Media Education, Access to News and Information Inequality: A Nationwide Experiment in French High Schools*

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March 2, 2026

Abstract

Despite unprecedented access to information in the digital age, young citizens face growing challenges related to misinformation and political disengagement. This large-scale randomized controlled trial examines the impact of two complementary interventions designed to enhance news consumption and media literacy among high-school students, implemented in France over the 2024-2025 academic year. The study involves 241 high schools (for a total number of 9,620 students), randomly assigned to receive one or both of the following interventions: (i) a one-year free digital subscription to *Le Monde*, the French national leading newspaper, and (ii) media education modules implemented by teachers. Exploiting unique data on students' actual online news consumption, we document a very large uptake of the free subscription, which translates in a large increase in both news consumption (+0.30 to 0.43 standard deviation) and demand for future news. We also observe a 0.24 to 0.28 sd increase in political knowledge for students enrolled in deprived schools, reducing baseline information inequality by 55-65%. Finally, we show that free news access and media education increase media literacy skills (+0.14 to 0.19 sd). Overall, our findings thus suggest that providing high-school students with free access to high-quality media may be an effective and scalable tool to improve information access and equality, an effect that can be further enhanced if combined with media education.

Keywords: media education, media literacy, misinformation, fake news, RCT, political participation, information inequality, information acquisition, news anxiety.

JEL No: D8, D83, D91, L82, L86.

*We are grateful for valuable feedback from Marc Gurgand, Elise Huillery and Adrien Pawlik, to seminar participants at SciencesPo Paris, the University of Bristol, and the University of Gottingen, and to conference participants at the CEPR Paris Symposium, the IDEE / J-PAL seminar series and the 4th Arcom Research Day. We thank Eval-Lab for their crucial support in implementing the experiment, and in particular Quentin Daviot. We also thank Victor Kreitmann, Barbara Perez, and Luka Prlic for excellent research assistance. We gratefully acknowledge the collaboration and institutional support provided by the French Ministry of Education (DEPP), the CLEMI, and the editorial and technical teams of our partner newspaper *Le Monde*. This research has received funding from the McCourt Institute and from the Chair *Economics of Climate Change and Human Health* at the University of Montpellier. The study was pre-registered in the AEA RCT Registry (AEARCTR-0016002) and approved by the Paris School of Economics' Institutional Review Board (IRB-2023-026). All remaining errors are our own.

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1 Introduction

Young people today grow up in a saturated and fragmented information ecosystem. While digital technologies have significantly broadened potential access to news and information, this has not necessarily translated into better-informed citizens. On the contrary, studies show that youth are increasingly vulnerable to misinformation, disengaged from traditional political processes, and distrustful of media institutions (Guess et al., 2021; Allcott and Gentzkow, 2017). These challenges raise concerns about the health of democratic life and the ability of new generations to exercise informed civic judgment. In this context, media and information literacy is increasingly recognized as a cornerstone of democratic resilience (Strömberg, 2015). Citizens must be able to access, interpret, and critically evaluate information in order to participate meaningfully in public debates, hold institutions accountable, and make evidence-based decisions (Dewey, 2016). These skills become even more essential when the traditional media landscape is replaced by a complex digital environment.

Yet, there is growing concern that these skills are far from universally acquired. Despite their fluency with digital tools, young people are not inherently equipped to navigate complex media environments (see e.g. OECD, 2022). Furthermore, they may suffer from the increasing price segmentation of the news market. The highest quality journalistic content is indeed typically behind a firewall. According to Tomasik and Lipka (2025), only 17% of adult Americans have paid for any kind of news source in the past 12 months months. That share goes down to 12% among 18-29 year-old and to 8% among people in the lower income tercile. This inequality in access to information is reflected in inequality in informational outcomes (Prior, 2007; Angelucci and Prat, 2024).

Importantly, while expanding access to quality news is often presented as a promising response to these challenges – through initiatives offering free or subsidized subscriptions – it remains unclear whether access alone is sufficient. Many young people are unaware of the resources available to them, or do not habitually seek out serious news content. In these cases, lack of exposure may stem not only from financial constraints, but also from gaps in media literacy, weak intrinsic motivation, or simple unfamiliarity with journalistic formats. While a small number of recent studies have examined the effects of exposing adults to politically biased news outlets (Levy, 2021; Broockman and Kalla, 2025), no research to date has rigorously investigated whether giving young people access to high-quality digital news can enhance their political knowledge or their ability to resist misinformation. The goal of this paper is to fill this gap.

This paper is the first large-scale randomized trial to assess the respective roles of financial, cognitive, and behavioral barriers to information consumption in a school context, thanks to

a unique partnership with the French national leading newspaper, *Le Monde*.[1] During the academic year 2024-2025, we implemented a large scale experiment, with 241 high schools and 371 classes, for a total number of 9,620 students (in 10, 11 and 12 grades). The participating high-schools are representative of the universe of French high schools (regarding in particular the socioeconomic and cultural conditions of the students' families enrolled in the schools), and the students come from very different backgrounds.

Schools were randomly assigned to one of four groups[2]: (i) the Control group: no intervention, (ii) the Treatment group 1 (T1): students receive free digital access to *Le Monde*, (iii) the Treatment group 2 (T2): teachers receive training and implement media education modules in the classroom, (iv) and the Treatment group 3 (T3): students and teachers receive both interventions (i.e. T1 + T2).

This design allows us to evaluate the individual and combined effects of (i) reducing financial barriers to accessing high-quality news and (ii) strengthening cognitive skills and motivation through structured media education. We investigate in particular the extent to which these treatments foster high-school students' ability to navigate the media environment and participate in democratic life. Uniquely, we observe news consumption patterns not only through survey data but also the actual online consumption of those students who were given the free subscription. We first document a very large uptake of the free news subscription, with 72.3% of the students in T1 and T3 who activated their subscription. Furthermore, among them, more than three fourth consumed at least some news articles during the academic year (half of them went more than 5 times on the website). This is consistent with the reported news consumption by the students.

Our analysis then assesses the treatments effects using the survey data to address four sets of questions.

First, does free newspaper access increase news consumption? Both T1 and T3 significantly increase the reported news consumption of the students: they cite more often a newspaper outlet as their main source of information and report spending more times reading newspapers – and in particular *Le Monde* – than students in the control group or treated only with media education (T2). For T1 and T3, reported *Le Monde* consumption (from the endline survey) results can be cross-checked with usage data from the *Le Monde*'s website.

Second, does access to *Le Monde* increase or reduce demand for other media? Both T1 and T3 increase students' interest in consuming news from different sources, which we measure in particular by a higher subscription rate to a set of newsletters proposed to students at endline (hard measure). On the contrary, we observe a decrease in the use of social media as the main

[1] The study was pre-registered at the AEA RCT Registry (AEARCTR-0016002) and approved by the Paris School of Economics' Institutional Review Board (IRB-2023-026).

[2] The randomization was done at the school-level and, as described in Section 2.2 below, we stratified by school socioeconomic status, school type (General, Technological and Vocational), grade level, and the intensity of the media education practices of participating teachers within the school before the intervention.

source of information for the three treatment groups. This can be due either to a substitution effect due to a time constraint – students in T1 and T3 spend more time reading the newspaper and so have less time to spend on social media – and/or to the fact that free news access and even more media education convince students that traditional media are a more effective source of information than social media. T2 and T3 also display increased trust in newspapers, an effect enhanced by the free subscription.

Third, does free access to information and/or media education increase knowledge? We use quizzes to measure students' knowledge of recent news events (that we call news knowledge for the sake of simplicity) as well as their political knowledge. The overall effect on knowledge is not significant, but as specified in our pre-analysis plan (hereafter, PAP) we find a large increase in news knowledge among students enrolled in disadvantaged high schools (i.e., schools with a high share of students from low-SES backgrounds). When focusing on these students, we find that, compared to the control group, free access to information (respectively the combination of free access and media education) increases political knowledge by 0.24 (respectively 0.28) standard deviation. As a result, information inequality is reduced by 55-65%.

Finally, do the treated students show improved media literacy skills? We built a media literacy skills index from two observed outcomes: (i) an experimental social media sharing task, in which students are randomly shown either a true or a false news story and later invited to share it, and (ii) the use of a fact-checking tool to which we give a sub-sample of students access to before the sharing prompt. We find that the three treatments increase media literacy skills (with an increase in the propensity to fact-check information, and a decrease in the probability to share a false information), by 0.14-0.18 standard deviation.

Taken together, our results indicate that a policy providing high-school students with free online access to mainstream newspapers can have sizable positive effects on news consumption, trust in media, news knowledge, and information equality. This policy would be easy to implement at scale as it does not require an additional infrastructure. The cost per student of the policy is likely to be limited.[3] Moreover, such a cost would not be a dead-weight loss, but mostly a transfer to producers of quality information (Cagé, 2015; Cagé and Huet, 2021). Finally, such a policy won't come at any well-being cost. We indeed show that our treatments do not affect news anxiety nor the overall well-being of the treated students. In other words, our program has great scalability prospects.

Contribution to the literature There is a vast literature on the impact of political information. However, there are only few experimental studies on the effect of providing and encouraging access to high-quality news media.

[3] As a reference point, *Le Monde* offers an online subscription to students for 6.99 euros per month (as of November 2025).

Levy (2021) and Broockman and Kalla (2025) are exceptions, but with a different research question – their focus is indeed on the consequences of partisan media and they thus recruit participants to expose them to outlets whose ideology differs from their.[4] On the contrary, the goal of this paper is to investigate how we can increase news consumption among young people and its consequences. Doing so is of particular importance given that, as documented by Angelucci and Prat (2024) in the U.S. context, young people are less able to discern a well-crafted true story from a largely-disseminated fake news than the rest of the population.

Our paper also contributes to the literature that relies on media consumption experiments to investigate the impact of information provision on political outcomes. Gerber et al. (2009) conduct a field experiment to assess the effects of newspapers' exposure on political behavior and opinion during Virginia elections in the U.S., and found that media exposure increases turnout and support for the Democrats, regardless of the newspaper slant. Chen and Yang (2019) – who conduct a field experiment with $1,800$ college students in Beijing – show that the acquisition of politically sensitive information through exposure to uncensored media brings substantial changes to their beliefs and attitudes.[5] On-going research by Castro and Pugliese (2024) experimentally provide three-month subscriptions and reading incentives for $1,658$ voters recruited on social media at the time of the Brazil's 2022 general election.

Compared to these experiments, our contribution is threefold. First, given that we are interested in news consumption per se, we offer a subscription to a non-partisan news source. Second, we attempt at a "real life" experiment and thus do not incentivize the participants nor recruit them online; our subjects are representative of French high-school students and our treatments could be implemented – at a reasonable cost – by high-schools in France or other countries. Finally, we implement a long-term treatment (with a school-year long subscription) on a very large number of students (nearly ten thousands), focusing on the impact of news consumption at a time when preferences and habits around news consumption are still to be formed.

Closest to us is Hopkins and Gorton (2024) who performed an RCT in Pennsylvania ($N = 5,059$) to encourage news consumption. However, their uptake is very low. While they offer $2,529$ individuals with free online subscriptions, only 44 of them subscribed. On the contrary, we were able to reach a 66% uptake in our experiment, and then also observe a large impact of free subscription. Furthermore, combining free news subscription with media education allows us to go beyond the only price barrier, and to disentangle the different mechanisms that could be at play.

Next, we also contribute to the growing literature on media literacy, whose focuses has

[4] A growing strand of the literature – whose focus is the (negative) consequences of social media – also relies on field experiments (Allcott et al., 2022, 2024).

[5] See also Banerjee et al. (2011) who investigate the effects of providing information on politicians before elections in India.

been mostly on fake news and misinformation and how to fight against it (see e.g. Guess et al., 2020). A large share of this literature relates to the supply side of the information market and investigate the efficiency of fact-checking news (Pennycook and Rand, 2019; Barrera et al., 2020; Cagé et al., 2025) There are only of few studies investigating the demand side. List et al. (2024) implement an online framed field experiment with 2,235 adults to study misinformation vulnerability and stated willingness to report fake news on social media. Roozenbeek et al. (2022) evaluate "psychological inoculation treatments" against fake news, and Bowles et al. (2025) sustained exposure to fact-checks. Compared to these previous studies, our article is the first to investigate whether exposing young people to high-quality digital news impacts their news and political knowledge – beyond fake news – and overall ability to fight misinformation. Further, compared to most of this literature that takes place online, we set up a long-term "real life" experiment.[6]

Besides, by investigating the extent to which media consumption patterns translate into civic engagement for young people, we also contribute to the literature that explored the links between information and political participation. Better informed citizens can indeed turn out to vote more (Gentzkow et al., 2011; Cagé, 2020), vote less for corrupt politicians (Ferraz and Finan, 2008), or vote more independently from government parties (Enikolopov et al., 2011; Banerjee et al., 2011). By investigating the impact of free news provision and media education on the political knowledge and engagement of the youths, our paper is the first to provide insights on how youth civic engagement is affected by differential media exposure and educational interventions.

Our paper draws loose inspiration from the media literacy movement that emerged in the United States during the 1930s and 1940s (Sproule, 1997). This movement was part of the broader progressive education tradition influenced by John Dewey, who argued that education should prepare students for active participation in democratic life (Dewey, 2016). It arose in response to growing concerns about the persuasive power of emerging mass media – namely, cinema and radio. A central role in this movement was played by the Institute for Propaganda Analysis (IPA), directed by Clyde Miller (Schiffrin, 2022). The IPA developed and distributed instructional materials designed to help students engage critically with media content and recognize common techniques of manipulation (Hobbs, 2022). Between 1937 and 1942, these materials reached an estimated 500,000 students. To our knowledge, however, no systematic evaluation of the long-term effects of these or similar media literacy initiatives exists.

Finally, our paper contributes to the literature on the effects of education on political par-

[6] Likewise, Amar et al. (2024) evaluate whether sustained, classroom-based education against misinformation can equip schoolchildren to become more discerning consumers of information. However, they do not consider the role played by the price barrier in the access to high quality information. Pereira et al. (2024) implement two experiments to test the effectiveness of a campaign against misinformation – included one intervention designed in partnership with a large Brazilian newspaper – but they embed them in online survey panels. Furthermore, their only outcomes of interest are related to misinformation.

ticipation. This literature, mostly correlational, has consistently documented one of the most robust empirical relationships in political science — namely, the positive association between education and voter turnout (see Willeck and Mendelberg, 2022, for a recent survey). However, as emphasized in that review, causal evidence remains scarce. A few studies, summarized in Briole (2025), have examined the impact of additional years of schooling on political participation, with mixed results – some finding positive effects, others none. Very few papers provide causal estimates of the impact of educational programs or curricular reforms on civic outcomes. One exception is Briole et al. (2025b), who implement an RCT in 200 middle schools across three European countries and show that citizenship projects can enhance civic skills such as tolerance, social engagement, and civic behavior at school. Compared to this previous work, our study is the first to rigorously evaluate the impact of an educational program specifically targeting media literacy as a lever for democratic participation.

The rest of the paper is organized as follows. Section 2 below describes our randomized experiment, and Section 3 provides a simple theoretical framework. Section 4 then presents the different data sources and provides summary statistics. Section 5 presents the empirical results regarding news consumption and demand for news, and we show in Section 6 that free news access increases news and political knowledge among low socio-economic status students, thus reducing information inequality. Finally, Section 7 presents our results regarding media literacy skills. We discuss these results and their policy implications in Section 8.

2 Experimental Setting

2.1 Sampling Design and Randomization Sample

The sample of participating schools includes high schools that volunteered to participate in the evaluation. Figure 1 describes the timeline of the experiment. Schools were recruited between April 2024 and August 2024 through various channels,[7] including direct outreach via CLEMI and DEPP networks,[8] contact with academic media education coordinators (the so-called *référents académiques*[9]), and a national email campaign targeting school librarians and teaching staff. Volunteer schools were asked to supply the names of the teacher(s) and

[7] As a preparation for our RCT, we also conducted a pilot study during the academic year 2023-2024 that involved 8 schools.

[8] The CLEMI – *Centre de liaison de l'enseignement et des médias d'information* – is an agency of the French Ministry of Education in charge of media education across the education system. The DEPP – *Direction de l'évaluation, de la prospective et de la performance* – is the department of the French Ministry of Education which produces analyses, studies and statistics on the education system.

[9] *Référents académiques* act as the interface between national and academic policies and the school, lead and coordinate actions in the schools, and participate in the network at departmental and academic level. They are placed under the authority of the Recteur. In France, an academy is an administrative district of the Ministry of National Education and the Ministry of Higher Education and Research. Each academy is headed by a rector.

students who would take part in the program. This step was mandatory for schools to be actually included in the randomization sample.[10] All types of high schools (both public and private, general, technological and vocational) and all grade levels were eligible to participate: 10th grade (*Seconde*), 11th grade (*Première*), and 12th grade (*Terminale*). To participate in the study, schools also had to organize the implementation of student and teacher baseline surveys before randomization. Schools that completed these surveys between September and October 2024 were included in the randomization sample. Randomization was performed in October 2024 and the interventions, that are described in Section 2.2, started at the end of the same month.

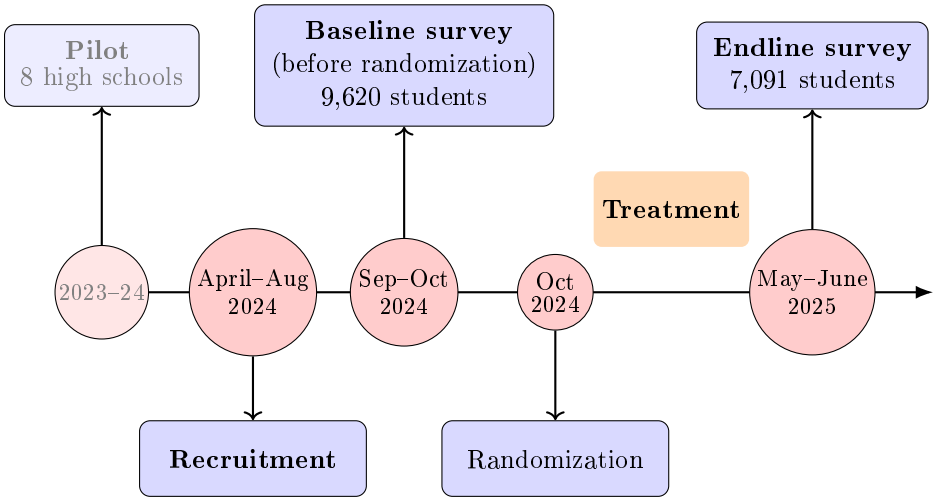


Figure 1: Timeline of the experiment

241 high schools and 371 classes, totaling 9,620 students, completed the baseline survey and were those included in the randomization sample. This makes it one of the largest RCT ever conducted in French high schools. Note furthermore that our recruitment design presents an important advantage compared to what is done in most of the literature on news consumption: we recruited the high schools rather than the students. Hence it means that there is no selection regarding the students (e.g. we do not recruit a sub-set of students interested in getting news for free, nor students who were already present online). Furthermore, we do not pay the participants.

Table 1 reports descriptive statistics on these schools as well as on the classes. The high schools included in the study closely resemble the national average in key dimensions, such as social composition (average IPS of 109, identical to the 2024–2025 national average (Piquemal, 2025)) and the share of scholarship students (*"boursiers"*), which is also exactly equal to the national figure (DEPP, 2024). In addition, the schools are widely distributed across the French

[10] More details on the recruitment process are provided in the online Appendix Section A.1.

Table 1: Randomization sample: Descriptive statistics

	Mean	St. Dev
High school characteristics (N=241)		
Social Composition Index (IPS)	109	16
Share of scholarship students	0.25	0.13
Private high schools	0.10	0.31
General and Technological high schools	0.75	0.44

	Mean	St. Dev
Class characteristics (N=371)		
10th grade	0.37	0.48
11th grade	0.45	0.50
12th grade	0.15	0.35

Notes: The table provides descriptive statistics on the randomization sample. In the upper panel, an observation is a high school. The Social Composition Index (*"Indice de Position Sociale"*) is an indicator calculated by the DEPP. It summarizes the socioeconomic and cultural conditions of the families of students enrolled in the school. It varies between 45 and 185. In the bottom panel, an observation is a class.

territory, ensuring national coverage (Figure 2).

2.2 Interventions and Randomization

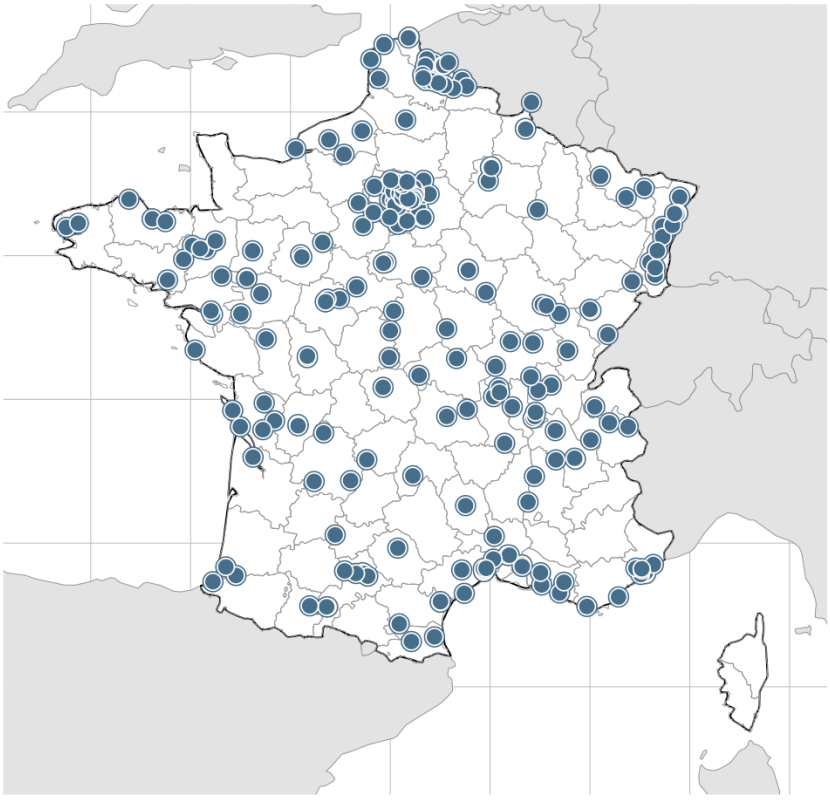
This study evaluates two complementary approaches to strengthening high-school students' ability to navigate today's media environment and engage in democratic life. The first approach builds on the idea that access costs are a key barrier: if high-quality news is expensive relative to students' willingness-to-pay, many will remain excluded despite being interested. It is important to keep in mind that, despite the fact that a lot of content is available online for free, price still drives the majority of online news consumption decisions (see e.g. O'Brien et al., 2025).[11] Removing financial frictions may therefore expand exposure to reliable information.

The second approach emphasizes the role of cognitive skills and motivation: even when information is available, young people may need media literacy skills to critically assess and use it.

To test these mechanisms, we implemented a randomized design at the high-school level. Randomization was performed at the level of the schools to avoid capturing spillover effects.[12]

[11] In their recent study of Austrian news consumers, O'Brien et al. (2025) indeed find that price drive nearly 60% of online news consumption decisions. Similarly, Kormelink (2023) – who explores the reasons news users have for not paying for (print and digital) news in a qualitative study (68 participants) – shows that the price of a subscription is by far the most cited reason not to pay for news. He further notes that *"having a limited budget was a main concern especially for the younger participants, particularly students. For them, monthly spending is a zero-sum game: money spent on news comes at the cost of other (more necessary) expenses."* We come back to this issue when discussing our results and their policy implications in Section 8 below.

[12] We indeed know from the existing literature that people can learn via shared news (see e.g. Bowen et al., 2023).



Notes: The Figure plots the geographical distribution of the high schools that participate in the experiment.

Figure 2: Map of the high-schools that participate in the experiment

Participating schools were assigned to one of four groups:[13] a control group, a group receiving free digital access to the French leading national newspaper (*Le Monde*) (T1), a group receiving media education training and classroom activities (T2), and a group combining both interventions (T3). This design allows us to isolate the effect of each approach and to assess whether the combination of increased access and enhanced literacy generates additive or synergistic impacts.

2.2.1 Free Access to a National Newspaper (T1)

In this treatment arm, students received free digital access to *Le Monde* throughout the school year – from October 2024 to June 2025. *Le Monde* – with 660K subscribers – is the French leading daily national newspaper, and is non-partisan. Its newsroom works with 500 journalists, and it is widely recognized for the quality of its journalism and its efforts to maintain political neutrality (see e.g. Eveno, 2001, 2010). The intervention aims to test whether eliminating financial or logistical barriers increases students' exposure to reliable current news, and whether this influences their news habits and democratic participation.

This is of particular importance given that the average amount people report they are willing to pay for news tends to be lower than the price of the online subscription to the newspaper (Institute, 2024). In other words, the youth may not consume high-quality information not because they are not interested into it but because doing so is too costly for them. Furthermore, not only a minority of people report that they pay for online news (8% in the UK, 11% in France, 22% in the US), but among the non-subscribers, 67% of the French subscribers surveyed report that they would not consider paying anything (Institute, 2024). It is then of particular interest to investigate whether the non-subscribers unwilling to pay – or willing to pay a price that is lower than the one charged by the newspaper – would nonetheless consume the newspaper if they were given access for free.

Access was provided through any digital interface (computer, tablet, cellphone), usable both at school and outside (e.g. at home), with no restrictions on the type of content consulted (or on the quantity of content consumed). To ensure effective take-up, all participating teachers assigned to this treatment were asked to organize a one-hour computer-room session at the beginning of the school year, during which students activated their accounts. As a result, the vast majority of the subscriptions were in practice activated (as we will see in Section 5.2 below). Furthermore, all students in the participating classes were given credentials and guidance on how to use the news website.

[13] Randomization was stratified based on (i) school type (general/technological vs. vocational), (ii) grade level (10^{th} vs. 11^{th} and 12^{th}), (iii) school socio-economic status (measured by the *Indice de Position Sociale*), and (iv) baseline media education practices of participating teachers.

2.2.2 Media Education and Classroom Activities (T2)

In this treatment arm, teachers receive training and pedagogical materials to implement media education activities in their classrooms. The training is developed and delivered by the CLEMI, i.e. it can be considered state-of-the-art media education and literacy training. The intervention is designed to support teachers in guiding students through a critical exploration of how information is produced, selected, and disseminated. It consists of two components:

1. **An asynchronous online training**, composed of three core modules – on prioritization of information, construction of news, and misinformation. The training provides teachers with foundational knowledge and practical tools to foster critical thinking about media in the classroom. The estimated duration of this training is approximately 8 hours.

2. **An optional simulation module: *Classe Investigation***, a game-based media literacy activity developed by the CLEMI in collaboration with journalists and educators. See online Appendix Section A.2 for a precise description of this immersive role-playing exercise.

To facilitate classroom implementation, teachers also receive a set of five ready-to-use media education activities. These resources are adaptable to a wide range of subjects and teaching contexts and are designed to be directly integrated into the school curriculum. The overall objective of the intervention is to ensure that the training translates into concrete, in-class pedagogical practices that strengthen students' critical engagement with the media and support their informed participation in democratic life. More details on the media education activities offered to the teachers are described in the online Appendix Section A.2.

Take-up of the media education intervention Note that regarding the media education interventions, our estimates have to be interpreted as Intent-to-Treat (ITT) effects. Not all the teachers included in T2 and T3 indeed followed the media education training they were offered. Online Appendix Figure A.4 shows that 60% of them did so in T2 and 57% in T3 when considering any form of media education training (53% and 45% respectively when focusing only on the media education training providing by the CLEMI).[14]

We discuss in the online Appendix Section A.2.3 the reasons why more than a third of the teachers in T2 and T3 did not follow any of the media education training activities they were offered. This is mostly driven by a lack of time – an important dimension to which we will come back when discussing the policy implications of our results. Moreover, a number of

[14] Also note that some teachers in both the control and the T1 treatment groups followed some media education training during the academic year covered by our experiment (around 25%), even if this was not as part of our experiment. Yet, as reported in the online Appendix Table A.1, media education training (that we also call Media and Information Literacy – MIL) was much lower among these groups than among T2 and T3.

teachers also report that they did not follow the activities because they have already done so (online Appendix Figure A.5).

2.2.3 Combined Treatments (T3)

Finally, in the treatment arm 3, students received both T1 (the free access to *Le Monde*) and T2 (media education and classroom activities). This treatment allows us to investigate whether media education can change the youth perception with respect to whether it might be worth consuming high-quality news (and also paying for it).

3 Theoretical framework

We present a simple theoretical framework to interpret some of the potential effects of our experiment. A subject – one of our high-school students – decides whether and where to consume political news. Students vary along three dimensions: their potential interest in political news, the access to news they had before their experiment, and the specific interest they have in *Le Monde*. The first treatment of the experiment consists in providing free access to *Le Monde*. The second treatment consists in an education treatment that may increase the student's interest in political news. The variables of interest are: consumption of *Le Monde*, consumption of other news sources, total news consumption, and political knowledge.

Consider an agent who must decide how much time to spend in news consumption. There are two news outlets: A (the set of news sources that are already available to the agent before the experiment) and B (*Le Monde*). Let $x_A \geq 0$ be the time the agent spends on outlet A and $x_B \geq 0$ the time she spends on outlet B. The agent may derive utility from news consumption, as captured by the following quadratic payoff function:

$$U(x_A, x_B) = \eta\gamma_A x_A + \eta\gamma_B x_B - \frac{1}{2}x_A^2 - \frac{1}{2}x_B^2 + \delta x_A x_B,$$

where:

- $\eta \geq 0$ represents the agent's general interest in news (note that η could be zero, in which case the agent chooses $x_A = x_B = 0$).
- γ_A and γ_B are the agent's relative preferences for the two outlets.
- δ is the degree of complementarity between the two outlets: a negative (positive) value of δ indicates that higher consumption of one outlet decreases (increases) the marginal value of consuming the other outlet.

The two outlets differ because A is available to the agent for free, while B requires a subscription fee p. The agent's utility is separable in news consumption and money.

We are also interested in two additional variables. One is total news consumption:

$$x = x_A + x_B.$$

The other is political knowledge, which is an increasing and concave function of news consumption:

$$I = f(x), \text{ with } f' > 0 \text{ and } f'' < 0.$$

A subject who consumes more news is better informed but the marginal effect becomes weaker as the subject becomes more informed.

To solve the agent's problem, consider two options: (a) consume only A; (b) pay p and consume both A and B.

In case (a), the agent consumes $x_A^0 = \eta\gamma_A$ and obtains utility $U^0 = \eta^2\gamma_A^2$.

In case (b), assuming an interior solution and that $|\delta| < 1$, the agent consumes:

$$x_A^* = \frac{\eta}{1-\delta^2}\left(\gamma_A + \delta\,\gamma_B\right), \qquad x_B^* = \frac{\eta}{1-\delta^2}\left(\delta\,\gamma_A + \gamma_B\right)$$

and obtains utility

$$U^* = \frac{\eta^2}{2\left(1-\delta^2\right)}\left(\gamma_A^2 + 2\delta\,\gamma_A\gamma_B + \gamma_B^2\right).$$

The agent prefers (b) to (a) if the payoff difference is higher than the subscription price: $U^* - U^0 > p$.

Let us now discuss the potential effects of the two treatments in our experiment within this simple model. The media education treatment (E) is an attempt to increase the student's interest in news, namely increasing the general interest from η to η'. The free subscription treatment (F) corresponds to a reduction of outlet B's subscription price from p to zero. For the latter, we assume that p was high enough that subjects chose not to subscribe to outlet B (which is true for almost all of our subjects). We consider the effect of treatments (E) and (F) individually and jointly (EF).

Proposition 1. *The effects of the three treatments are as follows:*

(E) The ***Education Only Treatment*** *induces an increase in news consumption and knowledge if the treatment has a non-zero effect on general interest in news ($\eta' > \eta$):*

$$\Delta_E x_A = (\eta' - \eta)\gamma_A, \qquad \Delta_E x_B = 0, \qquad \Delta_E x = (\eta' - \eta)\gamma_A, \qquad \Delta_E I = f(\eta'\gamma_A) - f(\eta\gamma_A).$$

(F) If the subject is not interested in news ($\eta = 0$), the ***Free Subscription Only*** *treatment has no effect. If the subject is interested in news, the treatment induces: (i) an increase in news consumption of B; (ii) an increase (a decrease) in news consumption of B if the*

complementarity parameter δ is positive (negative); (iii) an increase (a decrease) in total news consumption and knowledge if the complementarity parameter is positive or not too negative ($\delta > -\gamma_B/\gamma_A$):

$$\Delta_F x_A = \eta \frac{\delta(\gamma_B + \delta\gamma_A)}{1-\delta^2}, \qquad \Delta_F x_B = \eta \frac{\delta\gamma_A + \gamma_B}{1-\delta^2}, \qquad \Delta_F x = \eta \frac{\gamma_B + \delta\gamma_A}{1-\delta},$$

$$\Delta_F I = f\left(\eta \frac{\gamma_A + \gamma_B}{1-\delta}\right) - f(\eta\gamma_A).$$

The increase in knowledge due to (F) is larger if the subject received less knowledge from A before the experiment: $\Delta_F I$ is decreasing in γ_A. Thus (E) tends to reduce knowledge inequality.

*(EF) If both individual effects (E) and (F) have strictly positive effects, then the **Joint Treatment** has a positive interaction effect on total news consumption. Namely, its effect on total news consumption is larger than the sum of the effects of the two individual treatments (instead, if at least one of the individual treatment effects is zero, then the interaction effect is zero too):*

$$\Delta_{EF} x - \Delta_E x - \Delta_F x = (\eta' - \eta)\frac{\gamma_B + \delta\gamma_A}{1-\delta}.$$

The interaction effect on knowledge depends on the curvature of the knowledge function $f(\cdot)$. If f'' is not too high, then a positive interaction effect on total news consumption induces a positive interaction effect on knowledge.

Proof. See online Appendix Section B.1. □

The proposition makes predictions on the effects of the three treatments. The Education Treatment (E) is successful if and only if it manages to increase the general interest in news η. If it is successful, the subject consumes more news and becomes more informed.

The Free Subscription treatment (F) will be ineffective if the subject has no interest in news ($\eta = 0$). Otherwise, it will certainly increase consumption of B from zero to a positive level. The effect on the other variables is ambiguous and depends on the degree of complementarity between consumption of A and B. If the two outlets are complements, then (F) also raises consumption of A, total news consumption, and total knowledge. If the two outlets are mild substitutes, then the treatment decreases consumption of A, but still increases total consumption and knowledge. If the two outlets are strong substitutes, the treatment may even decrease total consumption and knowledge.

The Joint Treatment (EF) tends to display a positive complementarity. Unless one of the two treatments is non-positive, the joint treatment has a positive interaction effect, meaning

that its overall effect on total knowledge is larger than the sum of the effects of the two individual treatments.

Finally, what does the model predict in terms of knowledge inequality? Consider two agents who started with different access to outlet A. One agent has γ'_A. The other had γ''_A with $\gamma''_A > \gamma'_A$.

Before the treatment, the agent with γ''_A was consuming more news than the other agent and had a higher knowledge level. After the treatment, the agent with γ''_A is still consuming more news and has better knowledge, but has the difference increased or decreased? If the complementarity parameter δ is not too different from zero, we can give an unambiguous answer for the (F) treatment:

Proposition 2. *If $\delta \approx 0$ and (F) is effective, then the treatment reduces knowledge inequality:*

$$I^F(\gamma'') - I^F(\gamma') < I^0(\gamma'') - I^0(\gamma').$$

Proof. See online Appendix Section B.2. □

If δ is very large, the proposition may not hold, because the a subject who was already consuming a lot of news may increase its news consumption much more than the other subject. The effect of (E) on knowledge inequality is more ambiguous.

4 Data and Sample characteristics

In this section, we briefly describe the different datasets we use in this paper as well as our outcomes of interest, and then present our main analysis sample and the related internal validity checks.

4.1 Data Sources

The data we exploit in this study comes from four distinct sources.

Student surveys These surveys were administered at the start of the experimentation (baseline survey: September/October 2024) and at the end of the school year (endline survey: May/June 2025). They were administered on the school computers under the supervision of the teachers.

Teacher surveys Teachers were similarly sent surveys at the beginning (September/October 2024) and at the end (May/June 2025) of the school year. They were sent a link and asked to go to a website to fill the surveys.

Administrative data We use administrative data from the French Ministry of Education (*Direction de l'évaluation, de la prospective et de la performance* – DEPP) to track a number of objective measures such as the schools socio-demographic characteristics and the share of scholarship students.

Newspaper consumption data Finally, for the students drawn to benefit from the free subscription to *Le Monde* (T1 and T3), we recover the data automatically collected by the newspaper regarding their consumption behavior: number of articles read, time spent on the platform, etc. In our preferred specification, we focus on the news consumed between October 2024 and April 2025, i.e. before the start of the endline survey. We also consider in complementary analysis students' newspaper consumption after the end of the endline survey (and thus of the school year) to investigate the extent to which some of our results might be driven by the school context.

4.2 Outcomes of interest

The objective of this paper is to investigate whether the different treatments affect students' behaviors, beliefs, and knowledge. We organize the outcomes of interest into three broad categories. First, we consider outcomes that relate directly to news consumption and media-related behaviors and skills, including newspaper consumption, trust in newspapers and journalists, demand for news, willingness-to-pay for news, and media literacy skills. Second, we examine outcomes related to students' political knowledge, capturing their understanding of current events, political institutions, and economic issues. Finally, we explore additional downstream outcomes, including students' political and civic engagement and their psychological well-being. These outcomes are not directly targeted by the intervention and are therefore interpreted as potential indirect effects, as well as a way to assess possible unintended consequences of increased exposure to news. Following Anderson (2008), we average the outcomes that take the form of an index (i.e. are built from several outcomes) into a standardized measure.[15]

4.2.1 News Consumption and Media Outcomes

Newspaper consumption Our first outcome of interest is student news consumption. In particular, we build a *Newspaper Consumption Index* based on two variables drawn from the student endline questionnaire, following the procedure described above: (1) an indicator variable equal to one if students cite at least one newspaper as their main source of information

[15]This procedure consists in the following steps. First, for all the outcomes, we switch the signs when necessary so that the positive direction always indicates a "better" outcome. Second, we define J groupings of outcomes (also referred to as areas or domains). Each (normalized) outcome y_{jk} is assigned to one of these J areas, giving K_j outcomes in each area j, with k indexing outcomes within an area. Third, we create a new variable, s_{ij}, that is a weighted average of y_{ijk} for individual i in area j. When constructing s_{ij}, we weight its inputs – outcomes y_{ijk} – by the inverse of the covariance matrix of the transformed outcomes in area j.

in response to an open-ended question on their main information source(s); (2) an indicator variable equal to one if students select at least one major national newspaper from a predefined list when asked about their news consumption over the past seven days.[16]

Importantly, for students assigned to treatments T1 and T3, we complement self-reported measures with automatically collected usage data from *Le Monde*'s application, which provide a rare and objective measure of actual newspaper consumption. These data allow us to construct multiple behavioral indicators, including time spent and number of articles or pages consulted, as well as to investigate the type of content accessed (e.g., international news, environment, society, politics). Beyond offering a direct measure of behavior, this granular usage information enables us to assess the presence of potential reporting biases – such as social desirability or misreporting – by comparing declared newspaper consumption with observed usage patterns.

Trust We construct a *Trust in Newspapers Index*, designed to investigate potential mechanisms underlying changes in newspaper consumption and, more broadly, in students' demand for news. This index captures whether students trust newspapers *relatively more* than other media outlets and community members, and thus whether increased consumption may reflect a better understanding of the reliability of different information sources. Specifically, the index is defined as the difference between reported trust in newspapers and the average reported trust in other media outlets (television, radio, social media, and websites) and community members (parents, teachers, students, and friends).[17]

We also construct a *Trust in Journalists Index*, which captures a related but conceptually distinct dimension of trust, less directly tied to our intervention and to our consumption-related outcomes. This index measures students' general trust in journalists, independently of the type of media through which journalistic content is delivered. It is constructed from three survey items capturing students' agreement with two statements about journalistic accuracy and democratic role, and their overall trust in journalists.[18]

Demand for news To investigate whether the intervention affects students' demand for news beyond contemporaneous consumption, we rely on a behavioral, revealed-preference measure that offers students the opportunity to subscribe to one or more real newsletters.[19]

[16] This list includes: *Le Monde*, *Le Figaro*, *Libération*, *Le Journal du Dimanche*, *L'Équipe*, *Marianne*, *Le Nouvel Obs*, *L'Express*, *La Croix* and *L'Humanité*, i.e. all the French daily and weekly national newspapers.

[17] We also check that results are unchanged when using alternative measures based on the comparison of trust in newspapers with trust in (i) social media and internet, (ii) community members, an (iii) social media, internet and community members.

[18] See online Appendix Section A.3 for the full wording and response scales.

[19] We offer the students the opportunity to subscribe to one or more of the seven following newsletters: (i) *Le Monde* (political newsletter), (ii) *Courrier international* ("best-of"), (iii) France Info ("best of the week"), (iv) Konbini ("Fast Forward"), (v) Hugo Décrypte ("the news of the day"), (vi) Les Glorieuses ("The Newsletter"), and (vii) Le Quotidien ("Quotidien Matin"). We picked these seven newsletters because (i) they are offering

Answering "yes" to this offered opportunity results in an actual subscription, making it a hard, observable indicator of engagement with news content. As such, this outcome captures a forward-looking decision and provides evidence on whether the intervention generates more persistent changes in students' interest in news, complementing our measures of newspaper consumption during the experimental period. This approach has been used as a revealed preference measure in recent work on news demand (see e.g. Chopra et al., 2024).

Our main outcome is an indicator equal to one if the student subscribes to at least one newsletter, regardless of which one, and zero otherwise. To distinguish whether any effect is driven specifically by *Le Monde* or reflects a broader increase in news demand, we additionally construct two indicator variables: one equal to one if the student subscribes to *Le Monde* newsletter, and to zero otherwise; and one equal to one if the student subscribes to at least one newsletter other than *Le Monde*, and to zero otherwise.

Willingness-to-pay for news We first measure students' willingness-to-pay for news by asking them how much they will be willing to pay (maximum amount) for a one-year subscription to *Le Monde*.[20] Following the existing literature that highlights the difference between the willingness-to-pay (WTP) and the willingness-to-accept (WTA) (see e.g. Plott and Zeiler, 2005), we next ask them the minimum price at which they would be willing to resell such a subscription.[21]

Furthermore, for the subset of students in T1 and T3, *Le Monde*'s data allow us to observe whether they renew their subscription when they no longer have for free.

Media literacy skills Finally, we measure students' media literacy skills by directly observing their behavior in a social media sharing task. Students are shown a (fake) news story and asked whether they would be willing to share it on social media – and, if so, on which platform. A randomly selected half of respondents are additionally given the opportunity to fact-check the story using an official fact-checking tool provided by *Agence France Presse* (AFP). We build a *Media Literacy Skills* Index based on two *observed* outcomes: (i) an indicator equal equal to one if the student uses the fact-checking tool and to zero otherwise, and (ii) an indicator variable equal to one if the student reports being willing to share the fake news story after fact-checking it – and thus after learning that the story is false – and to zero otherwise. See online Appendix Section A.3 for further details on these measures.

news, (ii) are associated to well-known brands from different formats (e.g. Hugo Décrypte is a YouTube channel while Quotidien is a TV show), and (iii) are available for free upon subscription.

[20] "If you had to pay for a one-year subscription to the newspaper *Le Monde*, what would be the maximum amount you would be willing to pay each month?"

[21] "If you had a one-year subscription to the newspaper *Le Monde* and had the opportunity to resell it, what would be the minimum amount you would sell it for?"

4.2.2 Political Knowledge

We construct a *Political Knowledge Index* aggregating three complementary dimensions of students' factual knowledge about public affairs. The first component captures *news knowledge* and is based on students' ability to identify correct information about recent current events in France, in the world, and in the European Union. For each of these three domains, students are shown six statements – three true and three false – and are explicitly informed that exactly three statements are true and three are false. They are then asked to identify the three statements they believe to be true within a fixed time limit of three minutes, following Angelucci and Prat (2024).

The second component measures students' *knowledge of French and European politics*. It is based on six items covering key institutional and political facts. Three items relate to French politics: (i) identifying French trade union acronyms, (ii) naming the French Prime Minister, and (iii) matching prominent politicians with their political party. The remaining three items focus on the European Union: (i) identifying the country holding the rotating presidency of the Council of the European Union in the first half of 2025,[22] (ii) a true/false question regarding the political affiliation of the President of the European Commission, and (iii) identifying the current President of the European Commission.[23]

The third component captures students' *economic knowledge* and assesses their awareness of recent economic indicators and policies in France, including unemployment, public deficit, inflation, economic growth, and public debt levels.

4.2.3 Additional Outcomes: Political Engagement and Well-Being

While the intervention primarily targets students' news consumption, media literacy, and political knowledge, we also examine whether it translates into downstream effects on students' political and civic engagement on the one hand, and on well-being on the other hand.[24] These outcomes are not directly targeted by the intervention and are therefore interpreted as potential indirect benefits.

We first construct a *Political Participation Index* based on two outcomes. The first outcome captures students' self-reported participation in either one of three recent political protests shown in a list or in the activities of one of the two main high-school student unions over the school year.[25] The second outcome is based on students' willingness to support a petition,

[22] Students were offered five choices: Belgium, Denmark, Poland, Cyprus, and "I don't know."

[23] Students were offered five choices: Charles Michel, Ursula von der Leyen, Emmanuel Macron, Roberta Metsola, and "I don't know."

[24] Given the growing literature documenting the negative effects of the media – and in particular of social media (see e.g. Allcott et al., 2020a; Bursztyn et al., 2025).

[25] The list of protests includes: a national march against racism and the far right, a demonstration for the International Women's Rights Day, and an inter-union demonstration on Labor Day. The list of unions includes: *USL* (Union syndicale lycéenne) and *MNL* (Mouvement National Lycéen).

following the approach of Dechezleprêtre et al. (2025). Students are offered three types of petitions: (i) climate protection, (ii) equality, and (iii) students' rights. Importantly, agreeing to support a petition constitutes a behavioral and consequential measure of engagement: while students do not sign the petition personally, their anonymous response is recorded and included in collective results that are transmitted to the office of the Minister of Education, giving this outcome a direct civic impact beyond mere stated intentions.

To explore potential mechanisms through which the intervention may affect students' political participation, we also construct a *Political Self-Efficacy Index*. This measure allows us to assess the extent to which any effect on political and civic engagement is driven by changes in student" perceived competence, confidence, and ability to engage with political issues. The index is based on students' responses to a standard set of self-assessment questions capturing internal political efficacy (Niemi et al., 1991).

Finally, in order to assess potential unintended consequences of increased exposure to news on student well-being, we build two additional outcomes: (1) a *News Anxiety Index*, which is based on a validated scale developed by Bodas et al. (2015) and captures students' emotional responses specifically related to news consumption; and (2) a *General Well-Being Index*, which captures broader aspects of students's psychological well-being and combines a measure of *mental health* (i.e., the *Perceived Stress Scale* (Cohen et al., 1983)), and *happiness*, measured using two self-reported items on recent happiness and relative happiness compared to peers, following Allcott et al. (2020b).

4.3 Sample Characteristics and Internal Validity Checks

Before turning to the effects of the interventions on our main outcomes of interest, we present our main analysis sample and perform several internal validity checks. As highlighted above, our randomization sample includes 241 high schools and 371 classes, totaling $9,620$ students. 4 high schools in our randomization sample drop out of the study during the academic year and so are not included in our final analysis sample: one from T1, two from T2, and one from T3. In the remaining high schools, some students and/or teachers did not answer the endline questionnaire; the average response rate is equal to 74.8% for the students and to 93.3% for teachers.

Table 2 reports the number of schools, teachers and students included in each treatment groups in our analysis sample (that includes only the students who completed both the baseline and the endline surveys). Note that a higher number of schools (and thus of students) were included in the control group and in T2 than in T1 and in T3. This is due to the fact that the T2 treatment was at no cost for us, while the number of students that could be included in T1 and T3 was de facto constrained by the price of the subscription (and thus the budget at our disposal for the experiment).

Table 2: Analysis sample: Number of high schools, teachers and students by treatment arms

	All	Control	T1	T2	T3
Nb of schools	240	60	43	94	43
Nb of teachers	366	87	64	149	66
Nb of students	7,091	1,778	1,351	2,819	1,143

Notes: The table reports the number of high schools, teachers and students included in each of the treatment groups in our final analysis sample. Compared to the randomization sample, the analysis sample only includes the students who fill both the baseline and the endline surveys.

Differential attrition Online Appendix Tables E.1 and E.2 test for differential attrition across treatment groups, respectively for students and teachers. As shown in these tables, attrition is balanced between the four groups for both teachers and students.

Balancing checks Finally, we provide the results of our balancing checks. As highlighted above, stratification was done by high school socioeconomic status, high school type, grade level, and the intensity of the media education practices of participating teachers within the school before the intervention. Online Appendix Tables C.1 to C.3 provide the results of the balancing tests, based on equation (1), and confirm that there is no significant variation in student (Table C.1), teacher (Table C.2), or class characteristics (Table C.3).

5 Empirical Results: News Consumption and Demand for News

We present our main empirical results in Sections 5 to 7. Focusing on T1 and T3, we first investigate whether free media access increases the actual news consumption of the youth as well as their demand for news, and whether the magnitude of the effects varies depending on whether the students also receive media education. In Section 6, we then investigate how access to news and media education impact political knowledge and civic engagement, before turning to the impact on media literacy skills (Section 7).

5.1 Descriptive statistics on baseline news consumption

To start with, we provide some descriptive statistics on news consumption and interest in news at baseline. It is important to highlight that those statistics are of interest per se given the very large number of students who answer the survey and the fact that those students were not paid nor recruited online (see Section 2.1 above). Our sample therefore does not suffer from selection biases and is representative of the universe of French high-school students. Overall, nearly ten thousands students answered at baseline; this has to be compared to the average size of news consumption surveys which, for a given country, rarely include more than 2,000

individuals, and of all age (making it particularly difficult to draw any conclusion on the news consumption of the youth). Table 3 provides descriptive statistics from the baseline survey.[26]

The first interesting set of results is with respect to information acquisition and interest in news. Only 7% of the students report that they never keep up to date with political, economic, and social news in France and/or abroad. On the contrary, 36% of them report that they often do so and 9% very often. Furthermore, among the news topics they are mostly interested by, 50% of the students report politics (which come in second position after sport), and 47% international news (online Appendix Figure F.18a). Hence, young people still want news, including hard news.

However and perhaps less surprisingly, we find that consumption of traditional media – and in particular newspaper consumption (either online or offline) – is pretty low among high-school students at the start of the experiment. While 81% of the students report that, in the last 7 days, they have used social media as a source of information[27], and 65% report that they have used television, only 19% claim that they have used newspapers – either online or offline – to get some news.

Students seem nonetheless to have a very good knowledge of the media landscape and in particular of our partner newspaper *Le Monde*. 90% of the students in our study claim that they have already heard of *Le Monde* – that is, as already highlighted in Section 2, the French leading newspaper. On average, 54% of them have already heard of the other five national dailies.[28] Furthermore, 38% of the students report that they have used *Le Monde* (read any of its articles, watched any of its videos, or listened to any of its podcasts) in the last 7 days, and 11% on average for the other dailies.[29] Last, 8% of the students report that they – or their parents – already have a subscription to our partner newspaper (12% report that they have a subscription to at least one of the other French dailies).

The main source of information of the youth is still a television channel – TF1 – which is also the main French television channel in terms of overall audience (with a 35% average market share). It is followed by Hugo Décrypte, a YouTube channel that had 2.6 million subscribers in 2024 (Institute, 2024) and that provides explanatory videos about politics. This appears

[26] For the sake of consistency over the analysis, even if 9,620 students responded to the baseline, we only report here descriptive statistics for the 7,091 students included in our final analysis sample (i.e. those who responded to both the baseline and the endline survey). Similar statistics for the full set of students are available upon request.

[27] More generally, youth are largely present on social media. More than 80% of them report being present on Instagram, Youtube and Snapchat, followed by WhatsApp and TikTok (online Appendix Figure D.1).

[28] *Le Figaro*, *Liberation*, *L'Équipe*, *La Croix*, and *L'Humanité*. Note however that only 48% of the students correctly report the periodicity of *Le Monde* – a daily. This mismatch between their knowledge of the brand and of its periodicity can be explained by the fact that, given the youth mostly consume news online (and in particular do not subscribe to the print version of the newspapers), they no longer care about their periodicity.

[29] Note that the 38% share for *Le Monde* is higher than the overall share of students who reported that they have consumed news on newspapers, but this might be due to the fact that students watch videos produced on Youtube or other social media by the newspaper (furthermore, they might also do so without considering that this is to keep up with current events or social issues in France and/or abroad).

Table 3: Students' news consumption and interest in news at baseline: Descriptive statistics

	Mean	St.Dev	P25	Median	P75
Keeping up with news					
Never	0.07	0.26	0.00	0.00	0.00
Rarely	0.47	0.50	0.00	0.00	1.00
Often	0.36	0.48	0.00	0.00	1.00
Very often	0.09	0.29	0.00	0.00	0.00
News sources (past 7 days)					
Television	0.65	0.48	0.00	1.00	1.00
Radio	0.27	0.44	0.00	0.00	1.00
Podcasts	0.41	0.49	0.00	0.00	1.00
(Online or offline) Newspapers	0.19	0.39	0.00	0.00	0.00
Social media	0.81	0.39	1.00	1.00	1.00
Partner news & other dailies					
Knowledge of partner newspaper	0.90	0.30	1.00	1.00	1.00
Knowledge of other dailies (av.)	0.54	0.25	0.40	0.60	0.80
Use of partner newspaper	0.38	0.49	0.00	0.00	1.00
Use of other dailies (av.)	0.11	0.15	0.00	0.00	0.20
Subscription to partner newspaper	0.08	0.27	0.00	0.00	0.00
Subscription to another daily	0.12	0.32	0.00	0.00	0.00
Know periodicity of partner newspaper	0.48	0.50	0.00	0.00	1.00
Observations	7,091				

Notes: The table provides descriptive statistics on the news knowledge of the students in our sample at baseline. An observation is a student. Only the students included in the analysis sample (i.e. those that completed both the baseline and the endline surveys) are included here. "Keeping up with news" provides the statistics corresponding to the answer to the following question: "Do you keep up to date with political, economic, and social news in France and/or abroad?" "News sources (past 7 days)" provides the statistics corresponding to the answer to the following question: "Over the past 7 days, have you used the following sources to keep up with current events or social issues in France and/or abroad?" "Knowledge of partner newspaper" or "of other dailies (av.)" is based on the answer to the following question: "From among these French newspapers, select those you have heard of before." "Use of partner newspaper " or "of other dailies (av.)" is based on the answer to the following question: "From among the newspapers you have just selected, have you consulted one or more of their articles, videos, and/or podcasts in the last 7 days?"

very clearly when we ask the students to list – for each of the media category (e.g. television, social media, etc.) they report having used as a source of news over the past seven days – the name(s) of the specific outlets they have consumed. See online Appendix Figure D.2. 39.6% of the students report using TF1 as a source of news and 33.6% Hugo Décrypte, followed by the 24-hour news channel BFMTV (11.7%). *le Monde* appears in fourth position – with 9.8% – and is the first newspaper (or news website).[30]

5.2 Take-up: Free newspaper access

Before investigating the consequences of increased news consumption, we study whether free media access actually increases news consumption. This is of particular interest in the context of this study given that we know from the existing literature that the uptake of a free newspaper subscription can be very low (Hopkins and Gorton, 2024). Uniquely here, we have information both on news consumption as reported by the students in the surveys, but also – for the students in T1 and T3 – and on their actual news consumption thanks to the newspaper data. Furthermore, we can consider both the extensive margin: whether the students activated their news subscription, and the intensive one: how many news articles they consume and the time they spent on the application.

5.2.1 Using *Le Monde* data

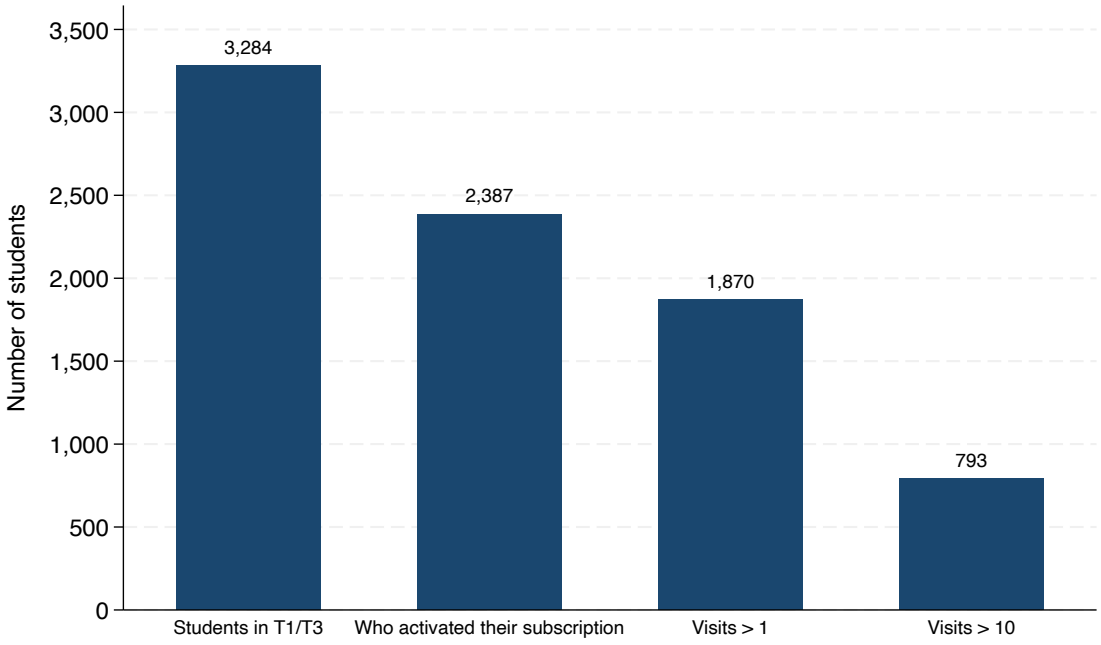
Figure 3 provides descriptive statistics statistics regarding the uptake of the free newspaper subscription when using the observed consumption data we obtain thanks to our partner newspaper *Le Monde*.

Extensive margin Out of the 3,284 students in the "free media access" treatment groups (T1 or T3), 2,387 students activated their subscription.[31] In other words, we have a 72.3% uptake, which is very high compared to the existing literature. Furthermore, out of the 2,387 activated subscriptions, 1,870 have visited at least one page on the news site (i.e. 78.3%).

Intensive margin At the intensive margin, we see that a third of the students who activated their account went on *Le Monde*'s website more than 10 times. For the 2,387 students who activated their subscription, online Appendix Figure F.4 plots the distribution of the number

[30] Note however that while France 2 appears in fifth position (also with 9.8%), we might somehow underestimate its use given that it belongs to a larger entity – France Télévisions, the French national public television broadcaster – and that some students only report "France Télévisions". Similarly for Radio France – the French national public radio broadcaster – which might lead us to somehow underestimate the importance of France Info and France Inter. In both cases, we indeed make the choice to have a conservative approach.

[31] As appears in online Appendix Figure F.1, most of these subscriptions were activated between October and December 2024, with the higher uptake taking place just after the announcement of the treatment. Only very few subscriptions were activated later. See also Figure F.2 that plots the cumulative number of activated subscriptions.



Notes: The Figure plots the total number of student in the free newspaper subscription groups, and among them the number of students who activated their subscription and did more than a certain number of visits on the website.

Figure 3: News consumption by students: Take-up

of visits on the website (sub-Figure F.4a). Half of the students went more than 5 times to the website, and 10% more than 29 times. In terms of pages viewed – which can also be interpreted as the number of articles read – half of the students saw 39 pages or more during the school year (sub-Figure F.4b).

If we investigate the evolution of news consumption over time, we observe a very large number of daily pages viewed per student in October 2024, i.e. at the time when they activated their subscription (online Appendix Figure F.3). For the rest of the time period, the daily average number of page views per students with an activated subscription is around 0.5. Around 135 students visit the newspaper website each day (online Appendix Figure F.5).

To get a sense on whether these figures reflect high or low news consumption, one needs to compare them to the behavior of other newspaper subscribers. Unfortunately, the newspaper does not have information on the age of its subscribers, but we can nonetheless use as a helpful benchmark descriptive statistics (that were generated for us by the newspaper) on the "students and teachers reduced subscription rate" subscribers (which more closely resemble the high-school students in our sample, even if a little bit older). Among this subset of subscribers, 92% are active users, i.e. read at least one article per month. Among these active users, 5% read only one article. Among the 95% of users who read at least two articles per month, nearly 83% read more than five articles per month, and 74% of users read more than ten articles per

month. The numbers are much lower for the students in our sample: only 13% of them have read at least one article per month between November 2024 and April 2025 and can thus be consider active users; among those however, 82% have read two articles or more per month, and 57% 5 articles or more. In other, only a low share of the students in our sample are active readers, but those who are tend to consume a relative high amount of articles.

5.2.2 Using the survey information

While the above statistics are based on data from *Le Monde*'s app, it is of interest to compare them with *Le Monde* consumption behaviors as reported by the high-school students in the endline survey. Interestingly, we find that the share of students declaring that they activated their subscription is roughly similar to what we observe in the hard data (76%). Similarly, online Appendix Figure F.6 reports – for the subset of students who claimed that they activated their subscription – the reported frequency at which they claim to use *Le Monde*'s website. The 21% of high-school students who say they never use the website corresponds exactly to the percentage of high-school students who have activated their subscription but have never visited *Le Monde*'s website. In other words, there seems to be no "social bias" with an overreporting of news consumption. This is an important finding because it validates the use of our survey-based outcome variables that allow us to estimate the treatment effects.

The endline survey information also allows us to get a better sense of the reasons for not consuming *Le Monde*. As appears in online Appendix Figure F.7, students who did not us *Le Monde* report that they did so mainly either because of a lack of interest or because they were already getting information on social media. Other main reasons include a lack of time as well as a preference for more dynamic formats.

5.3 Empirical specification

In the remaining of the paper, we provide an evaluation of the effects of being assigned to the treatment groups on several outcomes. To do so and following our PAP (Briole et al., 2025a), we base our analyses on the following regression model:

$$Y_{isr} = \alpha + \beta_1 T_s^1 + \beta_2 T_s^2 + \beta_3 T_s^3 + \boldsymbol{X_{is}'}\gamma + \delta_r + \epsilon_{isr} \tag{1}$$

where Y_{isr} is the outcome of interest for student i in school s and strata r. T_s is the binary treatment indicator, which equals one if school s is in the treatment group and zero otherwise, and $\boldsymbol{X_{is}'}$ is a vector of controls selected in each individual regression through a Lasso procedure (Belloni et al., 2014). Potential controls include student pre-determined characteristics (gender, age, geographical origin, family background, experience as class representative, outcomes at baseline) as well as teacher sociodemographic and professional characteristics (age, gender,

experience, seniority). These controls may be selected at the individual student-level or averaged at the school-level.[32] Finally, δ_r represents a full set of indicator variables for the strata used for randomization, and ϵ_{isr} the residuals. The estimated $\hat{\beta}$ coefficients ($\hat{\beta}_1$, $\hat{\beta}_2$, and $\hat{\beta}_3$) correspond to the intention-to-treat effects. Following de Chaisemartin and Ramirez-Cuellar (2024), standard errors are clustered at the strata level.

In the case of missing baseline data for specific covariates, we replace missing values with their mean values and include indicator variables for missing values for each covariate. Our results are not sensitive to imputing the missing covariate values. As specified in our PAP, when estimating the effect of the program on sub-indexes (see Section 4.2 below for the description of all the outcomes), we report the p-values of the coefficients of the treatment variables adjusted for the False Discovery Rate, using the Benjamini and Hochberg (1995) procedure, in order to account for multiple hypotheses testing.

5.4 Treatment effects: Reported news consumption

Table 4 reports the average treatment effects we obtain with respect to news consumption and media skills.

News consumption is measured here using the standardized newspaper consumption index described in Section 4.2.1 above. We find that both T1 and T3 have a large positive effect on newspaper consumption, with a 0.295 and a 0.429 standard-deviation increase, respectively, statistically significant at the one percent level. T1 and T3 lead to an increase in both the overall newspaper consumption, and in the use of newspapers as the main source of information.[33]

Interestingly, we obtain no effect of media education per se (T2) on newspaper consumption. However, it is interesting to note that media education somehow enhances the positive effect of free media access. It is also important to note that the increase in the news consumption index is observed all over the distribution (online Appendix Figure F.8).

The increase in newspaper consumption due to T1 and T3 is entirely driven by the use of our partner newspaper, *Le Monde*, as appears clearly in Figure 4.[34] The effect is not only statistically but also economically significant: in terms of magnitude, we observe a 21 (T1) to 24 (T3) percentage point increase in *Le Monde* consumption, corresponding to 62 to 70% of the mean for the control group (sub-Figure 4b). Importantly, while we cannot estimate equation (1) using the actual *Le Monde*'s consumption (given that we do not have the website logs for the students in the control group and in T2 – given that they did not benefit fro the

[32] We checked that the estimated effects on most outcomes of interest remained similar when all controls were removed. However, the use of controls provides generally more precise estimates.

[33] "Newspapers" here to the following set of newspapers (that includes all the national daily and weekly French newspapers): *Le Monde*, *Le Figaro*, *Libération*, *Le Journal du Dimanche*, *L'Équipe*, *Marianne*, *Le Nouvel Obs*, *L'Express*, *La Croix* et *L'Humanité*.

[34] The treatment effect is null when we exclude *Le Monde* from the two outcomes.

Table 4: Treatment Effects: Newspaper Consumption and Media Outcomes

Outcome variable	(1) C	(2) T1-C	(3) S.E.	(4) p	(5) p adj.	(6) T2-C	(7) S.E.	(8) p	(9) p adj.	(10) T3-C	(11) S.E.	(12) p	(13) p adj.	(14) N
Newspaper Consumption (NC) Index	0.000	0.295	0.073	0.000		-0.003	0.058	0.964		0.429	0.054	0.000		7091
NC: At least 1 newspaper as main info source (0/1)	0.414	0.078	0.027	0.004	0.004	-0.008	0.029	0.785	0.814	0.160	0.033	0.000	0.000	7091
NC: At least 1 newspaper consulted last 7 days (0/1)	0.473	0.155	0.032	0.000	0.000	0.006	0.025	0.814	0.814	0.179	0.017	0.000	0.000	7091
Trust in Newspapers	0.000	0.001	0.061	0.991		0.076	0.054	0.162		0.111	0.052	0.034		6718
Newsletter Subscription (0/1)	0.743	0.068	0.027	0.013		0.042	0.015	0.006		0.063	0.018	0.000		6630
Le Monde (0/1)	0.523	0.101	0.050	0.043	0.043	0.012	0.030	0.695	0.695	0.096	0.026	0.000	0.000	6262
Any other than Le Monde (0/1)	0.729	0.052	0.025	0.041	0.043	0.044	0.014	0.002	0.003	0.056	0.015	0.000	0.000	6561
Media Literacy Skills (MLS) Index	0.000	0.186	0.069	0.007		0.138	0.057	0.016		0.162	0.053	0.002		3448
MLS: Fact-Checking	0.000	0.081	0.095	0.396	0.396	0.087	0.061	0.157	0.157	0.107	0.066	0.105	0.105	3417
MLS: Fake News Sharing	0.000	0.203	0.067	0.002	0.005	0.169	0.072	0.020	0.039	0.174	0.066	0.009	0.018	1481

Notes: Each line corresponds to a separate regression. Binary outcomes are indicated with (0/1); other outcomes are standardized. Column (1) = mean of the dependent variable in the control group. (2) = estimated ITT for T1 and (3) s.e. of the estimated ITT parameter ; (4) = p-value and (5) p-value adjusted within hypothesis for multiple testing using the Benjamini and Hochberg (1995) approach. Standard errors clustered at the strata level in parentheses. Strata fixed effects and controls selected via Lasso, using the Belloni et al. (2014) approach, included.

subscription), we can nonetheless cross-checked these survey results with the usage data from *Le Monde*'s website. Online Appendix Figure F.9 plots the average number of pages viewed (as observed thanks to the website logs) for students in T1 and T3 depending on whether they report to use *Le Monde* as their main source of information. We see that this number is much higher among the subset of students who report using *Le Monde* as their main source of information.

We also observe a substitution effect between the use of newspapers – and in particular of *Le Monde* – as the main source of information and the use of social media (sub-Figure 4a). This is true both for T1 and T3 but also for the media education treatment (T2) per se. All three treatments leads to a 5 to 7 percentage point drop in the probability of using social media as the main source of information, corresponding to 10 to 14% of the mean for the control group.

Interestingly however, we do not observe a drop in the use of other news media, and in particular of Hugo Décrypte ("HugoDeciphers"), which is the main reported news source used by students in the baseline survey (sub-Figure 4a). This is consistent with the results of Altay et al. (2025) who find that news sources – even of different format – tend to be complement rather than substitutes.

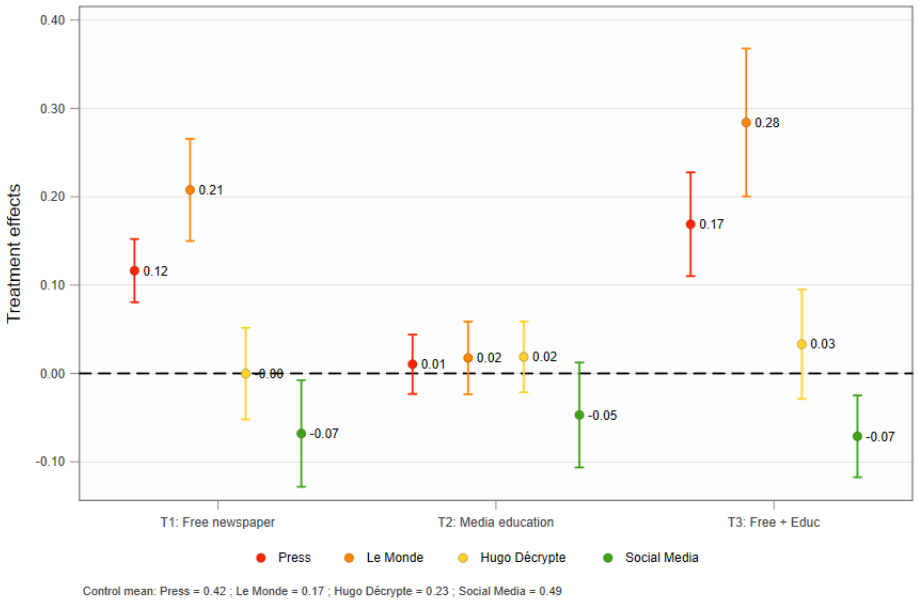
5.5 Treatment effects: Trust in newspapers and Demand for news

Trust Does the fact that, thanks to the free subscription (and to a lower extent to media education), students increase their use of newspapers also translate into increasing trust in journalists? This is a particularly important question given that trust in information from news organizations has continuously declined over the past decades, a phenomena that we observe across all age groups. As described in Section 4.2.1 above, we built a trust in journalists index based on whether the respondent trusts journalists, thinks that journalists report information accurately and truthfully, and believes that journalists play an important role in the political and democratic life of the country. We also built a relative trust in newspaper index.

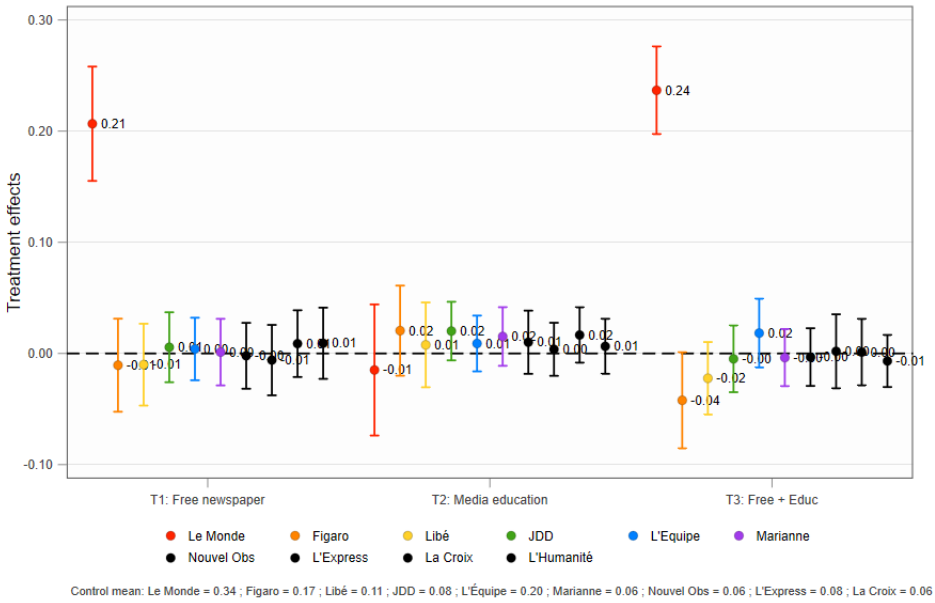
The results are reported in Table 4 for the later, and in the online Appendix Figure F.10 for the former. Overall, we find no treatment effect on our index of trust in journalists. Yet, there is a positive impact of media education per se (T2) on students' view that journalists provide information that reflects reality (there is no effect on the view that journalists play an important role for democracy, nor in the trust for journalists) (online Appendix Figure F.10).

Furthermore, it is interesting to note that there is a positive and statistically significant impact of the combination of free access and media education (T3) on the relative trust in newspapers; T3 indeed leads to a 0.111 standard-deviation increase in the trust in newspapers index (Table 4).

In other words, while we do not obtain any statistically significant treatment effect on



(a) Main source of information



(b) Newspapers Consulted Last Seven Days

Notes: The upper Figure 4a reports the treatment effects for the main source of information indicator variable. The bottom Figure 4b reports the treatment effects for the newspaper consumption indicator variable (that is equal to one if the respondent reports that it has consulted the newspaper at least once during the last seven days, and to zero otherwise).

Figure 4: Treatment effects: Newspapers' consumption and Use of newspapers as the main source of information

trust in traditional media outlets per se (online Appendix Figure F.11)[35], trust in newspapers increases relatively to trust in other media outlets or community members. This might be related to the observed increase in newspaper consumption described in Section 5.4 above (that might serve as a substitute to other news sources that students now trust less).

Demand for news While the above measures rely on reported news consumption and trust, we go one step further and investigate the treatment effects on an hard, observable indicator of engagement with news content, namely the willingness to subscribe to one or more real newsletters. We obtain that both free news access and media education – as well as the combination of the two – lead to an increase in the demand for news, that is both statistically and economically significant (with a 0.063 standard-deviation increase for T3) (Table 4).

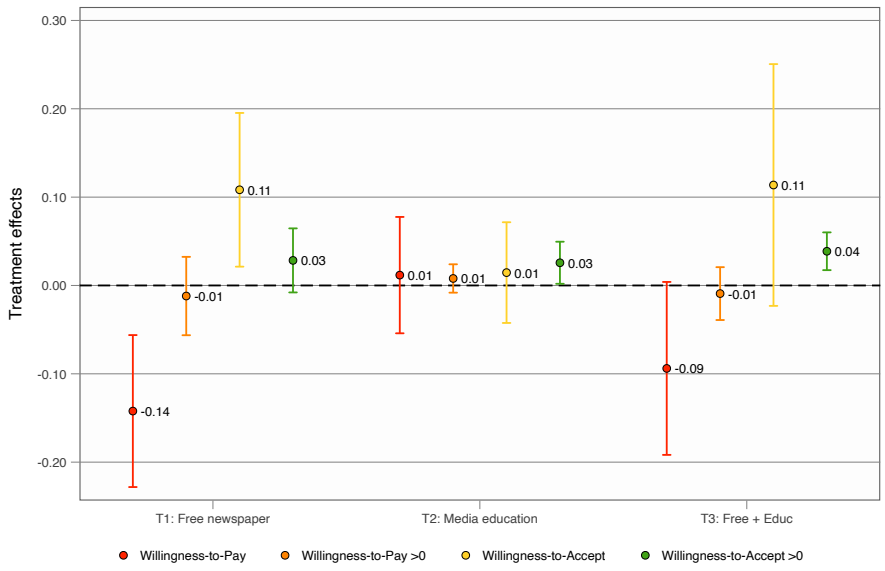
Interestingly, while the effect is particularly pronounced for *Le Monde* newsletter (especially in T1 and T3), we also observe an increased demand for news when considering the other newsletters (see online Appendix Figure F.12 for the estimated treatment effects for each of the newsletters considered separately). E.g. T1 leads to a 13 percentage-point increase in the willingness to subscribe to *Le Monde* newsletter (corresponding to 25% of the mean for the control group), but also to a 6 percentage-point increase for Le Quotidien[36] newsletter (corresponding to nearly 19% of the mean for the control group).

This result regarding the increase demand for news is particularly interesting because it reflects the fact that providing students with news increase their interest for news, and their willingness to get access to more information. Interestingly, the newsletters are for free and the students could have subscribed to them independently of our experiment. But they did not, in part because they most probably did not know about this possibility, and also in part because they never thought about it. This points to habit formation, which has been observed in digital consumption by Allcott et al. (2022). Here, students exposed to one digital news source for some time may experience an increase in the utility for news more in general, thus leading to an increase in demand for both the source they were exposed to and other sources.

Willingness-to-pay for news Does this increased demand for news is also reflected in an increase valuation of the news media? As described above, we measure both the willingness-to-pay (WTP) for a *Le Monde* subscription, and the willingness-to-accept (WTA). Figure 5 presents the results. We find that the minimum price at which the students will be willing to sell their *Le Monde*'s subscription (WTA) is higher for the students who benefited from a free subscription (T1 and T3). Hence, this shows that those students seem to value more high-quality news once they have been exposed to it.

[35] If anything, free newspaper access combined with media education decreases trust in social media and other news websites.

[36] Le Quotidien is a TV news show that analyzes current events and the world around us.



Notes: The Figure reports the treatment effects for the willingness-to-pay (WTP) and the willingness-to-accept (WTA) variables. The WTP is measured as the maximum amount students report they are willing to pay for a one-year subscription to *Le Monde*. The WTA is measured as the minimum price at which students report that they would be willing to resell a one-year subscription to *Le Monde*.

Figure 5: Treatment effects: Willingness-to-pay and Willingness-to-accept

However, the maximum price that they are willing-to-pay to subscribe (WTP) is *negatively* affected. While this might sound surprising, we think that this comes from the fact that, given that the students have been given the news for free, they are no longer willing to pay for it (in a way, they lack a sense of the fact that information is costly to produce).[37] The fact that for T3 this negative effect is lower than for T1 points toward this direction. Students in T3 – through media education – indeed have a better sense of the fact that producing information comes at a cost.

Note furthermore that the gap between the WTP and the WTA is consistent with the existing literature[38], and is often attributed to a loss aversion: the loss of the subscription due to a sale is more pronounced than a gain of the same subscription (see Plott and Zeiler (2005) for a discussion and Kahneman et al. (1991) for the seminal paper in the literature).

Well-being Note finally that the overall increase in news consumption seems to come at no cost in terms of well-being. We indeed observe no significant effects in any of the outcomes related to mental health and personal well-being.

[37] Note that this might also be driven by the "timing" of the question. We indeed ask T1 and T3 students their willingness-to-pay for a subscription they still had for free at the time we ask them.

[38] The so-called "endowment effect" (see e.g. Chapman et al., 2023).

6 Empirical Results: Knowledge and Engagement

The results of the previous section show that providing free access to a newspaper increases news consumption among young citizens. In this section, we investigate whether translates into an increased political knowledge among students, as well as on their political and civic engagement. As before, we also investigate the impact of media education per se, as well as of the combined treatments. Table 5 reports the results.

6.1 Political Knowledge: Avereage Treatment Effects

We first examine whether free access to news and/or media education affect students' political knowledge, as measured by our main *Political Knowledge Index* (defined in Section 4.2.2). We find that the average treatment effects (ATEs) are not statistically different from zero across treatment arms. The same pattern emerges when we consider the individual components of the index—news knowledge, knowledge of French and European politics, and economic knowledge—with ATEs that are not statistically different from zero for any treatment or outcome.

6.2 A Decrease in Information Inequality

While we find no statistically significant average treatment effects on political knowledge, this absence of average effects may mask substantial heterogeneity. In particular, treatment effects may depend on students' socio-economic background, as pre-specified in our pre-analysis plan (Briole et al., 2025a). One possible explanation for the null average effects is that a sizeable share of students – especially those from more advantaged backgrounds – were already relatively well informed prior to the intervention. In that case, increases in news consumption or media literacy would not necessarily translate into measurable gains in political knowledge. Yet, the existing literature documents large information inequalities and shows that individuals from disadvantaged backgrounds often lack basic political information (see e.g. Angelucci and Prat, 2024). If information constraints are more binding for these students, one would expect them to benefit disproportionately from improved access to news and media education.

To investigate this hypothesis, we examine treatment effect heterogeneity by the high school *Indice de Position Sociale* (IPS), a variable used to stratify randomization. The IPS is an administrative index constructed by the French Ministry of Education (DEPP) that captures the average socio-economic and cultural background of students' families within each high school, based on detailed information on parents' occupation and education. We divide high schools into quartiles of the IPS distribution and compare students enrolled in schools below the first quartile (low-SES schools) to those enrolled in schools above this threshold (high-SES schools). We then estimate equation (1) separately for these two groups.

Table 5: Average Treatment Effects: Political Knowledge and Participation

Outcome variable	(1) C	(2) T1-C	(3) S.E.	(4) p	(5) p adj.	(6) T2-C	(7) S.E.	(8) p	(9) p adj.	(10) T3-C	(11) S.E.	(12) p	(13) p adj.	(14) N
Political Knowledge (PK) Index	0,000	-0,001	0,069	0,989		0,003	0,052	0,949		0,018	0,081	0,821		7,091
PK: News	0,000	-0,039	0,069	0,567	0,567	0,010	0,047	0,831	0,930	0,008	0,079	0,924	0,924	6,923
PK: Political landscape	0,000	0,049	0,049	0,319	0,567	0,035	0,050	0,485	0,930	0,064	0,068	0,345	0,924	7,091
PK: Economy	0,000	-0,037	0,060	0,534	0,567	0,004	0,044	0,930	0,930	-0,028	0,058	0,637	0,924	6,917
Political Self Efficacy Index	0.000	-0.139	0.053	0.008		-0.045	0.046	0.328		-0.061	0.042	0.146		6874
Political Participation (PP) Index	0.000	0.006	0.039	0.872		-0.057	0.058	0.327		-0.029	0.064	0.652		7091
PP: Pol. Engagement	0.000	0.013	0.044	0.765	0.921	-0.029	0.053	0.580	0.580	-0.004	0.067	0.955	0.955	7091
PP: Signed the Petition (0/1)	0.772	-0.002	0.022	0.921	0.921	-0.021	0.020	0.302	0.580	-0.015	0.030	0.604	0.955	7091

Notes: Each line corresponds to a separate regression. Binary outcomes are indicated with (0/1); other outcomes are standardized. Column (1) = mean of the dependent variable in the control group. (2) = estimated ITT for T1 and (3) s.e. of the estimated ITT parameter ; (4) = p-value and (5) p-value adjusted within hypothesis for multiple testing using the Benjamini and Hochberg (1995) approach. Standard errors in parentheses. Strata fixed effects and controls selected via Lasso, using the Belloni et al. (2014) approach, included; standard errors clustered at the strata level.

Table 6 reports the results for the *Political Knowledge Index* and its subcomponents. The results reveal a striking pattern: all treatments lead to large and statistically significant increases in political knowledge among students enrolled in low-SES schools (Panel A), while no statistically significant effects are detected for students enrolled in high-SES schools (Panel B). Among students in low-SES schools, free access to newspapers (T1) increases political knowledge by 0.24 SD relative to the control group, while the combined treatment (T3) increases it by 0.28 SD. Media education alone (T2) also has a positive effect of 0.12 SD, significant at the 10% level. Importantly, these gains are not driven by a single dimension of knowledge: treatment effects are positive across all subcomponents of the index, including news knowledge, knowledge of political landscape, and economic knowledge.

To assess the magnitude of this effect, we compare these gains to the baseline knowledge gap. In the control group, students enrolled in low-SES schools score 0.43 SD lower on the *Political Knowledge Index* than students enrolled in high-SES schools. Given the absence of treatment effects among the latter, the estimated gains of 0.24 to 0.28 standard deviations for low-SES students imply that free newspaper access – alone or combined with media education – reduces this baseline knowledge gap by approximately 55-65%, while media education alone reduces it by 28%.

Table 7 reports heterogeneity results for our other main outcomes. Unlike for political knowledge, no clear pattern of heterogeneity emerges from this comparison (except maybe for trust in newspaper, for which treatment effects also tend to be more pronounced in low-SES schools). In particular, it is interesting to note that the increase in newspaper consumption induced by T1 and T3 is very similar in magnitude in low- and high-SES schools, suggesting that the heterogeneous treatment effects on political knowledge are not induced by differential effects on news consumption. Rather, these findings indicate that the *returns* to increased news consumption and media education are higher for students from disadvantaged backgrounds, for whom the intervention may provide access to information and perspectives that are less readily available in their social environment.

Finally, we complement this analysis with a data-driven approach based on recent machine learning methods to study treatment effect heterogeneity (Chernozhukov et al., 2025), focusing on the *Political Knowledge Index*. This analysis first confirms the presence of substantial heterogeneity in treatment effects for all treatments. As shown in Table E.6, the heterogeneity loading parameter (column 2) are strongly significant for all treatments. This analysis also confirms that socio-economic background (as measured by school IPS) is strongly correlated with treatment effects. In particular, the classification analysis (CLAN) reveals that the estimated difference in the mean school IPS between the 25% most affected and the 25% least affected groups is negative and statistically significant, especially for T1 and T3 (Appendix Table E.7).

Table 6: Political Knowledge: Treatment Effects by Socio-Economic Status (IPS Quartiles)

Outcome variable	(1) C	(2) T1-C	(3) S.E.	(4) p	(5) p adj.	(6) T2-C	(7) S.E.	(8) p	(9) p adj.	(10) T3-C	(11) S.E.	(12) p	(13) p adj.	(14) N
Panel A: Low-SES schools (IPS below first quartile)														
Political Knowledge (PK) Index	-0.386	0.239	0.032	0.000		0.115	0.067	0.085		0.279	0.058	0.000		1,786
PK: News	-0.377	0.180	0.062	0.004	0.005	0.140	0.050	0.005	0.016	0.248	0.084	0.003	0.005	1,715
PK: Political landscape	-0.358	0.248	0.061	0.000	0.000	0.057	0.101	0.570	0.570	0.236	0.106	0.026	0.026	1,786
PK: Economy	-0.244	0.192	0.098	0.050	0.050	0.142	0.080	0.076	0.115	0.296	0.101	0.003	0.005	1,704
Panel B: High-SES schools (IPS above first quartile)														
Political Knowledge (PK) Index	0.094	-0.006	0.016	0.728		-0.017	0.029	0.563		-0.030	0.056	0.589		5,305
PK: News	0.113	-0.048	0.047	0.309	0.464	-0.017	0.042	0.679	0.679	-0.042	0.100	0.671	0.671	5,208
PK: Political landscape	0.118	0.053	0.043	0.208	0.464	0.039	0.058	0.496	0.679	0.053	0.071	0.461	0.671	5,305
PK: Economy	0.078	-0.034	0.055	0.534	0.534	-0.011	0.027	0.677	0.679	-0.083	0.048	0.083	0.249	5,213

Notes: Each line corresponds to a separate regression. Binary outcomes are indicated with (0/1); other outcomes are standardized. Column (1) = mean of the dependent variable in the control group. (2) = estimated ITT for T1 and (3) s.e. of the estimated ITT parameter ; (4) = p-value and (5) p-value adjusted within hypothesis for multiple testing using the Benjamini and Hochberg (1995) approach. Standard errors in parentheses. Strata fixed effects and controls selected via Lasso, using the Belloni et al. (2014) approach, included; standard errors clustered at the strata level.

Table 7: Treatment Effects by Socio-Economic Status (IPS Quartiles)

	(1) Control	(2) T1 - C	(3) T2 - C	(4) T3 - C	(5) N
Panel A: Low-SES schools (IPS below first quartile)					
Newspaper consumption	0.000	0.253***	-0.025	0.352***	1,786
		(0.044)	(0.044)	(0.065)	
Trust in newspapers	0.000	0.123	0.188**	0.244*	1,676
		(0.108)	(0.067)	(0.117)	
Newsletter subscription	0.000	0.200	0.023	0.278**	1,676
		(0.120)	(0.067)	(0.082)	
Media literacy skills	0.000	0.155	0.104**	0.167**	874
		(0.089)	(0.041)	(0.062)	
Panel B: High-SES schools (IPS above first quartile)					
Newspaper consumption	0.000	0.298***	0.001	0.364***	5,305
		(0.053)	(0.034)	(0.040)	
Trust in newspapers	0.000	0.026	0.060*	0.100*	5,042
		(0.059)	(0.027)	(0.048)	
Newsletter subscription	0.000	0.171**	0.127**	0.120**	4,954
		(0.051)	(0.050)	(0.046)	
Media literacy skills	0.000	0.150**	0.112*	0.122**	2,574
		(0.056)	(0.051)	(0.049)	

Notes: Each line corresponds to a separate regression. All outcomes are standardized. Column (1) = mean of the dependent variable in the control group. (2) = estimated ITT for T1 (3) = estimated ITT for T2 and (4) = estimated ITT for T3. Standard errors (in parentheses) are clustered at the strata level. Strata fixed effects and controls selected via Lasso, using the Belloni et al. (2014) approach, included. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

6.3 Treatment effects: Civic and Political engagement

Table 5 also reports the results regarding the students' civic and political engagement. We find no effect of any the three treatments on the political participation index. We do not find either results when considering the two components of the index separately: the political engagement index (based on protest participation and participation in the activities of high-school unions), and our hard measure of support for petitions. This also appears in the online Appendix Figure F.14.

Political self-efficacy index T1 (free newspaper access) leads to a *decrease* in the students political self-efficacy index. The coefficient on T3 is also negative but not statistically significant. Why does free news access cause such a decrease (that this is not accompanied by increased news anxiety or worsened mental well-being as we just show)? We think that this is most probably due to the fact that consuming quality information makes subjects more aware of the complexity of politics and the difficulty of changing the status quo.

7 Empirical Results: Media literacy skills

The previous results show that free newspaper access (and to a lower extent media education) leads to an increase in both newspaper consumption and demand for news. They also reduce information inequality. But do free news access and media education lead to improved media literacy skills? Table 4 reports the results for the media literacy skills index, based on observed student behavior in a social media sharing task (see Section 4.2.1). We find that all three treatments significantly improve student media literacy skills, by 0.138 to 0.186 standard deviation. The effect is mostly driven by students refraining from sharing a fake news after fact-checking it (+0.17-0.20 SD), suggesting an increased trust in fact-checking tools and/or an increased awareness of the risk of sharing fake news.[39] We also observe positive coefficients for the use of fact-checking (+0.08-0.11 SD) but these effects are marginally insignificant at conventional levels.

Refraining from sharing a fake news story after fact-checking it might reflect either improved media literacy skills (students are less willing to share a fake news) or a knowledge effect (students know more often that the story is fake and would have thus refrained from sharing it regardless of the fact-checking opportunity). To disentangle between these two possible mechanisms, we also investigate whether students who were *not* given the opportunity to fact-check the news also refrain from sharing it on social media (see online Appendix Figure F.13; "fake news sharing (no FC option)"). We find no statistically significant effect on the

[39] Note that the outcome is reversed here so that the positive coefficient indicate a drop in the probability that students share the fake news after fact-checking it.

probability to share a fake news absent the fact-checking possibility. This shows that the positive effect we observe on the fact that students refrain from sharing a fake news after fact-checking it is not due to a knowledge effect (the fact that they know that the news was fake); it actually reflects their improved media literacy skills following the treatments.

8 Policy implications and Conclusion

This paper reports the results of the first large-scale randomized trial on interventions designed to increase high-quality news consumption among high-school students.

The results are very encouraging. Relaxing the price barrier to high-quality information leads to a sizable increase in news consumption and a substantial reduction in information inequality. This finding is particularly promising because the underlying intervention is easy to scale up and relatively inexpensive: at most a few euros per student per month. Moreover, the payment goes directly to high-quality news providers – and so to the overall production of information that could benefit other citizens. Hence our intervention is "ecological": students were not paid to participate, and they are furthermore representative of the overall population of high-school students in France.[40] Furthermore, it would most probably not experience a "voltage drop" if scaled up (List, 2024). In other words, one might expect our program not to fail to deliver its promises at scale (Al-Ubaydli et al., 2017, 2021).

Yet, one might be surprised by the fact that relaxing the price barrier is so efficient in a context where a lot of news – including high-quality news – is already available for free. First, it is important to highlight that, despite the fact that a lot of news is available for free, some people do actually pay for news, and recent research actually shows that the number of people willing to pay for news is slowly growing. Hence it means that people are willing to access the content that is distributed behind a paywall and actually value it. [41] Furthermore, the availability of free online news does not imply that citizens do not encounter paywalls. According to a recent Pew Research Center study, 74% of Americans run into paywalls at least sometimes when they are looking for news online.[42] Importantly, a third of them also report that they typically give up on accessing the information when they come across an article that requires payment. Hence price seems to act as an important barrier to accessing quality news, consistently with our results.

It should also be noted that, despite the availability of free information, 7.3% of students

[40] Note furthermore that France pretty similar to most Western democracies in terms of news consumption patterns and information inequality challenges.

[41] Interestingly, Fletcher and Nielsen (2017) find that, if anything, there is a positive association between public service news access and paying for online news as well as with the willingness to pay for online news.

[42] Including 38% who report coming across paywalled articles extremely often or often. See "Few Americans pay for news when they encounter paywalls," Emily Tomasik and Michael Lipka, Pew Research Center, June 24, 2025. Accessed on February 3rd, 2026.

participating to this experiment report that they never keep up with political, economic, and social news in France and/or abroad at baseline, and 47% that they only rarely do so (online Appendix Figure F.15). Furthermore, as discussed in Section 5.1 on baseline news consumption, students tend not to inform themselves through newspapers (either online or offline). However, the fact that the T1 and T3 treatment effects are consistently higher than T2 show that our results are not driven by a pure salience effect (i.e. informing students that there is free news available online – from *Le Monde* or other sources).

Better understanding what are the drivers of news consumption is still an open question in the literature – in particular the role played by the demand for political information (see e.g. Martin et al., 2025).[43] In our experiment, we ask students who report using *le Monde* in the endline survey the reasons why they read it.[44] We find that 90% of the students who report using *Le Monde* several times a month or more say that they do so for their personal knowledge, 73% for school-related activities, and 67% to verify information (the students were allowed to chose more than one reason) (online Appendix Figure F.16).

We can go one step further and investigate the kind of news students consume. To do so, we can rely on their observed news consumption (using *Le Monde* data) as well as on their reported news consumption.[45] Online Appendix Figure F.17 reports the results. Students report that they mostly read articles about Politics (64% in T1 and 71% in T3), followed by International news (respectively 57% and 60%). While Sport ranks third, this shows a strong interest in hard news consumption.

Next, we can investigate whether the news students consume correspond to the news they report they are interested in the most (we ask this question both in the baseline and in the endline survey). Online Appendix Figure F.18 reports the results. Perhaps not surprisingly, both at baseline and at endline, the kind of news most students report their are mostly interested in is Sport (respectively 58 and 56%). However, Sport is closely followed by Politics (respectively 52 and 50%). This is consistent with the results of Figure F.17 where the students report that they mostly read articles on Politics on *Le Monde* website. Furthermore at endline, 52% of the students also report a lot of interest in International news (which can be due both their reading of *Le Monde* during the academic year and to the particularly intense international news in 2024-2025).

[43] Martin et al. (2025) exploit the paywall introduction while we consider here today's context where paywalls have now been present for many years. In a sense, our experiment thus considers the reverse event: relaxing the paywall by giving the students a subscription for free.

[44] We ask them the following question: "For what reason(s) do you read *Le Monde* newspaper?", and offer them three possible answers: (i) For my own personal knowledge, (ii) For school: for homework, essays, etc., and (iii) To verify information I have heard elsewhere (friends, social media), to which they could answer by 1. Strongly disagree, 2. Somewhat disagree, 3. Somewhat agree, and 4. Strongly agree.

[45] We indeed ask them in the endline survey the topic of the articles they read the most: "What types of articles did you read the most?", and students were allowed to chose more than type of articles.

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Online Appendix to the Paper: Access to Information, News Consumption and Democratic Participation: A Nationwide Experiment in French High Schools

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February 24, 2026

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A Additional information regarding the experiment

A.1 Schools recruitment

Procedure to contact the schools to present them the experiment In order to recruit the schools, we use a Python script to automatically send two emails to all the secondary schools in France: one to the principal ("proviseur") of the school and one to the school librarian. We obtain these email addresses by scrapping the "annuaire de l'éducation nationale " website. We contacted $5,327$ high schools overall.

Document used to describe the study When contacting the schools to recruit them to be part of the experiment, we sent them the document reproduced in Figure A.1 presenting the experiment. (The document was sent in French; we provide here the corresponding English translation).

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EXPERIMENT

YOUNG PEOPLE AND THE MEDIA

CALL FOR VOLUNTEERS

How do young citizens inform themselves? What are their information practices, and how do these practices affect their civic participation?

We'd like to work with you on an ambitious research project, the first of its kind in France, to understand how media and information literacy initiatives can develop their media skills and encourage civic participation.

We're inviting volunteer high schools to take part in this action-research project with classes in Seconde, Première and/or Terminale over the course of the 2024-2025 school year.

To what extent can access to quality information and media education develop knowledge and interest in current affairs, the ability to distinguish between true and false information, and the civic and political participation of young citizens?

To answer these questions, we are proposing **two main actions** to our partner high schools:

- A free digital subscription to a leading daily newspaper for a class and its teacher for the whole school year.
- Media education modules developed by CLEMI for teachers, who will be able to set up activities on the themes of media and information with their classes.

In order to measure whether these interventions have an impact on young citizens, **this action-research project is based on a rigorous experimental approach** carried out by a group of researchers specialized in media and information education. The aim is to rigorously demonstrate the impact that this type of intervention can have on young citizens.

To this end, we are inviting interested high schools to take part in this action-research project, in which :

- **We're going to draw lots to decide which actions will be offered to each high school.** A quarter of participating high schools will receive a subscription, a quarter of high schools will receive media literacy training modules, and a quarter of high schools will receive both. The remaining quarter will receive none of these actions during the course of the project. This methodology makes it possible to measure the impact of each action in a rigorous way.
- **We will offer teachers and their students two questionnaires**: one at the beginning of the school year and one at the end. The questionnaires will be administered in the school's computer room.
- **The high schools will be asked to provide feedback and discuss the data collected in relation to young people's information practices.**

The data collected as part of this action-research project is collected **in strict compliance with the General Data Protection Regulation (GDPR),** and for research purposes only.

Figure A.1: "Call for volunteers" sent to schools for the experiment recruitment

WHAT WE PROPOSE TO HIGH SCHOOLS

- Contribution to an innovative research project that could have a major impact on our educational practices.
- The opportunity for teachers to take part in a media education training course run by the Centre de liaison de l'enseignement et des médias d'information.
- The prospect of students and teachers benefiting from a digital subscription to a benchmark daily newspaper.
- Detailed feedback from the researchers presenting the results of our study and the positioning of your high school in our national sample.

WHAT WE ASK OF HIGH SCHOOLS

- Confirm their willingness to commit to the research protocol by June 2024.
- Participate in the project until the end of the school year, regardless of which intervention your high school will benefit from as a result of the draw.
- Contribute to the survey protocol by facilitating the implementation of electronic questionnaires for students, teachers and school heads.

CALENDAR

February - June	**Receipt of applications from high schools**
2024 May - July	**Webinars for school heads and volunteer teachers**
2024	**Initial survey of teachers and students**
October 2024	**Random selection of high schools and assignment of actions to each high school**
November 2024	**Final survey of teachers and students**
May 2025	**Feedback of results to high schools**
December 2025	

TO EXPRESS YOUR INTEREST

If your school is interested in taking part in the experiment, please fill in the following form:

https://forms.gle/m3oCWGoAzkpwwf549

WHO WE ARE



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PARTNERS

depp Direction de l'évaluation, de la prospective et de la performance

DEPP is the department of the French Ministry of Education responsible for evaluating and measuring performance in the fields of education and training. As such, it contributes to the evaluation of innovative policies conducted by the Ministry of Education, and also facilitates the work of external researchers.

https://www.education.gouv.fr

CLEMI
Le centre pour l'éducation aux médias et à l'information

CLEMI (Centre pour l'éducation aux médias et à l'information) is responsible for media and information education (ÉMI) throughout the French education system. It promotes the use of pluralistic information resources in education, to help students better understand the world around them.
the world around them.

https://www.clemi.fr/

idee

The IDEE program is a structuring facility for research funded by the Agence Nationale de la Recherche (ANR) and supported by the Ecole normale supérieure-PSL, which aims to develop large-scale experimental research in education, and to promote the use of its results. It brings together a multidisciplinary consortium of leading laboratories.

The schools that showed interest in the project were then invited to attend a webinar (on June 19th, 2024) during which we presented the experiments and answered all the related questions.

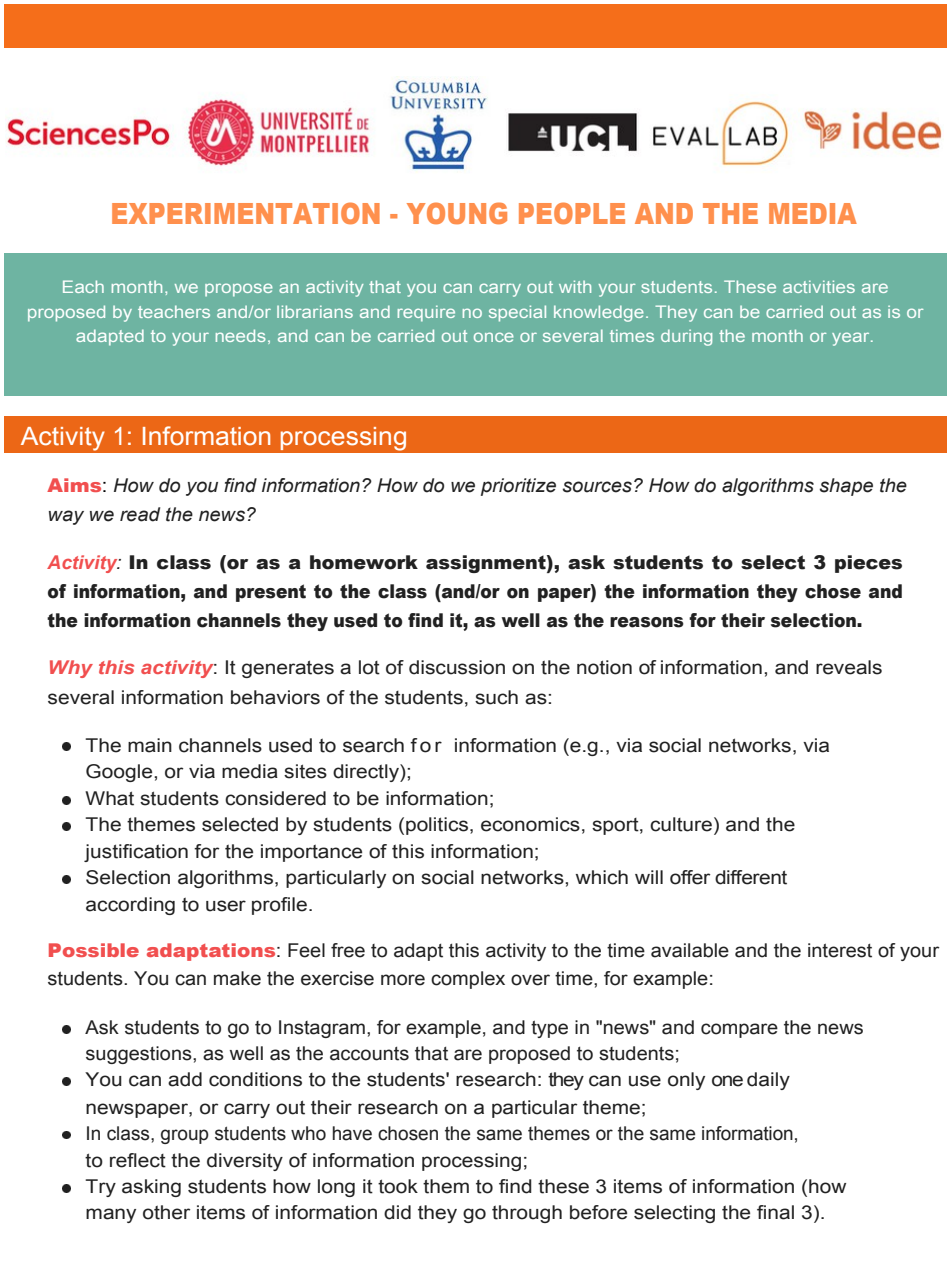
A.2 Media education activities

As described in Section 2.2.2, in the media education treatment arm, teachers receive training and pedagogical materials to implement media education activities in their classrooms. The intervention consists of two components: an asynchronous online training and an optional simulation module, described in turns in this section.

A.2.1 An asynchronous online training

We sent three emails to all the teachers in this treatment arm during the experiment to provide them information on the media education activities: one (i) on November 11st, 2024 for the "information processing" activity, one (ii) on January 13rd, 2025 for the "fake news" activity, and the last one (iii) on March 27th, 2025 for the "information overload" activity.

November 11st, 2024 – Information processing On November 11st, 2024, all the teachers in the media education treatment arm received an email containing the following core message: "As part of the media literacy project you agreed to participate in this year, starting this December, we are offering one activity per month that you can do with your students if you wish. Attached is a one-page PDF file presenting the first activity on information processing. This activity addresses several questions: How do we search for information? How do we prioritize sources? How do algorithms shape our reading of the news?" The PDF file was in French; Figure A.2 reproduces its content in English.



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EXPERIMENTATION - YOUNG PEOPLE AND THE MEDIA

Each month, we propose an activity that you can carry out with your students. These activities are proposed by teachers and/or librarians and require no special knowledge. They can be carried out as is or adapted to your needs, and can be carried out once or several times during the month or year.

Activity 1: Information processing

Aims: *How do you find information? How do we prioritize sources? How do algorithms shape the way we read the news?*

Activity: **In class (or as a homework assignment), ask students to select 3 pieces of information, and present to the class (and/or on paper) the information they chose and the information channels they used to find it, as well as the reasons for their selection.**

Why this activity: It generates a lot of discussion on the notion of information, and reveals several information behaviors of the students, such as:

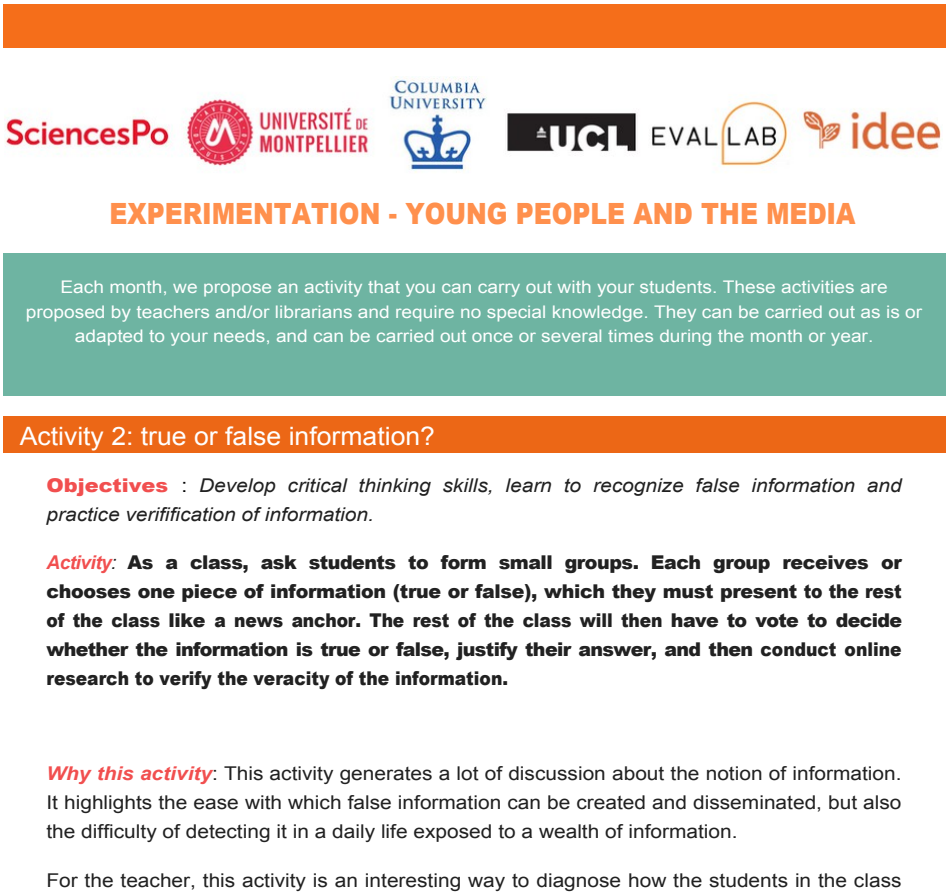
- The main channels used to search for information (e.g., via social networks, via Google, or via media sites directly);
- What students considered to be information;
- The themes selected by students (politics, economics, sport, culture) and the justification for the importance of this information;
- Selection algorithms, particularly on social networks, which will offer different according to user profile.

Possible adaptations: Feel free to adapt this activity to the time available and the interest of your students. You can make the exercise more complex over time, for example:

- Ask students to go to Instagram, for example, and type in "news" and compare the news suggestions, as well as the accounts that are proposed to students;
- You can add conditions to the students' research: they can use only one daily newspaper, or carry out their research on a particular theme;
- In class, group students who have chosen the same themes or the same information, to reflect the diversity of information processing;
- Try asking students how long it took them to find these 3 items of information (how many other items of information did they go through before selecting the final 3).

Figure A.2: Media education activities: Activity 1 – Information processing

January 13rd, 2025 – True or false information? On January 13rd, 2025, the teachers received an email highlighting that "attached are two PDF files presenting an activity on fake news. This activity is likely to generate rich discussions on the concept of information and the evaluation of the veracity of a given piece of information, especially in the context of rapid developments in generative artificial intelligence." The first PDF file details the activity and is reproduced (translated from French) in Figure A.3. The second PDF file contained five examples of true and false news.



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EXPERIMENTATION - YOUNG PEOPLE AND THE MEDIA

Each month, we propose an activity that you can carry out with your students. These activities are proposed by teachers and/or librarians and require no special knowledge. They can be carried out as is or adapted to your needs, and can be carried out once or several times during the month or year.

Activity 2: true or false information?

Objectives : *Develop critical thinking skills, learn to recognize false information and practice verifification of information.*

Activity: **As a class, ask students to form small groups. Each group receives or chooses one piece of information (true or false), which they must present to the rest of the class like a news anchor. The rest of the class will then have to vote to decide whether the information is true or false, justify their answer, and then conduct online research to verify the veracity of the information.**

Why this activity: This activity generates a lot of discussion about the notion of information. It highlights the ease with which false information can be created and disseminated, but also the difficulty of detecting it in a daily life exposed to a wealth of information.

For the teacher, this activity is an interesting way to diagnose how the students in the class apprehend potential false information, how they justify the decision to qualify a piece of information as true or false, and how they will try to seek out and verify the source of the information on the Internet.

Practical application: To carry out this activity, we've sent you some ideas for information to be presented by the different groups. You can of course choose others, or ask students to look for one or more pieces of information themselves.
(true and false) a few days before the activity and prepare to present it in class.

During the presentation, students may choose to project one or more photos or short videos to support their points. They will have to construct a narrative to present the information in a few minutes.

Figure A.3: Media education activities: Activity 2 – True or false information?

March 27th, 2025 – True or false information? Finally, on March 27th, 2025 all the teachers received an email offering them "a new activity that you can do with your students. This activity focuses on information overload and the distinction between true and false information. This activity includes three sub-activities that you can do with your students to help them work on these topics", accompanied by a Word including links to resources needed to realize the sub-activities.

A.2.2 An optional simulation module

The second component of the media education intervention consisted in an optional simulation module: *Classe Investigation*. *Classe Investigation* is a game-based media literacy activity developed by CLEMI in collaboration with journalists and educators.

In this immersive role-playing exercise, students work in pairs to conduct a simulated journalistic investigation. Using text, audio, and video sources, they must verify facts, select and prioritize information, and produce a final journalistic output – either in print or digital format. At the end of the session, students compare their work with that of professional journalists who covered the same fictional scenario. Each session concludes with a structured debriefing that invites students to reflect on key aspects of the journalistic process: editorial responsibility, choice of sources, time constraints, and the ethics of news production. Participation in this module requires teachers to attend a 2.5-hour live online training session with a CLEMI-affiliated trainer.

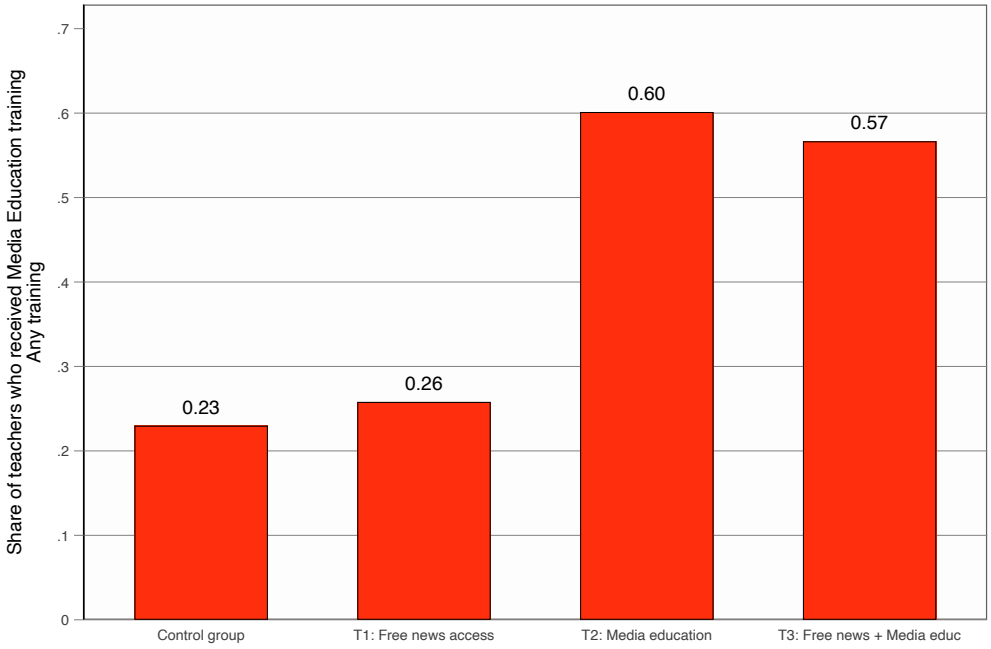
A.2.3 Media education activities: Take-up

As appears in Figure A.4, only 60% of the teachers in T2 followed the media education training activities they were offered, and 57% in T3 when considering any form of media education training. These shares are even lower (53% and 45% respectively) when we only focus on the media education training providing by the CLEMI).

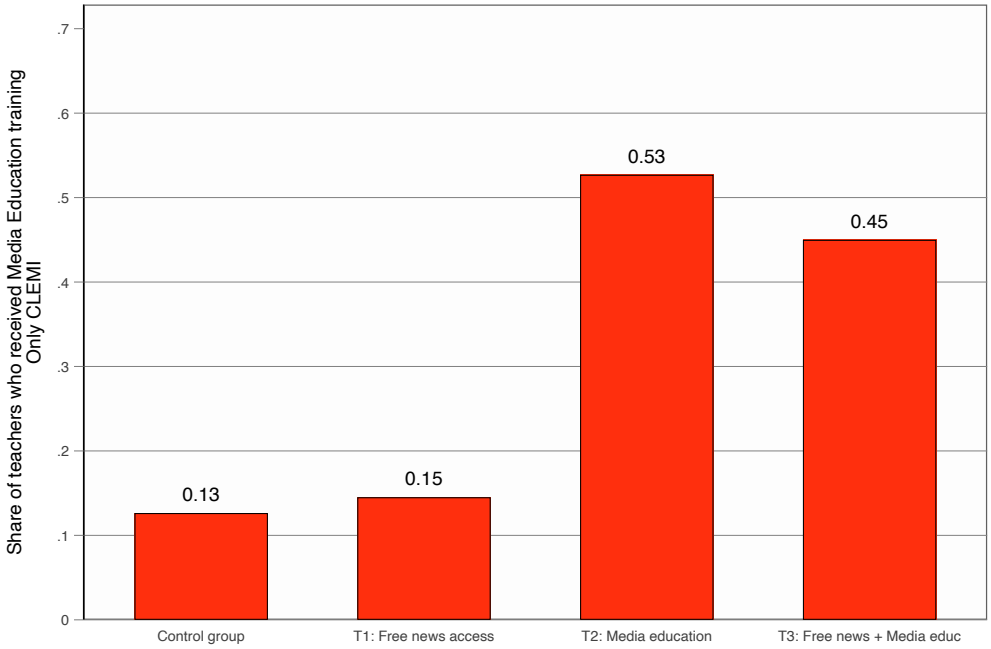
How to explain this relative low up-take? The answers to the teachers' endline survey allow us to understand why a large share of the teachers did not follow any of the offered media education training activities. For each of the proposed activities, we ask them the reasons why they did not implement them, offering them five possible answers: (i) not interesting, (ii) no time, (iii) technical difficulties, (iv) already taken, and (v) not aware of it. Figure A.5 reports the results. For the four activities proposed by the CLEMI (Class investigation as well as the three asynchronous training sessions), we observe that the main reason mentioned by the teachers is systematically a lack of time. Furthermore, a number of teachers report that they did not follow the training activities because they have already done so.

It is also important to note that the majority of the teachers who actually followed the training activities then reported that they found them of interest (and similarly "not interesting" is rarely mentioned by the teachers as a reason for not taking the training).

Finally note that some teachers in both the control and the T1 treatment group followed some media education training during the academic year covered by our experiment (around 25%), even if this was not as part of our experiment (see Figure A.4). Yet, as reported in Table A.1, media education training (that we also call Media and Information Literacy – MIL) was much lower among these groups than among T2 and T3.



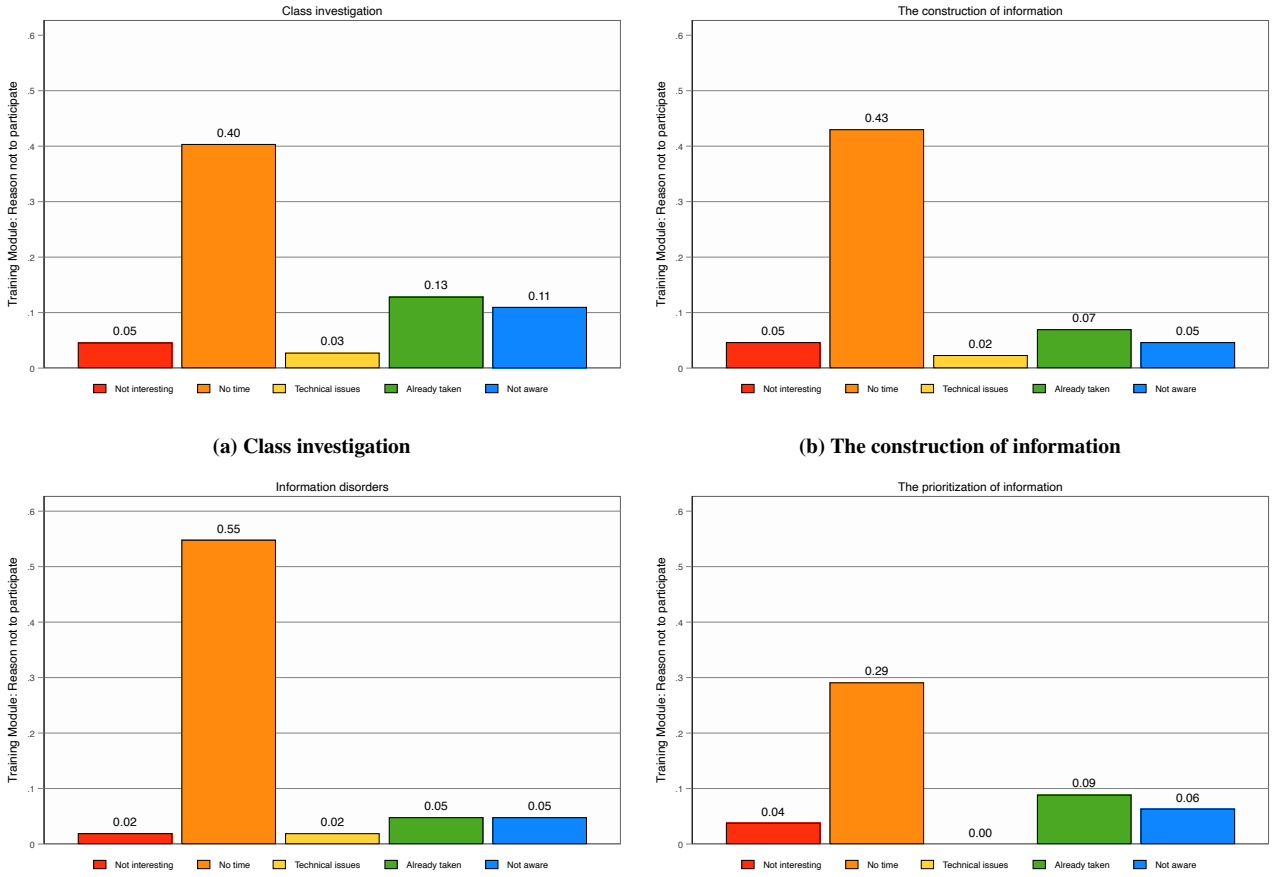
(a) All media education training activities



(b) Media education activities providing by the CLEMI

Notes: The figure reports the take-up of the media education activities offered to the teachers depending on the treatment group. The upper Figure A.4a reports the share of the teachers who went through any media education activities, while the bottom Figure A.4b focuses on the activities offered by the CLEMI.

Figure A.4: "Media education" take-up: Teacher training



(a) Class investigation

(b) The construction of information

(c) Information disorders

(d) The prioritization of information

Notes: The figure shows for the "Classe Investigation" online training (sub-Figure A.5a) as well as for the three asynchronous training sessions offered by the CLEMI – "The construction of information" (sub-Figure A.5b), "Information disorders" (sub-Figure A.5c), and "The prioritization of information" (sub-Figure A.5d – the reasons reported by the teachers for not taking the training.

Figure A.5: Media education training activities: Reasons for not taking the training

Table A.1: Treatment effects: "Media education" teaching (teachers)

Variable	Control	T1 – C	T2 – C	T3 – C
Panel A: Implementation of MIL activities in class				
MIL Teaching Index	0.00	0.29	0.42*	0.51***
		(0.16)	(0.20)	(0.14)
MIL: Hours	6.62	2.02	3.49**	2.96**
		(1.43)	(1.45)	(1.29)
MIL: Class activities	0.00	0.33**	0.35*	0.47***
		(0.14)	(0.16)	(0.14)
MIL: Topics	0.00	0.11	0.25	0.23
		(0.23)	(0.24)	(0.20)
Panel B: Training in MIL				
MIL training (0/1)	0.23	0.04	0.35***	0.35***
		(0.09)	(0.05)	(0.09)
CLEMI training (0/1)	0.13	0.02	0.38***	0.33***
		(0.07)	(0.06)	(0.10)
CLEMI: Info construction (0/1)	0.02	0.01	0.32***	0.26***
		(0.03)	(0.07)	(0.07)
CLEMI: Info disorder (0/1)	0.02	0.02	0.22***	0.18***
		(0.03)	(0.05)	(0.05)
CLEMI: Info hierarchy (0/1)	0.00	-0.00	0.35***	0.43***
		(0.00)	(0.05)	(0.08)
Class Investigation (0/1)	0.03	0.00	0.18***	0.14**
		(0.04)	(0.04)	(0.05)
Panel C: Confidence in Teaching MIL				
MIL: Confidence Index	0.00	-0.06	0.09	0.18**
		(0.16)	(0.19)	(0.07)
Confidence: skills	0.00	-0.14	-0.02	0.10
		(0.19)	(0.15)	(0.11)
Confidence: topics	0.00	0.02	0.14	0.19*
		(0.22)	(0.22)	(0.09)
Observations	357	357	357	357

Notes: Control = mean of the dependent variable. Standard errors in parentheses. Strata fixed effects included; standard errors clustered at the strata level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

A.3 Outcomes of interest

Trust in Journalists Index This index is based on three survey items, measured in the student endline survey. First, students are asked to indicate the extent to which they agree with two statements: "journalists report information accurately and truthfully." and "journalists play an important role in the political and democratic life of our country." Students were offered five response options: (i) strongly disagree, (ii) disagree, (iii) neither agree nor disagree, (iv) agree, and (v) strongly agree. Second, students report how much they trust journalists in general. Response options were: (i) not at all, (ii) a little, (iii) a lot, and (iv) completely.

Media literacy skills As highlighted in the core of the paper, we build an index of students' media literacy skills based on two observed outcomes.
The first outcome is the **fact-checking behavior**, that we measure through the observed use of a fact-checking tool. More precisely, we offer students the possibility to fact-check a (fake) news story by telling them "if you would like to verify this information, you can consult the article below from the Agence France-Presse (AFP) Factuel website, which specializes in fact checking", and we then observe whether or not they click on the AFP Factuel article.
The second outcome – that we call responsible media practices – is measured through a **social media sharing task**, where we ask students who are given the opportunity to fact-check it in the first place whether they will be willing to share a (fake) news story: "Would you be willing to share this information on social media?"

Political Self Efficacy The index is based on students' responses to a 5 questions capturing internal political efficacy (Niemi et al., 1991). In details, students are asked to indicate their level of agreement with the following statements: (i) when political issues are discussed, I usually have something to say; (ii) I can easily understand most political issues; (iii) I have political opinions that would be interesting to hear; (iv) I feel capable of participating in political life; and (v) I have a good understanding of political issues concerning France. For each question, respondents are offered five response options: (i) strongly disagree, (ii) disagree, (iii) neither agree nor disagree, (iv) agree, and (v) strongly agree.

News Anxiety Students' news-related anxiety is measured using a scale adapted from Bodas et al. (2015). The scale captures emotional and behavioral responses specifically associated with exposure to news content. Students are asked to indicate their level of agreement with the following statements:

- "The news often makes me feel that the world is going badly."
- "Reading the news often makes me feel anxious."
- "I find it difficult to mentally disengage from certain pieces of information after reading the news."

- "I deliberately try to avoid the news."
- "Reading the news sometimes makes me feel that there is nothing I can do to improve things."

For each item, students report their agreement on a five-point Likert scale ranging from *strongly disagree* to *strongly agree*.

Mental health Students' mental health is measured using the *Perceived Stress Scale* (PSS) developed by Cohen et al. (1983) and validated in French by **?**. The scale assesses the extent to which students perceive their lives as stressful over the past month. Students are asked how often they experienced the following situations during the last month: being upset by an unexpected event; feeling unable to control important things in their life; feeling nervous or stressed; feeling confident in their ability to handle personal problems; feeling that things were going their way; feeling unable to cope with all the things they had to do; being able to control their irritations; feeling on top of things; feeling angered because events were outside of their control; and feeling that difficulties were piling up so high that they could not overcome them. For each item, students respond on a five-point scale ranging from *never* to *often*.

Happiness Students' happiness is measured following the approach of Allcott et al. (2020b). Students are asked to report their overall level of happiness over the past four weeks on a seven-point scale ranging from 1 (*not very happy*) to 7 (*very happy*). They are also asked to assess their happiness relative to that of their peers over the same period, on a seven-point scale ranging from 1 (*less happy than most peers*) to 7 (*happier than most peers*). Responses to these two items are standardized and averaged to construct the happiness measure, with higher values indicating greater self-reported happiness.

B Theoretical framework: Proofs

B.1 Proofs of Proposition 1

Proof. Throughout, assume the control-group price is high enough that the subject chooses option (a), so

$$(x_A^0, x_B^0) = (\eta\gamma_A, 0), \qquad x^0 = \eta\gamma_A, \qquad I^0 = f(x^0).$$

(E). Under education, interest increases from η to $\eta' > \eta$ while the subject still does not subscribe, hence remains in option (a). Therefore

$$(x_A^E, x_B^E) = (\eta'\gamma_A, 0), \qquad x^E = \eta'\gamma_A, \qquad I^E = f(\eta'\gamma_A).$$

Subtracting control yields

$$\Delta_E x_A = (\eta' - \eta)\gamma_A, \quad \Delta_E x_B = 0, \quad \Delta_E x = (\eta' - \eta)\gamma_A, \quad \Delta_E I = f(\eta'\gamma_A) - f(\eta\gamma_A).$$

(F). If $\eta = 0$, then $U(x_A, x_B)$ is maximized at $(0, 0)$ regardless of access, so all effects are zero. If $\eta > 0$, the free subscription sets $p = 0$ and the subject chooses option (b) (under the maintained interiority assumption). Thus

$$x_A^F = \frac{\eta}{1-\delta^2}(\gamma_A + \delta\gamma_B), \qquad x_B^F = \frac{\eta}{1-\delta^2}(\delta\gamma_A + \gamma_B),$$

so relative to control

$$\Delta_F x_A = x_A^F - \eta\gamma_A = \eta\,\frac{\delta(\gamma_B + \delta\gamma_A)}{1-\delta^2}, \qquad \Delta_F x_B = x_B^F - 0 = \eta\,\frac{\delta\gamma_A + \gamma_B}{1-\delta^2}.$$

Moreover,

$$x^F = x_A^F + x_B^F = \frac{\eta(\gamma_A + \gamma_B)}{1-\delta},$$

hence

$$\Delta_F x = x^F - x^0 = \eta\left(\frac{\gamma_A + \gamma_B}{1-\delta} - \gamma_A\right) = \eta\,\frac{\gamma_B + \delta\gamma_A}{1-\delta}.$$

Since $I = f(x)$, it follows that

$$\Delta_F I = f(x^F) - f(x^0) = f\left(\eta\,\frac{\gamma_A + \gamma_B}{1-\delta}\right) - f(\eta\gamma_A).$$

The sign statements follow directly: $\Delta_F x_B > 0$ when $\eta > 0$ and $\delta\gamma_A + \gamma_B > 0$; and $\Delta_F x > 0$ iff $\eta > 0$ and $\gamma_B + \delta\gamma_A > 0$, i.e. $\delta > -\gamma_B/\gamma_A$.

(EF). Under the joint treatment, η is replaced by η' and $p = 0$, so (by the same maintained assumptions)

the subject chooses option (b) with

$$x^{EF} = \frac{\eta'(\gamma_A + \gamma_B)}{1-\delta}.$$

Therefore the interaction effect on total news is

$$\Delta_{EF}x - \Delta_E x - \Delta_F x = \left(x^{EF} - x^0\right) - \left(x^E - x^0\right) - \left(x^F - x^0\right) = x^{EF} - x^E - x^F + x^0,$$

and substituting $x^{EF} = \eta'(\gamma_A + \gamma_B)/(1-\delta)$, $x^E = \eta'\gamma_A$, $x^F = \eta(\gamma_A + \gamma_B)/(1-\delta)$, and $x^0 = \eta\gamma_A$ gives

$$\Delta_{EF}x - \Delta_E x - \Delta_F x = (\eta' - \eta)\left(\frac{\gamma_A + \gamma_B}{1-\delta} - \gamma_A\right) = (\eta' - \eta)\frac{\gamma_B + \delta\gamma_A}{1-\delta}.$$

Thus, whenever $\eta' > \eta$ and $\gamma_B + \delta\gamma_A > 0$ (i.e. both $\Delta_E x > 0$ and $\Delta_F x > 0$), the interaction is strictly positive; if either component effect is zero, the interaction is zero by the same expression. Finally, the interaction effect on knowledge equals

$$f(x^{EF}) - f(x^E) - f(x^F) + f(x^0),$$

whose sign depends on the curvature of f (with concavity tending to attenuate interaction effects in I relative to those in x). ■

B.2 Proofs of Proposition 2

Proof. From the proof of Proposition 1, we have that when $\delta = 0$:

$$x^0 = \eta\gamma_A \text{ and } x^F = \eta(\gamma_A + \gamma_B).$$

Therefore, when $\delta = 0$, we have

$$I^F(\gamma'') - I^F(\gamma') - (I^0(\gamma'') - I^0(\gamma')) = f(\eta\gamma''_A + \eta\gamma_B)) - f(\eta\gamma''_A)) - f(\eta\gamma'_A + \eta\gamma_B)) - f(\eta\gamma'_A)) < 0$$

because f is concave and, if the treatment is effective, $\eta\gamma_B > 0$. ■

C Balancing Checks

Table C.1: Balancing Checks: Student Characteristics

Variable	Control	T1 - C	T2 - C	T3 - C	N
Age	15.568	0.042	0.001	-0.016	6,871
		(0.045)	(0.068)	(0.089)	
Female (0/1)	0.573	-0.040	-0.006	-0.013	6,964
		(0.030)	(0.017)	(0.045)	
Foreign origin (0/1)	0.277	-0.009	0.007	-0.040	7,091
		(0.041)	(0.035)	(0.048)	
Presence on Social Media (BL)	0.507	0.000	-0.008	-0.025*	7,076
		(0.018)	(0.019)	(0.013)	
MIL exposure (BL)	1.362	-0.007	-0.031	0.001	5,950
		(0.026)	(0.037)	(0.032)	
Newspaper Consumption Index (BL)	0.00	-0.116	-0.019	-0.078	7,076
		(0.088)	(0.041)	(0.049)	
Media Literacy Skills (BL)	0.00	-0.025	0.048	0.029	7,051
		(0.038)	(0.028)	(0.034)	
Political Knowledge (BL)	0.00	-0.096	-0.014	0.003	7,033
		(0.056)	(0.064)	(0.068)	
Political Participation (BL)	0.00	-0.073	-0.017	-0.045	6,949
		(0.062)	(0.027)	(0.038)	

Strata FE included. School weights. Clustered s.e. at strata level.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C.2: Balancing Checks: Teacher characteristics

Variable	Control	T1 - C	T2 - C	T3 - C
Female teacher (0/1)	0.69	0.123	-0.005	-0.077
		(0.090)	(0.058)	(0.109)
Age (years)	46.65	1.891	-0.209	0.534
		(1.829)	(1.612)	(1.657)
General teaching experience (years)	20.00	2.465	1.147	-0.207
		(2.328)	(1.823)	(1.675)
High-level certification: *Agrégation* (0/1)	0.32	-0.085	0.015	-0.117**
		(0.080)	(0.043)	(0.048)
Head teacher (0/1)	0.25	-0.002	0.015	-0.124
		(0.068)	(0.045)	(0.073)
Trained in MIL last 5 years (0/1)	0.43	0.077	-0.052	0.089
		(0.052)	(0.053)	(0.058)
Trained by CLEMI last 5 years (0/1)	0.30	0.083	-0.030	0.007
		(0.050)	(0.052)	(0.060)
MIL teaching self-confidence (std.)	0.00	0.025	-0.028	-0.099
		(0.186)	(0.184)	(0.214)
MIL class activities (std.)	0.00	0.029	0.082	-0.032
		(0.228)	(0.242)	(0.173)
MIL topics (std.)	0.00	-0.109	0.133	-0.041
		(0.229)	(0.185)	(0.142)
Observations	357	357	357	357

Standard errors in parentheses

Strata FE included. School weights. Cluster s.e. strata.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: Active teaching practices defined as in **?**.

Table C.3: Balancing Checks: Class characteristics

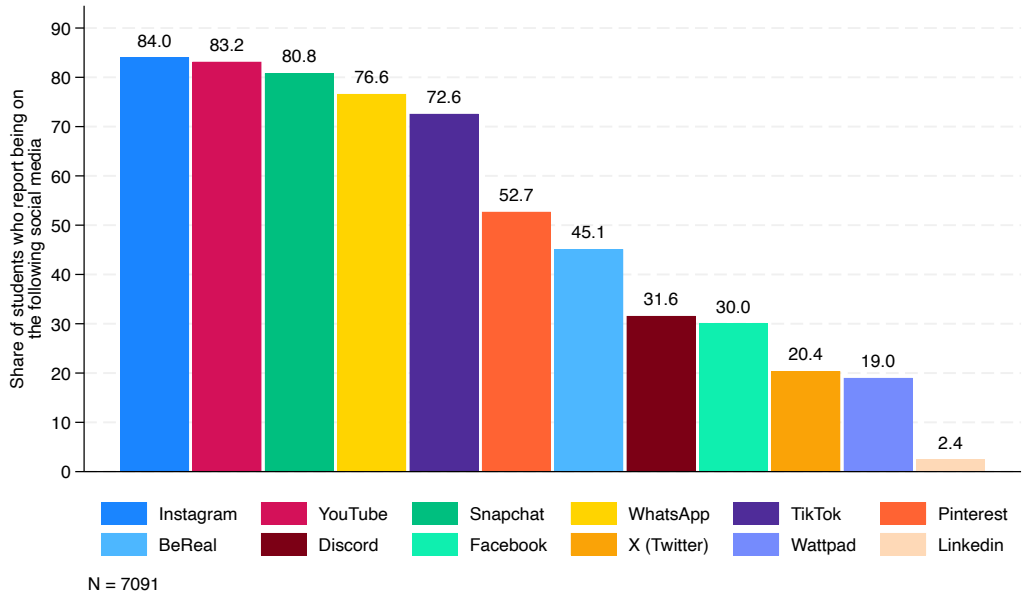
Variable	Control	T1 - C	T2 - C	T3 - C
School climate (index)	0.00	0.097	0.100	0.126
		(0.160)	(0.134)	(0.136)
General track (0/1)	0.74	-0.024	-0.060	-0.062
		(0.041)	(0.044)	(0.058)
Number of students per class	27.13	2.173*	0.538	-1.562
		(1.198)	(1.153)	(1.146)
Class: 10^{th} grade (Seconde)	0.38	0.004	-0.016	-0.029
		(0.040)	(0.019)	(0.043)
Class: 11^{th} grade (Première)	0.42	-0.050	0.027	0.043
		(0.054)	(0.053)	(0.071)
Class: 12^{th} grade (Terminale)	0.16	0.052**	-0.017	-0.044
		(0.023)	(0.047)	(0.054)
Observations	357	357	357	357

Standard errors in parentheses

Strata FE included. School weights. Cluster s.e. strata.

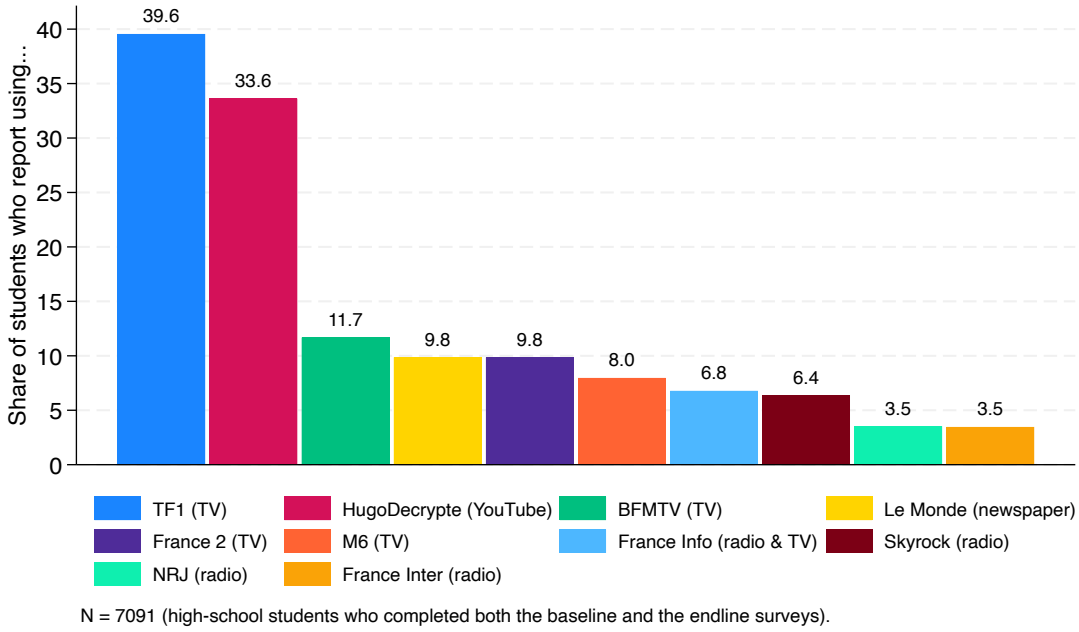
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

D Descriptive evidence: News consumption at baseline



Notes: The Figure plots the reported use of social media in the baseline survey. An observation is a student. Only the students who completed the baseline and the endline survey are included.

Figure D.1: Descriptive evidence at baseline: Use of social media



Notes: The Figure plots the share of the students who report using the different media outlets in the baseline survey. For each of the media category (e.g. television, social media, etc.) they report having used as a source of news over the past seven days, students were asked to list the name(s) of the specific outlets they have consumed. We report here descriptive statistics for the top-10 media outlets in terms of number of times they were listed. An observation is a student. Only the students who completed the baseline and the endline survey are included.

Figure D.2: Descriptive evidence at baseline: Most frequently used media outlets

E Additional Tables

Table E.1: Student Attrition

	(1) Endline Participation
T1	-0.004
	(0.063)
T2	-0.065
	(0.071)
T3	-0.005
	(0.051)
Constant	0.765***
	(0.041)
Observations	9628

Standard errors in parentheses

Strata FE included, Cluster S.E. Strata, school weights included. Control mean : 0.763

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: This table reports an attrition analysis where endline participation is regressed on treatment indicators (T1, T2, T3) and randomization strata fixed effects. The sample includes all participating students (i.e., who responded to either the baseline, the endline, or both surveys). Standard errors (in parentheses) are clustered at the school level. The control group is the omitted category; the control mean is 0.78. $*p < 0.10$, $**p < 0.05$, $***p < 0.01$.

Table E.2: Teacher Attrition

	(1) Endline Participation
T1	-0.014
	(0.020)
T2	-0.005
	(0.051)
T3	0.005
	(0.046)
Constant	0.935***
	(0.027)
Observations	383

Standard errors in parentheses

Strata FE included, Cluster S.E. Strata, school weights included. Control mean : 0.935

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: This table reports an attrition analysis where endline participation is regressed on treatment indicators (T1, T2, T3) and randomization strata fixed effects. The sample includes all participating teachers (i.e., who responded to either the baseline, the endline, or both surveys). Standard errors (in parentheses) are clustered at the school level. The control group is the omitted category; the control mean is 0.93. $*p < 0.10$, $**p < 0.05$, $***p < 0.01$.

Table E.3: Students' treatment effects: News consumption

		Interest in news								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	News inform	Political	Scientific	Social	Economic	Cultural	Celebrity	Internat.	Sport	Environment
T1: Free newspaper	-0.07**	-0.05***	0.02	-0.02	-0.02	-0.02	-0.02	-0.05**	-0.00	-0.00
	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
T2: Media education	0.00	-0.01	0.01	-0.01	-0.01	0.00	-0.01	0.00	0.02	0.01
	(0.03)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
T3: Free + Educ	-0.02	-0.02	0.01	-0.02	-0.04**	0.01	-0.02	-0.01	-0.00	0.01
	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Observations	7,099	7,117	7,117	7,117	7,117	7,117	7,117	7,117	7,117	7,117
Nb clusters	240	240	240	240	240	240	240	240	240	240
Mean DepVar	1.57	0.53	0.27	0.35	0.26	0.41	0.48	0.52	0.56	0.24
Sd DepVar	0.78	0.50	0.44	0.48	0.44	0.49	0.50	0.50	0.50	0.42

Notes: The table .
Lasso has selected these control variables: Student gender BL interest Scientific news BL interest Social news BL interest Cultural news BL interest Environmental news Teacher is homeroom teacher Missing Level of the class

Table E.4: Students' treatment effects: News consumption, Depending on the uptake of the free news treatment

		Interest in news								
	(1) News inform	(2) Political	(3) Scientific	(4) Social	(5) Economic	(6) Cultural	(7) Celebrity	(8) Internat.	(9) Sport	(10) Environment
T1: Free newspaper - No use	-0.05	-0.07**	0.07*	-0.01	-0.05*	-0.00	0.03	-0.06*	0.03	-0.01
	(0.05)	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)	(0.04)	(0.03)	(0.02)	(0.02)
T1: Free newspaper - Active	-0.08***	-0.04**	0.01	-0.02	-0.01	-0.02	-0.03*	-0.04**	-0.01	-0.00
	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
T2: Media education	0.00	-0.01	0.01	-0.01	-0.01	0.00	-0.01	0.00	0.02	0.01
	(0.03)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
T3: Free + Educ - Active	-0.03	-0.02	0.02	-0.01	-0.04**	0.00	-0.04*	-0.01	0.00	0.01
	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
T3: Free + Educ - No use	-0.01	-0.04	-0.04	-0.03	-0.03	0.02	0.05	0.01	-0.01	-0.02
	(0.04)	(0.04)	(0.03)	(0.02)	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)
Observations	7,099	7,117	7,117	7,117	7,117	7,117	7,117	7,117	7,117	7,117
Nb clusters	240	240	240	240	240	240	240	240	240	240
Mean DepVar	1.57	0.53	0.27	0.35	0.26	0.41	0.48	0.52	0.56	0.24
Sd DepVar	0.78	0.50	0.44	0.48	0.44	0.49	0.50	0.50	0.50	0.42

Notes: The table .
Lasso has selected these control variables: Student gender BL interest Scientific news BL interest Social news BL interest Cultural news BL interest Environmental news Teacher is homeroom teacher Missing Teacher experience Missing Level of the class

Table E.5: Balancing Checks in Low IPS Schools (below 1st quartile)

Variable	(1) Control	(2) T1 - C	(3) T2 - C	(4) T3 - C	(5) N
Panel A: Student Characteristics and Baseline Skills					
Age	15.668	0.084	-0.038	0.098	1,706
		(0.131)	(0.053)	(0.238)	
Female (0/1)	0.547	-0.034	0.025	-0.096*	1,751
		(0.061)	(0.035)	(0.047)	
Foreign origin(0/1)	0.426	-0.145	-0.114	-0.215	1,786
		(0.087)	(0.093)	(0.139)	
Presence of Social Media	0.519	-0.035	-0.057	-0.017	1,781
		(0.019)	(0.036)	(0.023)	
MIL exposure	1.259	-0.053	-0.031	0.082	1,460
		(0.062)	(0.036)	(0.062)	
Newspaper Consumption Index (BL)	0.00	0.119	0.019	0.079	1,781
		(0.075)	(0.095)	(0.082)	
Media Literacy Skills (BL)	0.00	0.035	0.049	0.063	1,766
		(0.048)	(0.065)	(0.054)	
Political Knowledge (BL)	0.00	0.068	0.115	0.227	1,757
		(0.102)	(0.075)	(0.122)	
Political Participation (BL)	-0.00	-0.020	-0.014	0.059	1,727
		(0.081)	(0.058)	(0.083)	
Panel B: Teacher Subjects					
History–Geography (0/1)	0.52	0.156	-0.009	0.098	89
		(0.166)	(0.090)	(0.126)	
Civics (0/1)	0.32	0.120	-0.103	-0.068	89
		(0.126)	(0.169)	(0.127)	
Economics and Social Sciences (0/1)	0.08	-0.029	0.069	0.024	89
		(0.081)	(0.136)	(0.141)	
Other humanities subjects (0/1)	0.41	0.314***	0.030	0.035	89
		(0.068)	(0.069)	(0.074)	
Scientific subjects (0/1)	0.00	0.010	0.084	-0.003	89
		(0.017)	(0.072)	(0.015)	
Media Education (0/1)	0.12	-0.125	-0.110	0.042	89
		(0.062)	(0.058)	(0.094)	
Panel C: Teacher Characteristics and Baseline Skills					
Female teacher (0/1)	0.72	0.059	0.042	-0.109	89
		(0.224)	(0.087)	(0.118)	
Age (years)	45.40	2.153	2.250	3.003	89
		(5.001)	(2.194)	(4.366)	
Teaching experience (years)	18.16	2.789	2.439	1.717	87
		(5.257)	(3.933)	(3.513)	
High-level certification: *Agrégation* (0/1)	0.19	-0.126	-0.086	-0.006	89
		(0.093)	(0.080)	(0.087)	
Head teacher (0/1)	0.28	0.029	0.007	0.077	89
		(0.160)	(0.122)	(0.142)	
Trained in MIL (0/1)	0.49	0.066	-0.074	0.096	89
		(0.079)	(0.155)	(0.154)	
Trained in MIL – CLEMI (0/1)	0.28	0.099	-0.049	0.089	89
		(0.061)	(0.162)	(0.087)	
MIL teaching self-confidence (std.)	0.00	0.258	-0.119	0.220	89
		(0.253)	(0.176)	(0.360)	
MIL class activities (std.)	0.00	-0.350	-0.661	-0.405	89
		(0.491)	(0.438)	(0.268)	
MIL topics (std.)	0.00	-0.255	-0.151	-0.206	89
		(0.481)	(0.223)	(0.345)	
Panel D: Class Characteristics					
School climate (index)	0.00	0.053	-0.002	0.267	85
		(0.430)	(0.405)	(0.444)	
General track (0/1)	0.38	-0.102	-0.037	-0.037	89
		(0.122)	(0.105)	(0.087)	
Number of students per class	22.82	3.532*	1.704	-2.371	89
		(1.473)	(1.840)	(1.668)	
Seconde (10th grade)	0.53	-0.121	-0.027	-0.043	89
		(0.073)	(0.034)	(0.116)	
Première (11th grade)	0.23	0.060	0.067	-0.113	89
		(0.061)	(0.042)	(0.167)	
Terminale (12th grade)	0.20	0.011	-0.064	0.081	89
		(0.031)	(0.043)	(0.152)	

Notes: Each line corresponds to a separate regression. Column (1) = mean of the dependent variable in the control group. (2) = estimated ITT for T1 (3) = estimated ITT for T2 and (4) = estimated ITT for T3. Standard errors (in parentheses) are clustered at the strata level. Strata fixed effects included. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table E.6: Generic Machine Learning results: BLP and GATES for the Political Knowledge Index

	ATE	**HET**	**TE for G1**	**TE for G4**
	(1)	(2)	(3)	(4)
Treatment 1:				
Political knowledge (STE)	0.021 [0.68]	0.264 [0.03]	-0.075 [0.33]	0.136 [0.11]
Treatment 2:				
Political knowledge (STE)	-0.027 [0.48]	0.181 [0]	-0.142 [0.03]	0.111 [0.10]
Treatment 3:				
Political knowledge (STE)	0.011 [0.81]	0.285 [0.04]	-0.061 [0.46]	0.119 [0.17]

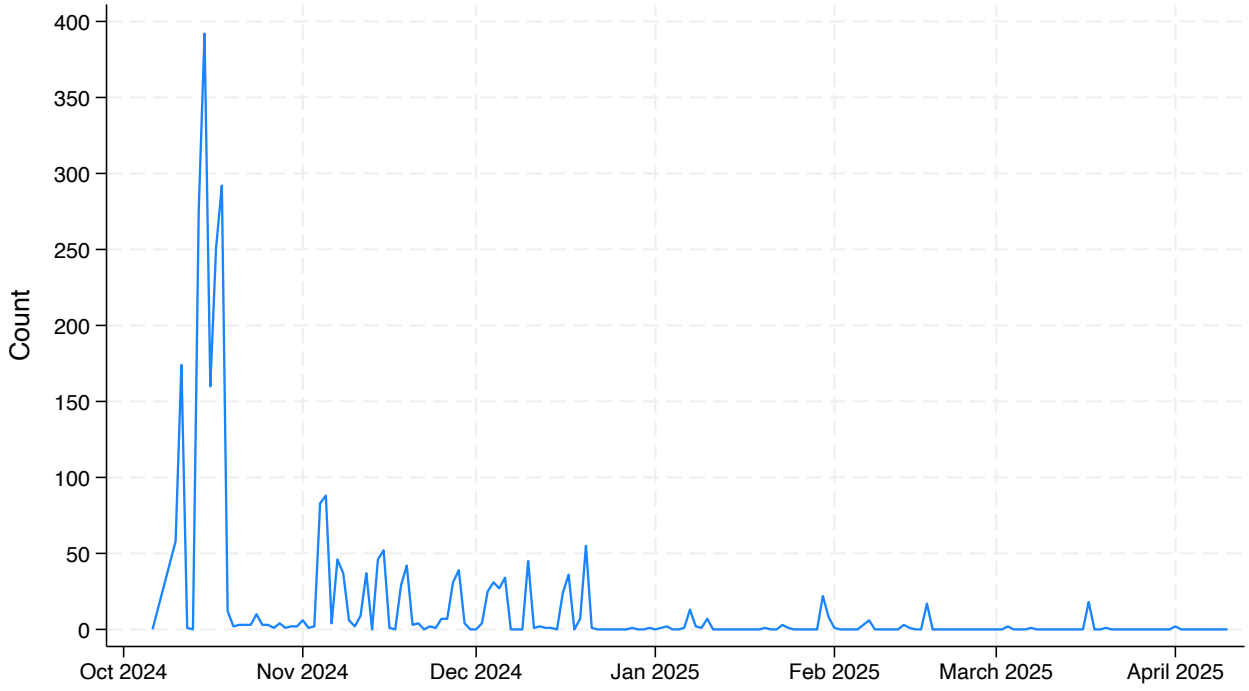
Notes: This table reports average and heterogeneous treatment effects estimated using the Generic Machine Learning framework (Chernozhukov et al., 2025). For each treatment arm, the table reports the results for political knowledge outcomes. The first column reports the Average Treatment Effect (ATE), while the second column reports heterogeneity loading (HET) parameters from the Best Linear Predictor (BLP). Columns (3) and (4) report Group Average Treatment Effects (GATES) for the first and fourth quartiles of the predicted treatment effect distribution (G1 and G4, respectively), where G1 corresponds to the least affected individuals and G4 to the most affected individuals. Estimation relies on sample splitting and cross-fitting with 250 random splits. Treatment effects are estimated using an ensemble of machine-learning learners, including random forests, LASSO, elastic net, support vector machines, and gradient boosting. Propensity scores are assumed to be constant. All specifications include strata fixed effects. Covariates used in the estimation include a rich set of baseline student characteristics, baseline outcome measures, class-level characteristics, and teacher characteristics. Missing values in covariates are imputed using mean imputation. Standard errors are clustered at the strata level. Reported p-values are two-sided. Each treatment arm (T1, T2, T3) is estimated separately against the control group.

Table E.7: Generic Machine Learning results: CLAN for the Political Knowledge Index

Heterogeneity variables	**25% least affected**	**25% most affected**	**P-value (2) – (3)**
(1)	(2)	(3)	(4)
Outcome: Political knowledge (STE) – Treatment 1			
(1) IPS	113.725	106.717	0.000
(2) Teacher female	0.606	0.887	0.000
(3) Baseline political knowledge	0.103	-0.239	0.000
(4) Active learning practices	-0.167	0.050	0.000
(5) MIL activities	-0.233	0.139	0.000
(6) Share of scholarship students	0.227	0.274	0.000
(7) School engagement (teacher)	-0.086	0.114	0.000
(8) Female student	0.613	0.489	0.001
(9) Baseline newspaper consumption	0.187	0.110	0.002
(10) Teacher experience (years)	21.875	20.323	0.025
(11) Baseline political participation	0.068	-0.052	0.021
Outcome: Political knowledge (STE) – Treatment 2			
(1) Active learning practices	-0.111	0.015	0.000
(2) Teacher female	0.630	0.712	0.002
(3) Share of scholarship students	0.215	0.234	0.010
(4) Teacher experience (years)	20.576	21.941	0.011
(5) MIL activities	-0.018	0.108	0.014
Outcome: Political knowledge (STE) – Treatment 3			
(1) IPS	113.132	110.044	0.006
(2) Share of scholarship students	0.224	0.262	0.000
(3) Teacher experience (years)	20.898	19.003	0.003
(4) Baseline political participation	-0.060	0.089	0.010
(5) School engagement (teacher)	-0.076	0.019	0.025

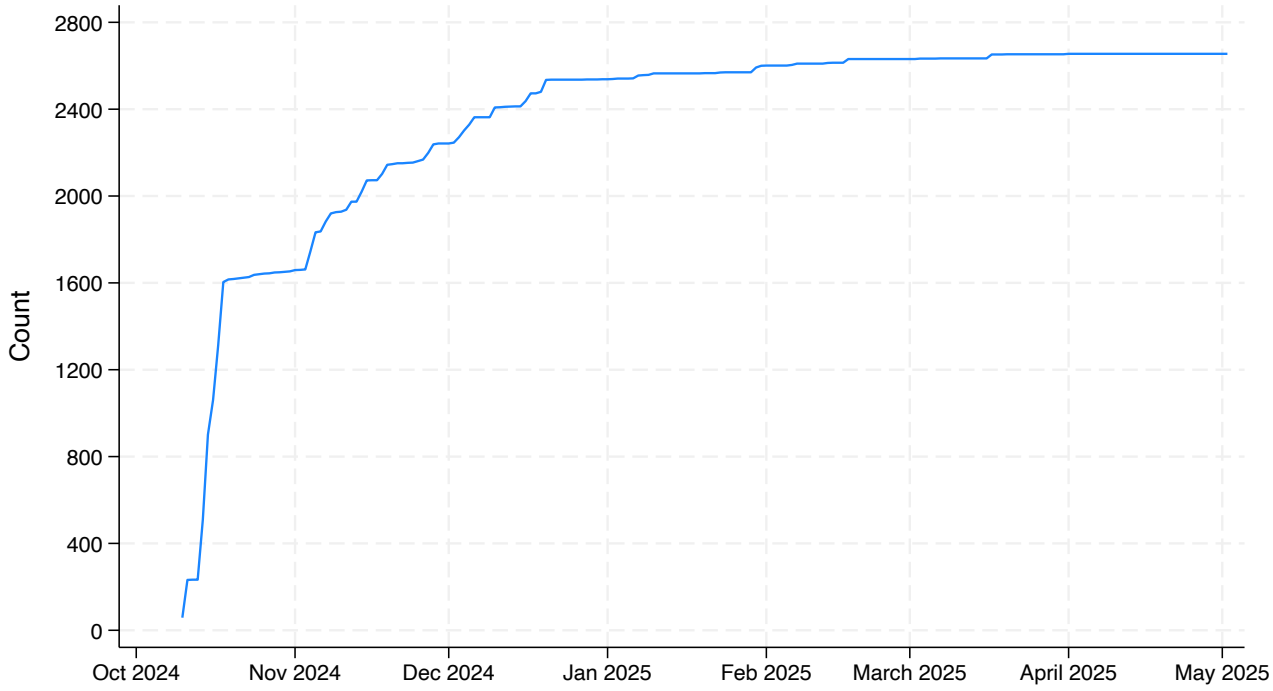
Notes: This table reports Classification Analysis (CLAN) results based on Generic Machine Learning estimates of heterogeneous treatment effects (Chernozhukov et al., 2025). The outcome is the political knowledge index. Columns (2) and (3) report mean values of baseline covariates for the 25% least and 25% most affected groups, respectively. Column (4) reports the p-value of the difference between these two groups.

F Additional Figures



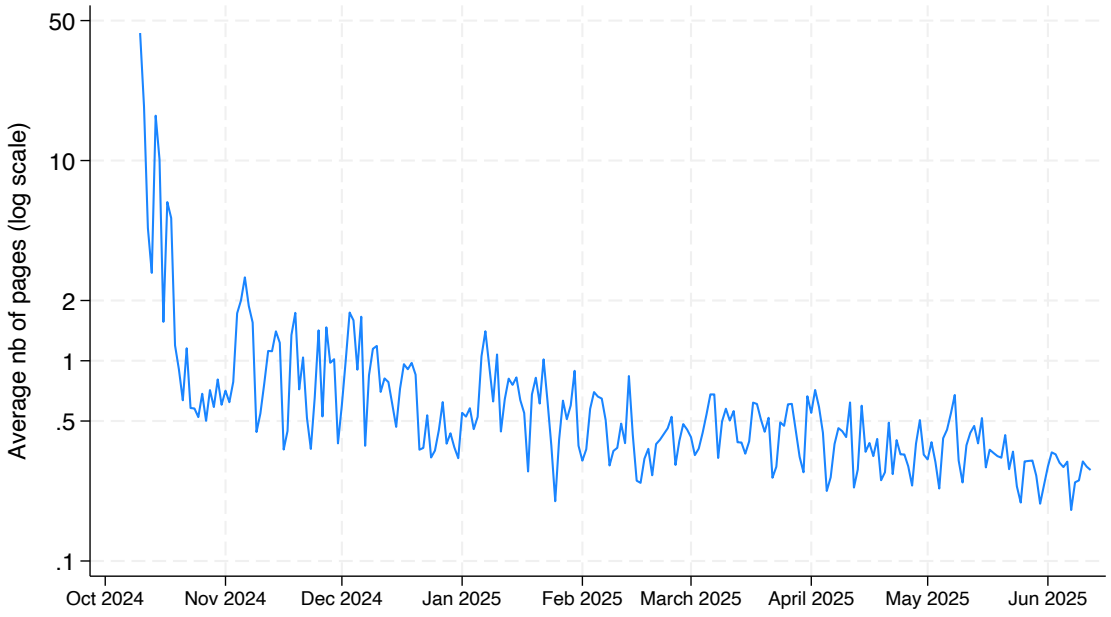
Notes: The Figure plots the daily number of activated subscriptions to our partner newspaper by students in our sample.

Figure F.1: Daily number of activated subscriptions (students)



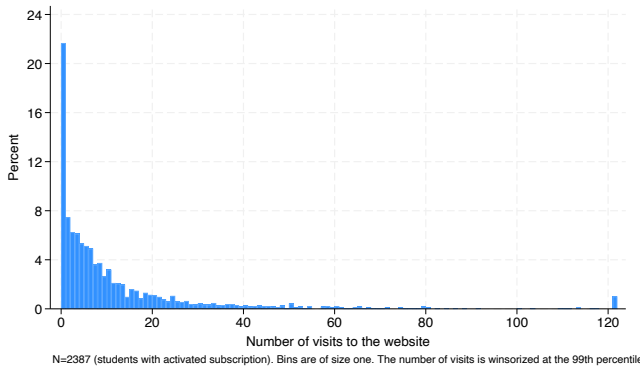
Notes: The Figure plots, for each day, the cumulative number of activated subscriptions to our partner newspaper by students in our sample.

Figure F.2: Cumulative number of activated subscriptions (students)

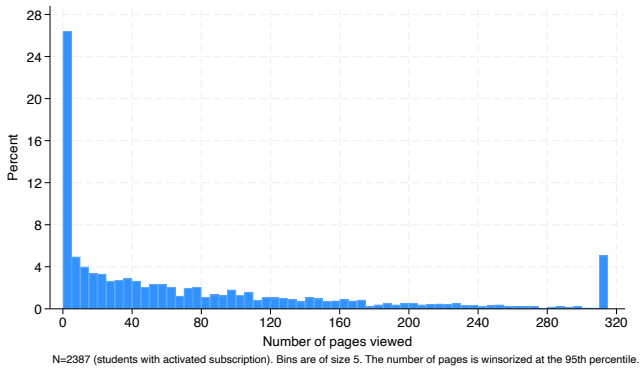


Notes: The Figure plots, for each day, the average number of page views per students who have activated their subscription to our partner.

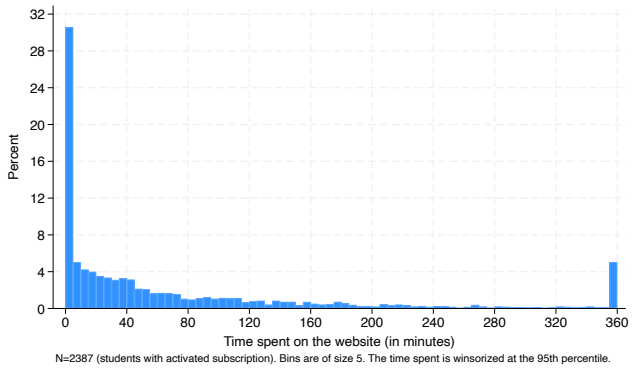
Figure F.3: Average number of page viewed (students)



(a) Distribution of the number of visits



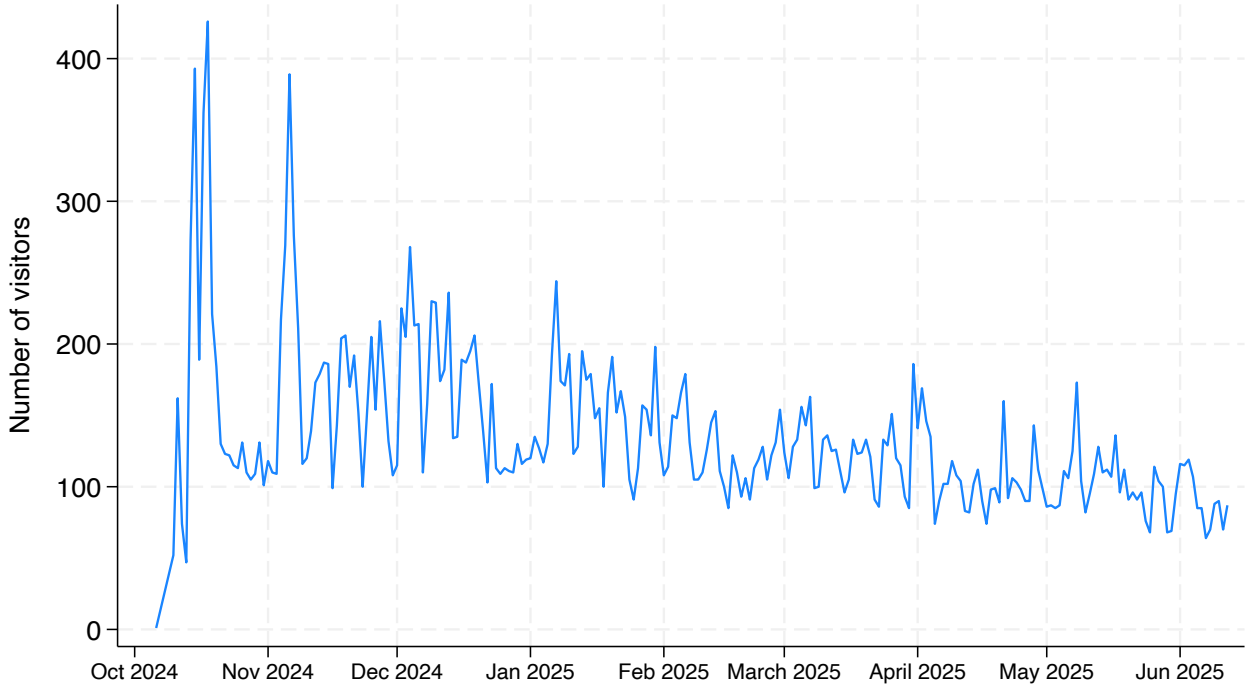
(b) Distribution of the number of pages viewed



(c) Distribution of the time spent online

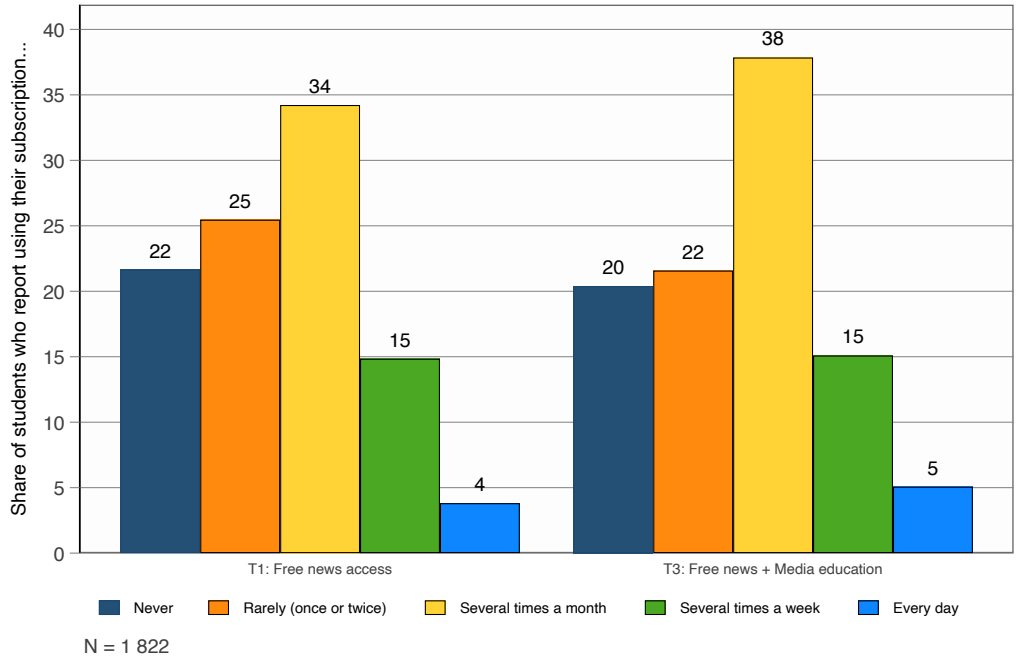
Notes: The upper-left Figure F.4a plots the distribution of the number of visits to the website. The upper-right Figure F.4b plots the distribution of the overall number of pages viewed on the website. Finally, the bottom Figure F.4c plots the overall time spent online. An observation is a student included in treatment group T1 or T3 and who has activated its free subscription to the newspaper.

Figure F.4: News consumption by students: Intensive margin



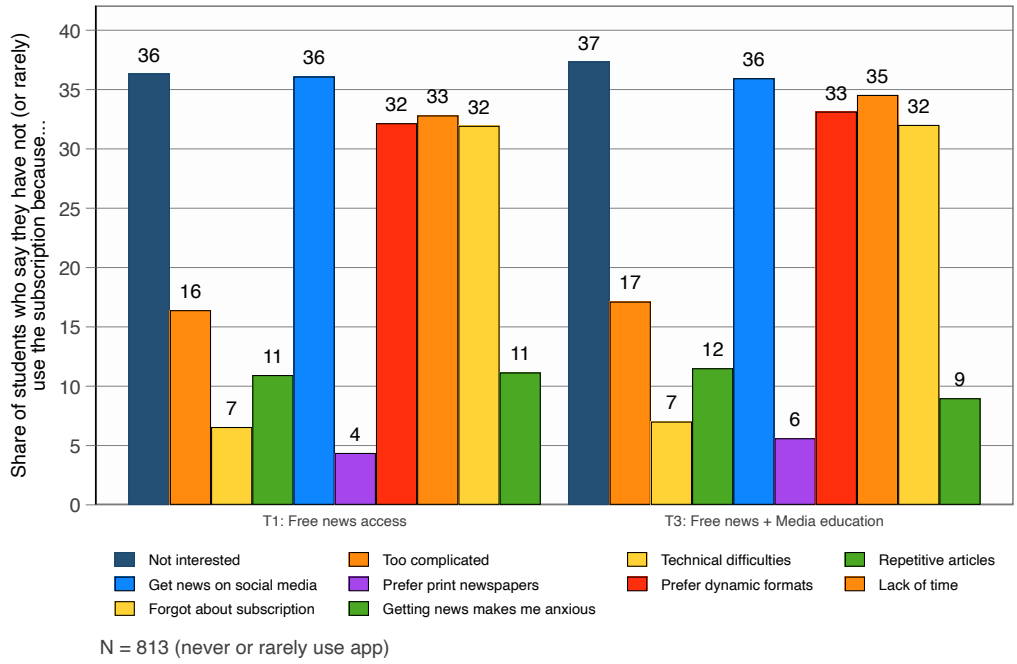
Notes: The Figure plots, for each day, the daily number of students going on the website of our partner newspaper.

Figure F.5: Daily number of visitors on the website (students)



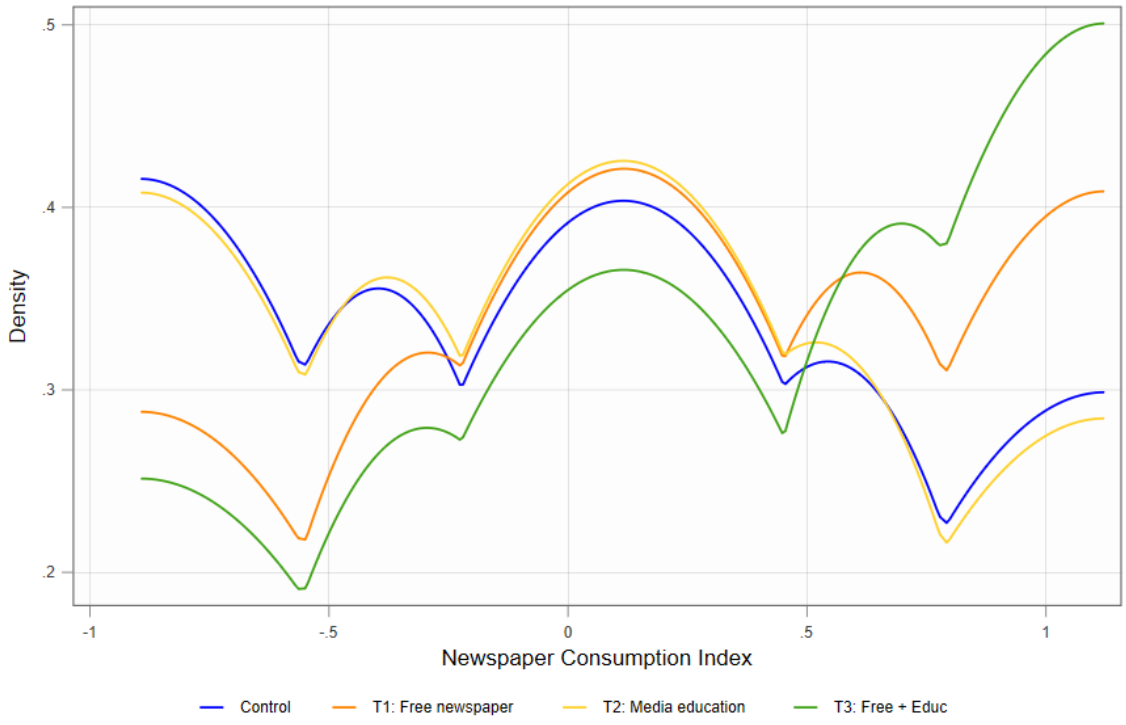
Notes: The Figure plots the reported use of *Le Monde*'s website in the endline survey depending on the treatment status. Only the T1 and T3 students in the analysis sample who report that they activated their subscription are included.

Figure F.6: Use of *Le Monde*'s website according to the endline survey



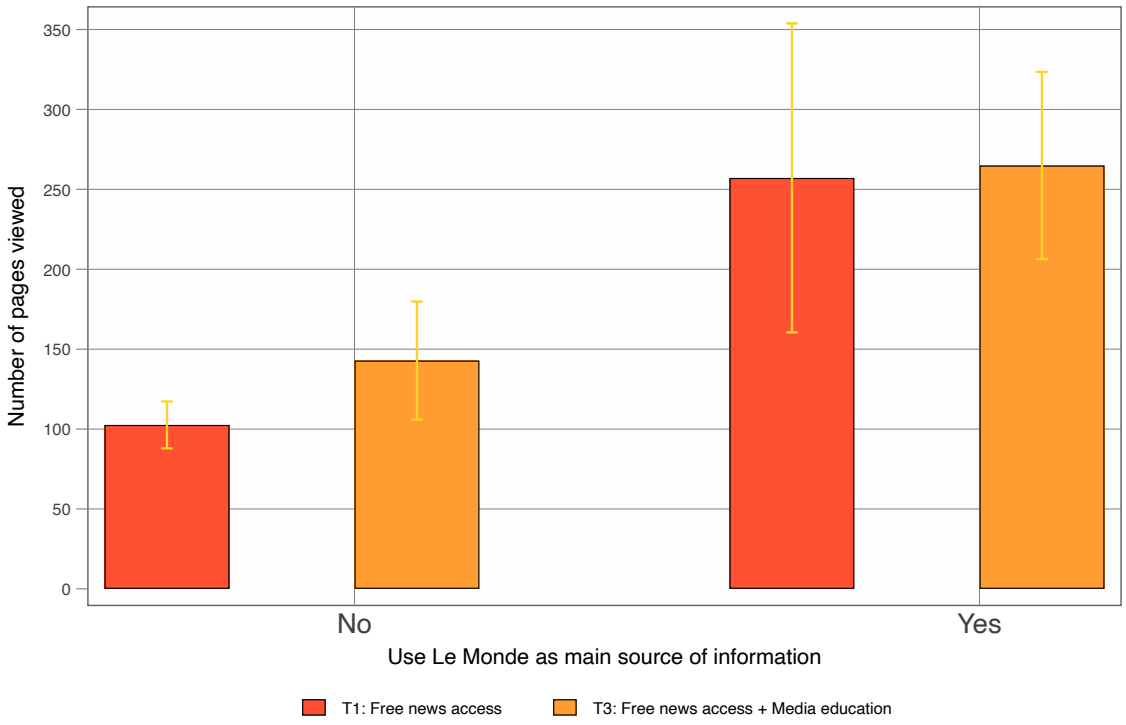
Notes: The Figure plots the reported reasons for not using *Le Monde*'s website in the endline survey depending on the treatment status. Only the T1 and T3 students in the analysis sample who report that they activated their subscription but rarely or never used it are included.

Figure F.7: Reported reasons for not using *Le Monde*'s website according to the endline survey



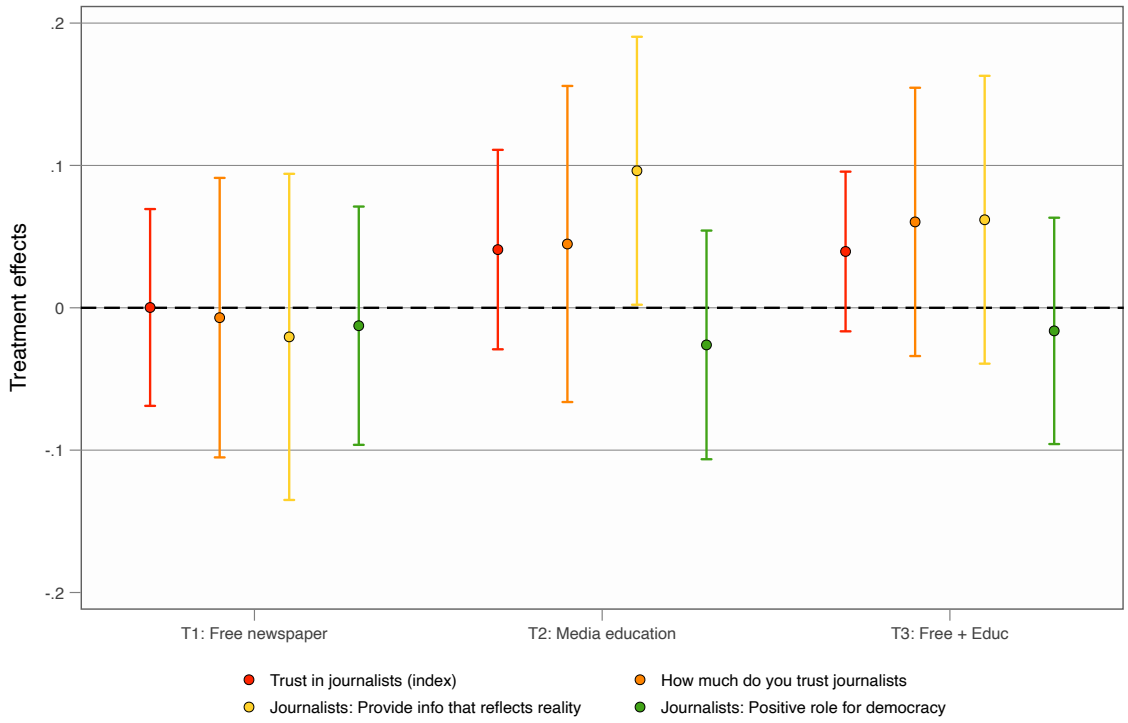
Notes: The Figure reports the newspaper consumption index distribution (density) depending on the treatment status. The newspaper consumption index is defined in Section 4.2.1.

Figure F.8: Newspaper Consumption Index Distribution by Treatment Status



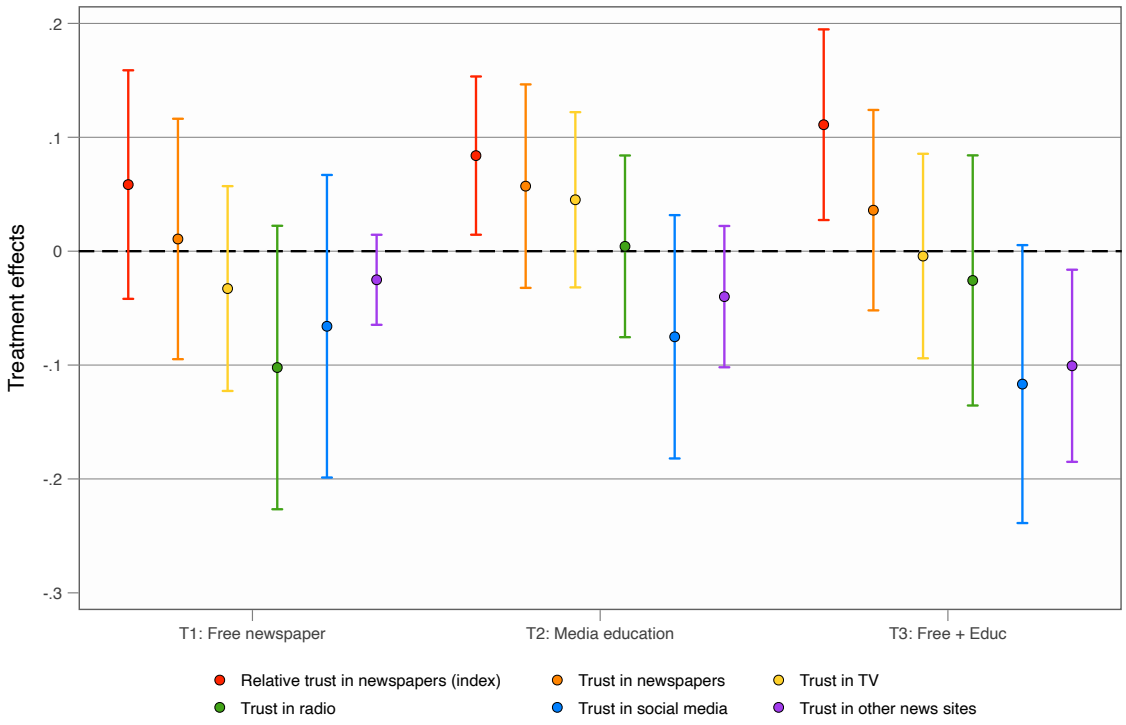
Notes: The Figure plots the total number of pages viewed by students in T1 and T3 computed using *Le Monde*'s website logs, depending on whether students report (in the endline survey) that they use *Le Monde* as their main source of information.

Figure F.9: Actual number of pages viewed depending on reported news consumption



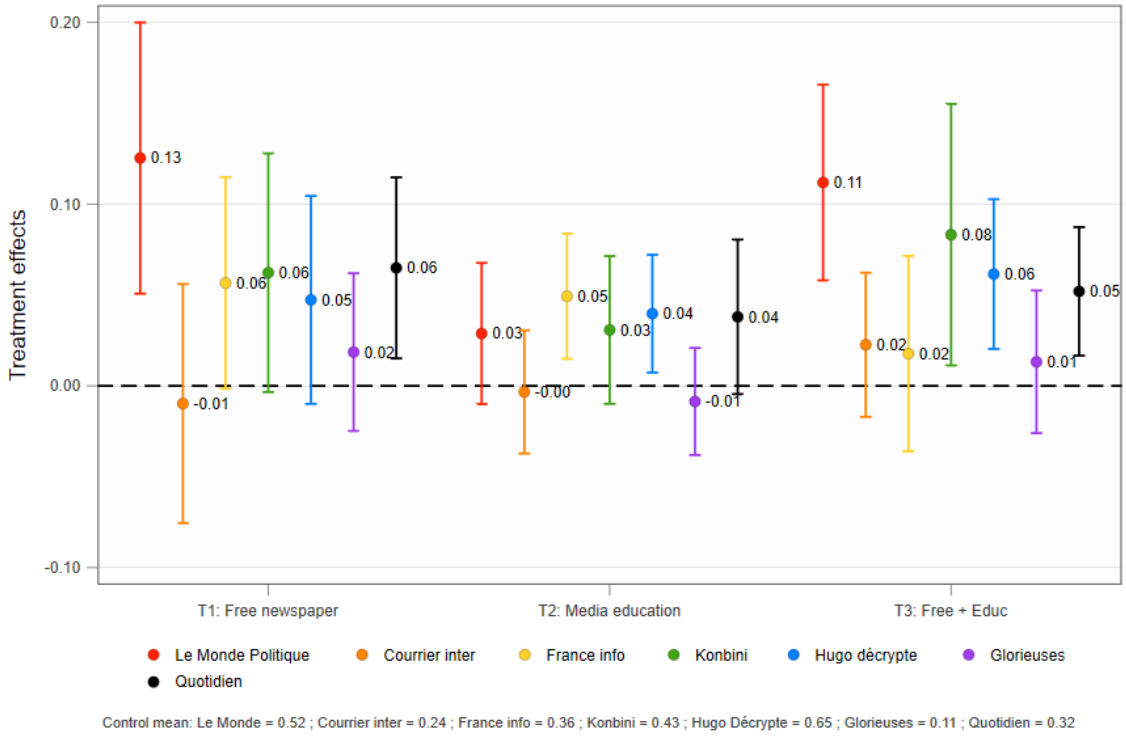
Notes: The Figure reports the treatment effects for the three component of our trust in newspapers index considered separately: (i) trust in journalists (red), (ii) the extent to which students agree with the following statement: "journalists report information accurately and truthfully" (orange), and (iii) the extent to which students agree with the following statement: "journalists play an important role in the political and democratic life of our country" (yellow).

Figure F.10: Treatment effects: Trust in journalists and perception of their work



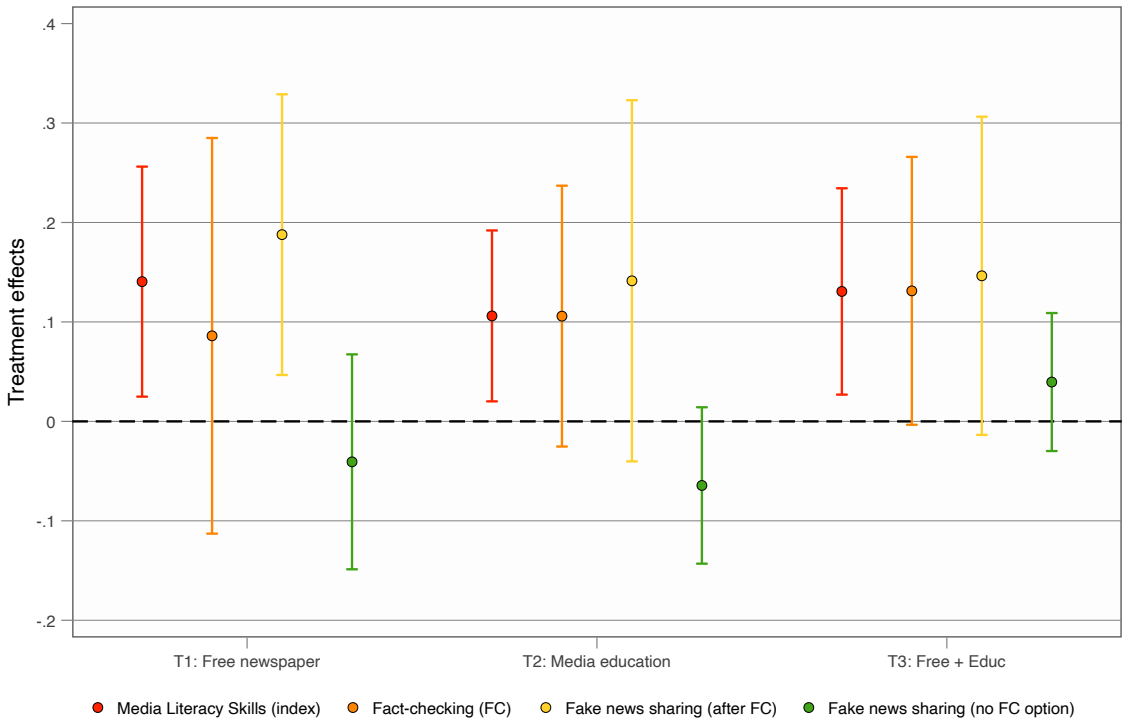
Notes: The Figure reports the treatment effects for our measure of trust in different media outlets (answer to the question "In general, how much do you trust information from the following sources?").

Figure F.11: Treatment effects: Trust in media outlets



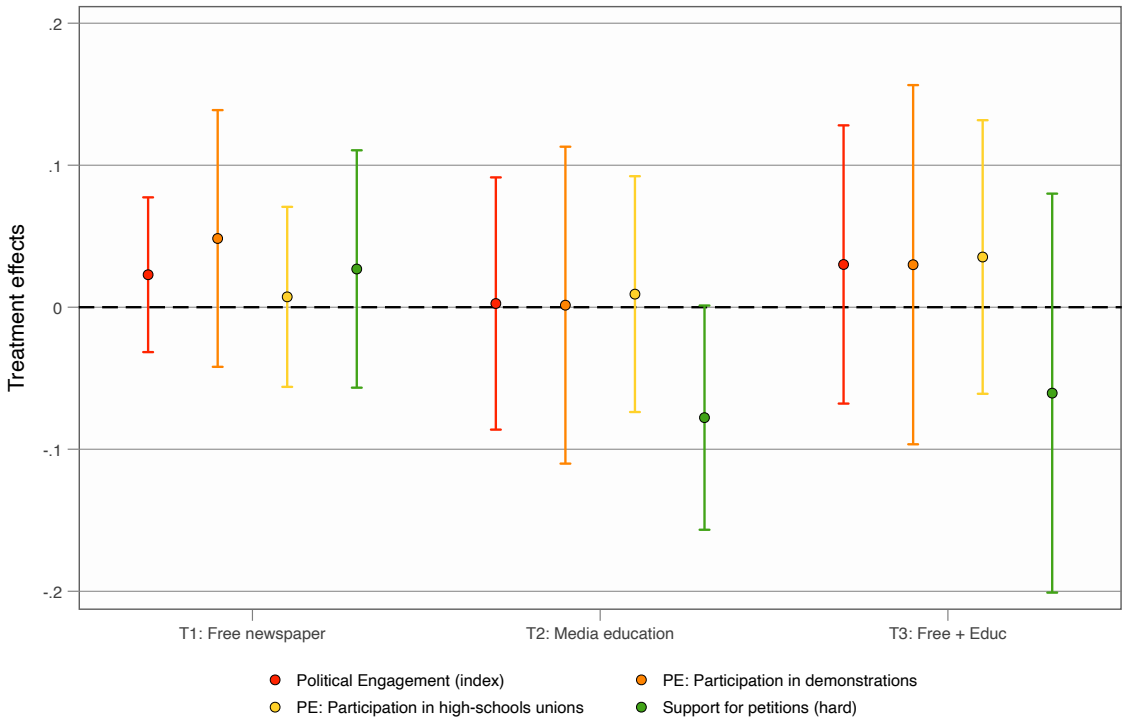
Notes: The Figure reports the treatment effects for the set of newsletter subscription indicator variables (each color corresponds to the associated newsletter whose name is reported in the legend; e.g. red for *Le Monde* newsletter). The question asked was the following: "As part of this study, we invite you to subscribe to one or more free newsletters that will help you follow and understand major political, economic, and social issues in France and around the world. If you are interested in one or more of the newsletters below, check Yes: you will be automatically subscribed and will receive the newsletter every week starting next week! There is no commitment and you can unsubscribe from the newsletter at any time."

Figure F.12: Treatment effects: Newsletter subscription



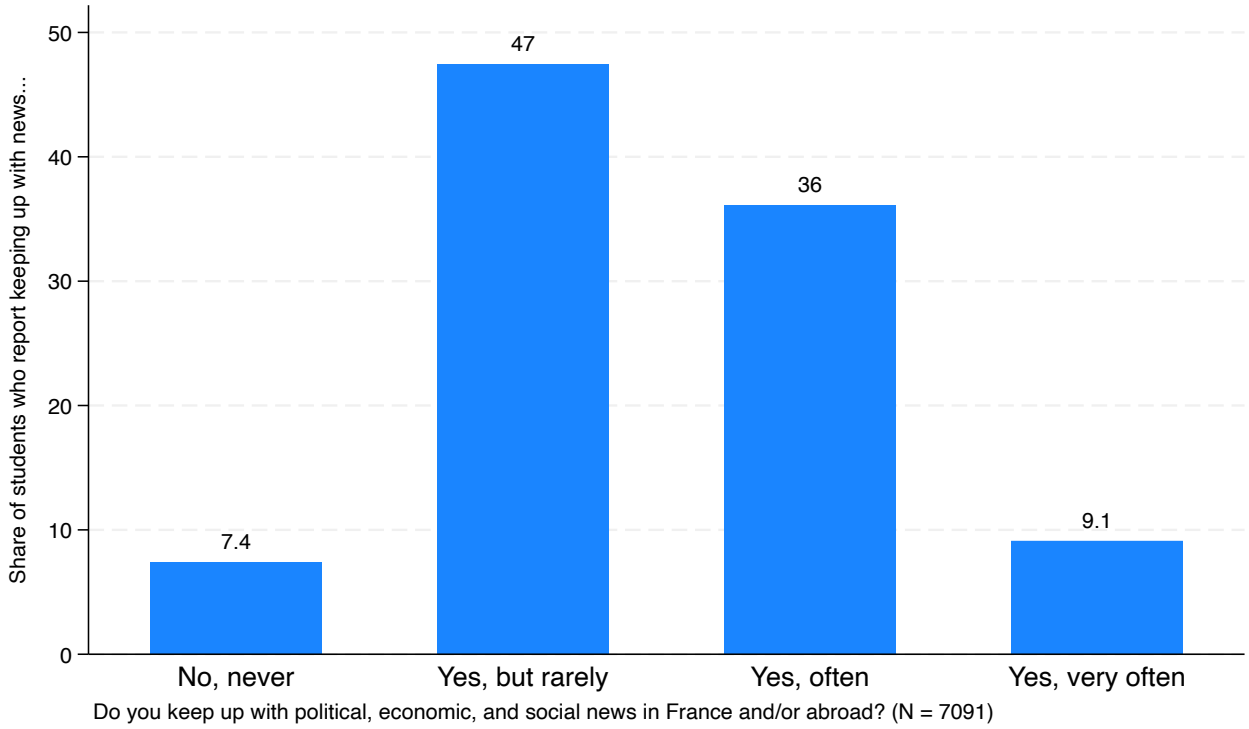
Notes: The Figure report the estimated treatment effects for the media literacy skills index (red) and its different components.

Figure F.13: Treatment effects: Media literacy skills



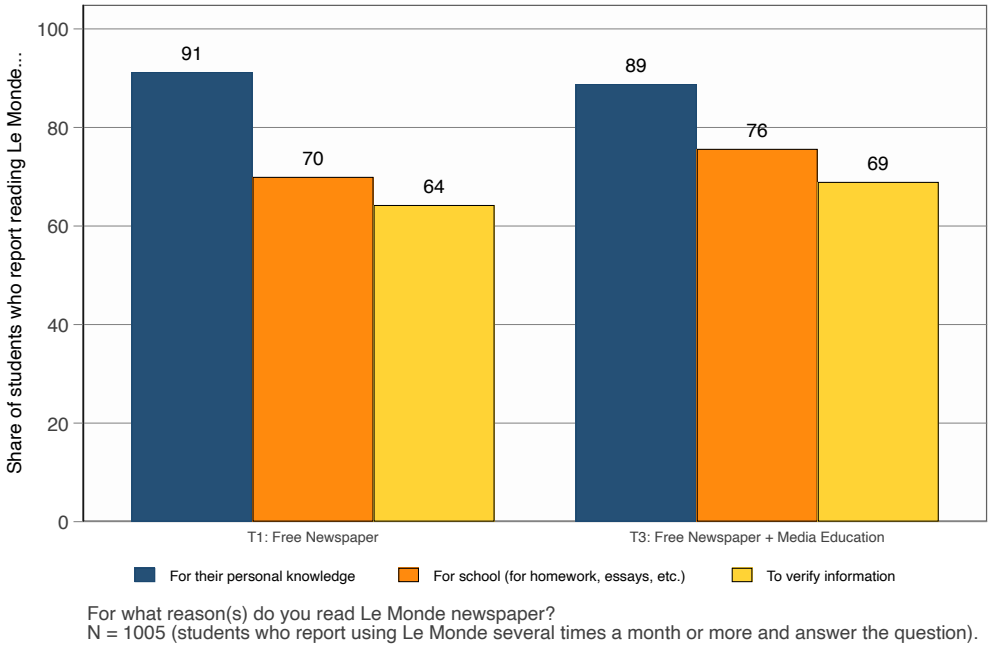
Notes: The Figure report the estimated treatment effects for the political participation index (red) and its different components.

Figure F.14: Treatment effects: Political participation



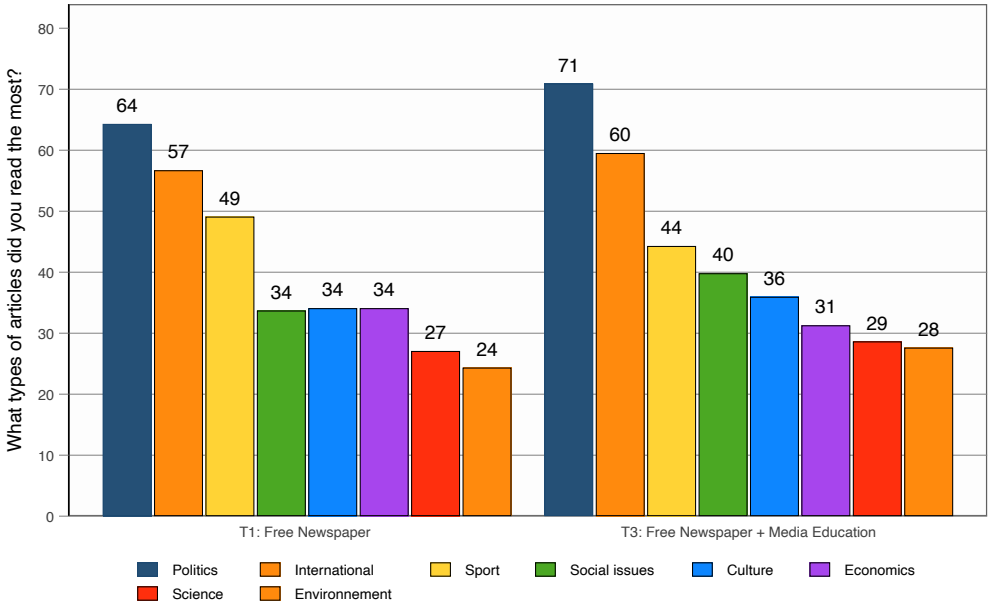
Notes: The Figure plots the share of students who report (i) "No, never", (ii) "Yes, but rarely", (iii) "Yes, often", and "Yes, very often" to the question "Do you keep up with political, economic, and social news in France and/or abroad?" at baseline.

Figure F.15: Tendency to keep up with news at baseline (students)



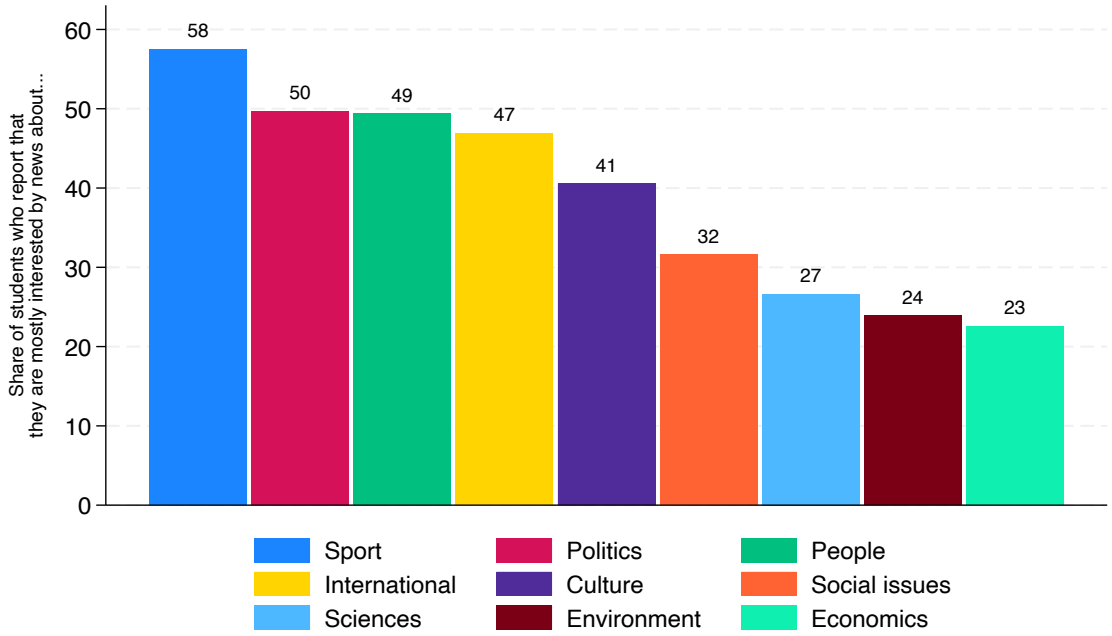
Notes: The figure plots the responses to the question (endline survey): "For what reason(s) do you read *Le Monde* newspaper?". For each proposed reasons – (i) for my own personal knowledge (blue bar), (ii) for school: for homework, essays, etc. (orange bar), and (iii) to verify information I have heard elsewhere (friends, social media) (yellow bar) – the figure plots the share of students who report that they somewhat agree or strongly agree.

Figure F.16: Reasons for reading Le Monde (students)

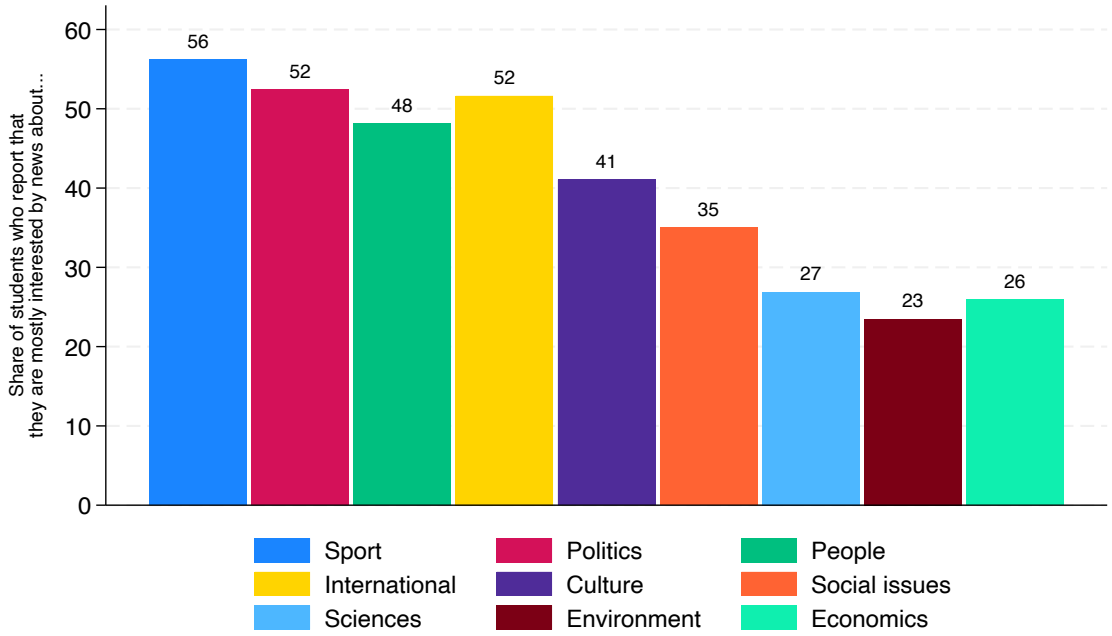


Notes: The figure plots the responses to the question (endline survey): "What types of articles did you read the most?". The students were allowed to chose several answers among the different types of articles proposed.

Figure F.17: Type of articles students report they read the most



(a) Baseline survey



(b) Endline survey

Notes: The figure plots the responses to the question: "What type(s) of news interest you the most?". The upper Figure F.18a plots the results in the baseline survey. The bottom Figure F.18b plots the results in the endline survey. An observation is a student who has filled both the baseline and the endline survey ($N = 7,548$).

Figure F.18: Interest in news depending on the topic