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Strategic Plan for financial education of low-skilled adults in Europe

Euroinvestment - European Financial Literacy Game for Adult Citizens



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Executive summary

Financial literacy is a core life skill that must be nurtured to encourage responsible financial behaviour and to give people the confidence to **take control of their finances**. Financial education has a vital role in ensuring that European citizens are equipped with the knowledge, confidence and skills necessary to improve their understanding of financial products and concepts.

However, many financial literacy studies show that basic financial concepts such as interest rates, inflation and risk diversification are not clearly understood by a meaningful part of the European adult population (aged 18 to 79 years). Just one-third of the world's adult population is financially literate (**3.5 billion adults have low financial literacy skills**)¹ and it takes massive public-private efforts to reverse this trend.

The lack of financial knowledge and skills between citizens endangers their **financial well-being** and over the last years has become a public issue. Consequently, governments, organisations and researchers are active in finding out the best practices for financial literacy education worldwide. In this sense, significant work is already underway in some European countries to implement national strategies for financial education.

On the other hand, technological innovations are changing our lives faster than ever before. **In 2017, 85% of households in the EU had internet access and 83% of those aged between 16 and 74 were regular users of the internet.** In 2017, 65% of individuals used a mobile device to connect to the internet, up from just 36% in 2012.²

In terms of financial education, one of the great benefits of improved technological resources and tools is the potential to reach a wider section of the public, which can lead to **higher levels of financial inclusion in the population**. Technology based tools can contribute to raising financial literacy levels and can help individuals to make more informed financial decisions.

Research suggests that teaching and training initiatives should involve **materials that are interactive and motivating**. Also, people are inclined to learn more about financial literacy by playing a game. Games can stimulate the learning of facts and important skills such as strategic and innovative thinking, creativity and cooperation.

In addition, game-based learning, as part of an edutainment approach, that links the education with the entertainment, is being recognized as an effective form of education and is highly valued as a compelling companion to classroom instruction, because it boosts students' interest and improves knowledge retention. In this regard, **digital games can become a pedagogical tool** which can be designed in such a way so to enhance learning outcomes that are relevant in adults' financial literacy education in the teaching process.

www.euroinvestment-project.eu

¹ "Financial Literacy Around the World: Insights from the Standard & Poor's Ratings Services Global Financial Literacy Survey", Klapper Leora, Annamaria Lusardi, and Peter van Oudheusden. 2015.

² "Digital economy and society statistics — households and individuals", Eurostat, June 2018

Euroinvestment objectives and key components

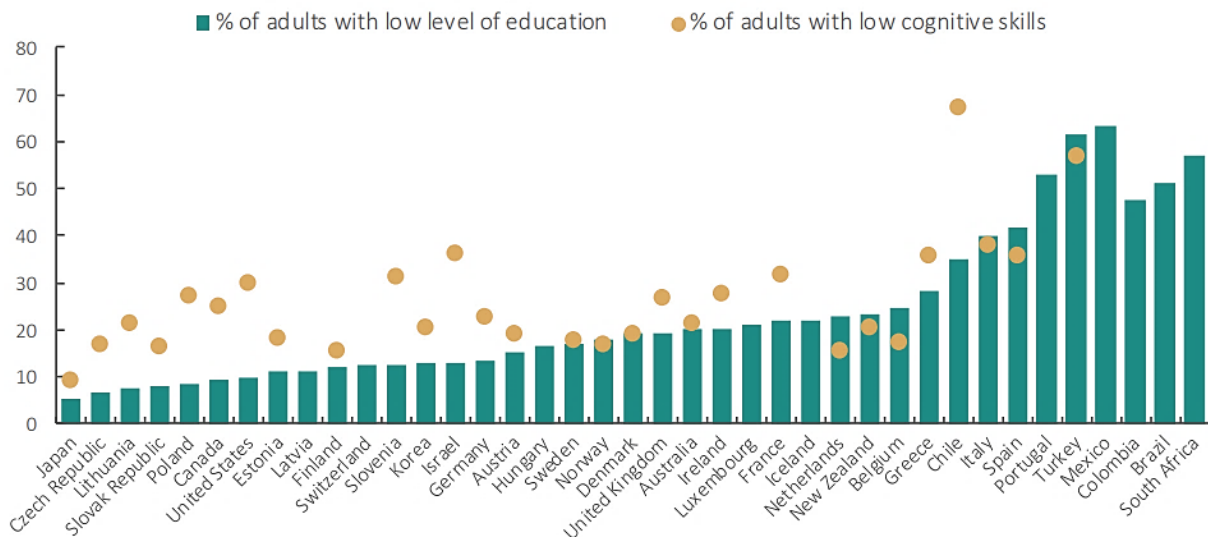
Target group

The main project’s target group is **low-skilled adults** between 18 and 55. In **OECD survey of Adult Skills (PIAAC)**³, adults with low skills are defined as:

- Adults with **low educational levels**, namely those whose highest qualification is at lower secondary level (ISCED 0-2), which means they have not completed high-school or equivalent, or
- Adults with **low cognitive skill levels**, namely those who score at proficiency level 1 or below in the literacy and/or numeracy dimension of the OECD survey of Adult Skills (PIAAC). These are adults who can at most complete very simple reading tasks, such as read brief texts on familiar topics, and mathematical tasks, such as one-step or simple processes involving counting, sorting, basic arithmetic operations and understanding simple percentages.

Using this definition, OECD survey of Adult Skills (PIAAC) shows that more than **one in five adults in the OECD has low skills**. 22% of adults across OECD countries have low educational levels and even more adults have low cognitive skills. On average 26.3% of adults are at most able to complete some very basic reading and/or mathematical tasks in those countries for which data are available:

Adults with low skills across OECD countries



Source: OECD education statistics database (2016), PIAAC (2012)

³ “Getting Skills Right: Engaging low-skilled adults in learning”, OECD (2019).

We know that adults learn best when implementing in the real context (for example their workplace environment) and when it is practical and problem-oriented⁴. However, in some places large parts of adult learning continues to take place in the classroom. It often mimics the teaching and learning styles we know from school. This approach is especially problematic for adults with low skills, as many of them have experienced failure in education and may find it difficult to return to a classroom setting.

Successful adult learning provision **takes into account how adults learn**. This means that it must be hands-on, problem-oriented and closely linked to the context of the learner, especially if it happens on his or her workplace.

From the existing practices regarding the adults' learning, here are three key insights⁵:

- Consider how adults learn when designing learning opportunities. Opportunities should be **practical, problem-oriented and closely linked to the context of the learner**;
- Offer **blended learning opportunities**, which give learners the option to choose a way of learning that works best for them;
- Ensure that the learning mode is appropriate for the target group, **make learning enjoyable** (e.g. through gamification), and **provide additional support where needed** (e.g. for online learning).

Objectives

The aim of this project is to avoid academic approach and instead **give practical explanations, based on the day-to-day financial experiences of individuals and families**, that deal with the doubts most frequently encountered by offering advice and recommendations through game-based learning experience.

Across multiple contexts, financial entertainment games have been effective at engaging players to build financial capability and confidence in a fun and stress-free environment. Gamification transforms the learner from a passive absorber of information to an active participant in creating strategic solutions, for this reason, it increases engagement and motivates learner to think out-of-the box.

A well-designed gamification will⁶:

- encourage problem solving and promote teamwork;
- give players a sense of control;
- reward out-of-the-box thinking;
- reduce the fear of failure that inhibits innovative experimentation;
- support diverse interests and skillsets.

Following a holistic approach to financial literacy, the central aim of the game is considering cognitive (knowledge, skills, abilities) and non-cognitive (interests, attitudes, values) resources that an adult need:

- to be capable of managing his/her own money adequately;
- to be well-informed consumer and a responsible citizen in financial issues.

⁴ "The Adult Learner: A Neglected Species (3rd Ed.)", Knowles, M., 1984.

⁵ "Getting Skills Right: Engaging low-skilled adults in learning", OECD, 2019.

⁶ "Totally Awesome Training Activity Guide Book: How to Put Gamification to Work for You", Monica Cornetti, 2013.

In this regard, the most prominent topic area within the individual cognitive facet is “planning and managing financial matters”. This aspect of financial literacy can be further subdivided into the following sub-categories⁷:

- Drawing up a budget;
- Using banking and financial services for daily needs;
- Planning expenses in accordance with own needs and possibilities;
- Evaluating own revenues.

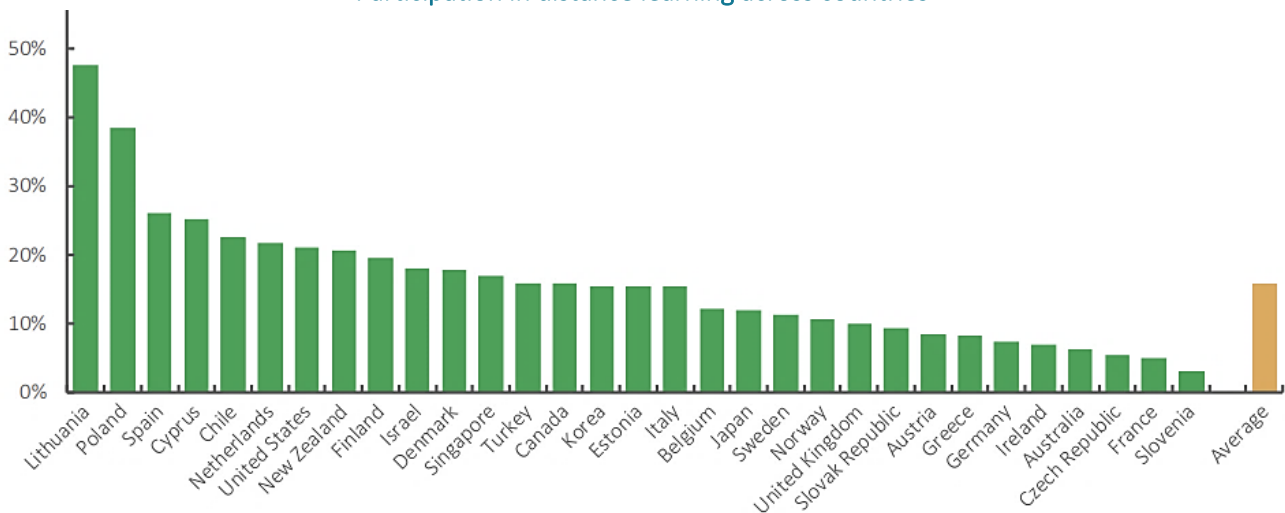
At the same time, other relevant topic areas under the individual cognitive facet are: saving money/building assets; borrowing money/raising a credit/financing methods; retirement planning; prevent (over-)indebtedness; knowing information and counselling services in the context of money and financial affairs, etc.

Key components

Not many adults have the time and motivation to take-part in lengthy courses to upskill or reskill. In many countries, there is some evidence that adults with low-skills are less willing to participate in time-intensive training than high-skilled workers⁸.

According to OECD PIAAC data, **16% of low-skilled learners complete at least part of their training as distance learning**. However, the situation differs vastly between countries. Close to every second learner with low skills takes part in distance learning in Lithuania, while this is the case for less than one in twenty learners in Slovenia:

Participation in distance learning across countries



Source: PIAAC data (2012,2015)

⁷ “Economic competence and financial literacy of Young Adults”, Eveline Wuttke, Jürgen Seifried and Stephan Shumann, 2016.

⁸ “Why Do Low-Educated Workers Invest Less in Further Training?”, Fouarge, Schils and de Grip, 2013.

In addition, modular training programmes can enable adults to learn in their own time and shape their own learning path. In contrast to traditional learning programmes, which need to be completed in full to gain a qualification, modular provision divides a learning programme into self-contained modules. Each module has its own distinctive learning outcomes, which are certified as credits or part-qualifications once completed. Learners can work towards a full qualification over time by successively adding modules to their learning portfolio⁹.

For this reason, the training game should provide players with opportunities to develop skills and acquire knowledge necessary to effectively manage their own financial situation. Most importantly, the game should be designed to meet the participants where they are when they start the training and build on what they know in an affirming and participatory way:

Hence, the developed game should reflect the following points:

- **Well planned objectives focused on application**

Effective training design begins with the identification and development of participant or behavioural objectives.

- **Reflective of the principles of adult learning**

The design and implementation must incorporate the principles of adult learning and learning styles.

- **Balance the diverse realities of multiple learners**

Effective training includes materials that use inclusive language and illustrations, cover a range of experiences in the examples used and are written at the appropriate literacy levels.

- **Content relevant to the audience**

The training must be structured to reflect the needs of the audience. Relevant content will keep the participants engaged in the game.

- **Include evaluation**

Evaluation provides an opportunity for the participants to contribute in improving their own learning experience.

- **Adult-oriented and easily accessible**

Financial literacy digital game should be easily accessible and has facilities that are orientated towards adults.

⁹ “Getting Skills Right: Engaging low-skilled adults in learning”, OECD (2019).

Financial literacy in the EU

The 2008 financial crisis highlighted consumers' low level of understanding of financial products, which they often deemed too complex. Therefore, it exposed the lack of financial literacy among consumers, financial literacy being a combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and achieve financial wellbeing.

Studies related to financial literacy in general measure three specific concepts:

- 1) **knowledge** of fundamental financial concepts;
- 2) **awareness of products and services** offered by different financial service providers and an understanding of the risks associated with using these products and services;
- 3) **understanding** how to manage personal finances or use financial services.

Financial literacy clearly benefits individual consumers and their households, since they are able to make better and more informed decisions when it comes to saving for their pension, studies or ensuring that they contract a mortgage for their home which they are able to repay within a reasonable period.

When the first studies measuring financial literacy came out more than a decade ago, the widespread lack of financial knowledge they revealed sparked a mixture of surprise and concern. More than ten years and a financial crisis after the first waves of financial literacy surveys, the results of different studies confirm little has changed.

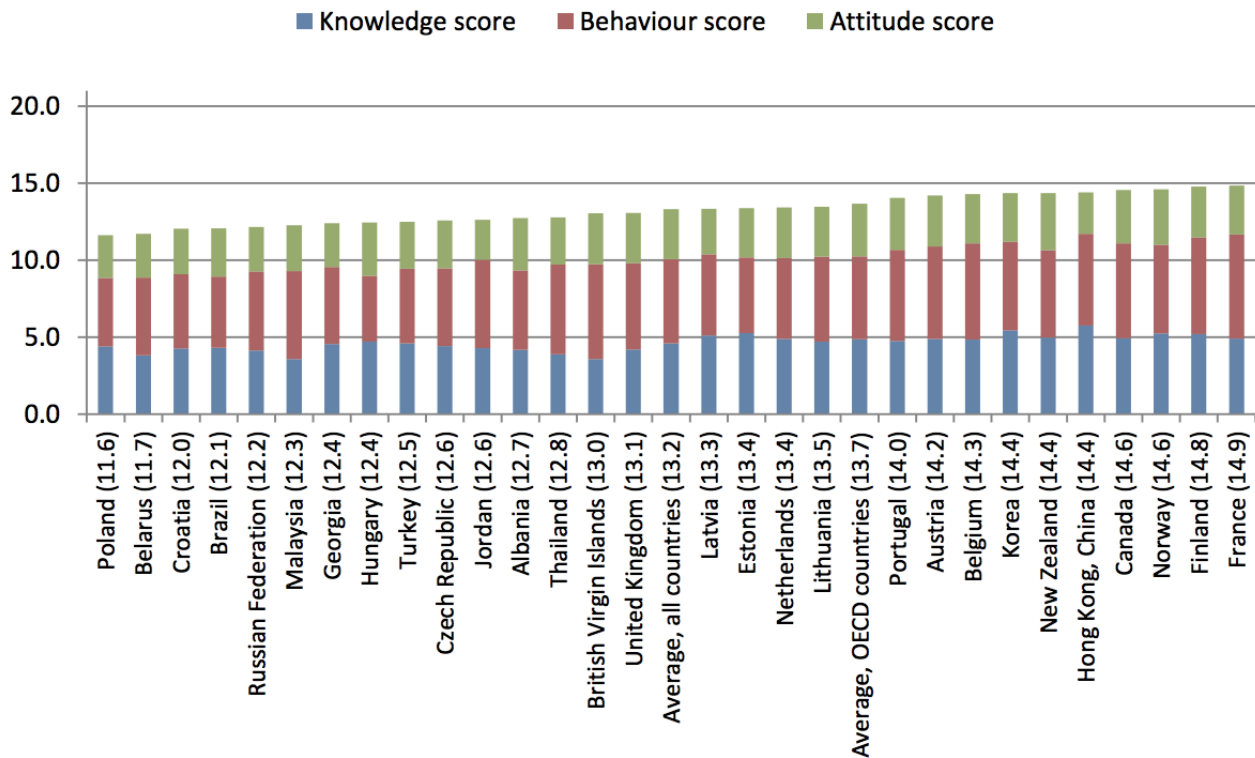
The OECD/INFE International Survey of Adult Financial Literacy Competencies (2016)

In 2015, the OECD/INFE has conducted an international data collection exercise to measure financial literacy and financial inclusion. **A total of 51,650 adults aged 18 to 79 from 30 countries and economies participated in the survey.**

The survey results indicate that:

- Overall levels of financial literacy, indicated by combining scores on **knowledge, attitudes and behaviour** are relatively low:
- ✓ The average score across all participating countries is just **13.2 out of a possible 21** (a combination of a maximum of 7 for knowledge, 9 for behaviour and 5 for attitudes), and 13.7 across participating OECD countries, showing significant room for improvement.

Financial knowledge, attitudes and behaviour (average scores)

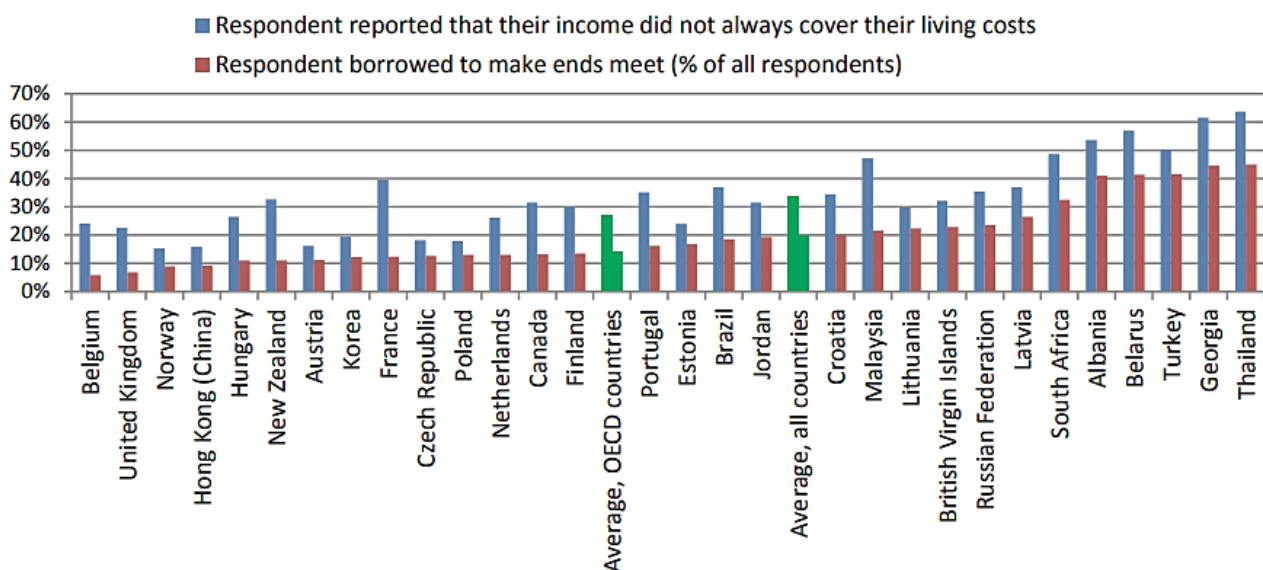


Source: OECD/INFE International Survey of Adult Financial Literacy Competencies, 2016

- **Average levels of financial knowledge show room for improvement**, whilst there is wide variation between countries:
 - ✓ On average, just 56% of adults across participating countries and economies achieved a score of at least five out of seven (considered to be the minimum target score), compared with an average of 63% across OECD countries, indicating that many adults around the world are currently unable to reach the minimum target score on financial knowledge.
 - ✓ Some areas of financial knowledge appear to be more problematic. Only 42% of adults across all participating countries and economies are aware of the additional benefits of interest compounding on savings (48% across OECD countries), and only 58% could compute a percentage to calculate a simple interest on savings (65% across the OECD). Only about two in three adults – across OECD and all participating countries and economies – were aware that it is possible to reduce investment risk by buying a range of different stocks.
 - ✓ Low levels of numeracy may be further reducing the ability of individuals to make sound decisions by applying financial knowledge. Responses to a question asking people to calculate the balance of an account after 2% interest has been added, suggest that a sizeable proportion of the population of many countries finds it difficult to apply.

- Across participating countries and economies, on average just **one in two (51%) respondents achieved the minimum target score of at least six out of nine on financial behavior**. The average across participating OECD countries is only slightly higher, at 54%.
 - ✓ The weakest areas of financial behaviour across these measures appear to be related to **budgeting, planning ahead, choosing products and using independent advice**. On average, across participating countries and economies, only **60% of adults reported having a household budget** (57% across the OECD); and only about 50% set long-term goals and tried to achieve them (51% across the OECD).
- Analysis of financial attitudes also shows that many people have a **tendency towards short-termism**:
 - ✓ On average, just 50% of adults across participating countries and economies achieved the minimum target score for financial attitude (that is, one that shows a tendency to favour the longer term), compared with an average of 55% across OECD countries.
 - ✓ Across all participating countries and economies, **two in five respondents had not saved in the last 12 months**: around six in ten respondents (59%) were active savers; (60% were active savers in OECD countries).
 - ✓ On average, **1 in 5 borrowed to make ends meet** in the last 12 months:

Making ends meet



Source: OECD/INFE International Survey of Adult Financial Literacy Competencies, 2016

- Informed and active product-choosing particularly deserves attention:
 - ✓ Relatively few people are choosing new financial products with the aid of **independent information or advice** – including best buy tables – indicating that more could be done to guide consumers towards unbiased sources of information

MAIN CONCLUSIONS

Only about **half of adults** reach the minimum target score on behaviour

On average, only **60% of adults** reported having a household budget (57% OECD), and only about **50% set long-term goals** and tried to achieve them (51% OECD)

Only **19% used independent information** (20% OECD) when choose a financial product

On average, **1 in 5 borrowed to make ends meet** in the last 12 months

S&P Global FinLit Survey (2015)

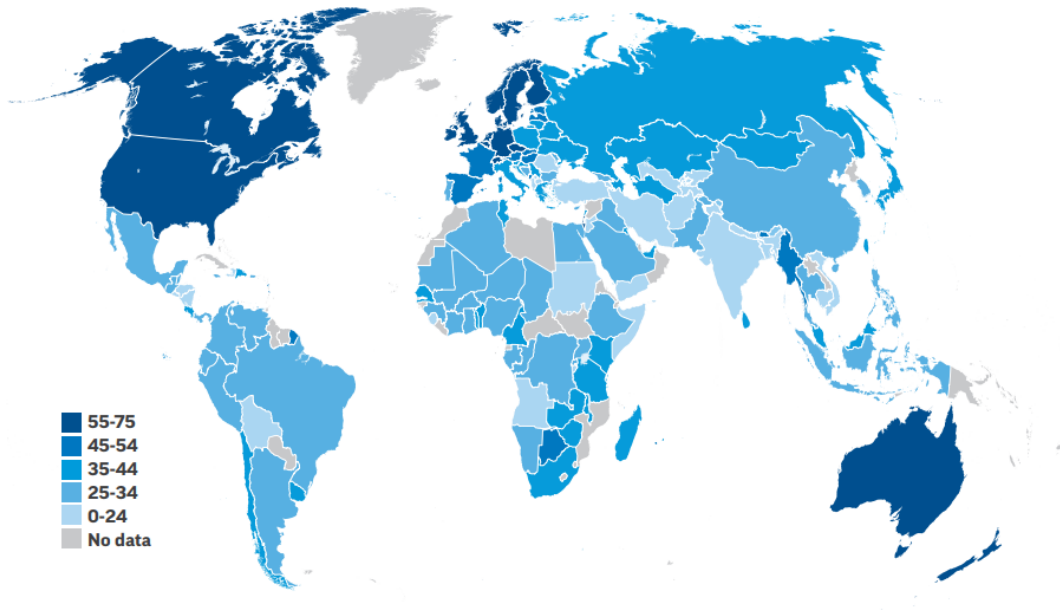
The Standard & Poor's Ratings Services Global Financial Literacy Survey is the world's largest, most comprehensive global measurement of financial literacy. It probes knowledge of four basic financial concepts: risk diversification, inflation, numeracy, and interest compounding. **The survey is based on interviews with more than 150,000 adults in over 140 countries.**

A person is defined as financially literate when he or she correctly answers at least three out of the four financial concepts listed above: risk diversification, inflation, numeracy, and interest compounding. Based on this definition, 33 percent of adults worldwide are financially literate. This means that around 3.5 billion adults globally, most of them in developing economies, lack an understanding of basic financial concepts.

Financial literacy rates differ enormously between the major advanced and emerging economies in the world. On average, 55 percent of adults in the major advanced economies—Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States—are financially literate. But even across these countries, financial literacy rates range widely, from 37 percent in Italy to 68 percent in Canada.

In contrast, in the major emerging economies (Brazil, the Russian Federation, India, China, and South Africa) on average, 28 percent of adults are financially literate. Disparities exist among these countries, too, with rates ranging from 24 percent in India to 42 percent in South Africa.

Global variations in financial literacy (% of adults who are financial literate)

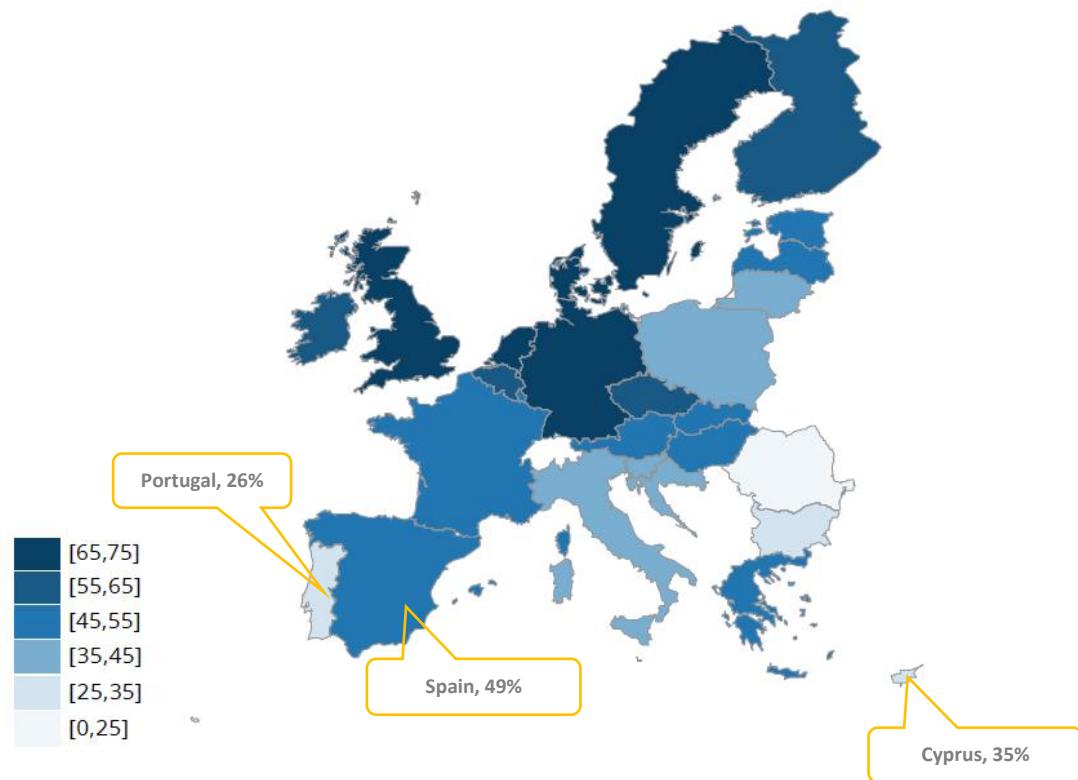


Source: S&P Global Fin Lit Survey, 2015

Financial literacy rates vary widely across the European Union. On average, **52 percent of adults are financially literate**, and the understanding of financial concepts is the highest in northern Europe:

- Denmark, Germany, the Netherlands, and Sweden have the highest literacy rates in the European Union: at least 65 percent of their adults are financially literate.
- Rates are much lower in southern Europe. For example, in Greece and **Spain**, literacy rates are 45 percent and **49 percent**, respectively. Italy and **Portugal (26%)** have some of the lowest literacy rates in the south.
- Financial literacy rates are also low among the countries that joined the EU since 2004. In Bulgaria and **Cyprus, 35 percent of adults are financially literate**. Romania, with 22 percent financial literacy, has the lowest rate in the European Union.

Northern Europe leads in financial literacy (% of adults who are financial literate)



Source: S&P Global Fin Lit Survey, 2015

Among the four topics that define financial literacy, inflation and numeracy (in the context of interest rate calculations) are the most understood. Worldwide, half the adult population understands these concepts. Knowledge of risk diversification is the lowest, with only 35 percent of adults correctly answering that survey question. Risk diversification also figures into some of the largest disparities among countries. In the major advanced economies, 64 percent of respondents have an understanding of this concept, against 28 percent in the major emerging economies. Differences for the other concepts are less pronounced, ranging from 15 percentage points for inflation to 10 percentage points for the compound interest concept.

MAIN CONCLUSIONS

Only **33% of adults** worldwide are financially literate

Numeracy and inflation are the most understood concepts

Risk diversification is the least understood concept

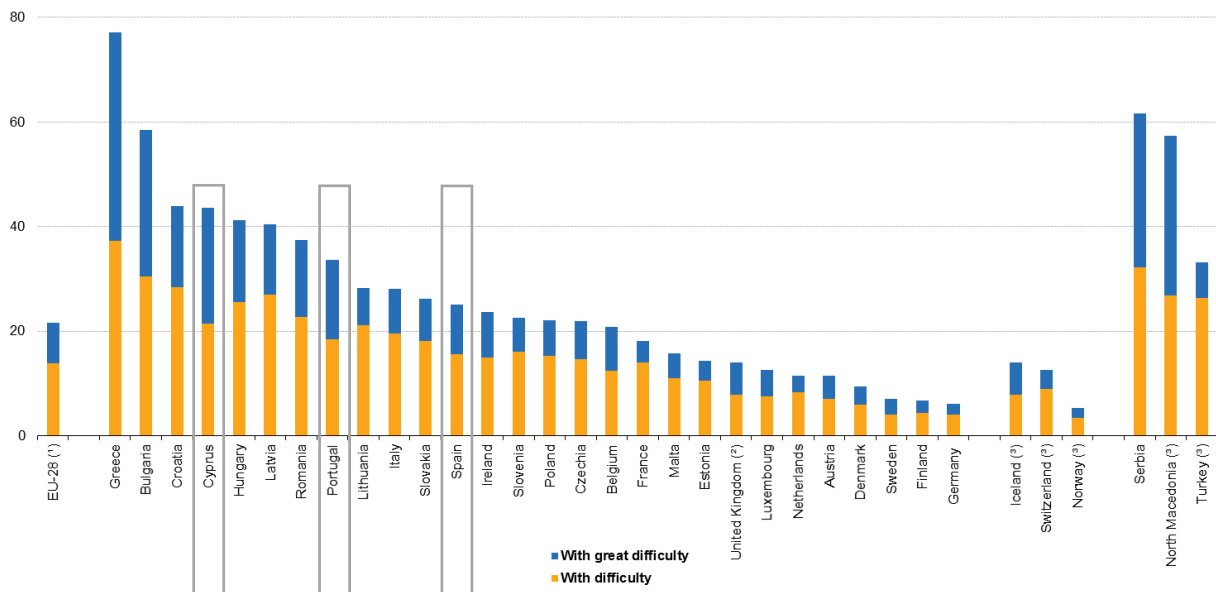
Inability to make ends meet (EU-SILC, 2017)

The **EU-SILC (EU Statistics on Income and Living Conditions)** is a statistical survey that is conducted annually in the EU countries as well as several other countries. Since 2008, the survey has been a part of the Survey on Living Conditions, enabling us to make international comparisons.

The indicator **Difficulty in making ends meet** is one of the indicators that is used to follow up how households meet economic strains. The share is estimated from those who answered "great difficulty" to the question "If you look at your household finances on the whole, do you think it is easy or difficult (for you) to make ends meet?".

In the EU, Sweden is the country with the lowest proportion of households, 2 percent, to state that they have great difficulty in making ends meet. Finland, Germany, the Netherlands, Denmark, France and Estonia also show low proportions between fully 2 percent and 5 percent. However, in Greece, **Cyprus** and Bulgaria, about one third of households have great difficulty in making ends meet. Croatia, **Portugal** and Romania also report high proportions, about 20 percent.

Share of population living in households that have difficulty or great difficulty in making ends meet



(*) Estimated data.
 (*) Low reliability.
 (*) 2016 data.

Source: Eurostat, 2017

Single persons with children are the household type that has the greatest difficulty in making ends meet. In the EU, 17 percent among single persons with children state that they have great difficulty making ends meet, compared with 10 percent among single persons without children.

MAIN CONCLUSIONS

In most countries, the highest proportions of people said they either had 'some difficulties' or it was 'fairly easy' for them to make ends meet

Greece, Bulgaria, Croatia, Hungary, Cyprus and Latvia were the countries with the highest proportions of people who had 'difficulties' or 'great difficulties' in making ends meet

The highest proportion of people who could make ends meet 'easily' or 'fairly easily' were in Norway, followed by the **Netherlands, Denmark, Germany and Finland**

The Survey of Adult Skills (PIAAC), 2012

The Programme for the International Assessment of Adult Competencies (PIAAC) is a programme of assessment and analysis of adult skills. The major survey conducted as part of PIAAC is the Survey of Adult Skills. The survey measures adults' proficiency in key information-processing skills - literacy, numeracy and problem solving - and gathers information and data on how adults use their skills at home, at work and in the wider community.

A total of **166,000 adults aged 16-65** were surveyed in 24 countries and sub-national regions using tests that ranged from 30 minutes to 50 minutes - in the vocabulary assessment, respondents had no time limit to answer the questions given to them.

The ability to **understand and process written texts and numerical information as well as the ability to use information and communication technologies (ICT)** to solve problems are the basis for effective and successful participation in social and economic life. This Survey reveals the levels of proficiency in these skills for the working age population in Europe and how this compares internationally:

- **Literacy** is defined as the ability to understand, evaluate, use and engage with written texts to participate in society, achieve one's goals, and develop one's knowledge and potential;
- **Numeracy** is defined as the ability to access, use, interpret and communicate mathematical information and ideas in order to engage in and manage the mathematical demands of a range of situations in adult life;
- **Problem solving in technology-rich environments** is defined as the ability to use digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks.

There are seven key findings of the Survey, which are all specifically relevant for EU education and training policies¹⁰:

1. 20% of the EU working age population has low literacy and low numeracy skills;
2. Education and skills increase employability: this represents a challenge for the one in four unemployed who has low literacy and numeracy skills;
3. The high-skilled are progressing well through adult learning, but people with low proficiency are easily caught in a 'low skills trap' as they are less likely to participate in learning activities;
4. There are significant differences between individuals with similar qualifications across the EU17 member countries: upper secondary graduates in some Member States score similar or better than higher education graduates in others;
5. 25% of adults lack the skills to effectively make use of ICTs;
6. The skills of a person tend to deteriorate over time if they are not used frequently. The gap in literacy proficiency skills between generations is more than two thirds of a proficiency level (equivalent to five years of education);
7. Sustaining skills brings significant positive economic and social outcomes.

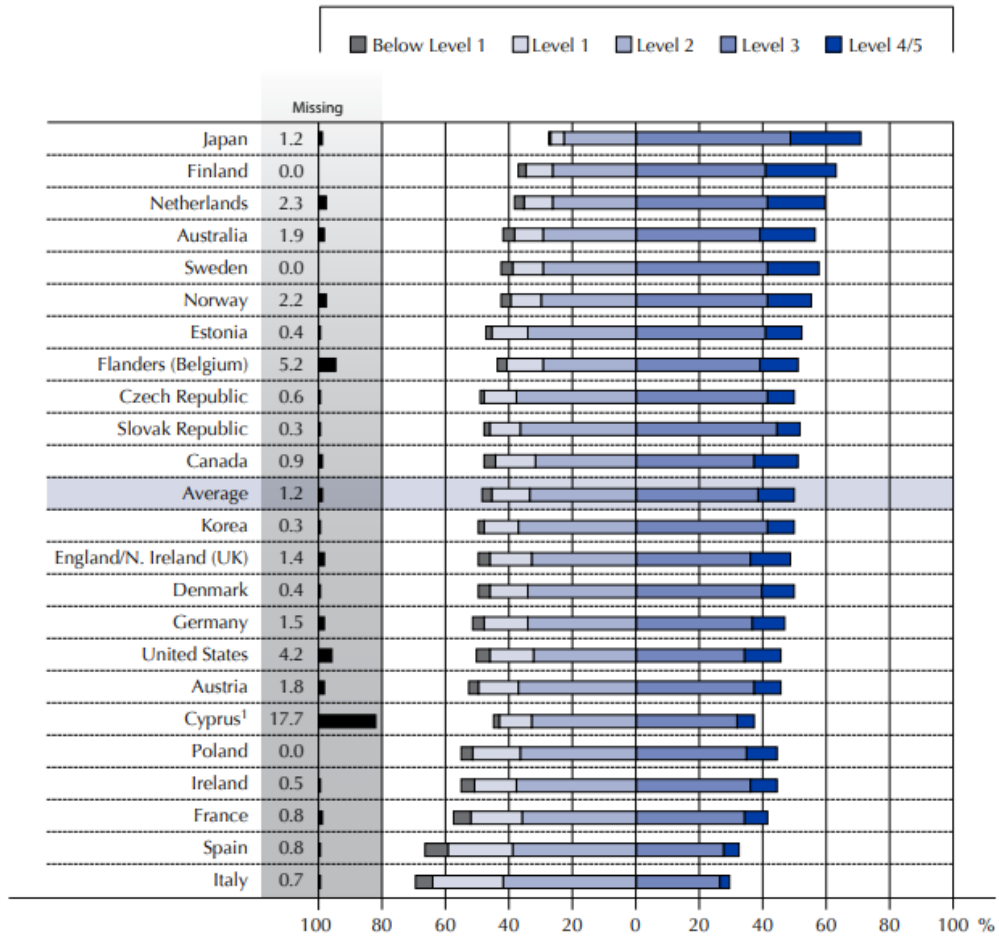
Based on the PIAAC's results, around **70% of adults in Italy and Spain** only score level 2 or lower on the literacy assessment. A score of level 2 means that an adult has demonstrated their ability to understand the information that is conveyed in a text which might require rewording or some basic inferences. When it comes to numeracy, 70% of adults in Spain and Italy again fail to get the top grades. Just 1 in 20 adults in those countries managed to demonstrate the highest level of skills in numeracy and literacy.

As is shown in the next table, in **Spain**, results show that there is a general problem with skills proficiency not only for the young but for the general population as Spain score far below the OECD and EU averages regarding numeracy and literacy.

In **Cyprus**, the Survey shows proficiency scores slightly below EU and OECD averages in literary and numeracy. Further investigation is needed on the fact that the performance of young people with upper secondary education is quite close to people with at lower secondary education (10 points for literacy) and that younger generations score close to other age groups.

¹⁰ "The Survey of Adult Skills (PIAAC): Implications for education and training policies in Europe", European Commission, 2018

Literacy profiles among 16-65-year-old Percentage of adults scoring at each proficiency level



Source: Survey of adults' skills (PIAAC), 2012

MAIN CONCLUSIONS

One in five European adults has only basic skills in literacy, one in four for numeracy

Prevalence of low skills among **unemployed**: around one in four unemployed adult has low skills

More than **one in four adults** can only solve very simple tasks in ICT environments (14%) or only have very basic to no computer experience (13%)

Digital financial literacy in EU

Public authorities in most European countries have developed one (or more) **websites with financial education and/or financial consumer protection content**. This section therefore focuses on some selected examples of initiatives, mostly developed/initiated by public authorities, with a focus on innovative projects.

All of them contain information about financial products and services existing in the country and most of them provide information and directions about financial decisions and potential problems at key life stages. Glossaries explaining financial terms and issues, and various types of calculators are also often included. A few websites also complement basic information with interactive tools, like comparative tables, games, quiz and applications for mobile phones.

Various countries also developed financial education **resources for teachers**, whether or not financial education is part of the national school curriculum, and whether or not financial education provision is mandatory. These resources are usually developed and tested by (or in collaboration with) educational authorities. They are ready to be used but, at the same time, quite flexible, so that teachers can decide how to integrate them in their classes. Such resources are often made available to teachers through these online platforms. Some examples at the national level include:

- In **Spain**, the portal '*finanzasparatodos.es/gepeese*' (Finance for all) was set up to give the teaching staff teaching resources, guidelines and recommendations to teach financial education in the classroom, the curricular areas related to financial education, games, workshops, etc.



- In **Portugal**, teaching resources are regularly made available through the website *Todos Contam* (Everybody Counts), <https://www.todoscontam.pt/>, in an online library dedicated to teacher's support. The three financial supervisors are also developing, in collaboration with the ministry of education and the four most representative industry associations, textbooks for the several stages of education, covering the main topics of the Core Competencies for Financial Education.



Some other examples at the national level in EU:

Country	Website	Info about products/services	Glossary Financial terms	Calculators	Tools to compare products	Games / Videos/ Quiz
Austria	www.oenb.at	Yes	Yes			Yes
Czech Republic	www.cnbprovsechny.cnb.cz	Yes	Yes			Yes
Denmark	www.raadtilpenge.dk	Yes	Yes	Yes		Yes
France	www.lafinancepourtous.com	Yes	Yes	Yes		Yes
Estonia	www.minuraha.ee	Yes	Yes	Yes	Yes	Yes
Ireland	www.consumerhelp.ie	Yes		Yes	Yes	
Latvia	www.klientuskola.lv	Yes	Yes	Yes	Yes	Yes
Lithuania	www.pinigubite.lt	Yes		Yes		Yes
Netherlands	www.wijzeringeldzaken.nl	Yes		Yes	Yes	
Serbia	www.tvojnovac.nbs.rs	Yes	Yes	Yes		
Slovak Republic	www.fininfo.sk	Yes	Yes	Yes		
Switzerland	www.iconomix.ch	Yes				
United Kingdom	www.moneyadvice.service.org.uk	Yes	Yes	Yes	Yes	
Belgium	www.wikifin.be	Yes	Yes	Yes		Yes



Financial literacy games in Portugal

GAME	STORYLINE	FINANCIAL TOPICS	POSITIVE ASPECTS (SWOT analysis)	NEGATIVE ASPECTS (SWOT analysis)
<i>Todos contam Simulators</i>	You choose the simulator and then, inside each one, you have option depending on the theme.	Familiar budget Savings Home credit Consumer credit Credit card Pensions Bank charges Pension charges Researcher charges	You can use your own data to have real responses Many options depending on your needs It includes an explanation about the aim of the simulator	Only in Portuguese Is not a game (is not entertainment)
<i>Global Management Challenge</i> (Origin in Portugal in 1980)	International strategy and management competition. It consists of an interactive business simulation in which each team manages a Company with the objective of obtaining the best investment performance for its company in the market in which it is inserted.	Business investments Management decisions (pricing, quantities, salaries, operational decisions...)	You can take business actions that will reflect in the company results as if it was in real life, and with that understand how actions can be good or bad in different scenarios and depending on what are the other companies' actions Complex game but that is reflected in a good simulation of what happens with real life companies	The platform/ website could be better and should have more interactive content





Financial literacy games in Spain

GAME	STORYLINE	FINANCIAL TOPICS	POSITIVE ASPECTS (SWOT analysis)	NEGATIVE ASPECTS (SWOT analysis)
<p>FINANZAS PARA TODOS (FINANCE FOR ALL)-</p> <p>http://www.finanzasparatodos.es/gepeese/es/ludoteca/</p>	<p>This website is the reference portal for financial education in Spain and includes 15 different games for adults, kids and teenagers.</p>	<p>Planning and Money Management</p> <p>Saving and Investing; Credit and Debt</p> <p>Risk management and Insurance</p> <p>Retirement and pensions</p>	<p>Do not require an understanding of complex and unfamiliar rules (Fast & Easy)</p> <p>Cover a wide variety of possible financial literacy topics and scenarios</p> <p>The game is accessible online with no cost</p>	<p>Not accessible via mobile devices (e.g. Smartphones, Tablets)</p> <p>The platform/ website could be better and should have more interactive content</p> <p>Only in Spanish</p>
<p>EFEC APP</p> <p>http://efecapp.cat/</p>	<p>APP EFEC is a multiple-choice game where students can play among themselves.</p>	<p>Financial Responsibility and Decision Making</p> <p>Planning and Money Management</p> <p>Saving and Investing; Credit and Debt</p> <p>Risk management and Insurance</p> <p>Retirement and pensions</p> <p>Taxes and fraud protection</p>	<p>Do not require an understanding of complex and unfamiliar rules (Fast & Easy).</p> <p>Cover a wide variety of possible financial literacy topics and scenarios.</p> <p>Accessible via mobile devices (e.g. Smartphones, Tablets) and online</p>	<p>Only in Catalan</p> <p>Need further support with language and maths.</p>



Financial literacy games in Cyprus

GAME	STORYLINE	FINANCIAL TOPICS	POSITIVE ASPECTS (SWOT analysis)	NEGATIVE ASPECTS (SWOT analysis)
<p>THE FEFE GAME: Financial Education for Future Entrepreneurs</p>	<p>The FEFE Game puts the student in the role of the owner-manager of a retail start-up business who runs their business over a series of ‘simulated months’ by responding to events, making business decisions, interpreting financial information</p>	<p>Cash transactions; statement of profit or loss, financial position, accounting terminology</p> <p>Tangible non-current assets & depreciation, accounting policies</p> <p>Credit transactions, accruals & prepayments, accounting concepts and conventions, financial ratio definitions, basic accounting measurements & treatments under IFRS</p> <p>Statement of cash flows; share issues, dividends; intangible assets and amortization, bad debts, provisions; capitalize & expense decisions; ratio interpretation; advanced accounting measurements and treatments under IFRS; the IFRS framework</p>	<p>Free mobile digital game</p> <p>Students receive immediate formative feedback</p> <p>Builds confidence in the form, content & terminology of financial statements</p> <p>Provides an engaging and fun way to support learning accounting</p> <p>Has an optional book-keeping mode and so is equally relevant for courses which require students to complete the debits and credits and those which do not</p>	<p>In some cases, the text overlaps with the images and it is not visible</p> <p>The visuals are built based on a dark scenery (coffin, skulls etc.) which may not be attractive to every audience</p>
<p>ONLINE GAME OF ENTREPRENEURSHIP ENTRINO</p>	<p>The player goes through a series of phases during the game in order to discover what it takes to be an entrepreneur</p>	<p>The game addresses issues related to the following financial concepts: Management, Marketing, Logistics, Personnel and Finance, Risk taking, Leadership, Communication, & time management</p>	<p>The game is accessible online with no cost. Accessible via mobile devices (e.g. Smartphones, Tablets): available for Android and iOS operating systems</p>	<p>It mostly resembles a gamified course; the gaming elements are visible but only partially</p>

Financial literacy games (worldwide)

In this section we present some games that can be used to enhance adults' financial literacy:

Practical Money Skills

<http://www.practicalmoneyskills.com>

This website contains **seven free games** that can be embedded at no cost in other websites. The most widely used is **Financial Soccer**. This game offers single player and head-to-head game play options and is being translated into a dozen different languages. This free game features three difficulty levels – children, teens and adults – and has companion lesson modules for classroom use.

All seven games are based on the Practical Money Skills for Life program, which is Visa's widely used financial education program. The program contains comprehensive money management resources and lesson plans tailored for use at home and in the classroom:



Countdown to Retirement

In this virtual world you will start your first job, earn promotions and see your salary increase. You will also make housing and transportation decisions and the choices you make will impact your retirement.



Road trip to savings

Meet the challenges of four weeks on the road as you steer your way to financial stability. This game requires players to make decisions about income, expenses and savings. Players start with \$1,000 cash and \$0 savings.



Financial Football

Visa and the National Football League have teamed up to create Financial Football, a fast-paced, interactive game that engages students while teaching them personal finance skills.

Financial Entertainment

<https://financialentertainment.org/>

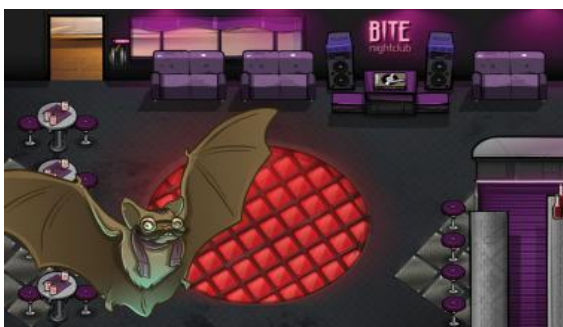
Doorways to Dreams Fund (D2D) is a nonprofit organization that provides innovative financial education to low-income families. This website contains three casual games that help build basic financial literacy skills. The audience for the games is low-income young adults, with a special focus on women and minorities:



Celebrity Calamity

This game teaches the importance of paying more than the minimum credit card payment, minimizing credit card finance charges, avoiding all fees including bank overdraft, credit card late payment, and credit card over-limit, and making good annual percentage rate (APR) choices.

- ✓ Celebrity Calamity is the 2009 Horizon Award Winner.



Bite Club

Retirement is something everyone should plan for, but a vampire has an eternity to consider. This game will help you to plan for retirement and very long future; understand the value of paying off student loan and credit card debt; and manage your current spending patterns.

- ✓ Bite Club is the 2011 NEEBC Best Practices Award, 2012 P&I Eddy Award, and 2013 EIFLE Award Winner.



Farm Blitz

FarmBlitz will teach you about the power of compound interest, both positive and negative; the value of low-interest, long-term savings; and the perils of high-interest, short-term debt.

- ✓ Farm Blitz is the 2011 EIFLE Award Winner.

The Doorways to Dreams Fund (D2D Fund) proposed a **Theory of Change**, which posits that video games can help users develop basic financial knowledge and foster one's confidence in their ability to reach financial goals. This is accomplished through being able to engage in financial tasks within a fun and low-stress environment. Consequently, the increased confidence will encourage users to become motivated to take action with their finances in real life.

In this sense, the organization conducted **research exploring the impact of these games on one's financial capability**. A portion of D2D Fund's research analyzed levels of financial self-efficacy and financial literacy for games released under their Financial Entertainment franchise, which include **Bite Club, Celebrity Calamity, and Farm Blitz**. The Fund began by testing the impact of their Farm Blitz and Bite Club games. Users were tested in six cities, consisting of groups of nine to 18 people per city. Each participant was asked to complete a financial confidence test before and after each game played, in addition to a financial literacy test. The financial literacy questions were based on the **NEFE Financial Education Evaluation Toolkit**¹¹. The results showed improvement in financial knowledge and confidence after the games were played.

The study says one problem that often occurs with traditional financial education is a lack of interest. Consequently, D2D Fund has used gaming as means to encourage consumers to develop a desire to learn about money management through an engaging, casual representation. Research suggests video games help participants become more engaged with the material.

FINRA's Moneytopia

<https://apps.finra.org/moneytopia/moneytopia.html>

FINRA is a no-for-profit organization. The goal of Moneytopia is to make sound financial decisions and achieve financial goals over a multiyear period. Moneytopia takes players through 40 years of financial decisions, including where to live, what clothes to buy, where to invest, and what bills to pay. To win, players must keep careful track of their finances, pay their bills on time, and manage all the small day-to-day items that can impact their finances.



Players can use cash, credit cards, or high-cost payday loans to pay their bills. Occasionally, players must deal with surprise expenses such as a wedding or the birth of a child. An investment advisor offers financial tips throughout the game.

¹¹ <https://toolkit.nefe.org/>

Why-Moolah - Singapore Version of Game of Life

app.whymoolah.com/

PlayMoolah is a Singapore-based start-up founded by two young women tech entrepreneurs in the aftermath of the 2008 world financial crisis. The team designs educational digital games and community projects. This game is available in both Google Play Store and App Store.



WhyMoolah allows players to experiment and see the financial impact of different decisions and lifestyle choices at crucial stages in life after graduation, including student loan repayment, buying a house and getting married.

It includes relevant information such as housing loan interest rates, stock investment, different types of insurances and credit cards, etc.

National competencies frameworks on financial literacy

Financial Literacy in Portugal

A Survey on the Financial Literacy of the Portuguese Population was a project that began in 2008, when **Banco de Portugal** was attributed specific duties in relation to the supervision of the market conduct of credit institutions. This project was developed taking into account the principles and best practices adopted internationally. The 2nd Survey on the Financial Literacy of the Portuguese Population (1,100 respondents and face to face interviews), conducted in 2015, enabled the National Council of Financial Supervisors to characterise and analyse the financial behaviour, attitudes and knowledge of the Portuguese population, five years after the first survey.

The results of the 2nd Survey suggest that, in general, **the Portuguese have positive attitudes**, although these attitudes do not always correspond to suitable financial behaviour. This fact is shown, especially by the importance attributed by the respondents to the **planning of the household budget, which is not reflected, for example, in saving with a long-term perspective**. This aspect deserves attention since **only a small part of the respondents reveals saving habits**, with the percentage of those who state saving for retirement being very low.

However, the Survey highlights important asymmetries in the levels of financial literacy of different population groups. There is a direct correlation between **financial literacy and education and income levels**:

- The interviewees with **higher levels of financial literacy** mostly have higher education and belong to households with a gross monthly income greater than €1,000. These interviewees also have regular saving habits and a significant involvement with the financial system, simultaneously holding banking products, insurance and investment products, which suggests that experience in acquiring products is also associated with acquisition of financial knowledge.
- On the other hand, the **lowest levels of financial literacy** belong to those interviewees without schooling, those members of households with a gross monthly income lower than €500, or without an income, those excluded from the financial system, those without a bank account or insurance, and those without saving habits.

The level of financial literacy, both in the components relative to knowledge and to financial behaviour, is directly related to schooling and to the income range of the respondents. The data shows gaps in knowledge of the sources of financial information and insufficient understanding of basic financial concepts, which makes it difficult for individuals to properly choose the financial products that are most suited to their effective preferences and risk profiles.

MAIN CONCLUSIONS OF THE PORTUGUESE SURVEY ON FINANCIAL LITERACY (2015):

- Approximately **27 per cent** do not plan the household budget and the habit of **saving** is more common amongst those who plan the household budget;
- Approximately **35 per cent mentioned that sometimes their income is insufficient** to cover their living costs were asked what they had done to solve the problem the last time it happened: 48.7 per cent claimed to reduce their expenses, 36.2 per cent borrowed money from family or friends, 25.1 per cent used their savings and 10.9 per cent left their bills unpaid;

- **54 per cent have little or no confidence in their retirement planning:** the majority of interviewees (82.2 per cent) state that they will finance their retirement through deductions to social security or another compulsory contributory regime;
- Almost **half do not compare interest rates** before investing savings or contracting loans.

National Plan for Financial Education

To promote financial literacy of the Portuguese population, the financial supervisors – Banco de Portugal, Comissão do Mercado de Valores Mobiliários (Portuguese Securities Market Commission) and Autoridade de Supervisão de Seguros e Fundos de Pensões (Portuguese Insurance and Pension Funds Supervisory Authority) – teamed up and in 2011 released the **National Plan for Financial Education**.

The **National Plan for Financial Education** is essentially a long-term commitment of the supervisors. Increasing the knowledge of population and above all shaping values, attitudes and behaviours require a comprehensive strategy with well-defined goals, priorities and metrics, carried out step by step, based on a network of stakeholders able to ensure the reach of this strategy.

The priority of the supervisors was to take financial education to schools in a consistent and structured way so that children and young people could acquire basic financial expertise early on in life, in terms of managing the family budget and different financial products and services. It is undeniable that financial education should follow the various steps of personal, intellectual and civic development because only then can it aspire to transform attitudes and behaviours.

In this sense, the **Core Competencies for Financial Education** for Kindergarten, Basic Education, Secondary Education and Adult Learning and Training¹ were prepared as part of the collaboration between the Ministry of Education and Science, through the Directorate-General for Education and the National Agency for Vocational Education and Qualification, and the financial supervisors. They were approved in May 2013 by the Secretary of State of Basic and Secondary Education. The Core Competencies for Financial Education are the guidelines for the implementation of financial education in an educational and training context.

They define the knowledge and skills considered essential for children and students in kindergarten, in the 1st, 2nd and 3rd stages of basic education and in secondary education. The Core Competencies for Financial Education also include a set of Short-Term Training Units (STTU) for adult learning and training. In order to introduce the content of these core competencies in the school curricula, CNSF and the Ministry of Education and Science began teacher training sessions in 2014. The development of teaching materials to support financial education in schools is also priority of the financial supervisors and the Ministry of Education and Science.

On the other hand, after schools, in 2014 the National Plan for Financial Education defined as its next priority the **support to entrepreneurs in the social economy** (or ‘third sector’) and micro, small and medium enterprises, given their importance for sustainable development. The supervisors are backed by very relevant partners: CASES – Cooperativa António Sérgio para a Economia Social (Public Interest Cooperative for Social Economy) and IAPMEI – Agência para a Competitividade e Inovação (Public Agency for Competitiveness and Innovation).

In the coming years, the National Plan for Financial Education will continue to give priority to financial education and to supporting entrepreneurship, gradually reaching out to new target groups.

Financial Literacy in Spain

The Banco de España (BdE) and the CNMV (National Securities Market Commission) have, as part of the Financial Education Plan, collaborated in preparing the Survey of Financial Competences (ECF by its Spanish abbreviation). The study has been able to count on the collaboration of INE (the National Statistics Institute), which has provided a large sample of randomly selected individuals representing Spanish territory as a whole and each of its regions.

The Spanish Survey of Financial Competences (8,952 respondents and face to face interviews) measures knowledge and understanding of financial concepts by the **Spanish population aged 18 to 79**, and this age group's holding, acquisition and use of various savings, debt and insurance vehicles. Included under the National Statistics Plan, this survey has key characteristics that provide for a rigorous and comprehensive description of the Spanish adult population's financial literacy and of their relationship with the financial system.

In the interview, before starting the financial literacy section, individuals are asked to assess how they perceive their own level of financial literacy. Almost **half the population (46%) perceives its literacy to be "low" or "very low"**. A further 46% says it is "medium" and only 8% declare their financial literacy to be "high" or "very high". On average, those who say their financial literacy is very low reply correctly to 1.1 of the 3 questions asked, while those declaring their literacy to be high or very high answer 2.1 questions correctly. The groups who perceive their financial literacy to be low or very low largely coincide with those who give the wrong answer to the questions on inflation, compound interest and risk diversification.

Along with literacy in general financial concepts, another measure of the population's financial competence is whether they are familiar with different types of savings, insurance, payment and debt vehicles. In all the savings vehicles, the percentage of the population familiar with financial products varies also on the basis of their labour market status.

The percentage of dependent employees and the self-employed who have heard of the savings vehicles considered is generally higher than that of the unemployed, retirees and other inactive individuals, with the difference being more marked in the case of savings accounts and fixed-income assets.

The differences in income levels when it comes to taking out insurance or cards are less marked than in the case of savings vehicles. The proportion of those who have acquired life insurance or credit cards diminishes with the age of the individual, and increases with educational level and income.

The differences in terms of educational level and income are also less marked in the acquisition of debt, since the majority of those who have incurred debt in the past two years have done so with a personal loan, and this is a means of indebtedness to which all groups resort.

Most interviewees (52%) reside in households which, were they to lose their main source of income, could maintain their spending for at least six months without taking on debt or selling properties.

MAIN CONCLUSIONS OF THE SPANISH SURVEY OF FINANCIAL COMPETENCES:

For 28% of the individuals in Spain expenses have exceeded income on some occasion over the past year, and 17% of individuals have faced this situation resorting to some form of credit financing. The rest have either drawn on savings or disposed of assets. The related figures in the EU and OECD countries are very similar to those for Spain, while for the overall total of countries considered the percentages increase to 35% and 21%, respectively.

National Plan for Financial Education

The Financial Literacy Plan created by the Bank of Spain and the CNMV (National Stock Market Commission) provides a framework for the development of initiatives in financial education at national level and defines the lines of action for carrying them out. To do this, it is necessary to coordinate the efforts of the Plan's promoters and its collaborators so that these efforts can be used to bring financial education to the greatest number of people and segments of the population.

In this sense, in accordance with the principles established by the OCDE applicable to financial education initiatives, the involvement of entities belonging to the private sector in financial education brings a multitude of advantages given the knowledge of the subject they have and the resources of those who have to reach large population groups. The participation of these entities contributes significantly to the enrichment of initiatives and materials related to financial education. The Financial Literacy Plan lead financial education initiatives developed in Spain.

Financial education is understood as the process by which investors and financial consumers:

- A. They improve their understanding of financial products, concepts and risks.
- B. They develop the necessary skills and confidence to become more aware of financial risks and opportunities through information, teaching and / or objective advice.
- C. Learning to make informed financial decisions.
- D. Developing habits related to saving and spending planning.

The Financial Literacy plan of Spain was created in 2008 by the Bank of Spain and the CNMV under the principles of the OCDE. The plan impulses the improvement of the financial culture of the Spanish and it is for all population segments. It has its own brand and it has been created thanks to more than 30 with 30 collaborating institutions and is open to the accession of many more.

The CNMV and the Bank of Spain have carried out a task of identifying the activities that are being developed in Spain in the field of financial education in accordance with the recommendations and guidelines of the OECD. In accordance with these, one of the objectives of the national financial education strategies is to promote coordination among the different agents to avoid duplication of efforts and resources, guaranteeing the coherence of the initiatives developed and improving the efficiency and scope of the same.

Among the actions of the Financial Literacy Plan, the Financial Education Day is an initiative promoted in Spain whose purpose is to dedicate the first Monday of October to remember and raise awareness among citizens of the importance of having an adequate level of financial culture to face the challenges they will face throughout the different stages of life.

Financial Literacy in Cyprus

A study conducted in 2016 by Dr. Panayiotis Andreou, Assistant Professor of Finance, Cyprus University of Technology, in cooperation with Dr. Dennis Philip of Durham University Business School showed that there was a serious problem amongst undergraduate university students regarding their understanding of even basic economic and financial terms.

The 2016 **financial literacy pilot survey of Cyprus** covers **881 domestic university students, aged mostly between 18 and 24 years old, across the five biggest universities in Cyprus** (two public and three private institutions). The survey was conducted with the aim to measure the level of financial knowledge among Cypriot students of basic financial concepts related to simple interest and compound interest calculations, understanding of inflation, consequences of inflation, risk-return relationships, and the benefits of risk diversification.

In terms of financial knowledge, **only 6.24% of the Cypriot students who were surveyed were able to answer all the questions correctly**. When considering at least 4 correct responses out of 6, which reflects a good financial knowledge proficiency level, we find only 36.9% of the students fall into this category.

In terms of average financial knowledge scores, Cypriot students have an average score below 50%. Although the financial knowledge average scores cannot be strictly compared across countries due to dissimilarities in survey questions and survey designs, we observe that the Cypriot students' average financial knowledge scores are comparatively lower than those reported in similar studies (OECD, 2016).

The results also show that male students, those in Business majors, students from public universities, students who focused on STEM subjects in high school, students whose parents have high income, and students with strong skills in mathematics, information technology and general knowledge tend to be more knowledgeable financially. On the other hand, freshman students and students that avoid situations that require in-depth thinking tend to be less knowledgeable financially. Additionally, financial knowledge is found to have a significant association with the students' understanding of managing credit card debt and their abstinence from fraudulent investments.

The prevalent low levels of financial literacy among Cypriot students squares rather surprisingly with the numbers in Standard and Poor's Ratings Services Global Financial Literacy Survey, which reports that **only 40% of Cypriot Millennials, and only 35% of Cypriot adults, are financially literate**.

While the results from the university student survey act as a pilot study in understanding the financial literacy levels in Cyprus, they are limited in drawing broader conclusions for the entire population. Therefore, a nationally representative household survey carried out as a policy step will allow for a comprehensive assessment of the level of financial knowledge in Cyprus.

In this sense, the **Central Bank of Cyprus (2017)** is conducting a countrywide survey in collaboration with experts from Durham University and the Cyprus University of Technology (CUT), for measuring the level of financial knowledge in the general population of Cyprus with specific demographic characteristics such as the district (urban/rural), gender and age range (18-79 years). The results of which will allow for an in-depth assessment of the level of financial knowledge of Cypriots, compared with other countries. The Central Bank of Cyprus stated that the finding of the aforementioned survey can support the design of a national strategy in tackling with financial illiteracy through a targeted and holistic educational campaign.

There is at least one plausible explanation for this inferior financial literacy performance of Cypriot students: the students don't receive proper and sufficient financial education during schooling, hence they enter university without possessing essential financial knowledge and skillsets.

In this sense, KPMG's branch in Cyprus¹², a global network of professional firms providing Audit, Tax and Advisory services, argues, based on previous research results that young people in Cyprus graduated from schools without sufficient financial knowledge. According to KPMG this fact means that it will difficult for them to be completely independent when they are about to have more adult responsibilities, such as buying stocks, applying for a loan etc. The recent bankrupt history in Cyprus, concludes the article, may have been a result of the Cypriot citizens' financial illiteracy.

KPMG proposes that in order to avoid situations as such, schools should include financial literacy courses to all levels of the education system in so to develop the ability of young people to properly manage a family budget and be acquainted with various financial terms such as reference rate, Total Annual Effective Interest Rate, etc. to be able to cope with any risks that may arise in the Cypriot economy.

Furthermore, the Cyprus Securities and Exchange Commission (2017) in the Annual Report argues that the financial needs of the individuals themselves have become more complex and create a greater need for proper management of their money. In this regard, it states that there is a need to provide training opportunities in relation to financial literacy to Cypriot citizens, focusing mostly in the areas of financial products and services and the capital market.

As a result, the Cyprus Securities and Exchange Commission promotes public education in the capital market in several ways. Specifically, it maintains a dedicated section on its website devoted to investors and which is periodically enriched with training material, advice and warnings issued by the Cyprus Securities and Exchange Commission or supervisory authorities from other countries. In addition, the Cyprus Securities and Exchange Commission publishes news articles related to Investment in newspapers, financial magazines and websites. It also organizes informative lectures and presentations open to the public, the dates of which are announced on its website. Within 2017, the focus was on constantly informing investors, focusing on the new regulatory framework governing investment services, and on a regular basis.

As for the field of education, In March 2016, at the request of the Ministry of Education, the Cyprus Securities and Exchange Commission contributed to the revision of the course "Trading" taught at Lyceum and in particular to the revision of the Chapter "General Commercial Information on the Capital Market". Subsequently, on May 25, 2016, through a letter sent to the Ministry of Education, the Cyprus Securities and Exchange Commission submitted a recommendation for introducing a "Basic Economics and Financial Knowledge" course, as a common core course for Lyceum students. The purpose of the suggestion was to provide Cypriot citizens with the respective knowledge already from a young age, and thus allow them to act as economically active citizens.

¹² "Financial illiteracy in the Cypriot context", KPMG, 2018.

Euroinvestment Survey (2019)

The main question that this quantitative study aims to answer is the following: **What are the main skills and needs lacking related to Financial Literacy?**

Framing the research question in terms of the problem (outcome) and factors influencing the problem (determinant) we have identified one top issue as priority area for research:

“Identify national levels of adults' financial literacy¹³ and set the gap in financial literacy needs, particularly among low-skilled adults”.

- **Sampling and group size:**

- ✓ Low-skilled adults aged 18-55
- ✓ Minimum 30 questionnaires per country (Cyprus, Portugal and Spain)

- **Questionnaire:**

The following questions have been strategically planned and structured in the best way possible in order to receive the most accurate data. The questions are varied, cover a diverse range of topics, and can be asked in multiple formats:

PART I: SOCIODEMOGRAPHIC DATA	
1. AGE:	<input type="checkbox"/> 18-25 <input type="checkbox"/> 26- 35 <input type="checkbox"/> 36-45 <input type="checkbox"/> 46-55 <input type="checkbox"/> 56 and more
2. GENDER:	<input type="checkbox"/> Male <input type="checkbox"/> Female
3. EMPLOYMENT STATUS:	<input type="checkbox"/> Permanent full-time job <input type="checkbox"/> Self-employed (work on my own business) <input type="checkbox"/> Permanent part-time job <input type="checkbox"/> Student/ Unemployed/ Retired
6. EDUCATION LEVEL:	<input type="checkbox"/> Less than high school <input type="checkbox"/> High school or equivalent <input type="checkbox"/> College/Bachelor <input type="checkbox"/> Graduate degree

¹³ The OECD/INFE has defined financial literacy as a “combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing”.



PART II: FINANCIAL BEHAVIOUR
Please rate the following items on a scale of 1-5 (1 =strongly disagree and 5 =strongly agree)

No.	Statement	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly
1.	I feel in control of my financial situation	1	2	3	4	5
2.	I feel capable of using my income to achieve my financial goals	1	2	3	4	5
3.	My finances are a significant source of worry for me	1	2	3	4	5
4.	I am uncertain about where my money is spent	1	2	3	4	5
5.	I feel credit cards are safe and risk free	1	2	3	4	5
6.	I feel putting away money each month for savings or investments is important	1	2	3	4	5
7.	I feel capable of handling my financial future	1	2	3	4	5
8.	I feel it is important to understand apartment leases and loan agreements before I sign	1	2	3	4	5
9.	I have interest in reading about money management	1	2	3	4	5
10.	I budget and track spending	1	2	3	4	5
11.	I compare my receipts of purchases to my monthly statement.	1	2	3	4	5
12.	I use credit cards to make purchases that I can't afford and I don't have the money in the bank to pay the bill	1	2	3	4	5
13.	I work extra hours to meet bills and expenses.	1	2	3	4	5
14.	I feel having life insurance is an important way to protect loved ones	1	2	3	4	5
15.	I have too much debt right now	1	2	3	4	5





PART III: FINANCIAL KNOWLEDGE

For each of the following statements, circle the correct answer from the available choices.	Answer 1	Answer 2	Answer 3
<p>Risk diversification</p> <p>Suppose you have some money. Is it safer to put your money into one investment, or to put your money into multiple investments?</p>	One investment	Multiple investments	I don't know
<p>Inflation</p> <p>Suppose over the next 10 years the prices of the things you buy double. If your income also doubles, will you be able to buy less than you can buy today, the same as you can buy today, or more than you can buy today?</p>	Less	The same	More
<p>Numeracy</p> <p>Suppose you need to borrow 100 €. Which is the lower amount to pay back: 105 € or 100 € plus three percent?</p>	105 €	100 € plus three percent	I don't know
<p>Compound interest</p> <p>Suppose you had 100 € in a savings account and the bank adds 10 percent per year to the account. How much money would you have in the account after five years if you did not remove any money</p>	More than 150€	Exactly 150€	Less than 150€





PART IV: DIGITAL CONFIDENCE

Check all that apply:

1. **Would you use a digital game to improve your financial knowledge?**
 - Yes
 - No
2. **Which topics would be of interest to you?**
 - Budgeting
 - Investing
 - Taxes
 - Credit
 - Bills
 - Life Insurance
 - Loans/debt
 - Credit cards
 - Saving
 - Interest rates
 - Other:
3. **Which of the following device(s) do you feel more confident using?**
 - Computer
 - Tablet
 - Smartphone
 - I don't feel confident using any technological device
4. **Have you used some of the device(s) above for learning before?**
 - Yes
 - No
5. **If you answered yes, please select the device(s) that you have used:**
 - Computer
 - Tablet
 - Smartphone
 - Other:
6. **Do you have Internet at home?**
 - Yes
 - No

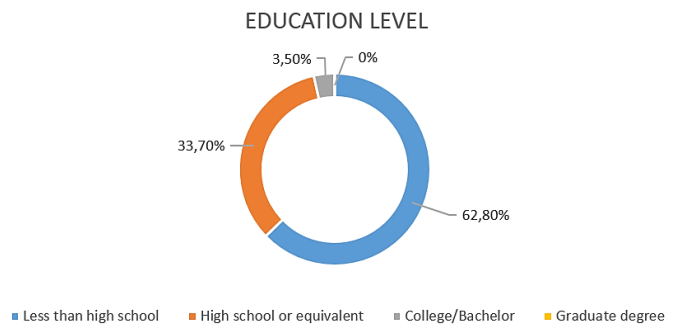
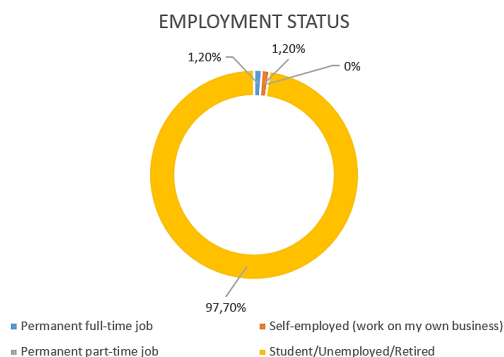
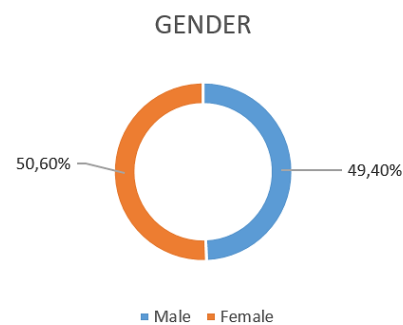
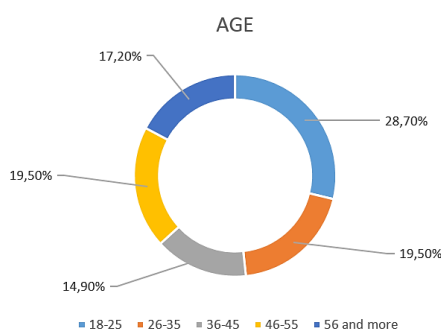


Survey Portugal (2019)

Number of answers: 88

PART I: SOCIODEMOGRAPHIC DATA

Regarding the sociodemographic results, we can say that in terms of ages we observe that there is a very equitable distribution, highlighting the age of 18-25 years which is the one that has a greater amount. The same happens with the gender, being practically 50% each of the sexes. The section on employment status deserves special mention, given that 97.7% of the respondents are students, unemployed or retired. We finish this section with the educational level, highlighting that more than half of the respondents have less studies than the school.

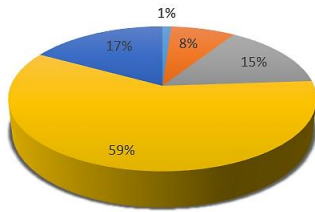


PART II: FINANCIAL BEHAVIOUR

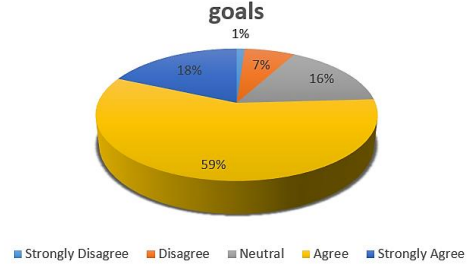
Analysing the behaviour of Portuguese respondents, we can draw the following conclusions: firstly, we observe that more than half of respondents feel that they have control over their financial situation, they are able to use their income to achieve their financial objectives and they know where they spend their money. In contrast, more than half of respondents recognize that finances are a significant source of worry for them. The result of the following question should be highlighted as more than half of the respondents disagree with the statement that "credit cards are safe and have no risks", while 20.9% have responded that they agree.

I feel in control of my financial situation

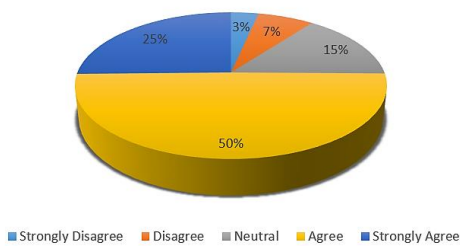
Strongly Disagree Disagree Neutral Agree Strongly Agree



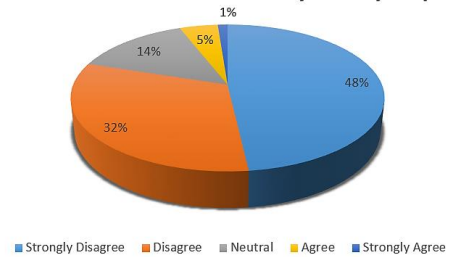
I feel capable of using my income to achieve my financial goals



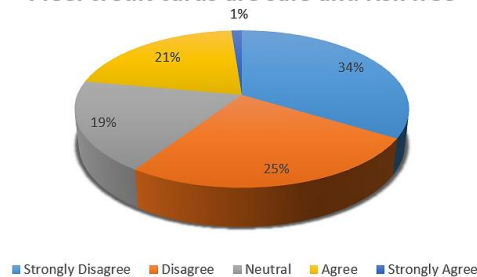
My finances are a significant source of worry for me



I am uncertain about where my money is spent

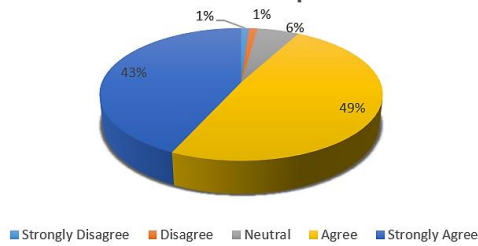


I feel credit cards are safe and risk free

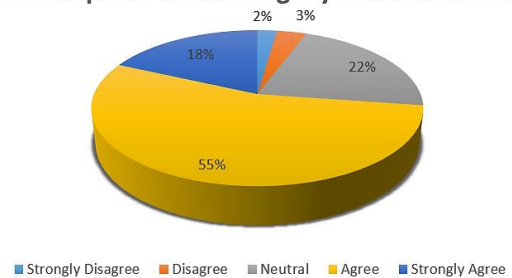


Regarding the 5 following questions we can say that more than 90% of respondents feel that saving is an important concept in their lives and most of them feel able to manage their financial future. We also note that more than 80% consider relevant to understand apartment leases and loans agreements before signing them. On the other hand, we observed that more than 20% of the respondents remain neutral regarding how to manage their money, although it is true that 50% of the respondents consider that they have an interest in staying informed on this topic. Likewise, practically 60% of the respondents affirmed budget and control their expenses.

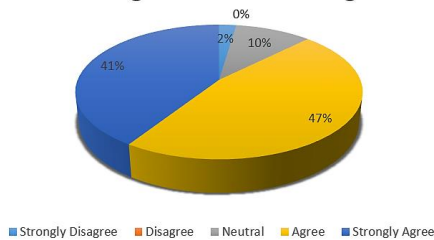
I feel putting away money each month for savings or investments is important



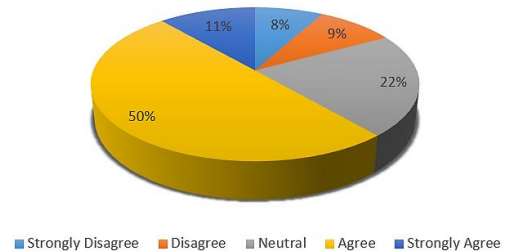
I feel capable of handling my financial future



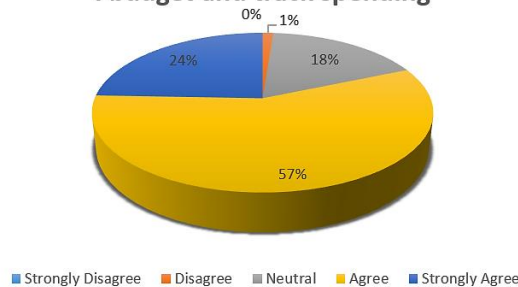
I feel it is important to understand apartment leases and loan agreements before I sign



I have interest in reading about money management

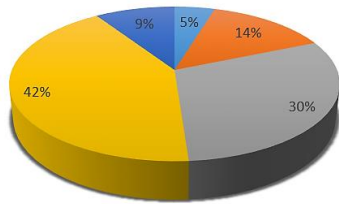


I budget and track spending



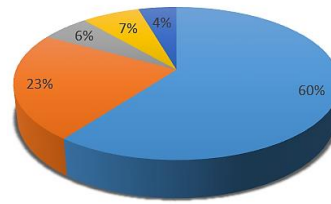
Regarding the next 5 questions on the behaviour of Portuguese respondents, we can draw the following conclusions: more than 40% of respondents admit to comparing their purchase receipts with the monthly status of their account, while 30% remain neutral on this. In addition, most Portuguese respondents refuse to use credit cards to make purchases that they cannot pay. Instead, we highlight the equal distribution of answers to the question of whether they work extra hours to pay bills and expenses. The same goes for the question of whether they feel that having life insurance is an important way to protect loved ones. Finally, more than 80% claim not to have too many debts currently.

I compare my receipts of purchases to my monthly statement



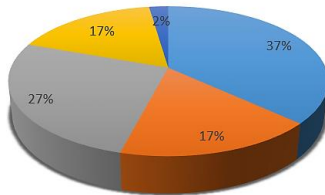
■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

I use credit cards to make purchases that I can't afford and I don't have the money in the bank to pay the bill



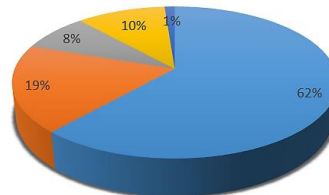
■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

I work extra hours to meet bills and expenses



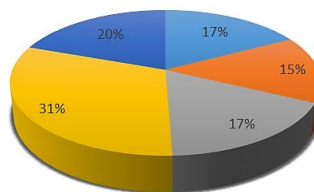
■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

I have too much debt right now



■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

I feel having life insurance is an important way to protect loved ones



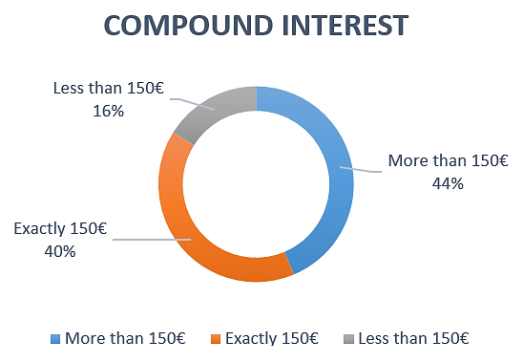
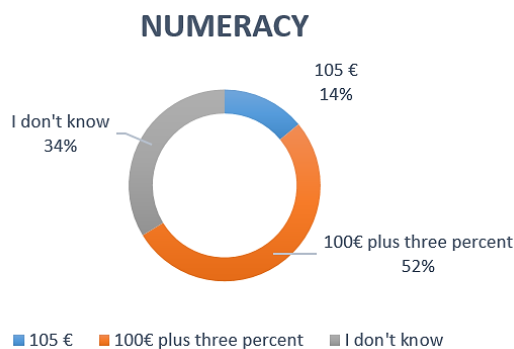
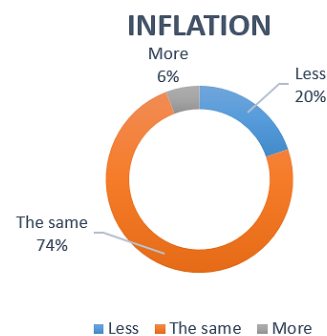
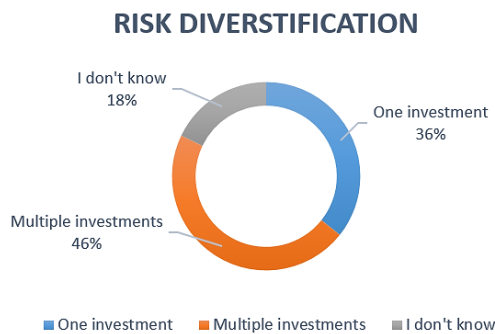
■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

PART III: FINANCIAL KNOWLEDGE

Regarding the third part of the questionnaire we will analyse the 4 answers obtained:

- 1. Risk diversification:** We observe that there is a more or less equal division in terms of the response given if it is safer to put money into one investment or into multiple investments. Only 46.4% have been able to answer the question well saying that it is safer to put the money in multiple investments.
- 2. Inflation:** In terms of inflation we see that there is a large majority that say that they could buy the same if the income and prices rise double. Also, only 25,6% have not been able to answer the question correctly.
- 3. Numeracy:** Regarding the question of arithmetic we can see how 52.3% of respondents have correctly answered that in the case of needing to borrow money the lowest amount to pay back would be 100 euros plus 3%. It should be noted that 33.7% have answered that they do not know how to answer the question.

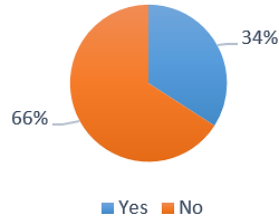
4. Compound interest: Finally, regarding compound interest we can see that the answers have been very distributed. The question said that assuming you have 100€ in an account and the bank adds 10% per year, how much money would you have after 5 years? So, 43.7% have correctly answered that the amount of money you would have in the bank would be more than 150 euros and 40.2% have answered that you would have exactly 150 euros. Finally, 16.1% did not know how to answer the question



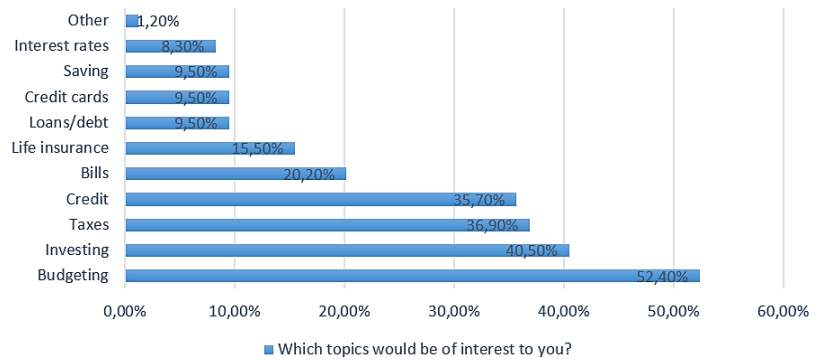
PART IV: DIGITAL CONFIDENCE

We observe more than 50% of the Portuguese respondents answer that they do not use digital games to improve their financial knowledge. It is important to note that although some of the problems that may have in your day to day are debts or excessive use of credit cards, have been one of the least requested themes. In return, budgeting, investments, taxes are topics of high interest to the respondents.

Would you use a digital game to improve your financial knowledge?

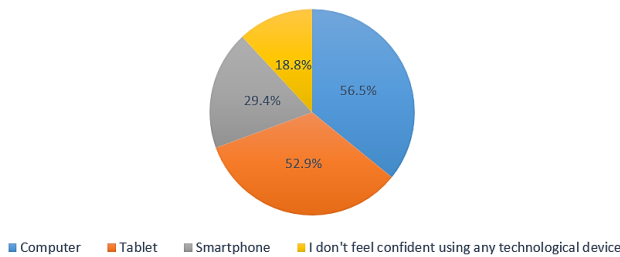


Which topics would be of interest to you?

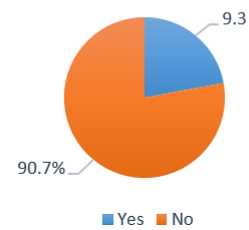


We can observe that there is a large majority between the computer and the tablet followed by the smartphone with 29.4%. Finally, highlight that 18.8% of Portuguese respondents have responded that they do not feel safe using any technological device. We highlight the vast majority of respondents who have answered that they have not previously used any of the technological devices with 90.7%.

Which of the following device(s) do you feel more confident using?

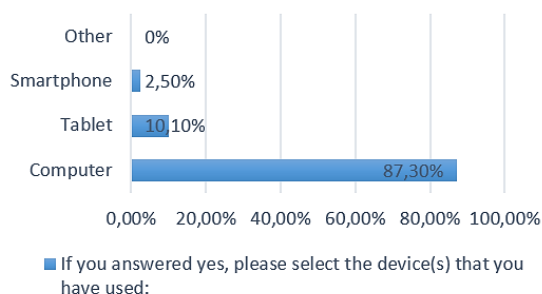


Have you used some of the device(s) above for learning before?

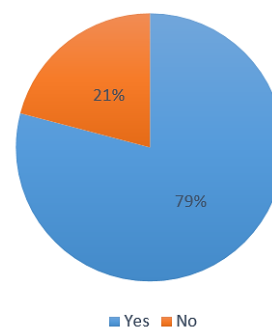


We highlight most responses received by the computer with 87.3% and the low score received by the tablet with 10.1%. We can draw the conclusion that even though respondents feel practically as safe using the computer and the tablet, then practically all use only the computer as a technological device to learn. Finally, we emphasize that practically 80% of respondents have Internet at home.

If you answered yes, please select the device(s) that you have used:



Do you have Internet at home?



MAIN CONCLUSIONS

Analysing globally the results obtained from the Portuguese respondents we find that practically the total of the respondents are students, are unemployed or are retired, and of them, more than half have less studies than high school. Thus, we can affirm that the profile of the Portuguese respondents is exactly what we were looking for to be able to carry out the study in question.

Once the target audience has been established, we can observe how there are inconsistencies regarding some specific financial aspects, since at the moment in which a large majority of the respondents answered to having control of their financial situation, there is no place for them to the same proportion of respondents recognize that finances are a significant source of worry for them.

In addition, we note **that the budget is the issue that most interests the Portuguese respondents** and this data can be spun with the vast majority obtained in the statement that the Portuguese make budgets and track their expenses. The same thing does not happen with **saving** since practically the total of the Portuguese consider that it is very important to save, but it is one of the topics of least interest to them.

We can highlight the great awareness that the Portuguese indicate regarding the **over-indebtedness** since a great majority of them have affirmed that they do not use credit cards to make purchases that they cannot afford, and they have also denied having too much debt at present.

We point out that regarding financial knowledge there has only been one question that the Portuguese have answered correctly with a large majority and this has been the one referring to inflation. Regarding the other questions, we observed that the percentages are very divided among those who have responded correctly and incorrectly. In this way, we can affirm that **there is greater ignorance regarding the topics of risk diversification, arithmetic and compound interest.**

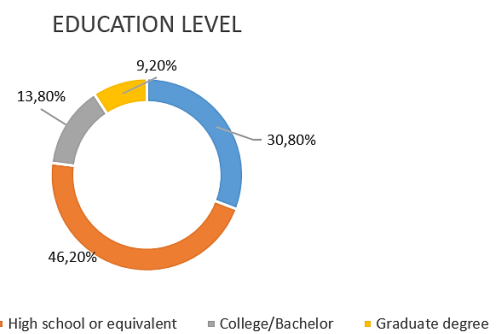
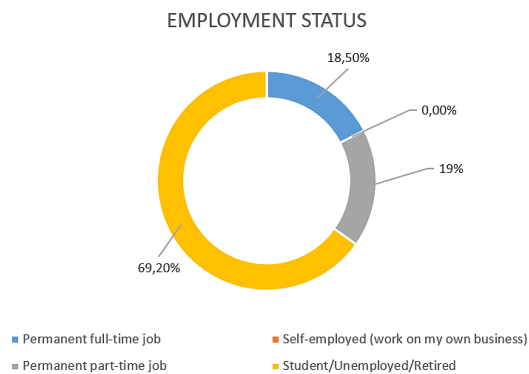
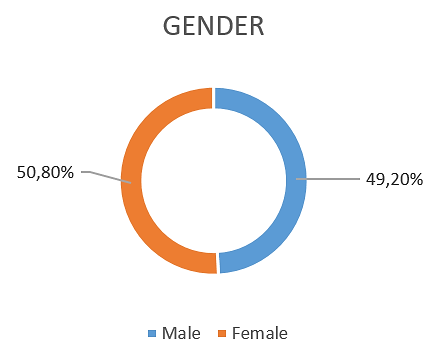
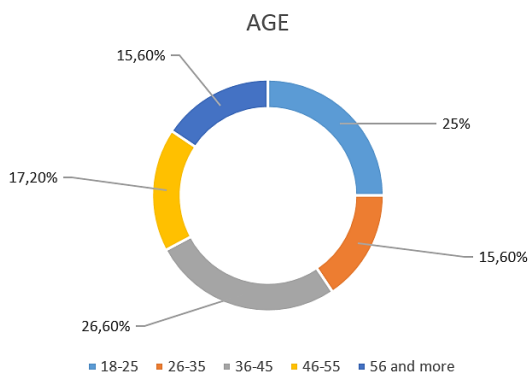
Finally, we emphasize that the vast majority of Portuguese respondents have Internet at home and the digital devices that most use are the computer and the Tablet. On the other hand, more than half of them answered that they would not use a digital game to improve their financial knowledge, which indicates the lack of connection between learning financial knowledge and enjoying playing with a digital game.

Survey Spain (2019)

Number of Answers: 65

PART I: SOCIODEMOGRAPHIC DATA

Regarding the results obtained from the sociodemographic analysis, we can highlight the following: firstly, in terms of age, we observe that the respondents are fairly evenly distributed in the different age groups. The same happens with the gender, since we can affirm that they practically represent 50% each of them. On the other hand, regarding employment we observed that there is a great majority that are in a student/unemployed /retired situation, representing almost 70%. Finally, regarding the level of education we highlight that 46.2% of respondents have high school or equivalent and 30.8% have less than high school.

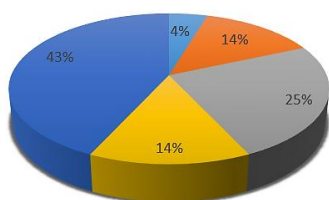


PART II: FINANCIAL BEHAVIOUR

Analysing the behaviour of the Spanish respondents we can highlight the following: first, more than 50% say that they feel they have control of their financial situation and feel able to use their income to achieve their financial goals. In exchange, the above is in contradiction with the answer they have given to the next question, since they have established that more than 50% of Spanish recognize that finances are a significant source of worry for them. Also, more than 50% say they know where they spend their money and more than 40% of respondents say that credit cards are not safe and risk free.

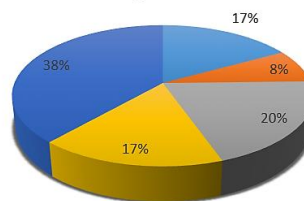
I feel in control of my financial situation

Strongly Disagree Disagree Neutral Agree Strongly Agree



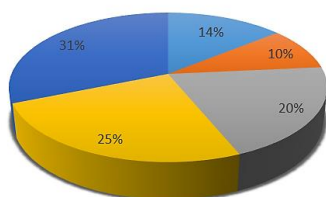
I feel capable of using my income to achieve my financial goals

Strongly Disagree Disagree Neutral Agree Strongly Agree



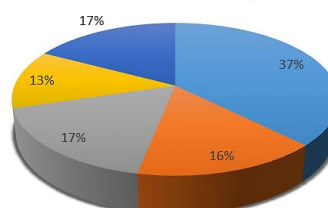
My finances are a significant source of worry for me

Strongly Disagree Disagree Neutral Agree Strongly Agree



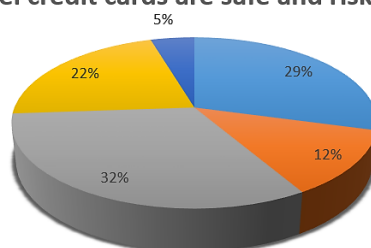
I am uncertain about where my money is spent

Strongly Disagree Disagree Neutral Agree Strongly Agree



I feel credit cards are safe and risk free

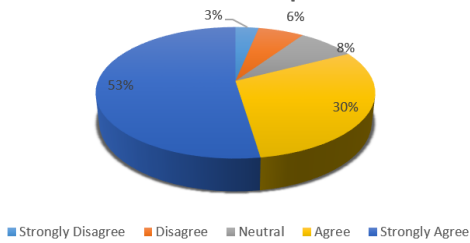
Strongly Disagree Disagree Neutral Agree Strongly Agree



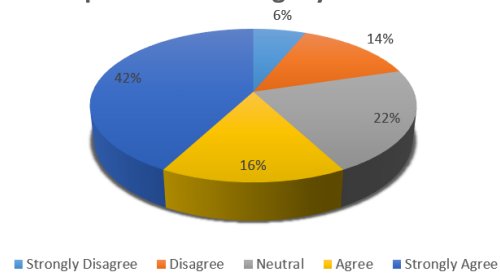
Regarding the following 5 questions we can draw the following conclusions: first, that more than 70% of respondents feel that saving or investing is important, almost 60% feel able to manage their financial future and more than 80% feel that is important to understand apartment leases contracts and loan contracts before signing them. In contrast, we note that 20% have no interest in learning about money management and 30.8% remain neutral in this regard. Finally, we see that with regard to the question of whether they make budgets and count their expenses, we observe that there is a very equal distribution between those who do and those who do not.



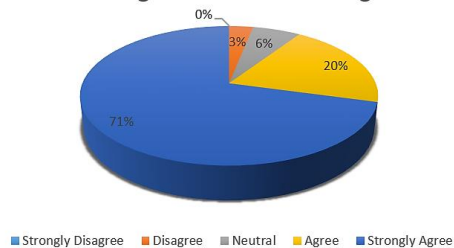
I feel putting away money each month for savings or investments is important



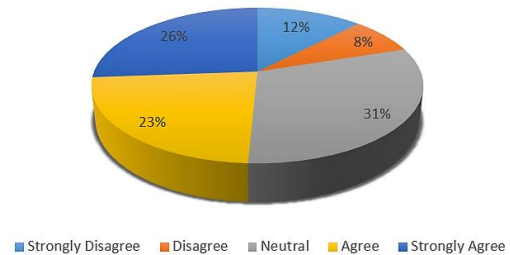
I feel capable of handling my financial future



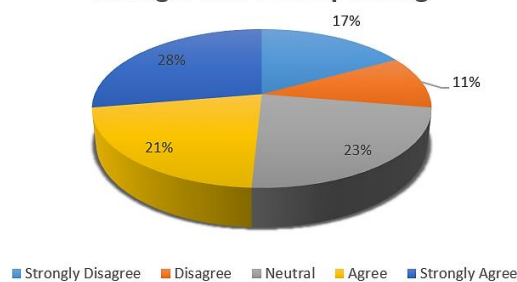
I feel it is important to understand apartment leases and loan agreements before I sign



I have interest in reading about money management

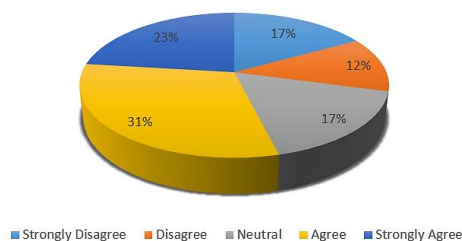


I budget and track spending

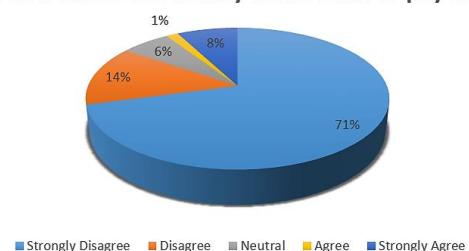


Regarding the next 5 questions we can establish the following: more than 50% of Spanish respondents say that they compare their purchase receipts with the monthly status of their account, more than 80% deny using credit cards to make purchases they cannot pay and practically 70% of respondents deny working extra hours to pay bills and expenses. Regarding the question of whether having a life insurance is important to protect loved ones we note that the answers are quite distributed. Finally, more than 65% deny having too many debts currently.

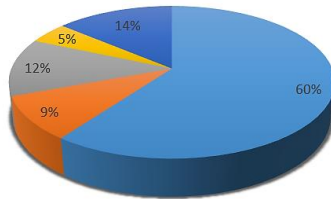
I compare my receipts of purchases to my monthly statement



I use credit cards to make purchases that I can't afford and I don't have the money in the bank to pay the bill

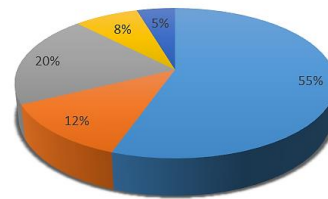


I work extra hours to meet bills and expenses



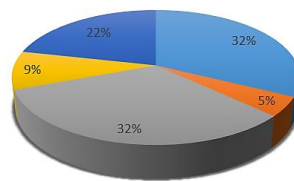
■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

I have too much debt right now



■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

I feel having life insurance is an important way to protect loved ones



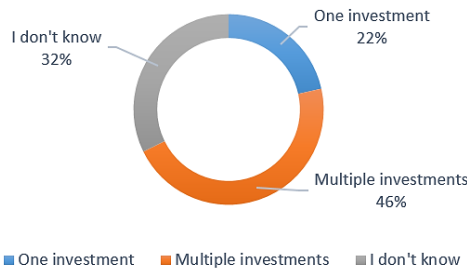
■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

PART III: FINANCIAL KNOWLEDGE

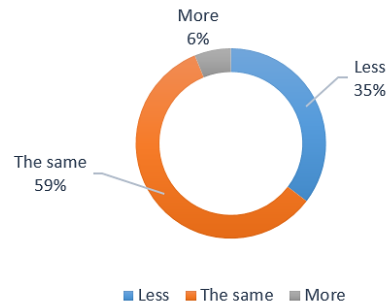
Regarding the third part of the questionnaire we will analyse the 4 answers obtained:

- Risk diversification:** With regard to risk diversification, note that 46.2% of Spanish respondents answered the question correctly saying that it would be safer to put the money in multiple investments.
- Inflation:** In terms of inflation, 58.5% of Spanish respondents answered correctly saying that they could buy the same.
- Numeracy:** We highlight in this question that 32.8% of respondents have not been able to answer the question and 54.7% have answered correctly saying that the correct answer is 100 € plus three percent.
- Compound interest:** Finally, regarding compound interest, it should be noted that only 39.1% answered the question correctly, saying that they would have more than € 150.

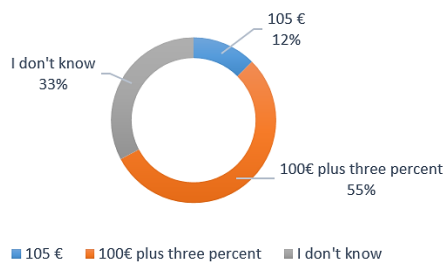
RISK DIVERSIFICATION



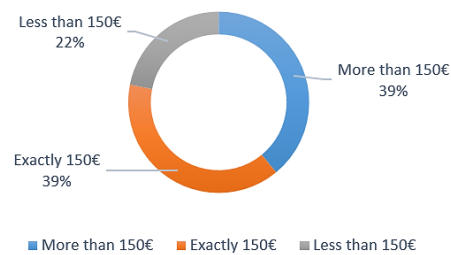
INFLATION



NUMERACY



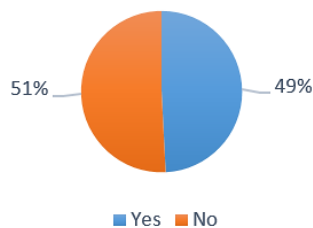
COMPOUND INTEREST



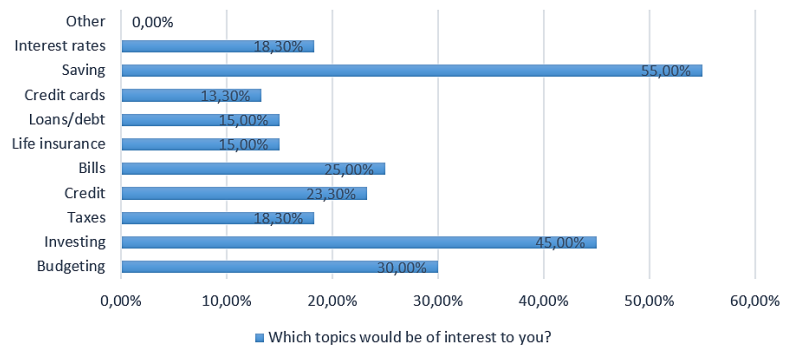
PART IV: DIGITAL CONFIDENCE

We emphasize that the answer to this question is practically 50% divided. We want to highlight that 55% of Spanish respondents have an interest in saving, 45% in investing and 30% in budgeting.

Would you use a digital game to improve your financial knowledge?

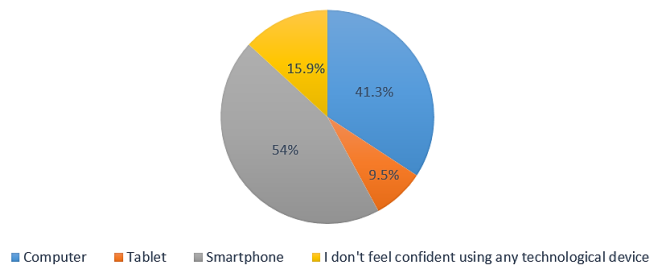


Which topics would be of interest to you?

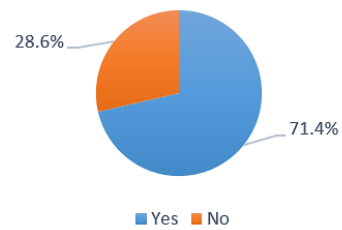


We can highlight how there is a large majority who feel more secure using the computer (41.3%) and the smartphone (54%). We emphasize that more than 70% claim to have used devices to learn previously.

Which of the following device(s) do you feel more confident using?

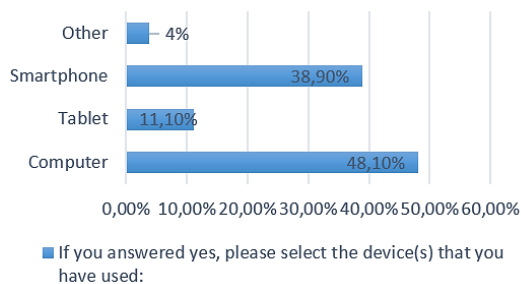


Have you used some of the device(s) above for learning before?

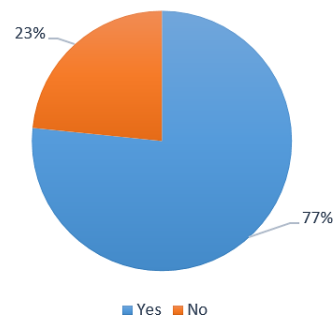


We emphasize that by a large majority Spanish respondents have used the computer (48.1%) and the smartphone (38.9%). Finally, note that 76.6% of respondents have internet at home.

If you answered yes, please select the device(s) that you have used:



Do you have Internet at home?



MAIN CONCLUSIONS

Making a global analysis of Spanish respondents we can establish that the profile of respondents is very different in terms of age, but more than half of them are students, are unemployed or are retired. Similarly, we find that almost half of the respondents have high school or equivalent and we also have a large part of the respondents who have less education than high school.

After establishing the target audience of the respondents, we would like to point out certain incompatibilities extracted from the questions regarding the financial behaviour of Spaniards, **since more than half of them claim to have control of their financial situation and feel confident about where their money is spent, but at the same time, more than half of respondents recognize that finance is an important source of worry for them.** So, we can say that although many of the Spanish respondents believe they have control of their finances, it seems that this is not the case.

On the other hand, **we have observed that one of the issues that arouses less interest in Spaniards is credit cards, however, almost 30% of respondents say that credit cards are safe and without risks.** This fact makes us reflect that despite being a topic that does not interest them, they have little information about it. Likewise, we observed that the topics of greatest interest to the respondents are **savings and investment.** In addition, we want to highlight the low score obtained in the question of whether Spaniards make budgets and track spending since more than half of them have answered negatively.

We want to point out that Spaniards have great knowledge about indebtedness since the vast majority do not use credit cards to make purchases that they cannot pay and do not have too much debt at present.

Thus, **we observe that with respect to the four questions on financial knowledge (diversification of risk, inflation, numeracy and compound interest) in all of them, practically half of the respondents answered correctly** and the other half either did not know how to answer or answered wrongly.

Finally, we want to point out that **half of the respondents have answered that they would use a digital game to improve their financial knowledge** and that the digital devices with which they feel most comfortable are the computer and the Smartphone. Finally, note that the vast majority of Spaniards have internet at home.

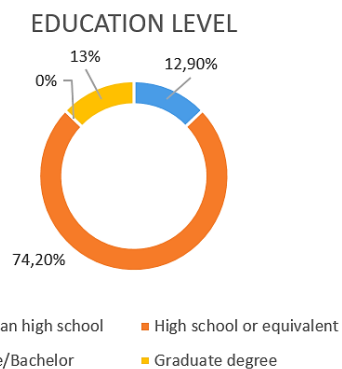
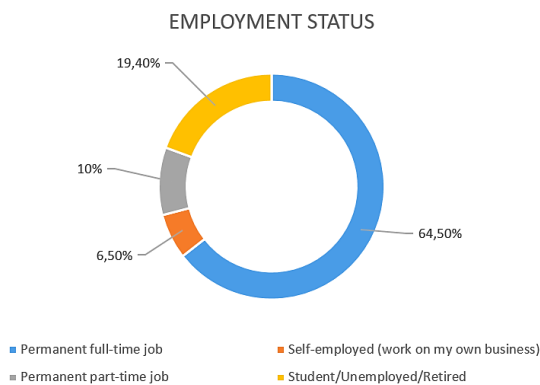
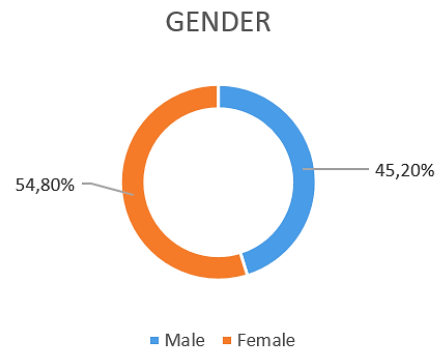
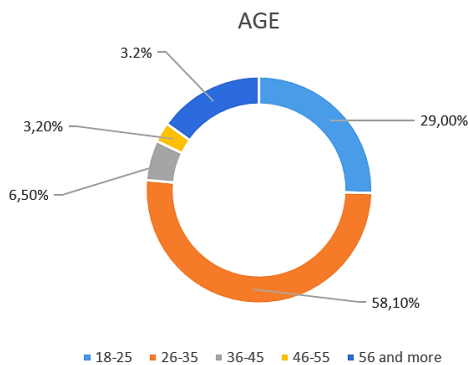
Survey Cyprus (2019)

Number of Answers: 35

PART I: SOCIODEMOGRAPHIC DATA

Regarding the sociodemographic results, we can say that in terms of ages there is a large majority of people who have answered the interview (58.1%) who are between 26-35 years old. While the respondents between 18-25 years represent 29%. The other ages symbolize a minimum amount.

Regarding gender, we observe that there is a fairly equitable distribution since 45.2% of the respondents are men and 54.8% are women. Thus, regarding the employment status, we note that 64.5% of respondents work full-time. Finally, 74.2% have high school or equivalent (a fact that will condition the results since it is not exactly the profile of respondents we were looking for: low-skilled adults).



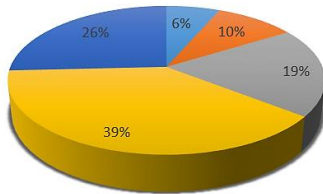
PART II: FINANCIAL BEHAVIOUR

Analysing the behaviour of the Cypriots who responded, we can highlight the following: first, that practically 65% claim to feel control of their financial situation, as well as that more than 50% say they feel capable of using their income to reach their financial goals. This contradicts the following question, since more than 50% affirm that finances are something that worries them very much on their day to day. In the same way, more than half of respondents say that they feel insecure about where their money is spent.

Finally, highlight the fact that more than 35% think that credit cards are safe and without risk while 32% think the opposite.

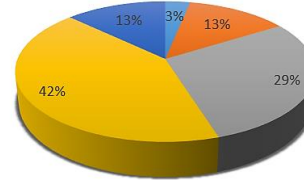
I feel in control of my financial situation

■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree



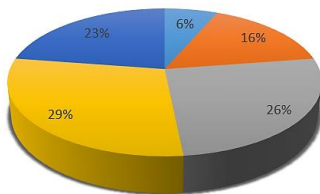
I feel capable of using my income to achieve my financial goals

■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree



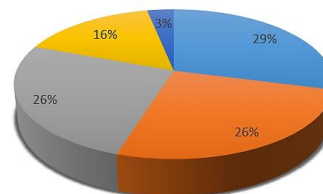
My finances are a significant source of worry for me

■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree



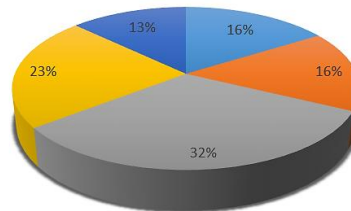
I am uncertain about where my money is spent

■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree



I feel credit cards are safe and risk free

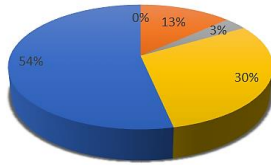
■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree



Regarding this second phase of analysis, we can see how there is a large majority who have answered affirmatively that they believe that saving every month is important, that they feel capable of managing their financial future, that they think it is important to understand the rental contracts of apartments and loans and they have a great interest in learning about the management of their money. However, it should be noted that with respect to the question of whether they budget and control their expenses, 25.8% of the respondents remain neutral.

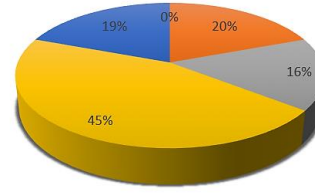


I feel putting away money each month for savings or investments is important



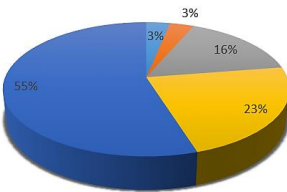
Strongly Disagree Disagree Neutral Agree Strongly Agree

I feel capable of handling my financial future



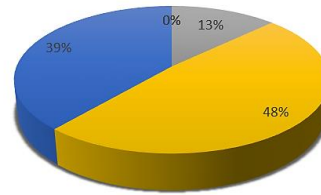
Strongly Disagree Disagree Neutral Agree Strongly Agree

I feel it is important to understand apartment leases and loan agreements before I sign



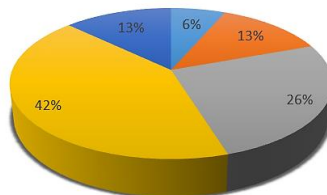
Strongly Disagree Disagree Neutral Agree Strongly Agree

I have interest in reading about money management



Strongly Disagree Disagree Neutral Agree Strongly Agree

I budget and track spending

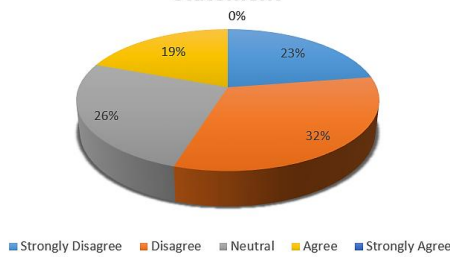


Strongly Disagree Disagree Neutral Agree Strongly Agree

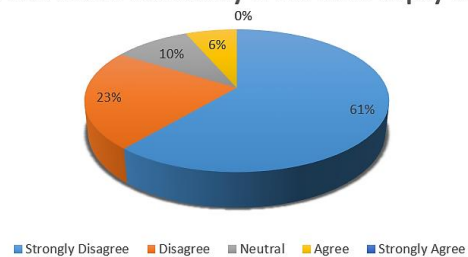
Regarding the last 5 questions in this section, we highlight that more than 50% of the Cypriot respondents claim not to compare their purchase receipts with the monthly status of their account, a fact that contradicts the answers given above. Otherwise, the vast majority claim not to use credit cards to make purchases that cannot pay and not work overtime to pay bills and expenses. On the other hand, a large majority say that having a life insurance is an important way to protect loved ones. Finally, more than 70% of respondents say they do not have too much debt currently.



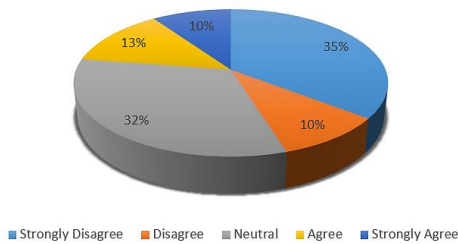
I compare my receipts of purchases to my monthly statement



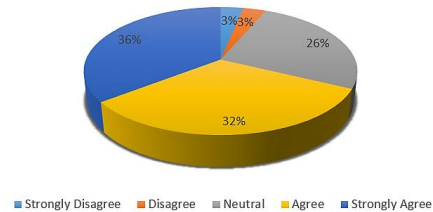
I use credit cards to make purchases that I can't afford and I don't have the money in the bank to pay the bill



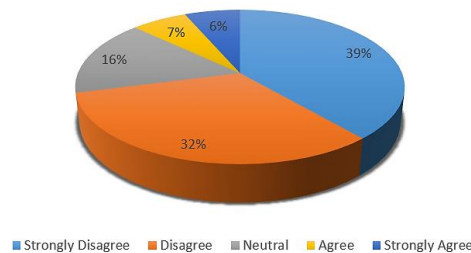
I work extra hours to meet bills and expenses



I feel having life insurance is an important way to protect loved ones



I have too much debt right now

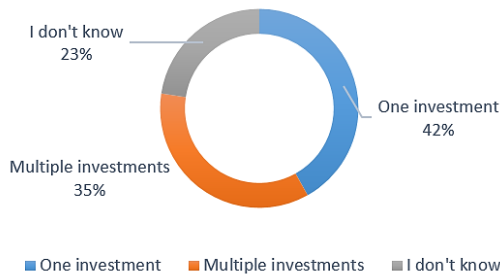


PART III: FINANCIAL KNOWLEDGE

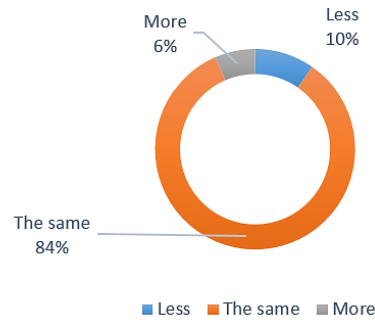
Regarding the third part of the questionnaire we will analyze the 4 answers obtained:

- Risk diversification:** Regarding the diversification of the risk we observed that only 35.5% of the Cypriot respondents have been able to correctly answer this question.
- Inflation:** In terms of inflation the correct answer has been received by a much larger number of respondents, since 83,9% have answered that they could buy the same if they raise salaries and the price of things double.
- Numeracy:** In the question referring to the mathematical calculation, only 54.8% answered the question correctly, while 35.5% of the respondents answered that they do not know how to answer the question.
- Compound interest:** Finally, regarding compound interest, it should be noted that only 35,5% of Cypriots have correctly answered the question saying that they would have more than 150 euros in the account in the alleged case.

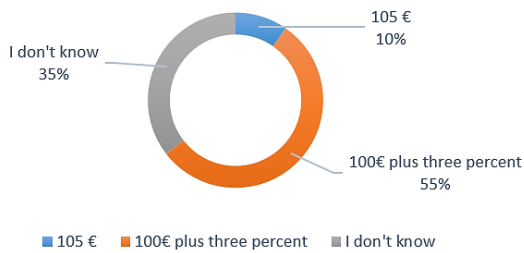
RISK DIVERSIFICATION



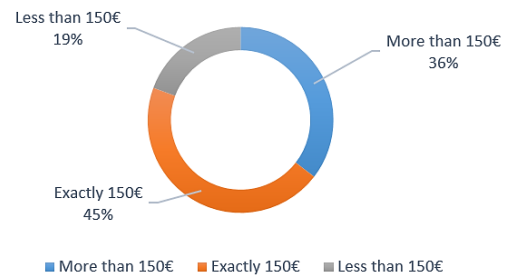
INFLATION



NUMERACY



COMPOUND INTEREST

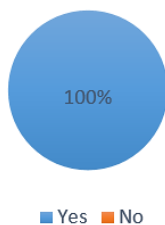


PART IV: DIGITAL CONFIDENCE

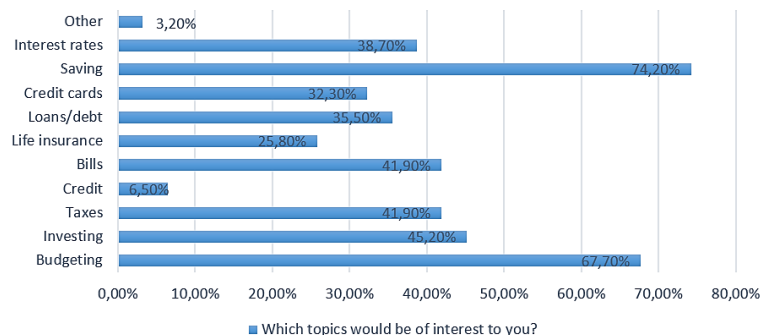
It is important to highlight the unanimity to the answer of this question, since 100% of the respondents have answered that they do use digital games to improve their financial knowledge.

Although some of the problems that may have in your day to day are debts or excessive use of credit cards, have been one of the least requested themes. In return, saving, budgeting, investments, taxes are topics of high interest to the respondents.

Would you use a digital game to improve your financial knowledge?

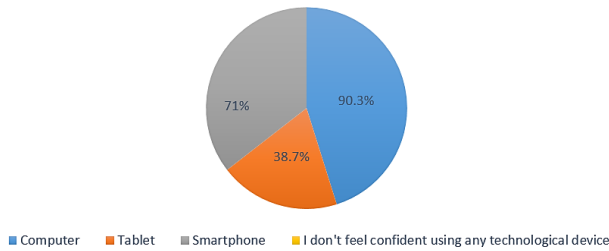


Which topics would be of interest to you?

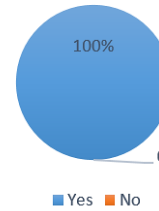


We can see that the vast majority of Cypriot respondents have responded that they are more comfortable using the computer and the smartphone. In contrast, only 38.7% have responded that they feel confident using the tablet. We also emphasize the absolute majority of 100% that have responded that they do use technological devices to learn beforehand.

Which of the following device(s) do you feel more confident using?

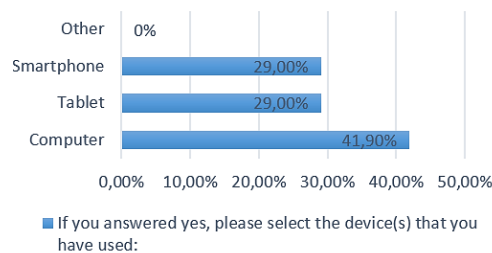


Have you used some of the device(s) above for learning before?

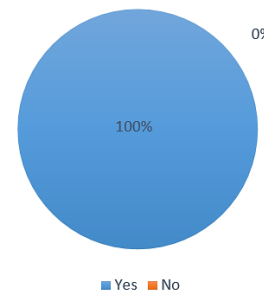


We note that 41.9% of Cypriot respondents have answered that the technological device they have used previously is the computer, while the tablet and the smartphone have obtained 29%. Finally, we want to emphasize that 100% of Cypriot respondents claim to have internet in their homes.

If you answered yes, please select the device(s) that you have used:



Do you have Internet at home?



MAIN CONCLUSIONS:

Analysing globally the results drawn from the surveys carried out on Cypriots, it should be noted that more than half of the Cypriot respondents are between the ages of 26 and 35 and more than half of them are full-time workers (this fact indicates that the target audience of the Cypriots is not the one we were looking for to carry out this activity).

We observe certain incompatibilities regarding the financial behaviour of the respondents, since more than half of them affirm that they feel capable of using their income to achieve their financial objectives and have the control of their financial situation, but, on the other hand, **more than half of them Cypriots claim that finance is a source of worry for them.**

We emphasize that one of the most interesting topics for the Cypriots is **the budget**, but only 55% of them claim to make budgets and track spending. Likewise, we observe that, in spite of being a topic of apparently much interest, then in reality they do not reflect it in their daily life. The same thing does not happen with the issue of **savings** since it is the topic that causes the most interest among the respondents and a large majority affirms that saving and investing is very important.

Note that Cypriots have demonstrated a **high level of knowledge about indebtedness**, since a large majority of them indicate that they do not have too much debt at present or use credit cards to pay for purchases they cannot afford. Regarding this last statement, we believe it is convenient to point out that more than **35% of respondents believe that credit cards are safe and without risk**, a fact that allows us to understand that a considerable number of Cypriots could become indebted in the future.

Regarding the section of financial knowledge highlight that **the question of inflation has been answered correctly by a large majority of respondents**. Regarding the remaining three questions, those concerning the diversification of risk and compound interest have been answered incorrectly by more than half of the Cypriots, while that concerning numeracy has been correctly answered by just over half of the participants.

Finally, it is important to note that **the total of Cypriot respondents have answered that they would use a digital game to improve their financial knowledge**. In the same way, practically the total of the respondents has affirmed that they feel more secure using the computer as a digital device and a very high number of them have also responded feeling safe using the Smartphone. To finish, note that 100% of Cypriot respondents have internet at home.

Survey responses and results

In this section, we proceed to make a brief comparison between the results extracted from the surveys carried out in the three countries.

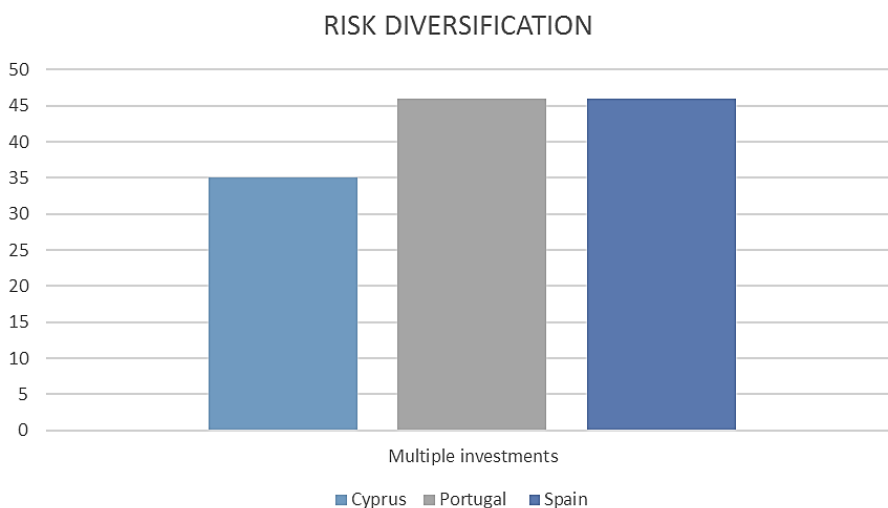
Regarding the target audience that answered the questionnaires of the three countries, we clearly observed how practically all the Portuguese respondents are students, unemployed and retired, while in Spain we can also find that the thickness of the respondents are also students, unemployed and retired. The same thing does not happen for the case of Cyprus, since almost 65% of the respondents are full-time workers.

On the other hand, we observed that the three countries share certain inconsistencies found in the financial behaviour since in both Cyprus, Portugal and Spain respondents feel they have control of their financial situation but instead, in the three countries we also find that the majority of respondents recognize that finances are a source of great concern to them. Also, we can conclude that although they may have a perception of control and security with respect to their financial situation, it seems to be a false reality since now, finances are an issue that worries them.

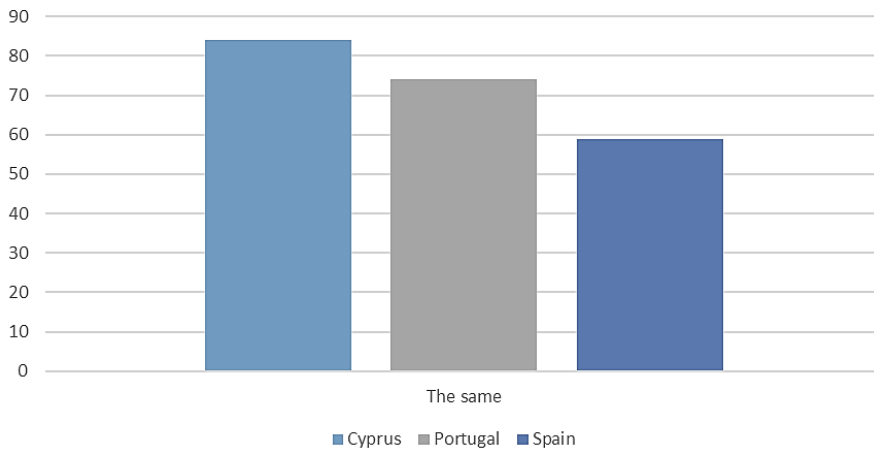
Regarding the budget issue, we can establish that there is some homogeneity among the three countries. Thus, the Portuguese have responded that the budget is the subject that most interests them and a large majority have claimed to make budgets; in the case of Cyprus, only 55% of the respondents have answered budgeting and tracking expenses and finally, in the case of Spain, there is only a lower percentage of respondents who have claimed to make budgets.

In the same way that it happens with the control of their financial situation, the three countries agree that their respondents have a great conscience about the indebtedness, since more than half of all of them affirms that they do not have too much debt at present and do not use of credit cards to make purchases that cannot pay.

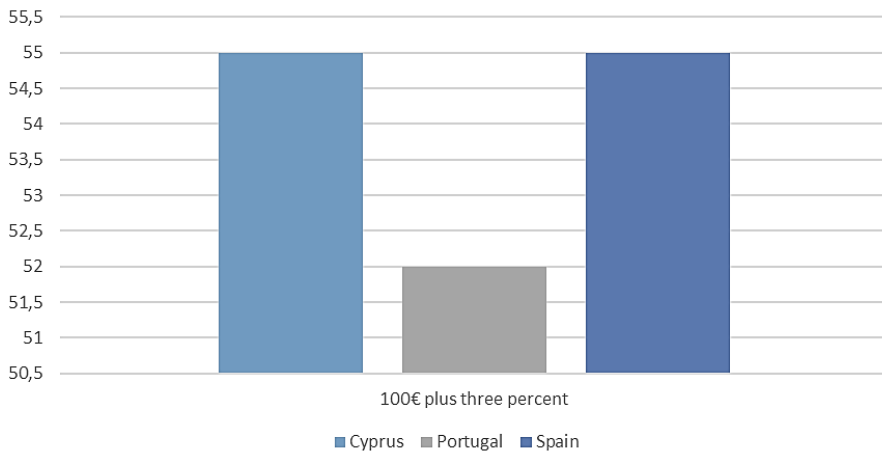
Concerning financial knowledge, we can capture the correct answers obtained in the different questions from the three countries:



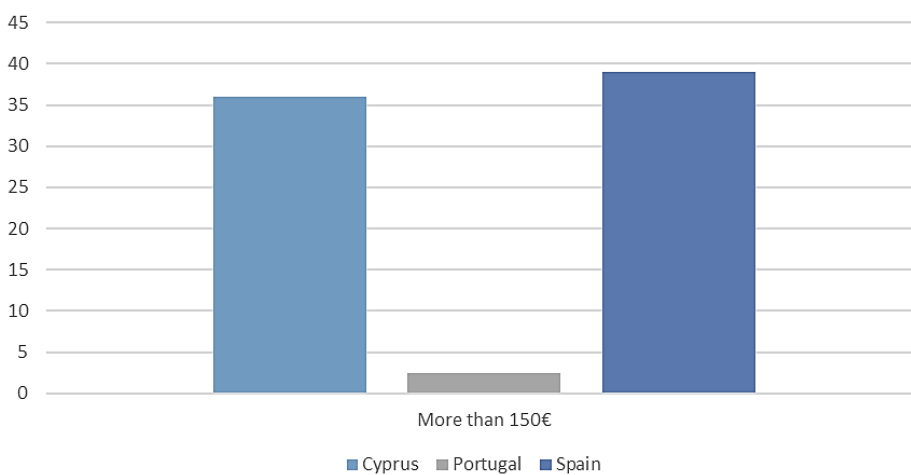
INFLATION



NUMERACY



COMPOUND INTEREST



Thus, we observe that the question regarding inflation has been the one that has received the most correct answers from the three countries. On the other hand, we would like to point out that the Portuguese have been the ones who have been the least successful in their responses since, as we have seen previously, the target public has a high risk of social exclusion. On the other side we find Cyprus, who are the ones who have answered the different questions better because the target audience has a higher educational level.

Finally, note that basically all respondents in the three countries have internet at home and feel more comfortable using the computer as a digital device. However, **Cyprus and Spain have also responded to feel safe using the Smartphone and instead, in the case of Portugal, have replied to the Tablet.** Finally, regarding the question of whether respondents would use a digital game to improve their financial knowledge, we can observe a great variety in the answers obtained. In the case of Spain, more than half have answered affirmatively, in Cyprus 100% have answered yes, and in contrast, in the case of Portugal, more than half have responded that they would not use a digital game to improve their knowledge financial.

Euroinvestment Focus Group

Sometimes it is necessary to listen the opinions of others in a small and safe group setting before they form thoughts and opinions. Focus groups are well suited for those situations. Focus groups can reveal a wealth of detailed information and deep insight. When well executed, a focus group creates an accepting environment that puts participants at ease allowing them to thoughtfully answer questions in their own words and add meaning to their answers.

The aim of the focus group is to:

- Explore participants’ interest in using ICT tools in their teaching approach and if they use them how they include them in their trainings/ classes;
- Explore participants’ knowledge about the existing digital games used as an adults' learning tool;
- Explore participants’ point of view in regard to the existing gaps on financial literacy of low-skilled adults.

Focus Group: Portugal

The focus group was held on the **8th February 2019** in CESAE’s premises, in Porto, Portugal. INOVA+ joined CESAE in this event assuring its moderation: Luísa Cruz (INOVA+) was the moderator and Ana Neves (INOVA+) the assistant moderator. A total of seven trainers participated in the focus group, with experience with low skilled adults and financial literacy.

1) Brainstorming Activity

The brainstorming activity was the first one to be developed. **This activity aimed to identify the main needs, competences and gaps in the field of financial literacy for low-skilled adults in Portugal during around 35 minutes.**

The first step was to divide the participants in two groups, one with three people and the other one with four people. Once the groups were defined, each participant was asked to write in a post-it three words about “Financial Literacy Skills for Adults”, in one minute, related to three different types of competences: Knowing, Doing, And Being. After, the groups had to discuss between them their individual answers and reach a group response. Once a decision was reached, one member of each group presented their choices to the rest of the participants and stick the post-it in the board.

The final group answers were:

FINANCIAL LITERACY SKILLS FOR ADULTS			
	KNOWING	DOING	BEING
GROUP 1	Basic financial concepts	Budgeting (individual and familiar)	Responsible and thoughtful
GROUP 2	Basic financial concepts	Budgeting and asking for loans	Critical and thoughtful

After presenting their group answers, all participants were invited to discuss and reach a final answer for each all should agree. At the end of the discussion, the moderator finalized the activity by writing on the

board the final answer based on the participants’ inputs. Since the answers given by both groups in the previous step were similar, it wasn’t hard to reach a unanimous response.

FINANCIAL LITERACY SKILLS FOR ADULTS		
KNOWING	DOING	BEING
Basic financial concepts (especially Interest rates and effort rates)	Annual budgeting planning	Thoughtful

Regarding the “Knowing” skill, participants highlighted the importance of **learning about basic financial concepts**, mainly linked to loans, such as interest rates and effort rates. Low skilled adults chose this type of finance option many times and don’t know these basic concepts that should be considered before they ask for the loan. Linked to the “Doing” competence, the participants in the focus group stressed out the benefits of an **annual budgeting as a planning tool**. Their trainees can’t build a proper budget, including the extra costs and the costs that are already defined for that year but aren’t linked to the daily activities, such as the car insurance.

Low skilled adults don’t have the rationale of building a budget for a year with all the predicted costs. In the “Being” competences, the participant trainers defined **judgment as the main characteristic to be developed**. This means that the adults should be able to plan and to define what is essential and what is secondary, and define their actions based on that. Also, they should think about the consequence of an action, in the sense of the cost of opportunity of buying one product instead of other, for instance.

2) Barriers and Bridges Activity

The second activity, barriers and bridges, which took around 30 minutes, aimed to respond to the question “*What is the biggest problem to use digital learning tools in the learning process when teaching to low-skilled adults?*” In order to do so, participants were asked to define one barrier and on bridge to solve it. Two pieces of paper were delivered, one to write the barriers and one to write the bridges.

The answers of the seven participants were the following ones:

BARRIERS OF ADULTS DIGITAL LEARNING	
BARRIERS	BRIDGES
Lack of knowledge in ICT	Training in ICT
Limited access to computer	Game able to be used in smartphones
Game complexity	Game divided by levels and with success tools, such as badges
Use of foreign language	Adapted and simple language
Fear of ruining the game if they touch	Show the worst-case scenario: what happens if a problem or an error in the game occurs
Lack of access to Wi-Fi	Offline game
Games only available for computer	Game available for computer and smartphone

After they wrote the answers on the pieces of paper, participants were asked to share them with the rest of the group, so that they could explain a little deeper their ideas and opening a space of discussion and

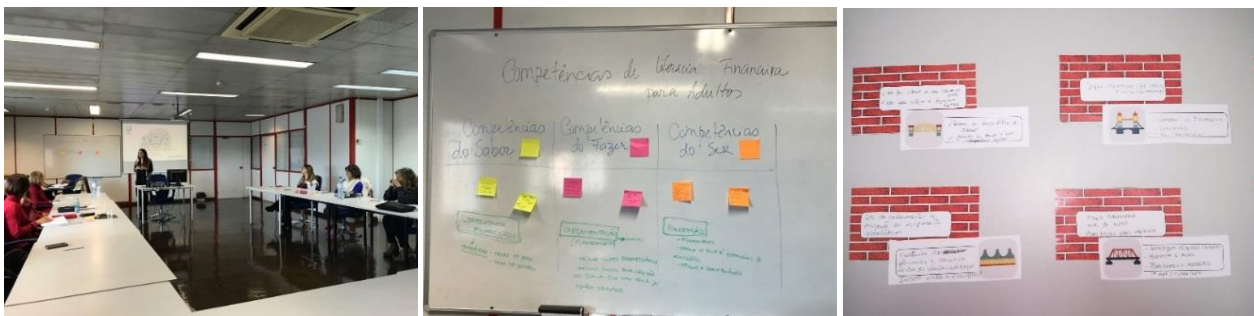
exchange of experiences. Many participants presented the same answers which can be concluded as important aspects to have in consideration when developing the game:

- Game available in app to be used on a smartphone
- Game available offline
- Game divided in levels and with badges

CONCLUSION: The focus group was a very important moment shared with seven low-skilled adults’ trainers. Several key conclusions were taken that will be considered when creating and developing the game.

On one side, regarding the needs, competences and gaps in the field of financial literacy for low-skilled adults, focus of the first activity, it was defined that the low skilled adults don’t have many knowledge about basic financial concepts, mostly related to loans, as well as the capacity the develop and plan an annual budget. To reach these competences, the adults should be thoughtful.

On the other side, focused on the barriers low skilled adults feel in the usage of ICT tools, and possible actions to overcome them, three main suggestions about the game structure and availability were reached: i) it should be available in app to be used on a smartphone, ii) it should available offline and iii) it should be divided in levels and with badges to reward the achievements.



Focus Group: Spain

The focus group was held on the **24th January 2019** in IEF’s premises, in Barcelona, Spain. Laia Santanach (IEF) was the moderator and Jordi Martinez (IEF) the assistant moderator. A total of six trainers participated in the focus group, with experience with low skilled adults and financial literacy.

1) Brainstorming Activity

We divided the participants into two subgroups of three people each one, and we asked them to think for a minute and write in different post-it’s the three words (one for each skill: **Knowing, Doing & Being**) that describes better “**Financial Literacy Skills for Adults**”. Then we asked them to share their words with the group. Upon completion of the initial spontaneous discussion, we asked them to share their final words with the larger group.

AIM: Identify the main needs and gaps in the field of financial literacy among low-skilled adults all around the world, and especially in Spain.

Group 1 – Financial Literacy Skills

FINANCIAL LITERACY SKILLS FOR ADULTS		
KNOWING	DOING	BEING
Mathematics	Savings	Responsible
Linguistic Knowledge	Money management	Short/Long Term Goals
Financial terms	Situation Analysis	Self-control

Group 2 – Financial Literacy Skills

FINANCIAL LITERACY SKILLS FOR ADULTS		
KNOWING	DOING	BEING
Calculation Knowledge	Budgeting	Personal goals
Visual literacy	Self-Management	Getting motivated
Rules & Culture	Understand money	Reflection thinking

Then we asked them to relate all the concepts that had some connection between them with markers of different colors in our **mess-meter**.

After that, we asked them to choose only **one word for each skill** (Knowing, Doing & Being), the most important word in agreement with the whole group members:

FINANCIAL LITERACY SKILLS FOR ADULTS		
KNOWING	DOING	BEING
Calculation & Linguistic Knowledge	Budgeting – Money Management	Reflection thinking – Personal Goals

And finally, we enquired them to create a sentence with the most **powerful idea** related to all these financial literacy skills for adults: **“Skills to optimize your wellness”**.

GROUP’S CONCLUSION: Our European Financial Literacy Game for Adults should include enough activities to develop all these basic skills (calculation and linguistic knowledge, budgeting and money management, reflection thinking and personal goals) to guarantee the optimization of citizens wellness through Financial Literacy.



2) Barriers and Bridges Activity

We asked the participants to identify the obstacles to use digital tools in an adults’ learning process and wrote them in our wall. Then we asked them to overcome these obstacles thinking how we can create the bridges between the barriers and the solutions.

Main question: What is the biggest problem to use digital learning tools (games) in the learning process when teaching to low-skilled adults’?

BARRIERS OF ADULTS DIGITAL LEARNING	
BARRIERS	BRIDGES
Digital illiteracy	Learning curve / Digital Training Sessions (teachers)
Internet access	Public Wi-Fi (Libraries, Coffee shops, etc.)
Paid App	Free App
Non-powerful smartphone	Offline support
To need a Player’s Handbook	Easy and intuitive game rules / Easy Usability
Too much easy or too much difficult game	Different levels of difficulty / Cooperative Game
No challenges (Boring)	Funny & Challenging game
Outdated devices	-
Difficult to understand	Video tutorials

GROUP’S CONCLUSION: Our European Financial Literacy Game for Adults should be a funny, cooperative and challenging game with simple and intuitive rules that are following a learning curve.

Focus Group: Cyprus

The focus group was held on the 6th February 2019 in CARDETS’s premises, in Cyprus. INNOVADE joined CARDET in this event. Ourania Miliou (CARDET) was the moderator. A total of six young adults (20-24 years old) participated in the focus group.

1) Brainstorming Activity

Main Question: To become financially literate, adults need to gain knowledge in at least four areas: Managing money, Budgeting, Saving and investing and Credit management. Building skills in each of these areas, or more, can help to ensure that we have the funds required to meet our needs. Do you agree? Why?

FINANCIAL LITERACY SKILLS FOR ADULTS		
KNOWING	DOING	BEING
Basic financial concepts	Managing Money	Responsible
Real-life scenarios	Budgeting	Self-control
Step-by-step instructions	Saving	Personal goals

- **Managing money:** Young people need to develop these skills because they tend to spend too much money for their lifestyle. Managing money is considered a useful skill for young people and they stated that they need practical examples of pros and cons and about the process of doing it.
- **Budgeting:** Young people don’t have too much budget to manage. Their monthly budget is limited. They think that it is difficult to set budget limits especially when they end up with more pocket money than usual. During these cases they tend to spend without taking into consideration that they need to keep savings. They tend not to be proactive its case of an emergency need. The same applies for managing the budget. Young people stated that they want to know how to manage their budget, but they need to find out why this process is important and what are the advantages for doing so in terms of their way of living.
- **Savings:** Savings are most likely to occur when young people make their own money, and they learn to appreciate the whole process. Especially if it is the first job of someone. Also, many young people keep savings when they have a goal to achieve, e.g. go for a trip or buy something. Then the motivation for keeping savings increases. They believe that when you work and have your own money and you save some of them you feel secure and more independent. Also, they feel that they can spend the money as they wish and for addressing their own needs. Some participants stated that cash money is spent more easily, while others stated that when you use a credit card you have limited control over your spending. Keeping savings is a process that works well when young people have a goal to reach and they are motivated for this goal to keep savings. They also believe that at their age keeping savings for the future is not an ultimate goal and they are very young to have something like this in their mind. They stated that this goal may appear later when they will have a stable income from a job and also children to take care.
- **Investments:** Young people don’t know a lot about investments, and they are not at all interested in learning about this financial literacy aspect. Young people are not at all interested in this activity. They mostly focused on how to manage money and how to create a budget plan.

- **Loans:** Young people stated that this knowledge is difficult to be developed as it needs experience. A person who wants to take a loan needs to speak with someone who knows the process and how it works, someone with experience. But it is not a priority for them now. Their consideration is also that they are young enough to ask for a loan, as most probably they would have to meet specific criterion, such as stable monthly salary so that the bank will accept their application for a loan. One great motivator for young people to look for a loan is for studying abroad. But again, they don't know how to do it and how to look for good opportunities. Also, young people had difficulties to relate to the process of applying for a loan, as they are mostly depended on their parents' income.

CONCLUSION: It seems that because young people don't have a permanent job and the main source of their pocket money is their parents, it is difficult for them to become motivated so to develop financial literacy skills.

2) Barriers and Bridges Activity

It is easy to identify the obstacles that create frustrations in the learning process of adults during the use of digital tools in the classroom. It is just as easy to identify what we feel would be the solutions to eliminate those barriers. The trick is to learn how to create the bridges between the barriers and the solutions.

BARRIERS OF YOUNG ADULTS DIGITAL LEARNING	
BARRIERS	BRIDGES
Lack of motivation or low motivation	Work in a project where they would have to manage their own money (most appealing teaching method)
Young people don't have their own money as they don't work	Use video campaigns and case studies that can provide practical information
-	Seminars or speeches from people that have experience in such issues
-	Teach through examples
-	Case studies can refer to ineffective ways of managing money and their consequences

One of the most common barriers for teaching young people financial literacy skills is **motivation**. They need to somehow relate themselves with the content so to find useful information which is connected to their everyday life.

CONCLUSION: How to teach budgeting: young people stated that they need small descriptions that depict how the process works and also, they want practical exercises

Other useful methodological and pedagogical practices:

- Real-life scenarios;
- Case studies with people at their age that are related to their way of thinking, their concerns and their everyday life in general;
- Provide step-by-step instructions.



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Other useful content related suggestions:

- Suggest practical tools;
- Less content, more practical exercise;
- Focus on pros and cons of financial literacy but small and to the point descriptions;
- Focus on budgeting and managing money, not so much on loans and investments.



Identifying needs and setting priorities

Financial literacy is not only financial education. The term can be divided into financial education covering the knowledge that can be acquired institutionally, such as basic concepts of economics, finance and numeracy skills, and the ability to employ this knowledge in making financial decisions¹⁴.

Moreover, financial literacy is one of the key components to achieving a successful financial life. Some people have the right resources and opportunities but their lack of knowledge only led to the loss of what could have been a good shot at personal wealth.

Research has shown that as people become more financially literate, they make better saving and borrowing decisions, are more likely to plan for retirement and hold more diverse assets in their balance sheet. As more and more households are asked to make their own decisions about such issues, financial illiteracy can become a serious threat to their life-time welfare.

Unfortunately, the presented studies on financial literacy show that even basic financial concepts such as interest rates, inflation and risk diversification are not clearly understood by many people. This lack of knowledge makes people vulnerable, and can ultimately lead to problems of over-indebtedness and financial exclusion.

Having the right tools to manage personal finances normally leads to a path of financial freedom as well. Debt is often the product of uninformed financial decisions that can be compounded by unfortunate life circumstances. However, focusing on those that can be addressed is an important step in getting out of debt and onto a road of financial independence.

The results of the OECD survey undertaken in 2015, highlighted a lack of financial knowledge amongst a sizeable proportion of the population in each of the countries surveyed. Furthermore, based on a financial literacy study across the world (S&P Global FinLit Survey), only 33 percent of adults worldwide are financially literate, that is worldwide, only 1-in-3 adults are familiar with the most basic economic concepts needed to make saving and investment decisions. This means that around 3.5 billion adults globally, most of them in developing economies, lack an understanding of basic financial concepts. However, these global figures vary around the world.

In this sense, financial literacy rates vary widely across the European Union. On average, **52 percent of adults are financially literate**, and the understanding of financial concepts is the highest in northern Europe:

- Denmark (71 percent), Sweden (71 percent), the Netherlands (66 percent) and Germany (66 percent) have the highest literacy rates in the European Union, while **rates are much lower in southern Europe, with Italy (37 percent) and Portugal (26 percent) having some of the lowest literacy rates in the south.**
- Rates are also low among the countries that joined the EU in 2004 and after. **In Bulgaria and Cyprus, 35 percent of adults are financially literate.**

¹⁴ "Measuring Financial Literacy", Sandra J. Huston, 2010

Surveys also confirm that **less educated and lower-income people** tend to score lower on financial literacy than the rest of the population. For the poor and disadvantaged, increased financial literacy means improved opportunities to access the benefits of economic growth.

Furthermore, there is a clear negative relationship between financial literacy scores and inequality in the EU. Countries performing better at financial literacy also tend to have lower inequality (based on Standard & Poor's Global FinLit Survey and Eurostat). In this sense, PIAAC results (2012) show that in average **20 % of the EU adult population** have low literacy and numeracy skills. In particular, financial literacy is especially low among this group and their lack of financial education is probably one of the causes that reduces their opportunities of being competitive and access to learning and training opportunities.

Euroinvestment Survey measured knowledge as well as behaviour of low-skilled adults in terms of financial literacy across three countries: Cyprus, Portugal and Spain. The purpose was to understand whether factors associated with financial literacy in one country can be generalized to other countries as well or whether unique national characteristics make it necessary to examine financial literacy in each country individually. Results suggest that there are no significant differences among countries indicating that there are some similitudes in what households know and need to know about their personal finances.

The study shows that a major part of the citizens is conscious and serious about proper financial management, but their lack of financial literacy lead some of them to making poor financial choices that can have negative consequences on their financial well-being. The level of financial literacy varies according to education and income levels, but evidence shows that highly educated citizens with high incomes have low knowledge about financial issues as less-educated, lower-income citizens (though in general, the later do tend to be less financially literate).

Financial literacy is crucial to help citizens save enough to provide adequate income in retirement, while avoiding high levels of debt that might result in bankruptcy, defaults and foreclosures. Based on behavioural results, these are the key topics that can greatly contribute to improve financial literacy between low-skilled adults for helping them to control their daily money management:

- **Emergency fund:** Saving up for a rainy day is important in getting over unforeseen challenges life will throw our way. Medical emergencies or losing a job could be some of the events our emergency funds can address. Without it, you can get deeper and deeper in debt as your only option is to get a loan to have the money to survive.
- **Sustainable spending habits:** Making good use of the money you earn is a good sign of sound financial literacy. Proper spending habits can also make you confident about personal finances.
- **Borrowing rate:** This is a great gauge on the risk profile of the state. The lower the number, the lesser the chances of default and the better the credit score.

By the way, this lack of financial knowledge and skills between citizens has become a public issue over the last years. Consequently, governments, organisations and researchers are active in finding out the best practices for financial literacy education worldwide. Creation of financial education programs designed specifically to enhance financial literacy has been viewed as a solution to mitigating financial problems that individuals and families face.

Many European countries exploit a variety of channels (in the form of websites, online tools, information campaigns, financial literacy days/weeks, museums, etc.) to provide information on a range of financial issues that consumers may face at different points in their lives and to raise awareness on reforms impacting households’ finances. However, a great part of national efforts in terms of financial education is devoted to children and young people.

At the same time, we believe that the best way to optimise a financial literacy training programme is to address homogenous group, by their needs and the channel they can be reached through, and to set a series of priorities that allow us to proceed efficiently to our objectives.

Given the fast pace of technological innovation in many fields, it is unsurprising that the delivery of financial education over digital platforms is becoming more commonplace. Through the different examples collected, we can affirm that financial education delivered through tablet computers, mobile phones or other personal devices, can be individualized. It can be designed to be self-paced and self-directed, personalized for the particular context, or timed to coincide with a person’s decisions, all without the high price tag of hiring a fleet of specialized trainers or personal wealth management advisors.

In the same way, we introduce the most important items concerning online financial literacy games for adults in the context of strengths (S), weaknesses (W), opportunities (O) and threats (T) by using the well-known method of SWOT analysis, taking in account the focus group results and the existing games:

Strengths	Weaknesses
<ul style="list-style-type: none"> Do not require an understanding of complex and unfamiliar rules (Fast & Easy) Cover a wide variety of possible financial literacy topics and scenarios Deal with qualitative outputs Provide hands-on training Provide visual training 	<ul style="list-style-type: none"> Require an expensive hardware to play The Trainer / Player must be an expert using technology Need further support with language and maths Software is difficult to use They may result to addiction
Opportunities	Threats
<ul style="list-style-type: none"> Free or extremely inexpensive (cheap) Perceived to be new and innovative (development of new approach of adult’s training) Fulfil all adults; financial literacy needs Work well in multi-domain frameworks Allow for flexibility in going through the training modules 	<ul style="list-style-type: none"> Lack of assessment methodology Paucity of academic research Ethical challenges Lack of regulation Players are fundamentally unable to grasp the main concepts (low-skilled adults) Digital Illiteracy

Euroinvestment Financial Literacy Map

In accordance with all the information collected in this document and taking in account the “G20/OECD INFE Core Competencies Framework on Financial Literacy for Adults”, we have developed the **Euroinvestment Financial Literacy Map**. It includes the most relevant topics concerning financial literacy and also the necessary progression through the levels of financial knowledge, understanding, skills, competence and responsibility. To acquire financial capability an adult requires certain literacy, language and numeracy skills. As many adults do not have the literacy and numeracy skills they need to be financially capable, these skills have been identified to help people working in the field of financial literacy to be aware that difficulties may arise from: a lack of financial literacy skills; or a lack of literacy, language and numeracy skills; or, a lack of both.

MONEY & TRANSACTIONS				
COMPONENT	Basic level	Developing level	Extending level	Numeracy Skills
(1) Types of money/payments	Recognise there are different forms of money, (e.g. cheques, plastic cards, etc.) and understand cash isn't the only way to pay for goods/services	Understand different forms of payment including cheques and debit/credit cards	Understand the implications of different forms of credit and debt including credit cards, store cards and catalogue shopping	Read, write, order and compare numbers and understand percentages
(2) Income	Recognise there are regular and unpredictable sources of money and identify them Recognise household expenses and understand the difference between essential and nonessential spending	Understand how earnings and salaries are calculated Understand personal expenditure and how to manage it	Begin to understand the need for retirement provision Begin to understand local and national taxation and spending	Add, subtract, multiply and divide sums of money and record (using decimal notation)
(3) Gathering financial information and record keeping	Understand the need to keep financial records including receipts, bills, tax payments, etc. Be able to keep a simple record of Money coming in and going out	Able to check for accuracy bank statements, utility and other bills	Develop an understanding of personal financial statements, including bank statements, credit card statements, bills... Able to gather, compare and contrast information on financial services to inform a decision	Extract and interpret information Use a calculator to solve problems in context, and to check calculations

PLANNING & MANAGING				
COMPONENT	Basic level	Developing level	Extending level	Numeracy Skills
(1) Budgeting, Saving, Spending	Begin to understand that saving can offer options for future spending	Understand the need to consider saving and the potential benefits	Understand ways in which to plan, monitor and control personal income and expenditure	Use a calculator to calculate using whole numbers and decimals to solve problems in context and to check calculations
	Begin to understand the different ways of saving	Understand the variety of ways and places to save		
	Use simple budgets to plan and control spending – begin to plan ahead including considering long-term saving	Begin to be able to plan and think ahead Understand how to use budgets to plan and control personal spending		
(2) Personal choices and the financial implications	Learn to balance needs and wants and to prioritise spending	Begin to make decisions on the basis of short or medium term needs.	Understand the difference between short-, medium- and long-term needs and be able to make appropriate decisions	Represent information so that it makes sense to others
	Begin to prioritise within the constraints of limited resources	Able to identify short-, medium- and long term needs		
	Begin to understand the implications of debt	Able to prioritise different needs working within the constraints of limited resources		
(3) Retirement	Understand the pension and National Insurance systems and how deductions are made	Begin to plan ahead including considering long-term saving/pensions	Able to obtain information and analyse it to decide on an appropriate service, taking care to evaluate and monitor the situation on an ongoing basis	Read, measure and record time

RISK AND CREDIT				
COMPONENT	Basic level	Developing level	Extending level	Numeracy Skills
(1) Identifying risk	<p>Understand the consequences of losing money</p> <p>Understand that you need to pay to borrow money and will be paid money if you save money</p>	<p>Begin to understand that both savings and borrowing are offered on differing terms and conditions</p> <p>Begin to understand that interest rates vary over time</p>	<p>Understand that saving and borrowing are offered on differing terms and that interest rates vary over time</p> <p>Understand the difference in risk and return between saving and investment products</p>	<p>Show that some events are more likely to occur than others</p>
(2) Debt and debt management	<p>Understand the implications of debt</p> <p>Begin to consider choices based on personal financial information gathering, identifying needs, what has to be spent, and what money is then left</p>	<p>Begin to understand how to plan and manage debt, including beginning to look at dealing with debt in a crisis</p> <p>Begin to put a financial value on differing needs and wants</p>	<p>Understand the difference between manageable, planned debt, and unmanageable, unplanned debt, including dealing with debt in a crisis</p> <p>Understand what to do if difficulties arise in repaying debt</p>	<p>Order and compare percentages, and understand percentage increase and decrease</p>
(3) Insurance	<p>Begin to understand the principles of probability and insurance</p>	<p>Understand the principles of probability and insurance in complex situations, identifying potential risks and how to protect against them</p>	<p>Able to analyse consumer information and understand the difference between this and advertising/marketing information</p>	<p>Read, measure and record time, including knowing the units of time</p>

FINANCIAL LANDSCAPE				
COMPONENT	Basic level	Developing level	Extending level	Numeracy Skills
(1) Implications of finances	Begin to understand the consequences of having more or less money	Know about the roles of financial organisations	Understand there is an ethical, social dimension to financial decisions	Calculate, measure and record time in different formats
	Begin to understand the roles of financial organisations	Begin to understand that local/national finance can impact on your own life	Understand the role of regulation and consumer protection in financial institutions	Calculate ratio and proportion
(2) Consumer rights & responsibilities	Be able to identify product information and be aware of the purpose of such information	Be aware of the purpose of advice, advertising and marketing information and how it might influence customer choice	Be able to assess and compare different sources of financial advice and information	Order and compare percentages, and understand percentage increase and decrease
	Understand that consumers have rights, and also responsibilities, such as paying for goods ordered	Recognise different sources of advice to help in understanding rights and responsibilities in relation to financial services	Understand there are different rights and responsibilities in relation to different products	

- **Financial terms glossary**

Including a glossary can help students better understand financial literacy concepts. People need to know how to manage their money and that requires both literacy and numeracy skills. Financial Literacy is a context which is relevant and meaningful to people of all ages. It is a way of engaging people in learning and showing them why basic skills are so important.



Strategic Plan for financial education of low-skilled adults in Europe

European Financial Literacy Game for Adult Citizens

