to verify :

- 1/ The ability to distinguish falsified news from proven news
- 2/ The use of digital tools
- 3/ The attitude towards InVID-WeVerify
- 4/ Changes in attitude following the intervention

The international comparison allowed to verify the variations in attitudes towards the media, disinformation and fact-checking tools, depending on the country.



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A total of 373 students aged 16 to 18 participated in the intervention, in the four countries concerned (Spain, France, Romania, Sweden). The total of the answers to the two tests (before and after) is 238 (including 144 girls, 83 boys and 11 not wishing to specify).

The loss compared to the initial number is largely due to the Covid-19 pandemic. For the same reasons, the intervention initially planned for March 2020 could not take place until September-October 2020.

More than 40 teachers were involved, in the design of the intervention and in the implementation. Most of them were teaching history or social sciences. In France, they were exclusively teacher-librarians.

School
Intervention

The
participants



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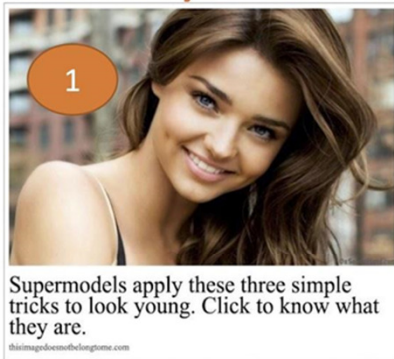
Intervention in the classes with high school students included:

- 1 pre-test
- 1 lesson plan in two parts of 60 minutes each:
 - 1/ News and disinformation: definitions, credibility, identification of types of disinformation
 - 2/ Individual means of defending themselves against disinformation: understanding the manipulation of images and appropriating INVID-WeVerify.
- 1 post-test
- 1 small feedback questionnaire from teachers

Identify motivations behind different types of disinformation

Identify motivations behind different types of misinformation

1



Supermodels apply these three simple tricks to look young. Click to know what they are.

2



Ray-Ban Only One Day

£199.90 90% Off

£17.65

www.rbsog.com

3




"If I were to run, I'd run as a Republican. They're the dumbest group of voters in the country. They believe anything on Fox News. I could lie and they'd still eat it up. I bet my numbers would be terrific."

Donald Trump

People Magazine, 1998

4



Black Matters added an event.

July 6 at 9:55am

NEVER FORGET ERIC GARNER

Rally in Memory Of Eric Garner

Jul 17 - Jul 18 · 202 Bay St, Staten Island, NY 10...

484 people interested · 134 people going

5



INFOWARS

RADIO SHOW NEWS VIDEOS STORE BREAKING NEWS CONTACT

SWEDEN BANS CHRISTMAS STREET LIGHTS; TO AVOID OFFENDING MUSLIM MIGRANTS?

Authorities claim it's for "security" reasons

Paul Joseph Watson | Infowars.com · OCTOBER 25, 2016

facebook

8

You can save a life with only \$1. When you give to HPC, 99% of every dollar "cash plus gifts-in-kind" goes directly to programs that serve the poorest child in Haiti. We work currently with two orphanages and elementary school, we are seeking donations. Please donate and help us spread the word to your friends, families, etc. Click to donate to make a difference! All you give, they'll be much appreciated. We appreciate your interest and hope that you will open your hearts and donate to better the lives and futures of those in need. If you have any questions before you donate please do not hesitate to contact us. We treat personal information with the utmost respect for your privacy. Click the button above. Thank you.

6



Did CNN Purchase an Industrial-Sized Washing Machine to Spin News?

The news media organization reportedly invested in mechanical assistance to help their journalists and news anchors spin the news before publication.

7



Man Tries to Hug a Wild Lion, You Won't Believe What Happens Next!

- A. Viral websites – clickbaits to make money "shocking" "amazing" "gossip"
- B. Satirical websites – for fun or clever comments
- C. Imposters – try to steal your money or identity

- D. Ideological actors – propaganda from a biased world view
- E. Foreign actors – trolls and information disorder
- F. Ordinary people – sharing without caring



1. Identify different types of disinformation – match A-F with 1-8.

- A. Viral websites – clickbaits to make money, use of terms “shocking” “amazing” “gossip”
- B. Satirical websites – for fun or clever comments
- C. Imposters – try to steal your money or identity
- D. Ideological actors – propaganda from a biased world view
- E. Foreign actors – trolls and information disorders
- F. Ordinary people – sharing without caring

2. Rank the eight items as more or less harmful

3. Why are some misleading information more harmful than other information?

Identify motivations behind different types of misinformation

A. Viral websites – clickbaits to make money “shocking” “amazing” “gossip”
B. Satirical websites – for fun or clever comments
C. Imposters – try to steal your money or identity
D. Ideological actors – propaganda from a biased world view
E. Foreign actors – trolls and information disorders
F. Ordinary people – sharing without caring

Student tasks in small groups

IS IT CREDIBLE, BIASED OR FAKE ?

Who is behind this information?

What is the evidence?

What do other sources say?

Student Task (2-3 people in each group)

1) Similarity: Double check! Reverse image search to see where the image comes from and possible manipulations. Explore several search engines, like Yandex, Bing and Google.

- Start by clicking this [Imgur post](#)

Right-click the image and use Fake video news debunker by Invid – to do reverse image search in Yandex etc. Is it credible? Why/why not?

2) Forensic: You are the detective! Spot what may have been manipulated.

- Start by clicking this [Twitter post](#)

Right-click the image and use Fake video news debunker by Invid – Forensic. Submit & scroll down. Is it credible? Why/why not?

3) Keyframes: Stop and analyze the video!

- Start by clicking this [Twitter video](#)

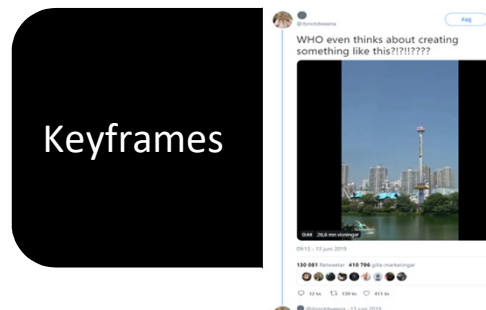
Use keyframe tool in Invid. Insert twitter link in keyframe. Use magnifier to look at name of carousel. Then do a reverse image search. Is it credible? Why/why not?



<https://imgur.com/gallery/BWtNcU0>



<https://twitter.com/MainatJM/status/914402135734996993>



<https://twitter.com/tsnotdweena/status/1139204212762578945>

The use
of InVID-
WeVerify

Explainers

1) Walrus was on a Russian submarine undergoing repairs in 2006.

The popular image of young man is fake. ([Snopes](#), 2019)

Click bait!

2) Image is from protests. Flag is inserted to look more iconic. ([El Pais](#), 2017)

Ideological disinformation!

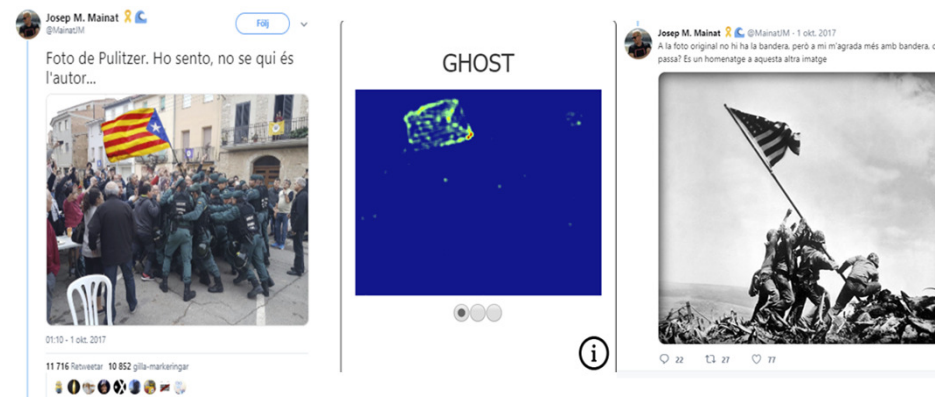
3) Video is fake. Producer is unknown. ([Metro](#), 2019; [Wired](#) 2019)

Click bait!



Tips & tricks !

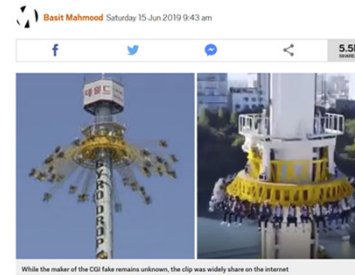
Bing reverse image search + Google key word search "walrus submarine fake photo", scroll down to Snopes article.



Tips & tricks !

Forensic + Google reverse image search "Catalonia fake" – scroll down to El País article in hitlist

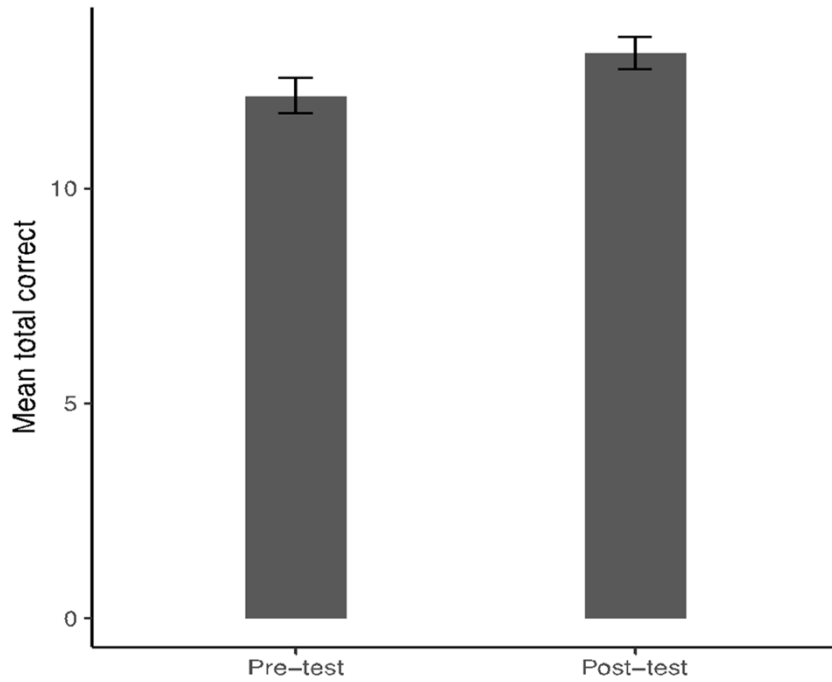
The terrifying theme park ride everybody keeps sharing online is actually fake



Tips & tricks!

Keyframes + Google reverse image search + Magnifier to see "Gyro drop". Text search "Gyro drop fake" scroll down to Wired article in hitlist

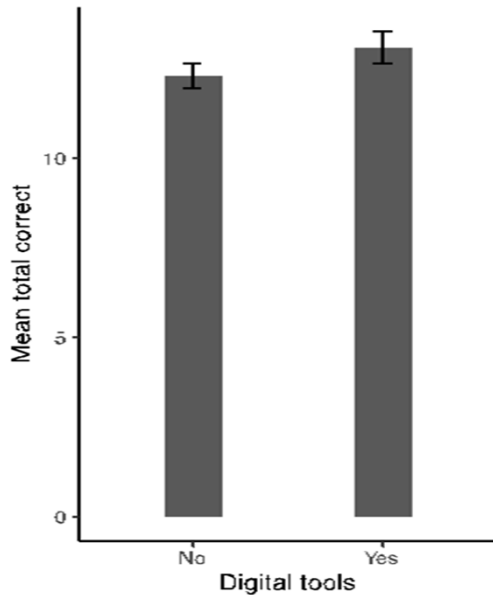
Explainers
and tips



N=238 Max: 21

A notable increase in performance, more than 1 point, after only two hours of intervention.

Results 1
Overall performance



N=238 Max: 21

Use in pre-test

Spain 8.5 %

France 29%

Romania 23%

Sweden 8.1%

Use in post-test

Spain 64%

France 42%

Romania 91%

Sweden 27%

Progression:

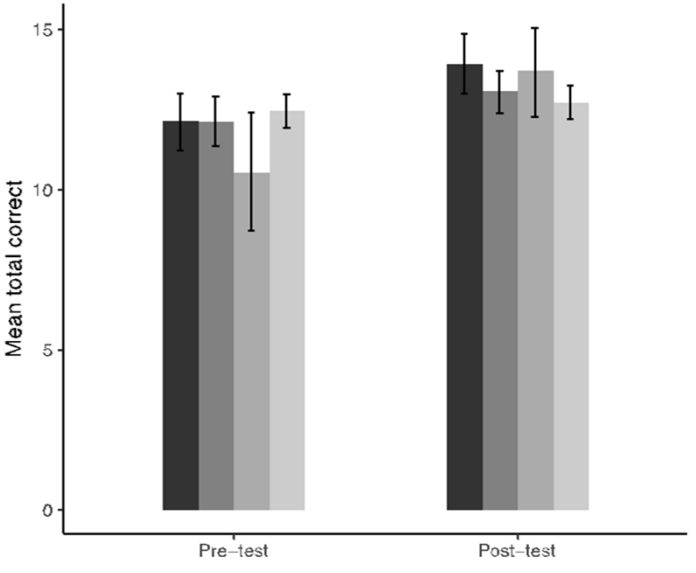
Spain + 55,5%

France + 13%

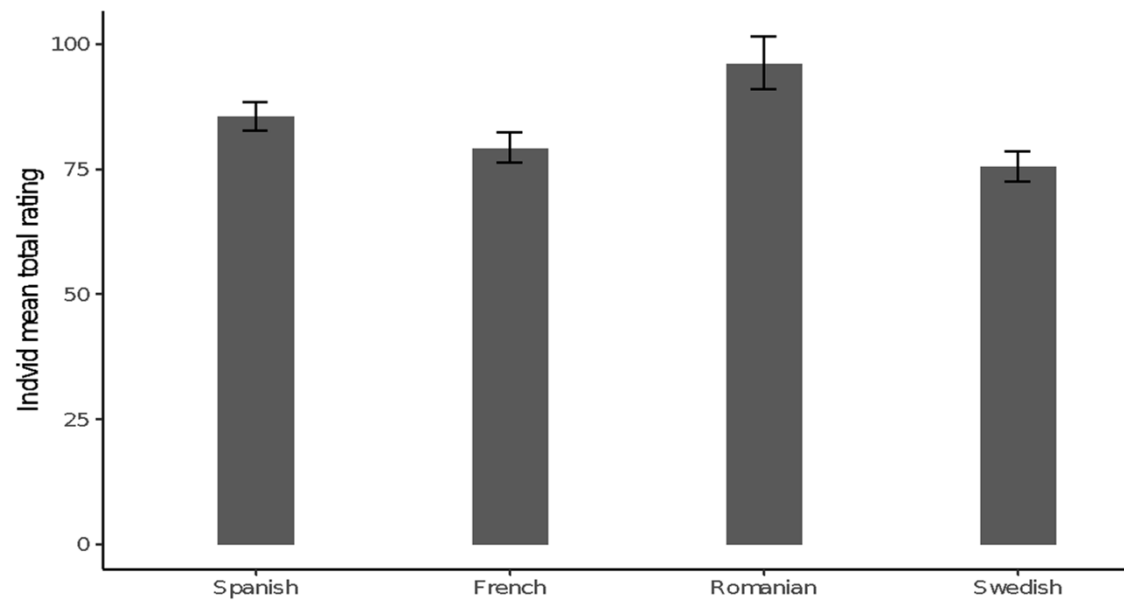
Romania + 68%

Sweden 18,9%

Results 2
Performance
with
verification
tools

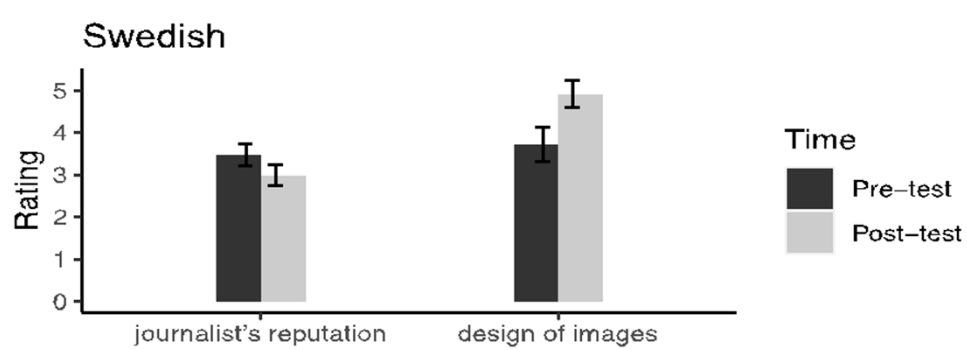
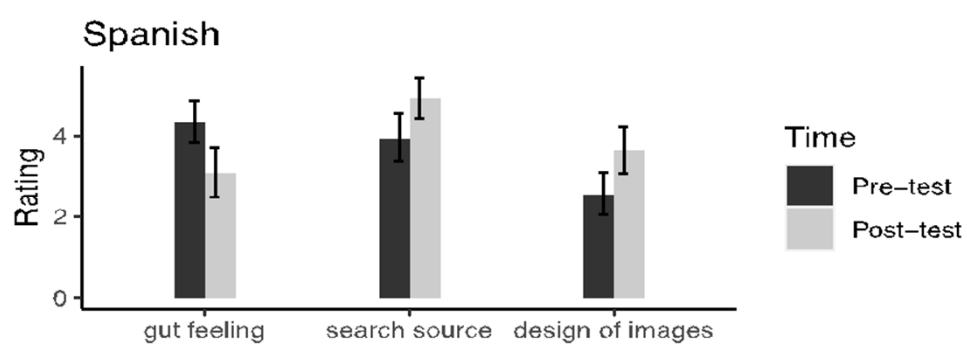
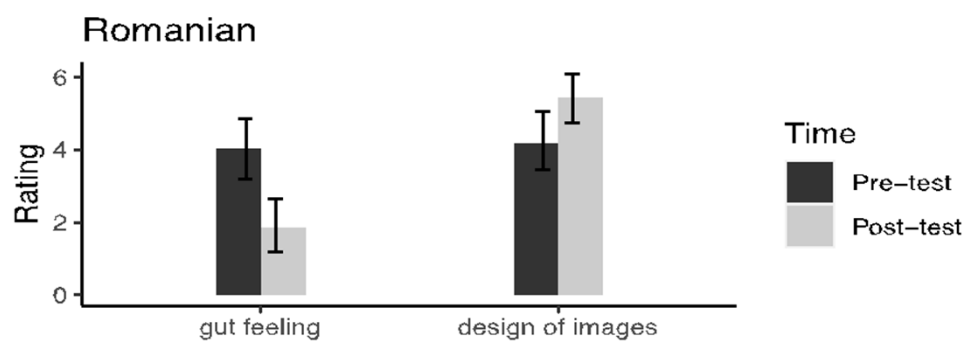


Language
Spanish
French
Romanian
Swedish

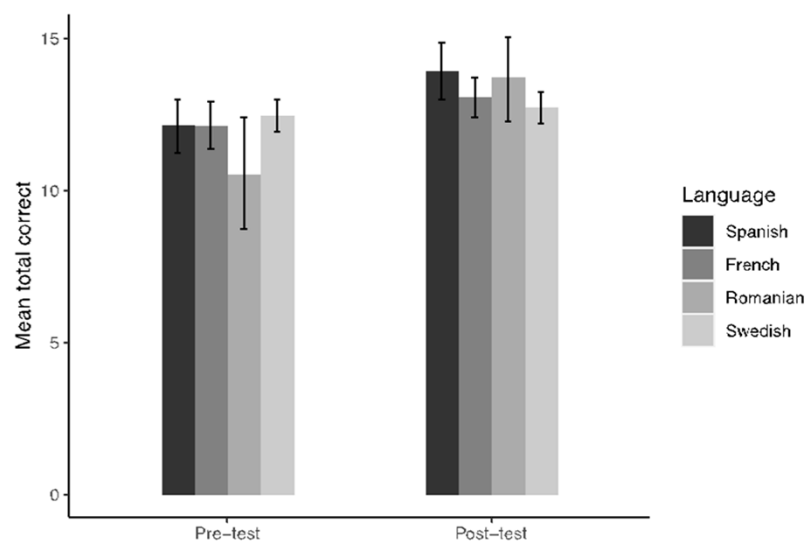


positive attitude after intervention

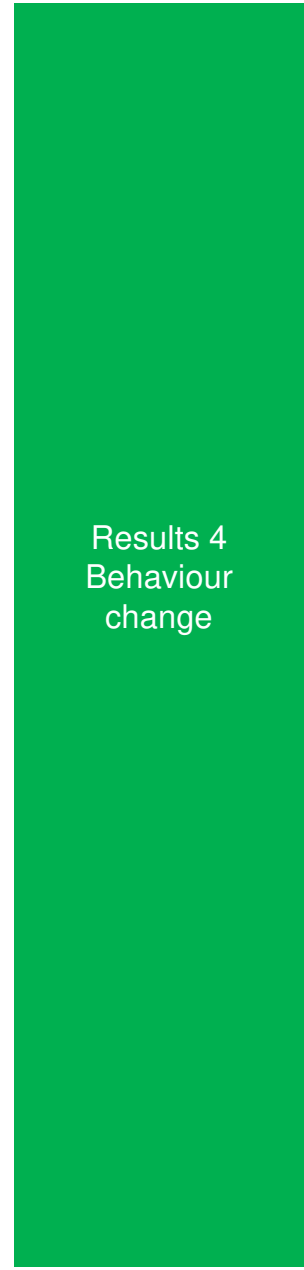
Results 3
Attitude
towards
InVID-
WeVerify



NB: Results for France were not statistically significant but indicated similar trends to other countries.



- Results:
- decrease in “trusting gut feeling”
 - increased attention to ” image design” and “search for reliable sources”





Regarding project progress:

The teachers found the intervention interesting and noted the students' interest in the subject of "fake news" as well as in the InVID-WeVerify tool (Spain and Romania especially).

Most of them noted a particular interest in the "forensic" functionality and in the comparison between search engines.

Most asked for a bank of debunked "fakes" ready to use, for an "app" that would make the tool easier to use in the classroom as well as a chatbot to discuss with professionals.

Regarding constraints:

Most teachers found that the two-hour intervention was not enough (three to four hour suggested).

Some noted difficulties in installing the tool in class or in the quality of the network connection, making it difficult to go on YouTube or social networks (especially France).

Results:
Feedbacks from
teachers



In general, in all countries, the intervention with InVID-WeVerify is successful, with significant performance.

The intervention does not show a "liar's dividend": the students clearly distinguished the true from the false and this did not diminish their credibility in the news. Therefore, the idea that fact-checking efforts help to legitimize doubts about the veracity of information is not validated (although this is one of the risks of exposure to disinformation). But this is especially true among students who used digital tools.

Generally, the two countries showing the most progress are Romania and Spain. Those showing less progress are Sweden and France, although there is a notable improvement. (Other research has shown that too much self-confidence can affect performance).

These differences may be related to the greater or lesser tradition of Media and Information Literacy depending on the country. It can also come from an attitude more or less favourable to technology or digital tools.



Introducing a professional fact-checking tool in education may have little effect if the tool is not understood or found useful by teachers and students.

This reinforces the principles of media and information literacy (particularly in transliteracy theory) which underline the need to incorporate the device into a cognitive scaffolding where the operational dimension is not dissociated from problem solving and the mechanisms of critical thinking and sense-making (see the lesson plan in two sessions: only the 2nd session incorporates InVID-WeVerify).

This is consistent with previous research which emphasizes that dialogue with teachers on technological devices is essential in experimental educational research. The “arena of realizations” (that of teachers in the field) must also be consistent with and supported by the “arena of formulations” (that of administration and decision-makers deciding about access, curricula, resources).



The positive results confirm that this experimental research should be moved to a broader stage of implementation, given its usefulness.

They also confirm that MIL can be a rapid response strategy to societal problems of the magnitude of disinformation. It can increase the performance of students in detecting misinformation, and it can change behaviour and develop critical thinking.

The involvement of teachers in the implementation of MIL is essential for success. It requires more links between the “arena of formulations” and the “arena of realizations”. The differences across countries point to a necessary alignment of public policies in Europe.

The theory and practice of transliteracy in MIL is confirmed, backed by techno-cognition (which incorporates cognitive advances in technological solutions). It is central to give everyone the control in their ability to navigate between formats, platforms and devices to fight against digital illiteracy and develop informational resilience. In a multimodal digital world, the three cultures of information (media, documents, data) are essential to avoid the pitfalls of disinformation and to foster digital citizenship.



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The results highlight how understanding visual disinformation may require a combination of knowledge, skills, attitudes and digital resources.

The connection between "gut feeling", that is relying on instinct (which is based on bias and emotions) and attention to "image design" is an important key to developing visual literacy. This presents a repertoire of intertwined and distributed skills:

**Repertoire
of skills**



decoding images (photos, videos) in relation to the degree of reality (denotation, context, iconicity ...)

controlling the use of verification tools (lateralization, comparisons, reversals, fragmentation, etc.)

making informed decisions on types of images and their types of use (advertising, propaganda, aesthetics, etc.)

knowing how to decipher false images (including deepfakes) and understand the risks of disinformation

communicating with others and be able to create images for counter-narratives (stories, selfies...) and rebuttal strategies

Towards visual
literacy skills in
the digital era

(D.Frau-Meigs)



Research publications:

Divina Frau-Meigs, Thomas Nygren, Nicoleta Corbu, Sara Osuna-Acedo, “Combating online disinformation by improving digital visual literacy: the YouCheck! Project”, IAMCR 2020.

Sara Osuna-Acedo, Divina Frau-Meigs, Thomas Nygren, Flavia Durach, “Developing media literacy outside the classrooms for fighting visual disinformation: the Youcheck! Project”, INNOVAGOGIA 2020, V Congreso Internacional sobre Innovación Pedagógica y Praxis Educativa (E.Lopez Meneses et al, eds). 2020, 533-543.

Thomas Nygren, Divina Frau-Meigs, Nicoleta Corbu, Sonia Santoveña-Casal, “Teachers’ views on disinformation and media literacy supported by a tool designed for professional fact-checkers: Perspectives from France, Romania, Spain and Sweden” (forthcoming, 2021)

Thomas Nygren, Mona Guath, Carl-Anton Werner Axelsson, Divina Frau-Meigs, “Facing visual fake news with a professional fact-checking tool in education in France, Romania, Spain and Sweden” (forthcoming, 2021).



Resources:

- Toolkit (lesson plan, powerpoint for the class)
<http://project-youcheck.com/toolkit/>
- Serious game (6 missions)
<http://project-youcheck.com/game-english/>

Youcheck! project website
<http://project-youcheck.com/>

Contact:
contact@savoirdevenir.net