As soon as possible - The effectiveness of a financial education program in Italian schools*

Abstract

This paper examines the impact of "Financial Education in School", a comprehensive financial education program implemented by the Bank of Italy across primary and secondary schools nationwide. The program includes teacher training, specialized educational materials, and interactive classroom activities. Using data from two Randomized Controlled Trials involving over 1,500 students in grades 5 and 8, we find that the program significantly enhances students' financial knowledge by approximately 8 percentage points. Notably, the alternative intervention - providing teaching materials without direct instruction — yields positive outcomes only for students from socioeconomically advantaged backgrounds. These findings underscore the pivotal role of schools and teachers in fostering financial literacy and promoting equitable opportunities for all students.

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Keywords. Financial education, impact evaluation, school effects, RCT.

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1 Introduction

Financial literacy plays a crucial role in several key personal life decisions, such as choosing a mortgage or managing savings. While many countries display a low level of citizens' financial competences (see, for instance OECD, 2020), the latter are becoming increasingly relevant for the financial welfare of the whole society (Lusardi, 2019). The lack of financial competences is a problem in societies where the volume and complexity of financial decisions and transactions constantly expand. Recent studies highlight the necessity to act to improve financial skills in the population - see, for the European case, Demertzis et al. (2024).

Several factors, such as the growing sophistication of the financial markets, the shrinking welfare system, and the economic difficulties caused by the global shocks that are disrupting economies, such as the pandemic crisis, urged governments to take action to elevate the average level of the population's financial literacy. Young people are key to reaching the goal of a financially literate and resilient society. For these reasons, and in the attempt to improve the general level of people's financial literacy, in the last two decades, many countries have undertaken programs to bring financial education to schools. In some cases, it has been made compulsory.

Italy's struggle with financial literacy is evident across both student and adult populations, as highlighted by international assessments. The Programme for International Student Assessment (PISA) and the International Survey of Adult Financial Literacy consistently rank Italy lower than many other countries (OECD, 2024;OECD, 2023;OECD, 2018). In the 2018 PISA assessment, Italian 15-year-olds scored 476 points, placing them near the bottom among European countries, with a notable gender gap where boys outperformed girls by 15 points. This trend persisted in the 2022 PISA results, where, despite a slight improvement in the overall

score to 484, the gender gap widened further to 20 points. Within Italy, D'Alessio et al. (2020) reveal that financial knowledge is particularly low among specific groups, including young people, those without a bachelor's degree, and women. These findings underscore Italy's ongoing challenges in improving financial literacy across both students and adults, highlighting the persistent and deepening internal inequalities, particularly the widening gender gap. A key role in supporting financial literacy (FL hereafter) in the country has been exerted by the Bank of Italy, one of the pioneering institutions in this task, devising several programs directed at both youths and adults since 2007 (De Bonis et al., 2022).

Concerning young people, the Bank of Italy has been promoting since then the program "Financial Education in School", in collaboration with the Ministry of Education. The project, aimed at primary, lower, and upper secondary school students (respectively, grades 1-5, 6-8, 9-13), offers training courses, organized by the staff of the Bank of Italy, dedicated to school teachers. The teachers then are invited to discuss economic and financial topics in the classroom with their students. The project evolved over time, with gradual and constant improvements of both its design and the coverage of topics, in line with the international best practices (OECD, 2012) and benefiting from a constant dialogue with schools. In 2019, the Bank of Italy finalized a new set of didactic resources (booklets) specifically designed to support teachers' preparation and teaching of specific subjects to students. The content, structure, and the "tone of voice" of the materials were adjusted for the age of the target population. To test the effectiveness of the project after its renovation, the decision-makers at the Bank undertook rigorous experimental evaluation in collaboration with a research group of the Politecnico di Milano. This paper contains a description of this study, undertaken in 2020-22, and its main findings.

In order to tackle potential sources of endogeneity stemming from het-

erogeneity across different schools, school grades, and students' characteristics and from students' self-selection into treatment, we ground our empirical strategy on two RCTs, concerning primary school and lower secondary school students, respectively. The empirical analysis is based on a rich dataset taken from two main sources: (i) student tests on financial literacy, developed by the research group and administered both before and after the FEiS program; (ii) student characteristics, including demographic variables and scores in both maths and reading tests, drawn from the National Institute for the Evaluation of the Education and Training System (INVALSI). In addition, we also exploit some information on teacher-level characteristics, gathered by means of non-mandatory questionnaires; the latter were available for a subset of classes only. This is the first time that such datasets and indicators are available in the context of an FE experiment in Italy, as we were able to merge different sources of information in a novel way. The richness of the available databases allows for investigating programs' features that have been so far under-explored, such as the heterogeneity of the program's effects.

We find that the program improves students' financial knowledge by between 0.5 and 0.6 SD for both school grades, a result in line with previous research in various countries. On the other hand, on average, no impact is detected for students invited to study the booklets on their own, at home. Investigating heterogeneous effects, student's family index of economic, social, and cultural status (ESCS) matters; in particular, students with a higher-than-the-median ESCS index experience larger benefits from the Bank of Italy program and improve their financial literacy also when studying on their own. This result calls for specific attention to the role of schools (and teachers) in promoting equality of opportunities.

We contribute to the literature in three different directions. First, we enlarge the research assessing the overall impact of FE school-based pro-

grams, focusing in particular on those programs grounded on a train-the-trainers approach. Second, we provide new evidence about the effectiveness of programs based on individual self-study. Third, we investigate whether program effects are heterogeneous across both students' and teachers' characteristics, taking advantage of a unique dataset. While the first research topic has been extensively studied by the academic literature, there is a substantial lack of rigorous evidence about the second and the third. Finally, our paper provides timely policy insights for those countries in which there is an open political and public debate about whether financial education (FE hereafter) should be included in school curricula as a compulsory subject. This is particularly relevant for Italy, where such a debate was still active when we completed the first draft of our work in late 2023. The discourse in Italy reached a significant milestone on February 27, 2024, when the Parliament approved the "DDL Capitali" bill, which incorporates financial education into the civic education curriculum.

The remainder of the paper is structured as follows. Section 2 offers a concise literature review. Section 3 details the program and provides an overview of the Italian schooling system. Section 4 outlines the research methodology employed. Sections 5 and 6 present the data and the empirical strategy. The results are discussed in Section 7, with additional insights from teacher data provided in Section 8. Finally, Section 9 concludes the paper.

2 Related literature

In this paper, we contribute to two key areas of research: the impact of FE programs on students and the influence of teachers' characteristics on the effectiveness of these programs. The latter area is particularly significant for our study, as it provides insights into how teachers' activities and

attributes may affect the outcomes of FE initiatives.

The first stream of research is wide and constantly growing. In order to better clarify our position in the literature, the contributions explored in this section exhibit some specific characteristics: i) they are based on standard teaching classes (i.e., they are not special ad hoc educational programs); ii) they involve students in primary or secondary schools; iii) they are assessed by means of RCTs, considered the gold standard among the evaluation methodologies, thus providing the most credible results to infer causal relationships.

Batty et al. (2015) focus on a program consisting of five short FE lessons (integrated into other curricula) directed to 4th and 5th-grade students in the United States. Their strategy is based on a RCT, involving 700 students, whose classes were randomly allocated to either treatment or control. They find a positive effect, of about 1.4 points (about 11 percent of the maximum score). A more recent randomized experiment on the effectiveness of FE programs directed at primary school and lower secondary school students - consisting of a four-hour financial literacy course - is provided by De Beckker et al. (2021), who focus on 688 8th and 9th-grade Flemish students. In particular, they find that the course increased students' financial literacy scores by 0.46 standard deviations, while it did not help improve their consumer choices. Similar results are obtained by Bover et al. (2018), who gather information about 78 schools and more than 3,000 9th-grade Spanish students in a 10-hour course called *Finanzas para Todos* ("Finance for All"): while the course does not affect students' budgeting skills or present biasedness, financial knowledge and attitudes improve considerably. In Italy, Agasisti et al. (2022) conducted a study involving 175 students who completed a 10-hour online course, while Sconti (2022) analyzed the experiences of 650 students who participated in either a 4-hour online course or a 4-hour in-person lesson. Both studies refer to secondary

school students. Despite the differences in terms of duration and sample size, both courses lead to an increase in financial competence, with positive effects of the in-person lesson also three months after its conclusion.

Part of the existing research focuses on the impact of experiential or gamified learning. This specific area of study is of crucial importance for the present work. Indeed, the program by the Bank of Italy relies upon a specific pedagogical design: active student participation and gamification. Among others, Kalwij et al. (2019) consider a 45-minute FE gamified lecture, directed to primary school students in the Netherlands, by using a RCT on more than 2,000 students. The authors find that the program raised both pupils' financial literacy and willingness to save. Amagir et al. (2022), again in the Netherlands, assess the effectiveness of "SaveWise", a learning program based on students' action, rather than theory. By exploiting a sample of more than 700 9th-grade students, they show that the program increases the students' financial knowledge, encouraging their intentions to save; such effect, however, is only short-term. Similarly, Batty et al. (2020) test whether U.S. students who apply for classroom jobs and practice budgeting and saving end up with an increase in their financial knowledge. Their results, based on a sample of about 11,500 students aged 8 to 11, are positive.

Our work is also related to the literature focusing on the role of teachers on students achievement. A large body of research shows that teachers shape students' outcomes both at school and later in life (see, among others, Rockoff, 2004 and Chetty et al., 2014). A stream of research, closer to our analysis, investigates the relationship between teachers' characteristics and students' performance on various subjects. Among others, Sancassani (2023) shows that teachers specialized in science have a positive and significant impact on students' science performance; on the other hand, teachers' features such as experience, general education level, and gender do not af-

fect students' performance. The relationship between the teacher's knowledge of a subject and her teaching effectiveness for that subject, however, might vary across subjects. For instance, Metzler and Woessmann (2012) use data on Peruvian 6th-grade students and teachers and find that while teachers' math knowledge impacts students' proficiency on the same subject, teachers' reading knowledge does not. Kane et al. (2008) similarly demonstrate that the influence of teachers' characteristics, such as experience and certification status, on student performance varies significantly across different subjects. Building on this insight, it is essential to explore how these dynamics manifest in the context of financial literacy, a field that remains largely under-researched.

We also examine whether certain teacher characteristics —such as confidence, experience, and financial literacy —impact the effectiveness of FE programs, a topic that has received limited attention in the literature. Harrison (2018) evaluates the impact of training programs for FE teachers, highlighting that key teacher attributes significantly influence both the outcomes of the training and the overall effectiveness of FE. Specifically, teachers with prior experience in FE tend to be more confident in delivering lessons tailored to students, while those with less teaching experience benefit the most from training programs, particularly in their use of technology. These findings underscore the necessity of specialized training for FE teachers. De Beckker et al. (2019) contribute to this discussion by surveying 300 Flemish teachers and discovering that half possess sufficient financial knowledge to provide FE. Their study also reveals that financial knowledge is generally higher among male teachers, those with higher education levels, and those with more teaching experience. To fully appreciate the significance of these findings, it is important to note that schools typically do not employ dedicated FE teachers; instead, they rely on teachers from traditional subjects, most often mathematics. This is also true in the

context of the present study, as discussed in Section 4.

3 The "Financial Education in School" Program

The program "Financial Education in School" (FEiS hereafter) falls within a large set of similar initiatives at work worldwide, mostly following OECD's encouragements and suggested practices (OECD, 2005). The Bank of Italy's program FEiS aims to introduce basic concepts of economics and finance into K-12 school curricula from primary to secondary education. The program, launched in 2008 in collaboration with the Ministry of Education, is directed to school teachers following a "train the trainers" approach and proposes a multidisciplinary strategy. In particular, the Bank of Italy provides specialized training courses for teachers at all school levels; then, teachers integrate economic and financial topics into their classroom activities. The program is also supported by didactic resources, for both students and teachers, provided free of charge to program participants. School teachers can decide to participate in the program on a voluntary basis.

The information collected about the students who participated in the early editions of the program (measured by means of tests administered both before and after the FE classes) showed a significant increase in their financial competences (Romagnoli and Trifilidis, 2013). In the following years, the number of participating students sharply rose: overall, it is estimated that more than 600,000 students were reached by FEiS between 2008 and 2022.

Over time, the program has been reinforced and modified to better meet the needs of schools and to respond to the changes in the economic context.

A major change to the program happened in 2019 when a new series of booklets, named *Tutti per uno economia per tutti! (All for one economics for all!)*, was released by the Bank of Italy. For each school level (primary, lower secondary, and upper secondary) there is a booklet for students and a guide for teachers, all available online, together with several additional web content, such as games and interactive figures [1]. The two volumes, organized in a parallel manner for each level, cover five essential topics that children and young people will inevitably encounter in their lives: i) income and planning, ii) money and prices, iii) payments and purchases, iv) savings and investment, and v) credit. The content selection aligns with the OECD PISA frameworks developed over the years and remains consistent with the principles outlined in the latest joint EU/OECD financial competence framework for children and youth (European Union/OECD, 2023), despite the volumes being structured before the release. Both the language and the pictures used are devised to illustrate the contents in a simple but thorough way, with the aim of improving students' engagement. The scope and structure of the booklets are adapted to the different grades and ages.

To provide context, it is important to understand the structure of the Italian educational system. It comprises three levels: primary school (grades 1-5), lower secondary school (grades 6-8), and upper secondary school (grades 9-13). Children enter primary school in the year they turn six and move on to lower secondary school at age eleven. These two stages constitute the "first cycle" of education, which is mandatory and standardized for all students. Our study examines students in grade 5 and grade 8, who are in the final year of primary and lower secondary school, respectively.

[1]The booklets, in particular, can be downloaded as pdf files or requested in print, free of charge, from the Bank of Italy (in 2022 about 50,000 booklets were sent by the Bank of Italy to primary, lower secondary and upper secondary schools).

Primary and lower secondary education differ significantly in their organization and approach. In primary schools, students typically have two main teachers who cover different subjects and often remain with the same group of students from first through fifth grade. In contrast, lower secondary schools have a more specialized structure, where students are taught by multiple teachers, each an expert in a specific subject. This stage emphasizes a broader and more diverse skill set, preparing students for the complexities of higher education.

4 Objectives and Research method

This work aims to evaluate the effectiveness of the FEiS program. Specifically, the paper answers three main research questions: i) is the program an effective instrument to improve the financial literacy of students who attend it? ii) is autonomous study (at home) as effective as classroom activities for the target group? iii) does the effectiveness of the program vary according to the heterogeneous characteristics of students and of their teachers? We focus on primary and lower secondary education, while upper secondary education is excluded from this impact evaluation analysis.[2]

Within primary and lower secondary schools, we focus respectively on grade 5 and grade 8 students. This choice is driven by the availability, for them, of a large set of data provided by the National Institute for the Evaluation of the Education and Training System (INVALSI) on both students' characteristics (such as scores in mathematics and reading) and their

[2]The rationale behind the exclusion of upper secondary school from this study is that, in Italy, these grades are characterized by heterogeneous programs of study and types of school (such as lyceums, technical colleges, and vocational colleges), which would have required a much larger - and very costly to handle - sample than the former, in order to fully evaluate the effectiveness of the program. Future research might shed some light on this specific educational segment.

socioeconomic status. In Section 5, we provide a list of the available indicators for individual students - as evident there, this is a particularly rich set of information. The interpretation of the individual-level data provided by INVALSI, combined with program-specific data, has been made possible thanks to the valuable collaboration with INVALSI. This partnership marks a significant milestone, as it is the first instance where rigorous research on the effects of FE in Italy is enriched by the critical administrative and performance data collected and managed by INVALSI.

In the remainder of this section, we outline key aspects of the two experiments, including the design (4.1), the training provided to participating school teachers (4.2), the implementation of the RCTs (4.3), and the student tests along with teacher questionnaires used for data collection (4.4 and 4.5).

4.1 Two Randomized Controlled Trials

We follow an experimental methodology, undertaking two fully fledged RCTs, involving 5 and 8 graders, respectively. The random allocation design is made at the school-class level and consists of two steps. In the first step, 30 schools, all belonging to the comprehensive institutes' typology (which includes both primary and lower secondary schools) were randomly selected. [3] To ensure that our sample is representative of the geographical differences across the country, schools were drawn from both the Centre & North area (namely, Veneto and Tuscany regions were selected) and the South & Islands (Sicily region was selected). In the second step, for each school, a triplet of primary school classes (grade 5) and a triplet of lower secondary school classes (grade 8) were randomly drawn.

[3]Notice that comprehensive institutes do not necessarily consist of just one large campus; often, they consist instead of different smaller campuses located over the city's area.

The design of each RCT (for both grade 5 and grade 8) includes two alternative treatment groups and one control group. In particular, within each school, classes in both the grade 5 and grade 8 triplets were randomly assigned to either: i) a treatment group consisting of classes assigned to training on basic economic-financial topics by means of face-to-face lessons, taught by school teachers (we refer to this group as Group A, i.e. "treatment"); ii) a treatment group consisting of classes whose students are asked to study at home using the booklets *All for one economics for all!* (Group B, i.e. "alternative treatment") without the teachers giving lectures on the different topics; iii) a control group (Group C). This particular design of the experiment is an innovative and valuable feature of the present study. Treatment A ("classroom activity") mimics the program proposed by the Bank of Italy yearly to the school system; using this form of treatment we can evaluate the effectiveness of the FEiS program. Instead, by means of treatment B (that we define "individual study") we can test whether the simple study of the booklet released by the Bank of Italy at home is sufficient to improve students' financial literacy. The comparison between the two treatments allows us to investigate the role of formal educational activities conducted by teachers in fostering financial literacy among students. Our hypothesis is that teachers are key essential mediators of knowledge transfer to students.

The random draw of the schools was made by INVALSI. The principals of the selected schools were first reached by INVALSI and invited to join the RCT, ensuring a strong institutional commitment. During the first contact, school principals were given a set of general information about both the Bank of Italy program and their school's involvement in the RCT. Those principals who showed interest in the FEiS program were then contacted by the Bank of Italy researchers, who provided more detailed information.

In order for the experiment to mirror the actual implementation of FEiS

within each school, we asked the teachers involved in the RCT to cover two topics out of five. Indeed, two is the median number of topics covered by schools that participate in the FEiS program within one school year.[4] In particular, the following two topics were included in the RCT: income and budgeting, and saving. The income and budgeting chapter is the first of the booklet; it introduces the students to the topic and describes how important income is to have regular earnings over time to ensure not only survival but also well-being. The second chapter chosen focuses instead on the concepts of saving and investment and risk reward. Our choice of grounding the RCTs on two topics only also arguably increases the participation rate of the schools and reduces their burden.

Among the institutes that have been contacted, 19 accepted to participate: 11 schools headquartered in the Center & North and 8 in the South & Islands. The majority of school principals who decided not to join the RCT based their decision on the general difficulties experienced by their institute due to the COVID-19 pandemic, which negatively affected teaching activities. In particular, school principals whose classes suffered more severe COVID-19 outbreaks preferred their students to concentrate on traditional school programs, rather than introducing new activities.

4.2 School teachers training

After the engagement of the schools, in order to coordinate the activities of the three groups of classes (i.e., Groups A, B, and C), in each school a project supervisor for each grade was appointed, mostly from the pool of teachers. Then, all the teachers of the classes involved in the experiment and project supervisors were provided with detailed instructions about the

[4]FEiS is a modular program. Most schools usually carry the program out over two school years (hence covering two or three topics each year) to avoid an excessive burden on compulsory activities.

experiment at hand. To this aim, a series of training sessions was arranged by Bank of Italy researchers.

The training consisted of a 3-hour online meeting, composed of a 2.5-hour seminar and a 30-minute Q&A session. The first part of the seminar replicated the training that the Bank of Italy organizes for teachers who participate in the FEiS program. In this way, we mimic the functioning of the FEiS program. The second part of the seminar involved instead the unfolding of the RCT, whose steps were explained in detail.

To meet the teacher needs and stimulate their attendance, 7 training sessions were arranged between November 2021 and February 2022.[5] To avoid introducing confounding factors in the experimental setup, all the training seminars were held by the same Bank of Italy researchers following the same structure and content. Moreover, all teachers and supervisors were invited to attend a plenary Q&A session in March 2022, where all the necessary clarifications about the RCT were provided. In addition, a dedicated email account was set up to promptly address any problem signaled by the teachers during the unfolding of the RCT.

The training seminar was mandatory for project supervisors and Group A teachers (i.e., those asked to undertake FE classes at school), while Group B and Group C teachers participated voluntarily. Overall, 137 teachers attended the training and Q&A sessions, of which 63 were grade 5 teachers and 74 were grade 8 teachers.

4.3 The practical features of the RCTs

The Bank of Italy handled all the logistic aspects of the RCT. Each participating school received a mail-box containing the *All for one economics for all!* booklets for its students, the teacher manuals, both pre-

[5]The training sessions took place on November 29th, December 2nd, December 9th, December 15th, January 17th, February 15th, and February 21st.

tests and post-tests for students, and stickers with the students' anonymous INVALSI-codes used by the teachers to label each test (see figure 2). In order not to discriminate against Group C students (control group), the mailbox included booklets for them as well; the latter were consigned to Group C students by their teachers only once the experiment was concluded. At the end of the activities, all participants involved in the RCT - students, teachers, and schools - received a certificate of attendance issued by the Bank of Italy.

Each school completed the teachers' training activities at different points in time. Once a school had completed such activities, the experiment began. For each grade, the three classes involved in the school (i.e., Groups A, B, and C) were asked to coordinate among themselves, with the activities being tailored to Group A's schedule. In particular, the three groups of students were administered a pre-test in the same week. Afterward, when Group A's teaching activities in class began, Group B students were asked to start studying the booklets at home. When Group A's teaching activities were completed, the three groups of students were administered a post-test (see Figure 3). Teachers, regardless of whether their students were in Groups A, B, or C, were administered two non-mandatory questionnaires: one before the beginning of the experiment, and one once the experiment was concluded. The questionnaire does not contain any measure of teachers' financial literacy or general effectiveness; it is intended to capture teachers' attitudes and beliefs, as well as activities conducted during the FE program (see details in Section 4.5). All the single phases of the experiment have been carefully monitored to check the validity of the procedures followed by each school and to avoid all potential inconsistencies.

4.4 Student tests

The students' pre-tests and post-tests consist of 9 or 10 questions, depending on the student's grade level, and are divided into three sections. The first section covers income and budgeting, corresponding to Chapter 1 of the booklets; the second section focuses on saving, as discussed in Chapter 4; and the third section assesses students' attitudes, such as their tendency to prioritize immediate rewards over future benefits when making decisions. The pre-tests are included in Appendix 1, while the post-tests are available from the authors upon request.

All the questions were initially evaluated through a pilot study conducted during the 2020-21 school year, involving two to three classes per grade. This preliminary step was essential for ensuring the validity of the research and stands as a distinctive feature of this assessment. The final tests are not only based on the best research in the field but are also tailored to the unique characteristics of the Italian school system (see Section 3). Drawing on the insights from the pilot study, the student tests were subsequently revised and validated.

The student tests were administered on paper, as this modality was largely preferred by the teachers. In compliance with Italian data protection laws, the tests were anonymous. To associate each pair of tests (pre- and post-) and to link data about students' characteristics (provided by INVALSI) to the test results, students were individuated by an anonymous code (INVALSI-SIDI code). The list of anonymous students' SIDI codes (without the corresponding students' names) was provided to the Bank of Italy by INVALSI. The individual codes were then printed together with other information - such as school names, grades, and group codes - on stickers and sent to the schools. The association between the SIDI anonymous codes and students' names was made by the teachers at school, for

each test. Finally, the tests were returned to the Bank of Italy. The final coding, data imputation, and empirical analysis have been primarily realized by the research group of the Politecnico di Milano.

Regarding the scoring of the tests, each question (often composed of multiple items) could earn up to 1 point, with a few exceptions for more challenging questions, which were awarded 2 points each. Incorrect or unanswered questions received zero points, as no negative scoring was applied. The final score for each student was calculated by summing all individual question scores and then normalizing the total to a [0,1] scale across the entire population that participated in the experiment.

4.5 Teacher questionnaires

The two questionnaires directed to teachers were not mandatory[6]. The first questionnaire (conducted before the experiment) was conceived to gather some demographic characteristics such as gender, age, level of education, teaching experience and subjects taught. Moreover, it was also meant to assess whether the teachers had already taught FE or taken part in FE courses before and to describe their relationship with finance (i.e., saving and investment habits). The main research-related object of this questionnaire is to gather relevant information about the teachers' background and their specific involvement with FE. The hypothesis is that some features might be associated with their effectiveness in teaching FE, which in turn affects the students' performance.

The final questionnaire was designed to gather detailed information about the implementation of the experiment, including the duration of the FE lectures and the association of teachers with their respective classes. The primary purpose of this second questionnaire was to collect evidence

[6]Both questionnaires, not reported in this paper for brevity, are available upon request from the authors.

on the various practical approaches each teacher used to implement the FEiS program. While the guidelines were consistent across schools and classes, variations in the effort and specific operational decisions made by teachers could impact the program's effectiveness. Indeed, teachers naturally adapted the FEiS program to meet the specific needs of their students.

5 Data

In the spring of 2022, the two experiments concluded with final assessments completed by all participating students. Approximately 1,000 fifth-grade students and 1,100 eighth-grade students filled out the tests. In addition to these tests, the evaluation study also utilized an extensive database provided by INVALSI, which includes detailed information about the students' individual characteristics, such as demographic traits, mathematics and reading test scores, and their index of economic, social, and cultural status (ESCS), as well as data related to their classes. A comprehensive description of the dataset is provided in Section 5.1.

In this paper, we utilize mathematics and reading test scores administered by INVALSI during the same school year as our experiment (i.e., 2021/22). We consider controlling for financial literacy performance using INVALSI test scores to be a crucial aspect of our study — representing a significant innovation. On the one hand, the FE test questions cover topics that differ considerably from those in the INVALSI tests. On the other hand, given that mathematics and reading skills are positively correlated with financial literacy, one might argue that the INVALSI tests could have prompted students to study more, thereby indirectly enhancing their financial literacy. However, this is unlikely to bias our results, as any such additional influence would affect all three groups of students (A, B, and C) equally. If anything, this could result in a downward bias in our estimates,

which would then represent a conservative lower bound of the true effect.

Since INVALSI tests are administered in grades 2, 5, 8, 10, and 13, an alternative approach could have been to use the INVALSI scores from grade 2 to control for the mathematics and reading skills of fifth graders, and those from grade 5 to control for eighth graders. However, this option was suboptimal for two main reasons. First, these earlier test scores are temporally distant from the experiment, making them less relevant for assessing current performance. Second, students in Italy typically attend grades 1-5 in primary school before transitioning to a different institution for grades 6-8, which is lower secondary school. This transition means that the student populations in primary and lower secondary schools are distinct, with different cohorts of students and often different teaching environments. If we had used INVALSI test scores from grade 2 to control for the mathematics and reading skills of fifth graders, or scores from grade 5 to control for eighth graders, we would have faced a significant challenge. Specifically, many of the students tested in earlier grades might not have continued on to the same schools or classes where our experiment was conducted, leading to incomplete or missing data. This substantial data loss would have diminished the statistical power of our analysis, making it harder to detect meaningful effects and reducing the overall precision of our RCTs.

The additional information on students' (from INVALSI) and teachers' (from questionnaires) characteristics holds significant value. Such information enables us to make more accurate assessments of the program's effectiveness. Moreover, it allows us to evaluate whether the program's effectiveness varies according to the observable characteristics of both teachers and students (heterogeneity analysis).

5.1 Descriptive statistics

We began with an initial sample of 1,077 fifth-grade students from 19 schools and 1,232 eighth-grade students from 20 schools. To ensure data accuracy, we conducted a rigorous data-cleaning process. Students whose SIDI codes were not present in our INVALSI database or who left their tests blank were excluded from the analysis. Additionally, we removed two sets of primary school classes associated with treatment A due to data issues: one class was excluded because of missing pre-test data, and another was removed due to evidence of cheating, as all post-tests were completed in the same handwriting. After this cleaning process, the final sample consisted of 639 grade 5 students from 16 schools and 899 grade 8 students from 18 schools.

Table 1 presents the key student variables used in the analyses, including individual characteristics (gender, nationality, ESCS index), the mean of the INVALSI Mathematics and Reading scores as a proxy for academic performance, class-level characteristics (class mean of the INVALSI Mathematics and Reading scores, class size), and financial literacy scores from both pre-tests and post-tests. The table also includes measures of students' patience and saving attitudes, derived from questions on intertemporal choices and savings management found in the third and final section of the tests (see Appendix 1).

Tables 2 and 3 provide a comprehensive overview of descriptive statistics for grade 5 and grade 8 students respectively, split by treatment group. The distribution of males and females in the two school grades is almost symmetrical, with grade 5 having 48 percent females and grade 8 having 53 percent females. The students from both grade levels reveal the same initial financial knowledge, with 57 percent of correct answers. Furthermore, when we analyze the mean between the INVALSI Mathematics and Read-

ing scores, we observe differences between the two grades. As a matter of fact, in our sample grade 5 students achieve an average score of 203, while grade 8 students score an average of 192[7]. Moreover, some heterogeneity emerges also inter-grade. The first point is about pre-test scores: while the Wilcoxon rank-sum tests indicate no statistically significant differences between the scores of Groups A (main treatment) and C (control), Group B (alternative treatment) displays a slightly larger (lower) score in grade 5 (grade 8) students with respect to Group C. Second, the ESCS index and the mean between the INVALSI Mathematics and Reading scores in grade 8's Groups A are higher, suggesting inequalities in students' family and educational backgrounds. Last, pre-test patience is significantly lower in grade 5's Groups C, with a 10 percentage-point gap with respect to the other two groups. These imbalances in the composition of students' groups, which are exogenous and determined by random selection of participants, are tackled in the empirical analysis by means of a regression approach, that controls for the relevant variables.

6 Empirical strategy

We analyze the impact of the FEiS program by means of two RCTs, respectively for grade 5 and grade 8. For each school grade, we estimate the following baseline regression model:

$$\begin{aligned} Post_{ij} = \beta_0 + \beta_1 \cdot Pre_{ij} + \beta_2 \cdot Treat_{A_ij} + \beta_3 \cdot Treat_{B_ij} + \\ + \lambda \cdot X_{ij} + \gamma \cdot Class_j + School_{FE_j} + \epsilon_{ij} \end{aligned} \tag{1}$$

[7]As Figure 1 illustrates, while such a score difference between the two grades is not observed at the national level, our two samples are largely in line with the Italian averages.

where $Post_{ij}$ is the post-test score (on financial literacy) of student i in school j. Pre_{ij} is the pre-test score, $Treat_{A_ij}$ and $Treat_{B_ij}$ indicate whether the student has been randomly assigned to Group A or Group B, respectively. While the balancing tests (see Tables 2 and 3) are reassuring about the randomization, in order to obtain more precise estimates, and to control for potential confounding factors, we also include a large set of covariates. In particular, X_{ij} is a vector of student-specific characteristics and $Class_j$ is a vector of class-level variables. The student-level characteristics include gender, nationality, an index for the family's economic, social, and cultural status (ESCS), pre-test measures of patience, pre-test saving attitude, and the mean between the INVALSI Mathematics and Reading scores[8]. At the class level, covariates include the class mean between the INVALSI Mathematics and Reading scores, as well as the number of students per class. To account for structural, persistent, and unobservable quality differences across schools, we include school fixed effects $SCHOOL_{FE_j}$. This approach helps ensure that the effectiveness of the program is not mistakenly attributed to pre-existing differences between schools. Additionally, standard errors are clustered at the class level to account for within-class correlations.

In the second step of the empirical analysis, student-level covariates are then employed to investigate whether the potential impact of the program is heterogeneous according to different students' characteristics. For this purpose, we use interaction terms augmenting the regressions specified in equation 1, to capture the differentiated effects of the intervention with the variables of interest.

[8]We employ the mean between the INVALSI Mathematics and Reading scores to keep in the estimation sample students for which only one among the two tests is available.

7 Results

The results of the estimates are provided in three separate subsections: 7.1 shows the average treatment effects of both the main treatment and the study at home treatment on financial knowledge of grade 5 and 8 students; 7.2 investigates the presence of heterogeneous treatment effect across students' characteristics; 7.3 provides some tests to check for the robustness of our baseline findings.

7.1 Treatment effects

Table 4 and Table 5 present the effects of the treatments for grade 5 and grade 8, respectively, when only student-level and class-level covariates are included in the estimation. In presenting such results, we estimate four alternative models, from a parsimonious one to a model that includes the full set of controls. In particular, Model 1 controls only for students' gender, nationality, and the ESCS index; Model 2 includes students' academic performance; Model 3 incorporates class-level variables; Model 4 controls also for students' financial behavior.

Let us first consider Table 4, referring to grade 5 students. The estimates show that the program improves students' financial knowledge by about 8 percentage points, which is approximately equivalent to an increase of one additional correct answer. Such an effect is stable and statistically significant across the four models. In terms of effect size, we observe a value of 0.54 SD, considered "large" according to Kraft (2020). No effect is detected for treatment B (i.e., study at home treatment). Notice that we cannot observe non-compliance for treatment B students, so for this group, our estimates measure an intent-to-treat effect. As a consequence, the fact that no effect is detected for treatment B could be due either to non-compliance (i.e., students did not read the booklet) or to the fact

that reading the booklet only is not effective without a discussion with an expert.

When looking at the control variables, foreign students' post-test scores are 5 percentage points lower than their Italian counterparts, and higher performance in INVALSI tests positively correlates with a better grasp of financial concepts, ceteris paribus. Also note that there is no statistically significant relationship between the ESCS index and the post-test financial literacy score, once the mean between the INVALSI Mathematics and Reading scores is introduced in Models 2, 3, and 4 - suggesting a strong correlation between socioeconomic status and academic performance.
Grade 8 students' results, provided in Table 5, are very similar to the evidence related to grade 5. Students assigned to Group A have better post-test scores with respect to students in Group C, while no impact is detected for Group B students. The treatment A's effect remains consistent across all Models, with a magnitude of 8.5 percentage points and an effect size of 0.66 SD.

7.2 Heterogeneous effects

In Tables 6 and 7, we assess whether the program's effects differ according to students' individual characteristics. Our analysis focuses on the following variables: gender; academic performance (indicated by the mean between the INVALSI Mathematics and Reading scores); class average skill level (measured by the class mean between the INVALSI Mathematics and Reading scores); and the ESCS index. To simplify interpretation, continuous individual-level regressors are dichotomized by a median split. Results show that no heterogeneity is detected with respect to gender and both student and class skills. However, for both grade 5 and grade 8 students, a positive and statistically significant interaction between Group B treatment and the ESCS index emerges. In particular, students in Group B

(i.e., subjected to the alternative, study-at-home treatment) with a higher ESCS index obtain higher post-test financial literacy scores compared to their Group B peers with a lower ESCS index. In other words, socially and culturally advantaged students can benefit from the financial education booklets also through personal reading, and not only through the learning activity provided by teachers. A potential explanation here is that the positive effect might be driven by parents' support in studying and discussing the booklet - an opportunity that disadvantaged students are less likely to have.

7.3 Robustness checks

In this section, we perform two robustness exercises, grounded on alternative specifications of the baseline models. Models 1 in Table 8 and Table 9 show the results obtained by employing an alternative question-scoring method. In particular, rather than scoring in accordance with the difficulty of each question, we calculate the pre- and post-test scores through an unweighted method, awarding 1 point for every correct answer. The earlier findings remain robust to this alternative scoring method. Models 2 in Table 8 and Table 9 present the estimates of an alternative equation, where the response variable is given by the difference between post-test and pre-test scores (i.e. delta scores), rather than the post-test score. The effectiveness of treatment A is, again, confirmed, for both grade 5 and grade 8 students. There are, however, additional insights to be discussed. The analysis among grade 8 students reveals that the distribution of the booklets has a statistically significant and positive, although small in size, effect on students' financial literacy. No effect of study at home is detected, instead, for grade 5 students. This result suggests that students' maturity level plays a role, where only sufficiently mature students fully benefit from the didactic material. Additionally, the robustness regressions based

on delta scores as outcome variables show some evidence that the program has a slightly larger impact on grade 8 female students with respect to their male counterparts.

8 Extension to the baseline results: A focus on teachers

In this section, we exploit teacher-level information. Our aim is threefold. First, we provide a further robustness exercise of our baseline findings, by adding teachers' characteristics among the set of controls. Second, we investigate whether the impact of the program is heterogeneous across some teacher observables and, third, across the duration of the Group A lectures.

8.1 Descriptive statistics

Table 10 describes the teachers-level variables introduced in the analyses. The first group of variables describes teachers' gender, age, and teaching experience, while the second group provides information about teachers' relationships with finance. In particular, concerning the latter, we observe whether teachers: have already dealt with economic and financial topics in their classes ("dealt with fin. topics"); manage their current account online, or use digital payments ("digitalization"); have left all their last year's savings in the current account ("CA only"). Finally, for Group A teachers, we observe the duration of the financial education classroom lectures.

When considering the responses from teachers, the voluntary nature of their participation in the questionnaires had a significant impact on the sample size. Approximately 60 percent of the teachers who took part in the initial questionnaire either skipped at least one question or left the online session before completing it. In addition, half of the teachers who partici-

pated in the first questionnaire were not matched with the participants in the final questionnaire.

The final sample comprises 27 primary school teachers from 14 institutes and 30 lower secondary school teachers from 16 institutes. Tables 11 and 12 provide a comprehensive overview of descriptive statistics for both primary and lower secondary school teachers, split by the treatment group assigned to their class. Regarding the primary school teachers, they are all female except two, almost half of them are between 56 and 65 years old, and one out of five has more than 31 years of school experience. Concerning their primary school counterparts, secondary school teachers display a larger fraction of males (17 percent), are younger (one out of three is less than 45 years old), and have less school experience (40 percent have less than 10 years of school experience).

All in all, using this additional information comes at the price of a sensible drop in the number of observations. In particular, the sample of grade 5 students has been reduced from 639 to 292, whereas grade 8 students fell from 899 to 533. The loss of more than half of the sample of grade 5 students does not allow us to undertake a robust investigation that is representative of the original population; therefore, the analyses that follow are only performed for grade 8 students.

8.2 Results

8.2.1 Treatment effect controlling for teacher characteristics

We first estimate again our baseline model adding teacher-level information. Results, reported in Table 13 and referring to grade 8 students, confirm our baseline findings, with treatment A statistically associated with higher performance. However, differently from previous results, also the coefficient of treatment B is statistically significant, as the post-test score of

students increases by around 3-4 percentage points in Model 3.[9] None of the teacher variables is statistically significant.

8.2.2 Heterogeneous effects across teacher characteristics

Second, we proceed to check whether teachers' financial behaviors may influence the FE learning process of their students. To do so, both treatments interact with the three teacher-level dummy variables described above. Namely, "dealt with fin. topics", "digitalization", and "CA only". The results are presented in Table 14. Looking at Model 1 when the variable "dealt with fin. topics" is considered, a student in Group A improves his/her outcome in the post-test by 21.5 percentage points if the FE course is taught by a teacher who has already dealt with economic and financial topics. This is a very strong effect in magnitude. Moving to Model 2, we observe again a positive and statistically significant interaction between teachers' behaviors and treated students' performance, as the post-test score of Group A's students increases by 10 percentage points when their teacher either manages his/her current account online or uses digital payments. Lastly, no statistically significant interaction emerges in Model 3, when "CA only" teachers interacted with the treatment.

8.2.3 Duration of the lectures and impact of the program

Finally, we investigate whether the impact of the program depends on the amount of hours dedicated to classroom teaching. In particular, we split Group A classes according to whether their teachers dedicated more

[9] One possible reason for this outcome, which differs from the baseline, could be that the sample used in this section consists of students taught by teachers who completed the questionnaire. Since these teachers completed the questionnaire, they were arguably more involved in the experiment, which might have led to better engagement with Group B students.

than 9 hours to the FE classroom activities or less than that[10]. Then, we estimate the following model:

$$Post_{ij} = \beta_0 + \beta_1 \cdot Pre_{ij} + \beta_2 \cdot Treat_{A1_ij} + \beta_3 \cdot Treat_{A2_ij} + \\ + \beta_4 \cdot Treat_{B_ij} + \lambda \cdot X_{ij} + \gamma \cdot Class_j + School_{FE_j} + \epsilon_{ij} \quad (2)$$

where $Treat_{A1_ij}$ and $Treat_{A2_ij}$ indicate Group A students undertaking longer classroom activities (i.e. more than 9 hours overall) and shorter classroom activities (i.e. 9 hours at most), respectively. All other variables are the same as model 1.

Results, displayed in Table 15, show a higher estimated coefficient for treated students belonging to the treatment group with more teaching hours. In particular, the program leads to an increase in financial literacy by about 11 percentage points for students who benefited from longer lectures, and by less than 5 percentage points for students in the shorter lectures group. Not surprisingly, the latter effect is not different from that associated with treatment B (i.e., study at home). In summary, this evidence suggests that dedicating a minimum of 4-6 hours per class session to each FEiS topic (the experiment encompassed indeed two distinct topics) seems essential for the program's overall effectiveness.

9 Concluding remarks and implications

In this paper we assess the effectiveness of a Bank of Italy's "Financial Education in School" (FEiS) program for grade 5 and grade 8 Italian students. The study employs two RCTs with a school-class level randomization. Students are divided into three groups: Group A ("treatment" group), Group B ("alternative treatment" group), and control Group C.

[10]The threshold of 9 hours has been chosen to equally split the sample of teachers and conduct a more robust analysis.

Treatment A mimics the FEiS program offered nationwide by the Bank of Italy, yearly since 2008. In particular, the program follows a "train the trainer" approach, where teachers are firstly instructed by the Bank of Italy on financial and economics topics; later, they undertake classroom activity supported by didactic resources *All for one economics for all!*. The alternative treatment, i.e. treatment B, consists in the self-study of the same didactic resources by the students. Together with the involvement of students, whose financial literacy competencies are tested through pre- and post-tests, also teachers actively participate and do so beyond their teaching role. Indeed, not only they are trained regarding the program but are also administered questionnaires on financial habits and evaluation of the FE initiative.

The FEiS program by the Bank of Italy improves the financial knowledge of students at both levels of education by about 8 percentage points. The effect size of the intervention results to be 0.54 SD for grade 5 and 0.66 SD for grade 8, which is sizeable and consistent with previous experiments in different countries and contexts (Batty et al., 2020; De Beckker et al., 2021; Sconti, 2022). No impact is detected, instead, on average for self-study for both grades.

Deepening the investigation through the analysis of heterogeneous effects, it turns out that the student's socioeconomic status plays a crucial role in the transmission of financial knowledge within groups. As a matter of fact, students with a high ESCS index who received the booklets to study at home performed better on the post-test compared to their peers with a lower ESCS index. This is an important finding, as it supports the claim that socioeconomically advantaged students can benefit from FE even without the direct involvement of teachers. The same does not happen for more disadvantaged students, though. These results highlight the importance of the school institution in promoting financial literacy and bridging inequal-

ities arising from diverse family backgrounds. In this vein, the effort by teachers should be primarily directed towards the less privileged students.

The financial behaviors of teachers involved in the FE course seem to matter in the ability of students to acquire new financial knowledge. This feature of the present study, although referred to as grade 8 students due to data availability issues, is particularly innovative. It is almost the first time that detailed data about teachers are merged with experimental microdata about students. The effort is worthwhile because we demonstrate that heterogeneity of teachers' behaviors is associated with variation in students' knowledge and with the program's effects. Specifically, teachers who have already shown interest in economic and financial subjects or embrace digital financial tools can impact the results of students, especially the former, with a final effect on post-test scores that is almost three times the baseline effect.

The findings obtained through our research hold three major policy implications. First, well-designed materials and programs for increasing financial literacy at school work, and the effects that they obtain are sizeable. Thus, it is necessary and helpful to continue promoting high-quality interventions in the FE domain for pupils without delay, as soon as possible. Second, the role of teachers is decisive. The program we tested obtained its causal impacts on financial literacy via the teaching activities during the classroom's time. The positive effects obtained by booklets alone for students whose families have a higher ESCS index underline that the classroom activities are particularly relevant for less advantaged ones, promoting equality in educational opportunities. Third, there is heterogeneity across teachers, and it must be taken into account. Given that more financially active teachers can improve the effect of the FEiS program, specific training for all seems necessary to raise the bar of quality education for all students.

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Figures and tables

Figures

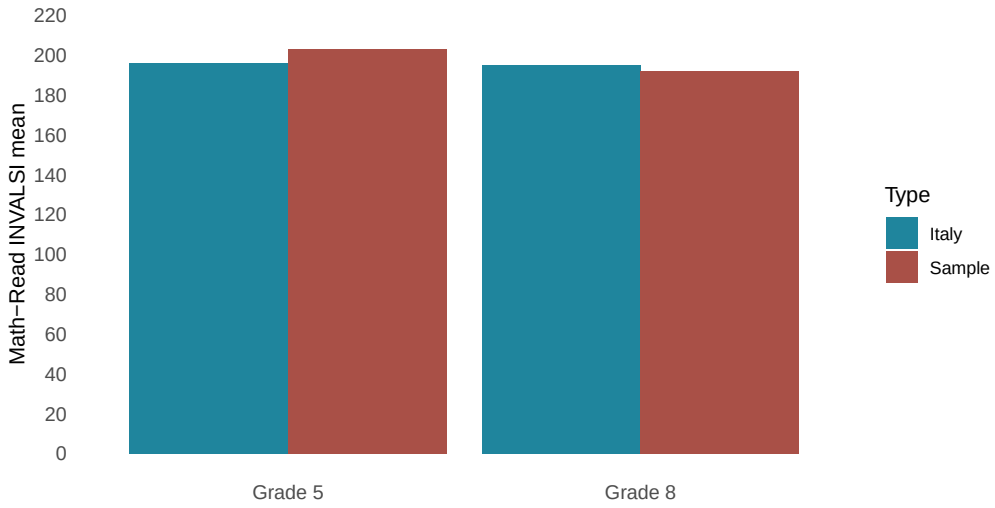


Figure 1. Mean between INVALSI Mathematics and Reading scores, by grade: Italy vs sample

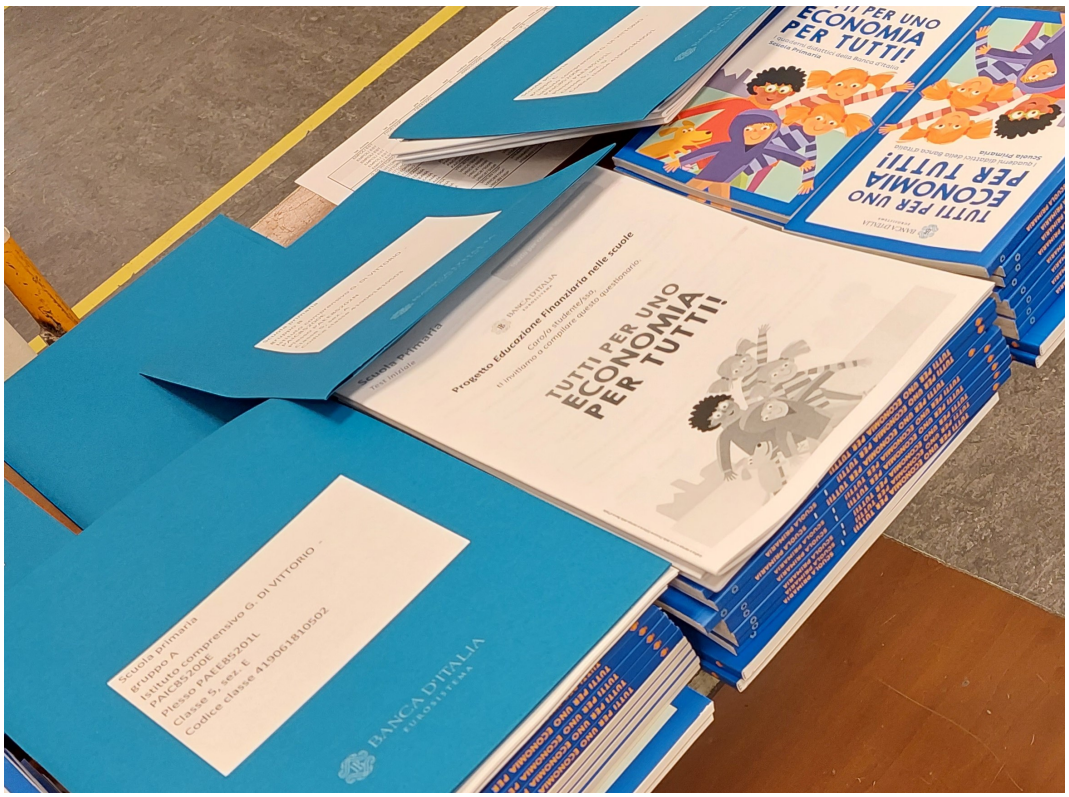


Figure 2. Content of the mail-box sent to RCT participant schools

Note: *All for one, economics for all!* booklets for students (small volumes) and teachers (large volumes), pre- and post-tests, RCT instructions and stickers with the students' anonymous SIDI-codes (in the folders).

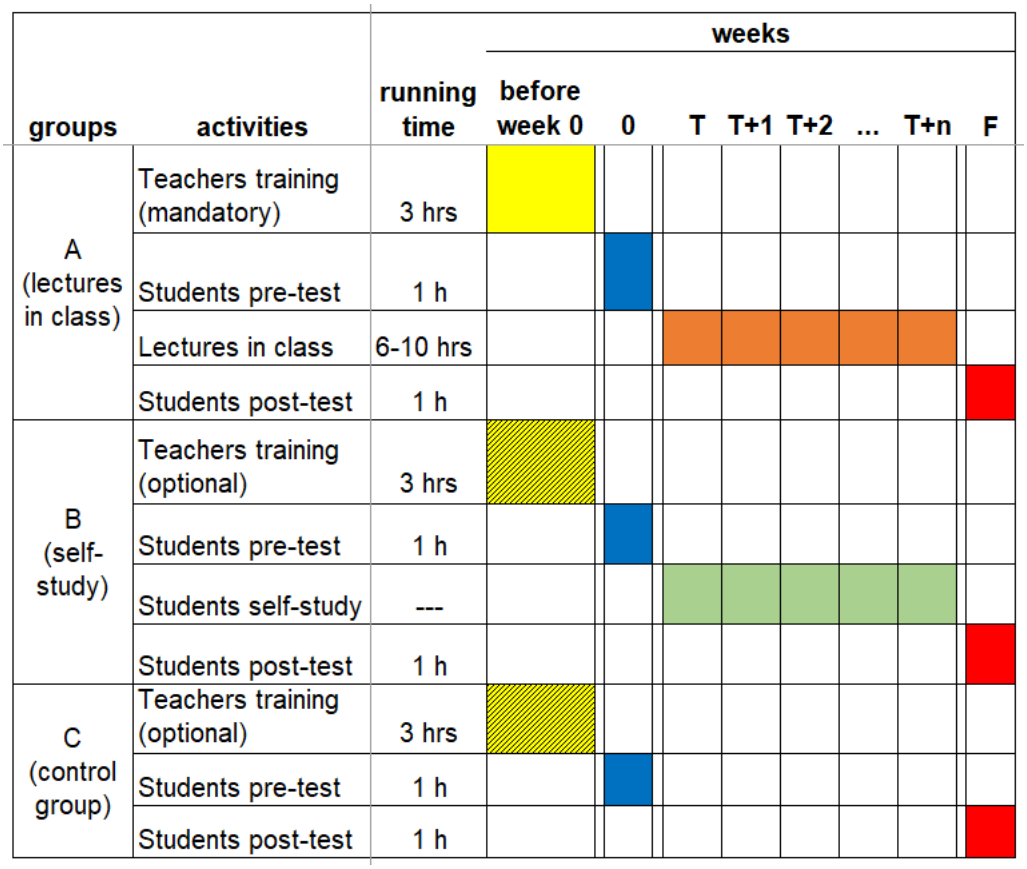


Figure 3. GANTT characterizing the two RCTs

Note: In each RCT participant school administered both pre-tests and post-tests to Groups A, B, and C students in a coordinated fashion, with a timing tailored to Group A's needs.

Tables

Table 1. List of students' variables

Variable	Description	Value/range
Individual characteristics		
Female	If the student is a female	1 or 0
Foreign	If the student is foreign	1 or 0
ESCS	Student's ESCS	from -3 to 3
Academic performance		
INVALSI mean Math-Read	The mean between the INVALSI Mathematics and Reading scores	from 64 to 315
Financial knowledge		
Pre-test score	Pre-test score in financial knowledge	from 0 to 1
Post-test score	Post-test score in financial knowledge	from 0 to 1
Delta score	The difference between pre-test score and post-test score in financial knowledge	from -1 to 1
Financial behaviors		
Pre-test patience	If the student, in the pre-test, always prefers to wait for a higher reward	1 or 0
Post-test patience	If the student, in the post-test, always prefers to wait for a higher reward	1 or 0
Pre-test saving	If the student, in the pre-test, prefers to save either all or most of his/her money	1 or 0
Post-test saving	If the student, in the post-test, prefers to save either all or most of his/her money	1 or 0
Class-level characteristics		
INVALSI class mean Math-Read	The class mean between the INVALSI Mathematics and Reading scores	from 129 to 229
Students per class	The number of students in each class	from 10 to 24

Table 2. Descriptive statistics - Grade 5

Variable	**A**	**B**	**C**	**p-value**
Female	115 (49%)	96 (47%)	96 (49%)	0.9
Foreign	41 (17%)	42 (20%)	32 (16%)	0.5
ESCS	0.15 (1.16)	0.14 (1.12)	0.08 (1.22)	0.9
Pre-test score	0.56 (0.20)	0.59 (0.20)	0.55 (0.18)	0.058
Pre-test patience	98 (42%)	93 (45%)	66 (34%)	0.051
Pre-test saving	174 (74%)	152 (74%)	143 (73%)	>0.9
INVALSI mean Math-Read	204 (36)	205 (36)	199 (37)	0.2
INVALSI class mean Math-Read	202 (21)	202 (17)	198 (17)	0.8
Students per class	17.9 (3.1)	18.6 (3.0)	18.4 (4.2)	0.7
Post-test score	0.74 (0.16)	0.65 (0.18)	0.65 (0.18)	<0.001
Delta score	0.18 (0.23)	0.05 (0.20)	0.09 (0.21)	<0.001
Post-test patience	123 (52%)	77 (37%)	67 (34%)	<0.001
Post-test saving	186 (79%)	149 (72%)	145 (74%)	0.2
N	236	206	197	

Note: continuous variables (in italics) are represented as means and standard deviations. Dummy variables are represented as frequencies and percentages. The p-values for continuous variables come from a Kruskal-Wallis rank sum test, whereas the p-values for categorical variables come from a Pearson's Chi-squared test.

Table 3. Descriptive statistics - Grade 8

Variable	**A**	**B**	**C**	**p-value**
Female	154 (52%)	168 (53%)	152 (53%)	>0.9
Foreign	39 (13%)	56 (18%)	38 (13%)	0.2
ESCS	0.05 (1.08)	-0.17 (1.04)	-0.24 (1.15)	0.004
Pre-test score	0.59 (0.16)	0.54 (0.18)	0.57 (0.17)	0.003
Pre-test patience	77 (26%)	85 (27%)	71 (25%)	0.9
Pre-test saving	201 (68%)	223 (70%)	197 (69%)	>0.9
INVALSI mean Math-Read	198 (37)	191 (40)	189 (40)	0.022
INVALSI class mean Math-Read	191 (20)	187 (22)	183 (25)	0.5
Students per class	20.7 (3.7)	20.7 (3.6)	20.4 (4.3)	>0.9
Post-test score	0.63 (0.14)	0.54 (0.15)	0.54 (0.15)	<0.001
Delta score	0.04 (0.19)	0.00 (0.19)	-0.04 (0.19)	<0.001
Post-test patience	68 (23%)	71 (22%)	65 (23%)	>0.9
Post-test saving	214 (73%)	229 (72%)	203 (71%)	0.9
N	294	319	286	

Note: continuous variables (in italics) are represented as means and standard deviations. Dummy variables are represented as frequencies and percentages. The p-values for continuous variables come from a Kruskal-Wallis rank sum test, whereas the p-values for categorical variables come from a Pearson's Chi-squared test.

Table 4. Treatment effect on post-test score - Grade 5

	Dependent variable:			
	Post-test score			
	(1)	(2)	(3)	(4)
Pre-test score	0.288***	0.148***	0.143***	0.144***
	(0.037)	(0.037)	(0.037)	(0.037)
Treatment A	0.081***	0.075***	0.074***	0.075***
	(0.020)	(0.019)	(0.021)	(0.020)
Treatment B	−0.002	−0.010	−0.013	−0.011
	(0.024)	(0.021)	(0.022)	(0.021)
Female	0.002	0.011	0.010	0.012
	(0.013)	(0.013)	(0.013)	(0.013)
Foreign	−0.067***	−0.051***	−0.051***	−0.051***
	(0.021)	(0.017)	(0.017)	(0.018)
ESCS	0.021***	0.006	0.006	0.006
	(0.006)	(0.006)	(0.006)	(0.006)
INVALSI mean Math-Read		0.002***	0.002***	0.002***
		(0.0002)	(0.0002)	(0.0002)
INVALSI class mean Math-Read			0.001	0.001
			(0.001)	(0.001)
Students per class			0.001	0.001
			(0.004)	(0.004)
Pre-test patience				−0.016
				(0.011)
Pre-test saving				0.005
				(0.013)
Observations	639	639	639	639
R^2	0.387	0.463	0.465	0.467
Adjusted R^2	0.366	0.444	0.444	0.444
Residual Std. Error	0.143 (df = 617)	0.134 (df = 616)	0.134 (df = 614)	0.134 (df = 612)

Note: *p<0.1; **p<0.05; ***p<0.01. All models incorporate school fixed effects and clustered standard errors at the class level.

Table 5. Treatment effect on the post-test score - Grade 8

	Dependent variable:			
	Post-test score			
	(1)	(2)	(3)	(4)
Pre-test score	0.239***	0.210***	0.205***	0.201***
	(0.039)	(0.043)	(0.044)	(0.045)
Treatment A	0.084***	0.083***	0.085***	0.085***
	(0.014)	(0.014)	(0.014)	(0.014)
Treatment B	0.010	0.009	0.009	0.009
	(0.016)	(0.017)	(0.016)	(0.016)
Female	0.005	0.003	0.003	0.002
	(0.009)	(0.009)	(0.009)	(0.008)
Foreign	−0.005	0.0003	0.001	−0.001
	(0.016)	(0.016)	(0.016)	(0.015)
ESCS	0.007*	0.003	0.002	0.002
	(0.004)	(0.004)	(0.005)	(0.005)
INVALSI mean Math-Read		0.0004***	0.0005***	0.0004***
		(0.0002)	(0.0002)	(0.0002)
INVALSI class mean Math-Read			−0.0003	−0.0003
			(0.001)	(0.001)
Students per class			0.003	0.003
			(0.003)	(0.003)
Pre-test patience				0.027**
				(0.011)
Pre-test saving				−0.001
				(0.012)
Observations	899	899	899	899
R^2	0.197	0.204	0.206	0.211
Adjusted R^2	0.175	0.182	0.182	0.186
Residual Std. Error	0.139 (df = 875)	0.138 (df = 874)	0.138 (df = 872)	0.138 (df = 870)

Note: *p<0.1; **p<0.05; ***p<0.01. All models incorporate school fixed effects and clustered standard errors at the class level.

Table 6. Heterogeneity analysis: the effects of FE material on post-test score for different individual and class-level regressors - Grade 5

	Dependent variable:			
	Post-test score			
	(1)	(2)	(3)	(4)
Treatment A	0.067***	0.044	0.086***	0.074*
	(0.025)	(0.029)	(0.033)	(0.043)
Treatment B	−0.034	−0.045	−0.020	−0.025
	(0.026)	(0.029)	(0.028)	(0.037)
Treatment A:Female	0.010			
	(0.034)			
Treatment B:Female	0.048			
	(0.033)			
Treatment A:ESCS		0.061*		
		(0.034)		
Treatment B:ESCS		0.071**		
		(0.032)		
Treatment A:INVALSI mean Math-Read			−0.027	
			(0.031)	
Treatment B:INVALSI mean Math-Read			0.016	
			(0.027)	
Treatment A:INVALSI class mean Math-Read				0.003
				(0.071)
Treatment B:INVALSI class mean Math-Read				0.030
				(0.062)
Controls	X	X	X	X
Observations	639	639	639	639
R^2	0.446	0.449	0.445	0.443

Note: *p<0.1; **p<0.05; ***p<0.01. All models incorporate school fixed effects and clustered standard errors at the class level. The control variables include pre-test score, female, foreign, ESCS, pre-test patience, pre-test saving, INVALSI mean Math-Read, INVALSI class mean Math-Read, and students per class. ESCS, INVALSI mean Math-Read, and INVALSI class mean Math-Read have been dichotomized using a median split.

Table 7. Heterogeneity analysis: the effects of FE material on the post-test score for different individual and class-level regressors - Grade 8

	Dependent variable:			
	Post-test score			
	(1)	(2)	(3)	(4)
Treatment A	0.083***	0.090***	0.086***	0.082***
	(0.019)	(0.015)	(0.022)	(0.025)
Treatment B	−0.006	−0.008	0.009	0.026
	(0.022)	(0.017)	(0.022)	(0.026)
Treatment A:Female	0.007			
	(0.022)			
Treatment B:Female	0.028			
	(0.021)			
Treatment A:ESCS		−0.003		
		(0.017)		
Treatment B:ESCS		0.036*		
		(0.020)		
Treatment A:INVALSI mean Math-Read			0.001	
			(0.028)	
Treatment B:INVALSI mean Math-Read			−0.002	
			(0.025)	
Treatment A:INVALSI class mean Math-Read				0.002
				(0.032)
Treatment B:INVALSI class mean Math-Read				−0.041
				(0.035)
Controls	X	X	X	X
Observations	899	899	899	899
R^2	0.211	0.213	0.210	0.213

Note: *p<0.1; **p<0.05; ***p<0.01. All models incorporate school fixed effects and clustered standard errors at the class level. The control variables include pre-test score, female, foreign, ESCS, pre-test patience, pre-test saving, INVALSI mean Math-Read, INVALSI class mean Math-Read, and students per class. ESCS, INVALSI mean Math-Read, and INVALSI class mean Math-Read have been dichotomized using a median split.

Table 8. Treatment effect on the reweighted post-test score and delta score - Grade 5

	Dependent variable:	
	Post-test score	Delta score
	(1)	(2)
Pre-test score	0.237***	
	(0.040)	
Treatment A	0.055***	0.089***
	(0.015)	(0.029)
Treatment B	−0.013	−0.012
	(0.014)	(0.031)
Female	0.007	0.001
	(0.008)	(0.014)
Foreign	−0.036***	−0.051**
	(0.012)	(0.021)
ESCS	0.002	0.007
	(0.004)	(0.007)
INVALSI mean Math-Read	0.001***	−0.0002
	(0.0002)	(0.0003)
INVALSI class mean Math-Read	0.0003	−0.001
	(0.0004)	(0.001)
Students per class	−0.0001	0.0003
	(0.003)	(0.009)
Pre-test patience	−0.009	−0.025
	(0.008)	(0.015)
Pre-test saving	−0.004	0.001
	(0.009)	(0.022)
Observations	639	639
R^2	0.507	0.284
Adjusted R^2	0.486	0.255
Residual Std. Error	0.092 (df = 612)	0.189 (df = 613)

Note: *p<0.1; **p<0.05; ***p<0.01. Both models incorporate school fixed effects and clustered standard errors at the class level.

Table 9. Treatment effect on the reweighted post-test score and delta score - Grade 8

	Dependent variable:	
	Post-test score	Delta score
	(1)	(2)
Pre-test score	0.289***	
	(0.046)	
Treatment A	0.080***	0.085***
	(0.011)	(0.014)
Treatment B	0.018	0.037**
	(0.013)	(0.016)
Female	0.006	0.031**
	(0.007)	(0.012)
Foreign	−0.004	0.001
	(0.012)	(0.023)
ESCS	0.003	−0.005
	(0.003)	(0.006)
INVALSI mean Math-Read	0.001***	−0.001***
	(0.0001)	(0.0002)
INVALSI class mean Math-Read	0.001	−0.001
	(0.001)	(0.001)
Students per class	0.001	−0.007**
	(0.002)	(0.003)
Pre-test patience	0.018**	0.014
	(0.008)	(0.014)
Pre-test saving	0.002	−0.022
	(0.009)	(0.014)
Observations	899	899
R^2	0.363	0.152
Adjusted R^2	0.342	0.125
Residual Std. Error	0.107 (df = 869)	0.182 (df = 870)

Note: *p<0.1; **p<0.05; ***p<0.01. Both models incorporate school fixed effects and clustered standard errors at the class level.

Table 10. List of teachers' variables

Variable	**Description**	**Value/range**
Individual characteristics		
Female	If the teacher is a female	1 or 0
Age	Teacher's age in six age groups	from 25 or less to 66 or more
School experience	Teacher's school experience in five age groups	from 5 or less to 31 or more
Financial behaviors		
Dealt with fin. topics	If the teacher has already dealt with economic and financial topics in his/her classes	1 or 0
Digitalization	If the teacher either manages his/her current account online or uses digital payments	1 or 0
CA only	If the teacher left all his/her last year's savings in the current account	1 or 0

Table 11. Descriptive statistics - Grade 5 teachers

Variable	**A**	**B**	**C**
Female	12 (86%)	9 (100%)	8 (100%)
Age			
25 or less	0 (0%)	1 (13%)	0 (0%)
26-35	2 (14%)	0 (0%)	0 (0%)
36-45	2 (14%)	2 (25%)	1 (13%)
46-55	3 (21%)	1 (13%)	3 (38%)
56-65	7 (50%)	4 (50%)	3 (38%)
66 or more	0 (0%)	0 (0%)	1 (13%)
N/A	0	1	0
School experience (in years)			
5 or less	1 (7.7%)	1 (13%)	0 (0%)
6-10	2 (15%)	0 (0%)	2 (25%)
11-20	3 (23%)	1 (13%)	0 (0%)
21-30	4 (31%)	4 (50%)	4 (50%)
31 or more	3 (23%)	2 (25%)	2 (25%)
N/A	1	1	0
Dealt with fin. topics	5 (36%)	3 (38%)	2 (25%)
Digitalization	8 (57%)	2 (22%)	3 (38%)
CA only	5 (36%)	4 (44%)	5 (63%)
N	14	9	8

Note: both dummy and categorical variables are represented as frequencies and percentages.

Table 12. Descriptive statistics - Grade 8 teachers

Variable	**A**	**B**	**C**
Female	11 (73%)	7 (78%)	8 (100%)
Age			
26-35	1 (6.7%)	1 (11%)	1 (13%)
36-45	4 (27%)	1 (11%)	3 (38%)
46-55	7 (47%)	5 (56%)	2 (25%)
56-65	3 (20%)	2 (22%)	2 (25%)
School experience (in years)			
5 or less	4 (27%)	0 (0%)	1 (14%)
6-10	3 (20%)	5 (56%)	1 (14%)
11-20	5 (33%)	3 (33%)	3 (43%)
21-30	1 (6.7%)	1 (11%)	2 (29%)
31 or more	2 (13%)	0 (0%)	0 (0%)
N/A	0	0	1
Dealt with fin. topics	2 (13%)	3 (38%)	1 (13%)
Digitalization	9 (60%)	4 (44%)	5 (63%)
CA only	7 (47%)	3 (33%)	2 (25%)
N	15	9	8

Note: both dummy and categorical variables are represented as frequencies and percentages.

Table 13. Treatment effect on the post-test score (teacher-level variables included) - Grade 8

	Dependent variable:		
	Post-test score		
	(1)	(2)	(3)
Pre-test score	0.229***	0.224***	0.224***
	(0.058)	(0.059)	(0.059)
Treatment A	0.068***	0.067***	0.067***
	(0.016)	(0.017)	(0.017)
Treatment B	0.039**	0.029	0.029*
	(0.017)	(0.018)	(0.018)
Female	−0.00001	−0.001	−0.001
	(0.011)	(0.011)	(0.011)
Foreign	0.005	0.005	0.005
	(0.020)	(0.020)	(0.020)
ESCS	−0.003	−0.002	−0.003
	(0.007)	(0.007)	(0.007)
INVALSI mean Math-Read	0.001***	0.001***	0.001***
	(0.0002)	(0.0002)	(0.0002)
INVALSI class mean Math-Read	−0.001	−0.001	−0.001
	(0.001)	(0.001)	(0.001)
Students per class	0.007**	0.007**	0.007**
	(0.003)	(0.003)	(0.003)
Pre-test patience	0.021	0.021	0.021
	(0.014)	(0.014)	(0.014)
Pre-test saving	0.001	0.001	0.001
	(0.015)	(0.015)	(0.015)
Dealt with fin topics	−0.021	−0.024	−0.025
	(0.017)	(0.018)	(0.017)
Digitalization		−0.018	−0.018
		(0.016)	(0.017)
CA only			−0.001
			(0.023)
Observations	533	533	533
R^2	0.269	0.270	0.270

Note: *p<0.1; **p<0.05; ***p<0.01. All models incorporate school fixed effects and clustered standard errors at the class level.

Table 14. Heterogeneity analysis: the effects of FE material on the post-test score for different teacher-level regressors - Grade 8

	Dependent variable:		
	Post-test score		
	(1)	(2)	(3)
Treatment A	0.046**	0.023	0.069*
	(0.019)	(0.023)	(0.037)
Treatment B	0.055***	0.039	0.031
	(0.019)	(0.024)	(0.022)
Treatment A:Dealt with fin. topics	0.169**		
	(0.078)		
Treatment B:Dealt with fin. topics	−0.071		
	(0.083)		
Treatment A:Digitalization		0.077**	
		(0.033)	
Treatment B:Digitalization		−0.015	
		(0.041)	
Treatment A:CA only			−0.008
			(0.096)
Treatment B:CA only			−0.005
			(0.046)
Controls	X	X	X
Observations	533	533	533
R^2	0.279	0.279	0.270
Adjusted R^2	0.234	0.234	0.225
Residual Std. Error (df = 501)	0.137	0.137	0.138

Note: *p<0.1; **p<0.05; ***p<0.01. All models incorporate school fixed effects and clustered standard errors at the class level. The control variables include pre-test score, female, foreign, ESCS, pre-test patience, pre-test saving, INVALSI mean Math-Read, INVALSI class mean Math-Read, students per class, "dealt with fin. topics", "digitalization", "CA only".

Table 15. Treatment effect on the post-test score with high- and low-intensity Treatment A - Grade 8

	Dependent variable:			
	Post-test score			
	(1)	(2)	(3)	(4)
Pre-test score	0.277***	0.237***	0.238***	0.230***
	(0.046)	(0.054)	(0.054)	(0.056)
Treatment A1	0.105***	0.105***	0.117***	0.107***
	(0.014)	(0.016)	(0.016)	(0.014)
Treatment A2	0.047**	0.048**	0.046**	0.047**
	(0.019)	(0.020)	(0.018)	(0.019)
Treatment B	0.050***	0.050**	0.048***	0.040**
	(0.019)	(0.021)	(0.018)	(0.016)
Female	0.005	0.002	0.001	0.001
	(0.011)	(0.011)	(0.011)	(0.011)
Foreign	−0.006	0.004	0.006	0.004
	(0.021)	(0.021)	(0.021)	(0.020)
ESCS	0.002	−0.004	−0.004	−0.005
	(0.006)	(0.007)	(0.007)	(0.007)
INVALSI mean Math-Read		0.001***	0.001***	0.001***
		(0.0002)	(0.0002)	(0.0002)
INVALSI class mean Math-Read			−0.001**	−0.001**
			(0.001)	(0.001)
Students per class				0.005*
				(0.003)
Pre-test patience				0.021
				(0.014)
Pre-test saving				−0.001
				(0.016)
Observations	533	533	533	533
R^2	0.250	0.265	0.268	0.273
Adjusted R^2	0.218	0.231	0.233	0.234
Residual Std. Error	0.138 (df = 510)	0.137 (df = 509)	0.137 (df = 508)	0.137 (df = 505)

Note: *p<0.1; **p<0.05; ***p<0.01. Students in Treatment A were divided into two distinct groups: one group received an extended FE course lasting more than 9 hours (Treatment A1), while the other group participated in a shorter FE course lasting less than 9 hours (Treatment A2). All models incorporate school fixed effects and clustered standard errors at the class level.

Appendix - Student Pre-Tests

In this section, we present the pre-tests administered to both primary and lower secondary school students for illustrative purposes. The original post-tests (in Italian) for both grades, along with English translations of all tests, are available upon request from the authors.

Scuola Primaria

Test iniziale

spazio per codice identificativo

BANCA D'ITALIA
EUROSISTEMA

Progetto *Educazione Finanziaria nelle scuole*

Caro/a studente/ssa,
ti invitiamo a compilare questo questionario.

TUTTI PER UNO ECONOMIA PER TUTTI!



Grafica e stampa a cura della Divisione Editoria e stampa della Banca d'Italia

Prima Parte

D1. Ordina le seguenti azioni: **lavorare - guadagnare - studiare - spendere** da quella che si fa prima a quella che si fa dopo. Inseriscile nella seguente linea del tempo.

Prima:	*Seconda:*	*Terza:*	*Quarta:*
.....	.....	.....	.....



D2. Collega con una freccia ogni soggetto (nella colonna di sinistra) con la sua tipologia di reddito (nella colonna di destra).

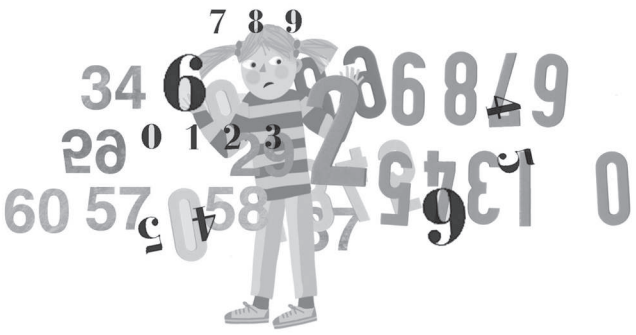
Soggetto	**Tipologia di reddito**
Chi possiede azioni	Reddito d'impresa
Avvocato	Reddito da capitale
Chi possiede una società di costruzioni	Reddito da lavoro dipendente
Insegnante	Reddito da lavoro autonomo

D3. Per soddisfare un bisogno o realizzare un desiderio a volte dobbiamo sostenere una spesa; indica con una **X** quali dei seguenti acquisti sono bisogni e quali desideri.



	Bisogno	**Desiderio**
Regalo a un amico		
Tre succhi di frutta per merenda		
Pranzo a mensa		
Vestiti alla moda		
Cellulare di ultima generazione		
Libri di testo		

D4. In questa settimana hai ricevuto una **paghetta** di **10 €**, hai comprato un **fumetto** che costava **5 €,** mentre la **merenda** che hai fatto con i tuoi compagni è costata **7 €**. Infine, la **zia** ti ha dato **15 €**, e quindi hai deciso di comprare il **gioco** che tanto desideravi, al costo di **14 €**. Di seguito trovi una lista delle tue voci di spesa e di guadagno per questa settimana.



Voci di spesa e guadagno
Paghetta 10 €
Fumetto 5 €
Merenda 7 €
Regalo della zia 15 €
Gioco 14 €

Completa ora la tabella seguente, inserendo le spese nella colonna delle uscite e i guadagni nella colonna delle entrate (la paghetta è già stata inserita); poi, somma tutte le entrate e tutte le uscite.

Ora completa tu…



Entrate	Uscite
Paghetta 10 €	
TOTALE ENTRATE: . . . . . **€**	**TOTALE USCITE:** . . . . . **€**

D5. Dopo aver compilato la tabella rispondi alle seguenti domande.

Attenzione: il saldo è in attivo se il totale delle entrate è maggiore del totale delle uscite.

- Il saldo è in attivo o in passivo? ……
- Di quanto? …… €
- Hai la possibilità di tornare indietro e modificare le tue scelte. A cosa rinunceresti tra il fumetto, la merenda e il gioco? ……

D6. Lo Stato usa le tasse pagate dai cittadini per fornire loro beni e servizi. Indica se ciascuna delle seguenti affermazioni è vera (**V**) o falsa (**F**).

	V	F
La pizzeria è un servizio fornito dallo Stato		
La scuola è un servizio fornito dallo Stato		
Pagare le tasse è facoltativo		
Tutti devono pagare lo stesso importo di tasse		
Chi guadagna di più deve pagare più tasse		

Seconda Parte

D7. Ci sono almeno due buoni motivi per risparmiare: per realizzare un desiderio o per poter affrontare una spesa imprevista. Leggi la conversazione tra Giulia ed Edoardo e indica con una **X** chi risparmia per realizzare un desiderio e chi per affrontare una spesa imprevista.

Giulia:	*"Sai, stavo pensando che dovrei iniziare a risparmiare qualcosa della mia paghetta…".*
Edoardo:	*"Fai bene: anche io ho iniziato tempo fa. Vorrei un monopattino. Ho fatto i calcoli e ci vuole solo un anno per mettere da parte la somma giusta!".*
Giulia:	*"Bravo Edoardo, ma se dovesse succedere un imprevisto durante quest'anno? Per esempio, potrebbe rompersi la tua bicicletta…".*
Edoardo:	*"Non ci avevo mai pensato, speriamo che non capiti… e tu invece per cosa vorresti iniziare a risparmiare?".*
Giulia:	*"Io vorrei iniziare a risparmiare per essere sicura di avere i soldi necessari se succede qualcosa di inaspettato…".*

Giulia risparmia per

- ◯ Realizzare un desiderio
- ◯ Poter affrontare una spesa imprevista

Edoardo risparmia per

- ◯ Realizzare un desiderio
- ◯ Poter affrontare una spesa imprevista

D8. Per correre pochi rischi dove conviene conservare i propri risparmi? Indica con una **X** la risposta corretta.

- ◯ Tutti in banca depositati su un conto corrente
- ◯ In parte depositati su un conto corrente e in parte investiti in azioni
- ◯ Tutti investiti in azioni

D9. Indica se ciascuna delle seguenti affermazioni è vera (**V**) o falsa (**F**).

	V	F
L'interesse che si paga su un prestito dipende dal tempo trascorso		
L'interesse che si paga su un prestito non dipende dalla somma ricevuta		
L'interesse che si paga su un prestito è uguale per tutti		

Dicci qualcosa in più su di te

Nelle domande seguenti non esistono risposte giuste o sbagliate. Scegli in base alle tue preferenze.

a. Per ogni coppia di alternative indica con una **X** quella che preferisci.

- ◯ Ricevere 10 figurine oggi
- ◯ Ricevere 11 figurine tra una settimana

- ◯ Ricevere 10 figurine oggi
- ◯ Ricevere 15 figurine tra una settimana

- ◯ Ricevere 10 figurine oggi
- ◯ Ricevere 20 figurine tra una settimana

b. Se ricevi 50 € a Natale, quale uso ne fai nel mese successivo? Indica con una **X** la risposta che ti rappresenta di più.

- ◯ Li spendo tutti
- ◯ Ne risparmio la maggior parte
- ◯ Ne risparmio una piccola parte
- ◯ Li risparmio tutti

Grazie mille per aver compilato questo questionario!

Scuola Secondaria di primo grado

Test iniziale

spazio per codice identificativo

BANCA D'ITALIA
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TUTTI PER UNO ECONOMIA PER TUTTI!



Grafica e stampa a cura della Divisione Editoria e stampa della Banca d'Italia

Prima Parte

D1. Associa il soggetto con la sua tipologia di reddito (scegli, per ogni riga, una sola opzione tra le tipologie di reddito).

Tipologia di reddito / *Soggetto*	Reddito d'impresa	Redditi diversi	Reddito fondiario	Reddito da lavoro dipendente	Reddito da capitale	Reddito da lavoro autonomo
Insegnante						
Dentista						
Proprietario di una società edile						
Chi possiede delle azioni						
Proprietario di un appartamento dato in affitto						
Vincitore di un quiz televisivo						

D2. Immagina che queste siano le voci del tuo bilancio della scorsa settimana. Indica per ciascuna di esse se rappresenta un'entrata (+) o un'uscita (-).

	+ (entrata)	*- (uscita)*
Paghetta ricevuta per aver fatto una commissione: 10 €		
Ricarica telefonica: 5 €		
Merenda: 7 €		
Regalo da tua zia: 20 €		
Acquisto di un videogame: 12 €		

D3. Alla fine della scorsa settimana il tuo bilancio era in attivo o in passivo?

- ○ Attivo
- ○ Passivo

D4. Facendo riferimento al bilancio della settimana scorsa, qual è il saldo, cioè la differenza tra entrate e uscite?

..... €

D5. Parliamo di tasse. Indica se ciascuna delle seguenti affermazioni è vera (V) o falsa (F).

	V	*F*
Lo Stato utilizza le tasse per fornire tutti i servizi, inclusi ad esempio i ristoranti		
Al crescere del reddito, si pagheranno più tasse		
Solo i cittadini che usufruiscono dei servizi pubblici (come gli ospedali o le scuole) devono pagare le tasse		
Le tasse servono a finanziare importanti servizi pubblici come la pulizia delle strade e la sicurezza tramite la polizia		

D6. Indica se ciascuna delle seguenti affermazioni è vera (V) o falsa (F).

	V	*F*
Il budget serve per tener conto delle spese effettuate		
Sarebbe bene che il budget comprendesse una voce per il risparmio		
Nel budget rientrano le spese effettuate da altri (es. dai propri amici)		
Risparmiare oggi può servire per soddisfare un desiderio più avanti nel tempo		

Seconda Parte

D7. Indica se ciascuna delle seguenti affermazioni è vera (V) o falsa (F).

	V	*F*
Se possiedo una somma di denaro che voglio investire, la soluzione migliore è il conto corrente		
Le obbligazioni sono titoli emessi da banche, imprese o Stati per "vendere" il proprio debito		
Investire in azioni garantisce la restituzione dell'intera somma investita		

D8. Gli interessi possono essere attivi o passivi. Nei due esempi sotto riportati, indica con una X se gli interessi sono attivi o passivi.

	Interessi attivi	*Interessi passivi*
Franco acquista obbligazioni di una società e ottiene		
Franco ottiene un prestito dalla banca e deve pagare		

D9. Indica se ciascuna delle seguenti affermazioni è vera (V) o falsa (F).

	V	*F*
Se l'interesse ricevuto su un'obbligazione è minore, il rischio di perdere il denaro è minore		
Se l'interesse ricevuto su un'obbligazione è minore, il rischio di perdere il denaro è maggiore		
Se l'interesse ricevuto su un'obbligazione è maggiore, il rischio di perdere il denaro è minore		
Se l'interesse ricevuto su un'obbligazione è maggiore, il rischio di perdere il denaro è maggiore		

D10. Supponi di investire 120 € a un tasso d'interesse del 3% annuo. Dopo un anno, quanti soldi avrai, considerando il capitale iniziale?

- ○ 120,3 €
- ○ 123,6 €
- ○ 123,0 €
- ○ 126,3 €

Dicci qualcosa in più su di te

Nelle domande seguenti non esistono risposte giuste o sbagliate. Scegli in base alle tue preferenze.

a. Se ricevi 50 € a Natale, quale uso ne fai il mese successivo? Indica con una X la risposta che ti rappresenta di più.

- ○ Li spendo tutti insieme per qualcosa che desideravo da tempo
- ○ Li spendo un po' per volta
- ○ Ne conservo una parte e spendo il resto
- ○ Li metto tutti da parte

b. Per ogni coppia di alternative indica con una X quella che preferisci.

- ○ Ricevere 10 euro oggi
- ○ Ricevere 11 euro tra un mese

- ○ Ricevere 10 euro oggi
- ○ Ricevere 15 euro tra un mese

- ○ Ricevere 10 euro oggi
- ○ Ricevere 20 euro tra un mese

Grazie per il tempo che hai dedicato alla compilazione di questo questionario!