

# EduMediaTest, a tool in the service of media competence. Project report, results and recommendations

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[monica.figueras@upf.edu](mailto:monica.figueras@upf.edu)ORCID: <https://orcid.org/0000-0003-4912-4509>*Paper received on June 1 2022 and accepted on September 9 2022***Abstract**

*EduMediaTest is a free interactive digital tool to assess and train the media competence of European students aged 14 to 18. The project, within the framework of a European call for proposals, has been led by the Catalan Audiovisual Council (CAC), with the Pompeu Fabra University, five European audiovisual regulators and two educational organisations. It consists of a fun-interactive survey and flexible training material on every dimension of media competence. In May 2021, 8,699 students answered the survey, of which 1,192 were from Catalonia. The analysis of the results concludes that there is an urgent need to improve media literacy skills among young Catalans and Europeans, especially those related to the production and dissemination of messages.*

**Keywords**

*Media Competence, Media Literacy, Training Materials, Formal Education, Assessment.*

**Resum**

*EduMediaTest és una eina interactiva digital gratuïta per avaluar i formar la competència mediàtica d'estudiants europeus de 14 a 18 anys. El projecte, en el marc d'una convocatòria europea, l'ha liderat el Consell de l'Audiovisual de Catalunya, juntament amb la Universitat Pompeu Fabra, cinc reguladors audiovisuals europeus i dues entitats educadores. Consta d'un qüestionari lúdic-interactiu i de material formatiu flexible sobre cada una de les dimensions de la competència. El maig del 2021 van contestar el qüestionari 8.699 estudiants, dels quals 1.192 eren de Catalunya. L'anàlisi dels resultats conclou que urgeixen millorar les habilitats d'alfabetització mediàtica entre els joves catalans i europeus, sobretot les relatives a la producció i difusió de missatges.*

**Paraules clau**

*Competència mediàtica, alfabetització mediàtica, material formatiu, educació formal, avaluació.*

**Introduction**

The Catalan Audiovisual Council (CAC) and Universitat Pompeu Fabra (UPF) led a project in 2019 and 2020 to develop an interactive digital tool aimed at assessing and improving the media skills of European students aged 14 to 18 years. The initiative is part of a competitive call for research on media literacy called 'Media Literacy for All', promoted by the European Commission (EC). One of its aims is to combat disinformation and critically manage the content received via social networks. The project, called EduMediaTest, was one of the 15 winning proposals, out of a total of 69 submitted in the 2019 call for proposals, and was delivered to the EC in September 2020. The resulting document has been made available to

institutions throughout the countries of the European Union, openly and free of charge, and can be accessed via the website <https://edumediatest.eu/>.

The project saw the participation of five European audiovisual regulators, two public institutions in the field of education and one university. Specifically, the five regulatory authorities are the CAC, the Agencija za elektronicke medije (AEM) in Croatia, the Rada pre vysielanie a retransmisiu (CBR) in Slovakia, the Conseil Supérieur de l'Audiovisuel (CSA) in France and the Entidade Reguladora para a Comunicação Social (ERC) in Portugal.

The two educational institutions are the National Centre of Audiovisual Media & Communication (EKOME) in Greece and the Dublin West Education Centre (DWEC) in Ireland. The Pom-

peu Fabra University has participated in designing the proposal, drawing up the survey and the training sheets, and ensuring that the project responds to the principles of scientific research.

In order to streamline coordination between members and the implementation of the online assessment and training tool in very different contexts, a face-to-face workshop was planned for members and staff involved, in order to reach a consensus on the theoretical and methodological criteria. The limits imposed by the Covid-19 pandemic made this initiative impossible, but nevertheless, it has been possible to rise to this challenge by means of virtual meetings and exchanges through digital systems.

The tools designed to assess and train in media competence have been evaluated to guarantee their validity and reliability, firstly in individual and collective pre-tests, applied to all countries and, finally, in the actual process of carrying out the project. The final survey was distributed to 9,379 young people from seven countries (Catalonia, France, Greece, Croatia, Slovakia, Portugal and Ireland) and 8,699 were considered valid for analysis. The participating schools were both public and private entities in urban and rural areas. In Catalonia, the participating schools were: Assís School (Premià de Mar), Cor de Maria School (Mataró), Pia el Masnou School, Solc School (Barcelona), Virolai School (Barcelona), Antoni Torroja Secondary School (Cervera), Ernest Lluch Secondary School (Barcelona), El Vern Secondary School (Lliçà de Vall), Euclides Secondary School (Pineda de Mar), Antoni de Martí i Franquès Secondary School (Tarragona), Manyanet Les Corts School (Barcelona) and Jaume Cabré Secondary School (Terrassa). A total of 1,192 surveys were collected in these schools and secondary schools.

### What exactly is EduMediaTest?

The project consists of an online tool for assessing the media competence of students aged 14 to 18 and, at the same time, interactive training proposals to correct any weaknesses. The programme is designed to be managed by teachers who want to assess pupils, but at the same time educate them in this subject as another teaching activity in the school. Only by being aware of gaps in knowledge is it possible to feel the need to learn. The aim of this project is to educate in media competency based on an assessment of its current status.

With regard to the first part (assessment), the aim is to check the degree of media competency of the students by means of an interactive survey of 43 questions covering the different areas detailed in the following section: technology, languages, production process, reception and dissemination process, ideology and values, and aesthetic dimension (Ferrés & Piscitelli, 2012) by means of an interactive survey of 43 questions. By way of example, it assesses the students' ability to determine the reliability of news, detect the non-visible interests of sources, determine the existence of stereotypes and encourage

a responsible attitude towards copyright. The aim is also to test the mastery of expressive codes and the ability to generate understandable and effective messages. To answer the survey, the student had to do a variety of activities such as analysing videos and photographs or searching for information using an internet search engine in order to complete the answers.

With regard to the second part (training), the programme proposes training activities in media competency that teachers can implement in the classroom based on the data obtained in the assessment and a dossier of material posted on the web, together with a sheet of training proposals for each question, which teachers can choose according to the areas of weakness observed in their pupils.

The EduMediaTest media competency assessment and training tools are openly and freely available on the web (<http://edumediatest.eu>), so that anyone who wants to use them, whether they are teachers in formal or non-formal education, or even families, may use them. Both the survey and the materials are available in ten languages to ensure widespread dissemination: firstly, in English, as this is the working language of the project, and also in Catalan, Spanish, Croatian, French, Gaelic, Greek, Portuguese, Slovak and German.

### Conceptualisation of the project

The growing concern about disinformation cannot be addressed effectively in education without transcending the instrumental approach to media competence. The verification of facts and the critical assessment of information, although useful, are not enough to change the attitude of users towards the media. It is necessary to have a deeper understanding of the role played by the media in society, its economic structure and its politics, but, above all, it is necessary to know how the mind of the interlocutor works and to be aware of the interests and contradictions that motivate them.

Similarly, it is essential to enhance the ability to interact with the media in a broader sense, to be able to express oneself through different codes and formats. But, moreover, to focus attention on the role played by beliefs, unconscious attitudes and emotional responses in the experience of interacting with the media. It is therefore important to bear in mind the importance of maintaining a critical attitude towards one's own practices and knowledge when it comes to the use of the media. For this reason, the EduMediaTest project adopts a holistic approach and takes into account the dimensions that make up media competence, which have been developed and refined over the course of multiple research projects over the last twenty years (Ferrés, Aguaded-Gómez & García Matilla, 2012; Masanet, Contreras & Ferrés, 2013; Ferrés, Masanet & Blanco, 2014; Ferrés, Figueras-Maz, Masanet & Hafner, 2017). The central axis on which the different questions of the survey are based refer to the six dimensions of Ferrés and Piscitelli (2012: 79-81):

- **Languages:** knowledge of codes and the ability to use them and analyse messages in a multimedia, transmedia and multimodal culture, from the perspective of sense and meaning, from narrative structures and genre conventions.
- **Technology:** understanding the role of ICT in society. Knowledge and ability to use the tools that enable communication in a multimedia, transmedia and multimodal context; and understanding of the processes through which messages are created.
- **Reception processes:** Ability to assess, select, review and value one's media diet. Ability to understand and manage, from a critical point of view, the cognitive, rational, emotional and contextual elements involved in reception processes.
- **Production and dissemination processes:** Knowledge of the roles and tasks carried out by the social actors involved in the production and dissemination processes, and their regulatory framework. Ability to craft, select, share and disseminate media messages.
- **Ideology and values:** Ability to foster a comprehensive, committed and critical attitude in the selection, consumption and elaboration of media messages, understood as representations of reality.
- **Aesthetics:** Ability and sensitivity to analyse, assess and enjoy the formal aspects of media messages, taking into account their aesthetic quality and originality. Ability to produce messages that contribute to increased levels of creativity, originality and sensitivity.

### The project's added values

The proposal is innovative both from the point of view of the approach and the contents as well as the methodology. Some of the project's added values are:

- EduMediaTest is one of the few existing tools that measures the media competence of citizens (assessment is a prerequisite for training). Moreover, the measuring instrument offers an automatic and instant assessment. Teachers can see the results obtained by their class immediately after completing the survey.
- Contrary to what is usually the case in assessments, the tool takes an interactive and playful approach. Students interact with the computer or tablet to answer the questions and do so using a variety of resources such as the mini-quiz, the swipe, the grid-array-drag, the filter, the mechanics and the multiple choice.
- The few materials on the market for measuring citizens' media literacy (including those produced by prestigious institutions such as the BBC) are of a self-perceptive nature. This is not the case here: For example, to measure whether or not they verify the information they access on the Internet, the survey asks them to search for information in a browser and the device automatically detects and

assesses not the accuracy of the answer, but whether the student has verified the information they have found on the first search, i.e. whether they have made more than one search.

- The tool serves not only to assess media competence in general, but also that of each of its six dimensions, as mentioned above. It is possible that a person may be very competent in one dimension, for example, in the case of young people, they may be very competent in technology, and little or not at all in another, for example, ideology.
- The resource is also used to assess media competence and to train children and young people in this competence. After assessing the group/class, teachers can see the results obtained and can access the sheets and put them into practice. The training material offered is totally flexible and can be limited to dedicating a single hour of class time to training students in their own weaknesses (for example, only in that dimension of the competence in which they have obtained the worst results) or it is possible to provide intense and structured training, focusing on all the dimensions that form part of media competence.
- At the conceptual level, the contents, both in the assessment and training parts, take into account the innovations developed in the field of technology and new communication practices, as well as the discoveries made in the field of neuroscience regarding the functioning of the mind, which interacts with and through these digital media, and above all, it stresses the importance of the unconscious and the emotional brain in media processes.
- The project not only addresses the critical skills needed to process information-centred discourse, but also the underlying strategies undertaken in fictional discourse –through storytelling techniques– for the purpose of manipulation, which is fundamental in a context where disinformation is pervading the media ecosystem.

### Some conclusions about the level of competence of young Europeans

One of the most important conclusions of the EduMediaTest project concerns the reliability of the test, bearing in mind that the aim of the project was to design a tool that would both assess and train young people's media competence.

In terms of media competence, the project has confirmed at European level what other academic research has shown in relation to other competences: that in most countries there is a correlation between the level of competence of the citizens and the educational level of the mother. In other words, the mother's level of education is a better predictor of the child's level of media competence than the father's (Mercy & Steelman, 1983; Gutman, Sameroff & Cole, 2003; Ribas, Moura & Bornstein 2003).

The results have also been significant in relation to the variables of age, gender and the device used to answer the survey. Girls obtained a higher overall score than boys; older students obtained a higher score than younger students; and those who used a computer to take the tests had better results than those who used mobiles or tablets. The study showed that 72.9% of users used a PC and 27.1% used smartphones/tablets. The only exception was Croatia, where almost half of the people interviewed used computers and the other half used smartphones or tablets. With regard to the time taken to complete the survey, the older segment of the young people spent more time online, and the longer they spent on the survey, the higher the score obtained by the participant answering the survey.

With regard to the assessment of the media competence of the young European participants in each of the six dimensions, the results of two of them, technological and aesthetics, stand out. This table shows the scores for all the dimensions in a standardised range of 0-10 (0 minimum score and 10 maximum score on the test). The results of each dimension were weighted according to the instructions provided by the team that designed the survey on the basis of their relevance in relation to the dimensions and indicators of media competence.

The highest levels of competence are found in the technology dimension, which shows the contradiction of the school, which reduces media competence to digital competence (basically in its instrumental dimension). In other words, schools tend to offer the highest level of training in the only area in which students are already prepared. The young participants have adequate media training in terms of technical skills (access to content, content management, web browsing).

However, it is clear that the schools have been changing the parameters in which media literacy moves according to the changes derived from technological innovations, but they have not changed them according to the discoveries about the functioning of the brain interacting with these technologies. A new challenge for media literacy.

The other dimension in which they have achieved good results is aesthetics. The aesthetic dimension scored second highest and its aim is to assess the participants' ability to take pleasure in formal categories, to recognise the aesthetic quality of a product and to relate media productions to other artistic works, detecting mutual influences.

The ideological dimension was rated third overall. The questions on ideology explored how the media's representations structure everyone's perception of reality and paid special attention to the power of visual communication. This dimension involved questions about distinguishing truth from false information and the disinformation explored.

The worst scoring dimensions were the three remaining ones, production and dissemination, language and reception. Production and dissemination included exploring the ability to share and disseminate information through traditional media and social networks, while improving the visibility of messages, interacting with increasingly larger communities. The language dimension involved assessing the participants' ability to alter existing products, giving them a new meaning and value. Reception was aimed at assessing the participants' knowledge of the concept of the target audience, the studies on the target audience and its objectives and limitations. Low performance in these three dimensions indicates that students are unfamiliar with how media organisations and content platforms work, how media messages are produced according to certain rules and how they can have a lateral meaning.

### Some conclusions about the level of media competence in Catalonia

As mentioned above, 12 schools and secondary schools in Catalonia from three provinces (Barcelona, Tarragona and Lleida) participated in the EduMediaTest in May 2021. The final selected sample of participants was 1,192 young people and represented 13.7% of the final sample. Before conducting

**Table 1. Overall results of the seven countries in each of the 6 dimensions**

Dimensions	Sample	Average	Standard Deviation
Aesthetics	8,699	4.42	2.61
Ideology	8,699	3.21	1.93
Language	8,699	2.51	1.45
Production and dissemination	8,699	2.44	1.18
Reception	8,699	2.77	1.69
Technology	8,699	5.11	2.50

Source: Authors, SPSS.

the survey, two virtual meetings were held with the people responsible for the educational centres to explain the project and clarify any doubts that might arise. In addition, some of these secondary schools had volunteered to pilot the survey in February 2021. The involvement and collaboration of everyone was excellent, as were their assessments of the process and the survey, which they were able to assess through a short survey that was prepared specifically for them. Some of the comments they wrote, which are quoted verbatim, are as follows:

Q3: The proposed contents of the survey are not widely taught at our school and they were useful.

Q10: The test included very interesting questions on the use of images and web content, taking into account rights of use. It could have gone further to find out to what extent they have mastered "citation", i.e. to find out if they know how to cite (texts and images found on the web).

With regard to the results obtained in Catalonia (see table 2), it is important to say that they do not differ much from the general results in Europe. Likewise, the scores for all the dimensions are shown in a standardised range of 0-10 (with 0 being the minimum score and 10 the maximum score on the test). The technology dimension is also the one most mastered by the young Catalans who answered the EduMediaTest, which it reflected in Europe, with an average score of 5.44. Secondly, the aesthetic dimension and thirdly, the ideological one, just like in Europe. The main difference in the remaining three dimensions compared to the results obtained by young Europeans is that the language dimension is the dimension with the lowest score for Catalan young people, in sixth place, while it is in fifth place in Europe. This dimension is important because it assesses the ability of adolescents to modify existing products in different languages. The reception dimension, as well as the production and dissemination dimensions, occupy the fourth and fifth place, respectively, in our country. As in Europe, the fact that these three dimensions have the lowest scores shows how necessary it is to consolidate media literacy

in the country in order to give young people the necessary skills to become media literate prosumers.

### Recommendations issued to the European Commission

According to the statistical analysis of the results, there is still a great need to improve media literacy skills among young people. It is for this reason that at the end of the project, and on the basis of the results obtained, recommendations were drawn up for decision-makers in the field of media literacy. These are summarised below:

**Recommendation 1:** Given the apparent contradiction in schools, which reduce media literacy to a simple digital skill (essentially, its instrumental dimension), it is essential to continue improving media skills and at the same time incorporate digital transformation educational approaches that are considered necessary for blended learning models, such as Flip Classroom and Remote School Education.

**Recommendation 2:** Although the aesthetic dimension was the second highest rated, it is essential that aesthetic courses continue and improve at all school levels, with more national and intercultural references for all pupils.

**Recommendation 3:** It is also necessary to make further efforts in the third dimension, ideology, which is placed in third place in the results. It is important to improve the school curriculum with more subjects on the ideological conception of how the media works and the impact of the audience.

**Recommendation 4:** With regard to production and dissemination, reception and language, which are at the bottom of the ranking, it is recommended that these cognitive skills be reinforced in order to turn students into better researchers and analysts of the meaning and of the creation media.

**Recommendation 5:** Firstly, given the correlation between score performance and age, there is a need for more units related to the media for a lower level of education. Secondly, given the correlation also with the time taken to complete the survey, it

**Table 2. Results in Catalonia in each of the 6 dimensions**

Dimensions	Sample	Average	Standard Deviation
Aesthetics	1,192	4.28	2.73
Ideology	1,192	3.62	1.93
Language	1,192	2.59	1.45
Production and dissemination	1,192	2.71	1.18
Reception	1,192	2.85	1.64
Technology	1,192	5.44	2.39

Source: Authors, SPSS.

is recommended that an adequate amount of time (at least 2 teaching hours) be devoted to carrying out assessment projects such as the EduMediaTest based on one's own experience and knowledge. The students were willing to complete the survey and explore its dimensions, but there was not enough time.

**Recommendation 6:** Despite the availability of technical equipment for interactive educational processes in schools, they generally need to be improved and updated.

**Recommendation 7:** Schools are mostly unaware that, if media experiences are interactions between minds through technologies, they cannot be made enriching by knowing how technologies work if they do not know how minds work. This is a new and unresolved challenge in media literacy, one which must be taken seriously.

### Final considerations

Once the project was completed, the CAC presented the results of the EduMediaTest at the EPRA Assembly (European Platform of Regulatory Authorities, <https://www.epra.com/>), where in recent years the actions carried out to promote media literacy have been a constant feature. In addition, the project has also been presented to the Assembly of the PRAI (Ibero-American Platform of Audiovisual Regulators, <https://prai.tv>), the body of which the CAC is Vice-Chair. Furthermore, presentations were made to the British regulatory authority Ofcom; to the Media and Learning Association (<https://media-and-learning.eu/>) and to the Mediterranean Regulatory Authorities Network (<https://www.rirm.org/>). In all cases, a great deal of interest has been shown in the project and in moving towards a media-savvy citizenship.

EduMediaTest represents the consolidation of a measurement and training tool, theoretically based on the long history of previous empirical research by the UPF team in different media literacy projects, and now represents an opportunity to offer the implementation of the instrument to various Latin American countries, both in Spanish and Portuguese. The UPF is working on this possibility through a joint initiative with Alfamed. Regardless of the framework, the efforts made in this project and the results obtained should be used to continue promoting the assessment and training of media competence in Europe, globally, and in Catalonia in particular.

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