



Photo: Essow K

# Recommendations for entrepreneurial finance stakeholders and entrepreneurial policy makers

[www.financenlab.com](http://www.financenlab.com)



Co-funded by  
the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.



This work is licensed under a Creative Commons  
Attribution-ShareAlike 4.0 International License.

# TABLE OF CONTENTS:

- 01** Foreword

---

- 02** All about the Project Resources

---

- 03** Meet the Consortium

---

- 04** Framework of the Report

---

- 05** Target Groups of Recommendations

---

- 06** Needs Analysis

---

- 07** Methodology

---

- 08** Results

---

- 09** Recommendations

---

- 10** Sources and Recommended Readings

# 01 Foreword

Entrepreneurship has emerged as a driving force behind economic growth, job creation, and societal development.

Despite that financial education has been acknowledged as critical in the current economic and social environment worldwide because of its contribution to the stability, still a small proportion of the population has been and is being trained properly in finance (Financial Education Plan 2018-2021, CNMV). Frequently only those students, who study the grades of Economics and Business Management, have access to this type of education. According to the JA Europe report on financial education (JA Europe, 2016), 94% of young people miss financial skills when starting their work lives, regardless of whether they see themselves as future employees or entrepreneurs.

More specifically, it has also been acknowledged that entrepreneurial finance is a new specific field of much relevance that should complement efficiently any education programme in entrepreneurship. Entrepreneurial finance mainly fills the gap of lack of understanding between entrepreneurs, who act on their intuition (Da Rin & Hellmann, 2020). In recognition of this significance, it is imperative that we equip aspiring entrepreneurs with the necessary tools and knowledge to navigate the complexities of financing their ventures.

The FINANCEn\_Lab project presents a comprehensive solution strategy that bridges gaps in practical financial education in higher education, vocational training and adult education. Simultaneously, it extends its scope to encompass vital stakeholders within the financial system, providing them with tangible recommendations. In line with the EU2020 strategy, which highlights the importance of financial and entrepreneurial education, the FINANCEn project aims to contribute to growth and development by promoting a strong entrepreneurial ecosystem in Europe. In addition, the project addresses the impact of the COVID 19 pandemic, which has had a lasting effect on the personal education of many students and highlighted the need for innovative digital approaches to practical education.



Photo: Tima Miroshnichenko

# About the Project and the Project Resources

# 02

## What is FINANCEn\_LAB all about? Spotlight on the project resources

FINANCEn\_LAB is an Erasmus+ Strategic Partnership project which focuses on enhancing entrepreneurial education for young entrepreneurs in higher, vocational as well as adult education. By providing efficient tools and realistic scenarios, the project aims to improve entrepreneurship education, increase financial literacy and facilitate strategic decision-making for budding entrepreneurs. It also strengthens the alignment between educators, financial institutions and policy makers, ultimately bridging the gap between entrepreneurs and financial institutions and fostering cooperation and mutual understanding for sustainable business growth.

The FINANCEn\_LAB Project introduces an advanced open educational simulation platform, driven by artificial intelligence, which facilitates a personalized learning journey with tangible real-world implications within a secure environment. This cutting-edge platform enables learners to immerse themselves in a tailored educational experience, honing their financial skills and decision-making abilities in a risk-free setting.

Additionally, the project includes a recommendations report, offering practical recommendations for higher education educators, finance sector professionals, and policymakers. These recommendations are specifically designed to address the challenges and opportunities encountered in the ever-evolving landscape of finance. By leveraging the power of technology, the FINANCEn\_Lab Project empowers stakeholders to gain invaluable insights and make informed decisions, ultimately driving positive transformations in financial education and practice.

[www.financenlab.com](http://www.financenlab.com)

## Our ambition for the FINANCEn\_LAB project

- The project has successfully developed an innovative trainer's tool, utilizing social learning within a digital simulator. Learners engage in real-world simulated experiences crafted by finance sector experts, fostering active interaction and accelerated learning. This approach prioritizes practical learning for potential entrepreneurs, emphasizing collaboration and the application of knowledge, please access via: <https://sim.financenlab.com/>
- The project effectively applies AI techniques in education software for personalized training. Within our project, AI is utilized to analyze anonymized learner interactions with financial experts. It enables the detection of user patterns and adaptive learning object customization. These innovative applications are specifically tailored for Higher Education and Entrepreneurial Finance, uncovering valuable research data and guiding entrepreneurs towards success.
- The project addresses gaps in entrepreneurial finance literature, focusing on financial constraints and generating new knowledge through data analysis. It provides recommendations for stakeholders and policymakers, particularly in understanding the financial behavior of entrepreneurs and their interactions with agents. This innovative approach facilitates empirical research and future targeted reports.

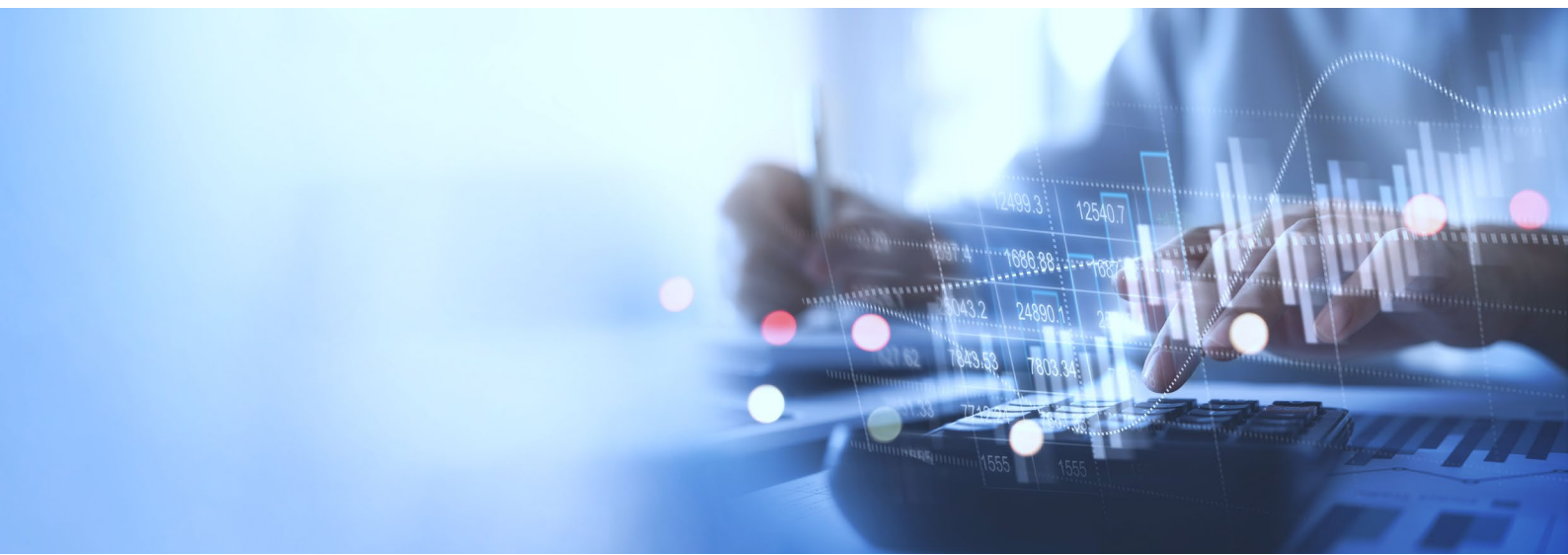




## The overall objectives of the project resources

The main objective of the project is to address the urgent problem of financial illiteracy among adults in the European Union. In many EU countries, a significant proportion of the adult population lacks financial literacy, which prevents them from making informed financial decisions. This lack of financial literacy has a direct impact on entrepreneurial intention and overall entrepreneurship effectiveness. To tackle this problem, the project aims to enhance and extend entrepreneurial education to a wider range of individuals, focusing on critical areas such as financing management. By creating and disseminating specific and accessible training programs, the project aims to empower potential and current entrepreneurs with the necessary skills and practical knowledge to secure funding and effectively manage their financial situations.

The Financen\_Lab project acknowledges the significance of online learning in delivering education that is accessible and inclusive, especially in times of pandemics or other circumstances that limit face-to-face training. Through the utilization of digital interactive tools, the project aims to connect traditional education with practical financial education. In its mission to empower both aspiring and established entrepreneurs, the Financen\_Lab project equips individuals with the essential skills to navigate the complexities of the financial landscape. By providing comprehensive financial education, the project not only promotes economic stability and enhances self-employment prospects but also addresses wider societal issues such as youth unemployment, social inclusion, and the promotion of equal opportunities across the European Union.



## Who is the target audience for the project resources?

The resources developed within this project is aimed at two main target groups: aspiring entrepreneurs and professionals in the finance sector.

The simulation platform offers aspiring entrepreneurs a valuable opportunity to develop the essential skills and knowledge required to navigate the financial aspects of launching and running a business. Its purpose is to empower them with a comprehensive understanding of financing options, budgeting, financial decision-making, and risk management. By providing aspiring entrepreneurs with these vital financial competencies, the course aims to enhance their likelihood of success and decrease risk aversion. This enables them to make well-informed financial choices and secure funding for their ventures.

Additionally, professionals in the finance sector, including educators, financial agents and policymakers, are also a target audience for the resources. They offer practical insights and recommendations that can inform their work in supporting and guiding entrepreneurs. These recommendations are designed to enhance collaboration and understanding between aspiring entrepreneurs and financial agents, fostering a more productive and mutually beneficial relationship. The resources also address the need for continuous professional development, allowing finance professionals to stay updated with the latest trends, strategies, and best practices in entrepreneurial finance.



Access to the simulation platform:  
<https://sim.financenlab.com/>



# 03

## Meet the consortium

The resources have been expertly developed by passionate professionals who are committed to advancing financial education for aspiring entrepreneurs. Their goals revolve around equipping individuals with the knowledge and tools needed to make informed financial decisions in their entrepreneurial endeavors, empowering them to navigate the financial landscape effectively.

1

### **Fundación Universitaria Iberoamericana (FUNIBER)**

FUNIBER, a scientific and investigative university institution, is a vital project partner with extensive experience in R&D&I projects and international cooperative initiatives. Their expertise lies in training projects, particularly in economics and new platforms. Notable projects include, among others, the Virtual School of electronic commerce for entrepreneurs in MERCOSUR and Interactive platforms for educational content distribution.



2

### **Centro de Investigación y Tecnología Industrial de Cantabria (CITICAN)**

CITICAN is a non-profit private foundation specializing in R&D&I projects. They collaborate with companies, researchers, and project management professionals to develop new products, services, and business models while improving processes. CITICAN's activities include innovation support services, knowledge dissemination, ICT integration in education, and research collaborations nationally and internationally.



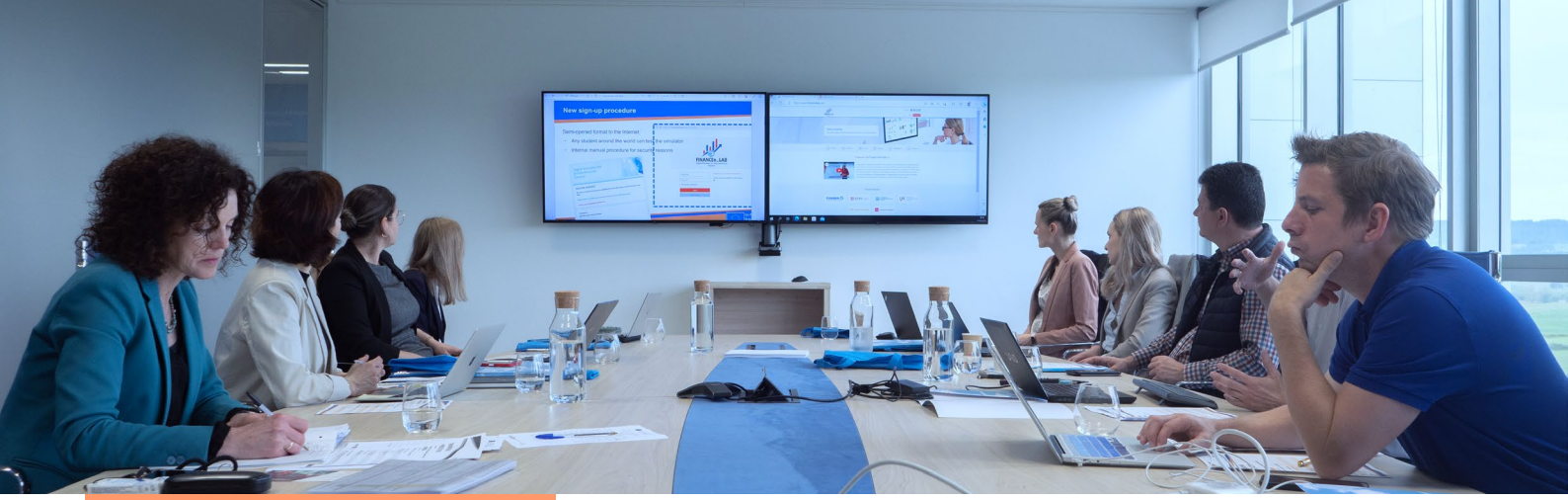
3

### **Universitatea "Alexandru Ioan Cuza" din Iași (UAIC)**

UAIC, the third project partner, is a highly research-oriented institution with extensive involvement in national and international research projects. They have a strong presence in the Erasmus exchange program since 1998, coordinating and participating in multiple Erasmus Mundus Action projects. Maintaining over 500 partnerships with universities worldwide, UAIC is committed to global cooperation.







# The project resources were created by:

4

## Universidad de Valladolid (Uva)



Uva, one of Spain's oldest universities, prioritizes research and innovation for sustainable growth. With a vast international network and numerous research institutes, groups, and laboratories, Uva fosters impactful research and collaboration. Its Scientific Park serves as a vibrant hub for innovation and entrepreneurship.

5

## Jan Kochanowski University of Kielce (UJK)



UJK has vast experience in diverse projects, including European Regional Development Fund initiatives, educational programs, CERN collaborations, and international engagements. They have successfully co-financed multiple projects and actively participated in European Commission initiatives. UJK's expertise extends to the Top 500 Innovators Science-Management Commercialization Programme, focusing on research management and technology transfer.

6

## The vision works (TVW)



TVW is an SME specializing in consulting services for businesses, startups, public organizations, and NGOs. They offer expertise in various areas including business planning, growth strategies, financing, change management, crisis management, and international project management. With experience in ERASMUS+ projects like Navigating Tourism and Smart-UP, TVW provides valuable support to clients in diverse sectors



## Framework of the Report

# 04

This report presents a comprehensive set of recommendations aimed at entrepreneurial finance stakeholders and policy makers, with a specific focus on policymakers, financial agents, and higher education teachers and mentors. By addressing the needs and interests of these key stakeholders, we aim to bridge the financing gaps in entrepreneurial education and foster a collaborative ecosystem that empowers aspiring founders, promotes innovation, and drives economic growth within the European Union.

The recommendations outlined in this report are the result of a rigorous research process that included field research with 124 entrepreneurs from Spain, Poland, Romania, and Germany, as well as survey responses from 881 university students from Poland, Romania, and Spain. This extensive data collection allowed us to gain valuable insights into the challenges faced by entrepreneurs and aspiring founders, as well as the existing gaps in entrepreneurial finance education.

In the following sections of this report, we will present a detailed needs analysis, outlining the specific challenges and areas of improvement identified through our research. Subsequently, we will describe the methodology of our data collection process, providing transparency and credibility to our findings. The report will then proceed to present the results of our research, highlighting key trends and insights. Finally, we will present a series of actionable recommendations tailored to policymakers, financial agents, and higher education teachers and mentors, aiming to empower them to collaborate effectively and create an ecosystem that supports entrepreneurial education and facilitates access to financing.

By implementing these recommendations, we aspire to cultivate an environment where aspiring entrepreneurs have the necessary resources and support to translate their ideas into successful ventures. We believe that by working together, policymakers, financial agents, and higher education professionals can drive positive change, unlock entrepreneurial potential, and contribute to the overall economic development and prosperity of the European Union.

# Target Groups of the Recommendations

## 05



We have included recommendations for policymakers, financial agents, and higher education teachers and mentors because each of these stakeholders plays a crucial role in shaping the entrepreneurial ecosystem and addressing the financing gaps faced by aspiring founders. Here's a breakdown of why recommendations are directed towards each group:

**Policymakers:** Policymakers hold the power to create an enabling environment for entrepreneurship. By implementing supportive policies, such as tax incentives, streamlined regulatory frameworks, and funding programs, policymakers can encourage entrepreneurial activity and facilitate access to financing options. Recommendations for policymakers aim to highlight the importance of comprehensive policies that foster innovation, provide targeted support to early-stage ventures, and incentivize alternative financing methods.

**Financial Agents:** Financial agents, including banks, venture capitalists, and angel investors, have a significant impact on the availability and accessibility of funding for entrepreneurs. Recommendations for financial agents emphasize the need for them to embrace innovative financing methods, adapt their processes to better cater to the unique needs of entrepreneurs, and establish stronger relationships with universities and other stakeholders. By actively engaging with the entrepreneurial community, financial agents can contribute to closing financing gaps and providing entrepreneurs with the financial resources they need to succeed.

**Higher Education Teachers and Mentors:** Higher education institutions play an important role in nurturing entrepreneurial talent and providing the knowledge and skills that aspiring founders need to navigate the financing landscape. Recommendations for university teachers and mentors suggest expanding the curriculum to include practical sessions using financial analysis tools and the digital simulator on entrepreneurial finance, incorporating experiential learning opportunities and promoting intensive student-teacher interaction. A motivating factor for students can also be the recognition of the competences they have acquired in financial training units. By equipping students with relevant and up-to-date financial knowledge, higher education institutions can better prepare them for the challenges they will face as entrepreneurs.

By targeting recommendations towards policymakers, financial agents, and higher education teachers and mentors, we aim to foster a holistic and collaborative approach to addressing the financing gaps in entrepreneurial education. These stakeholders have the power to enact meaningful change and work together to create an ecosystem that supports aspiring founders, promotes innovation, and drives economic growth within the European Union.

Financial literacy can be defined as “the awareness of fundamental financial concepts and aptitude to perform simple calculations” (Lusardi and Mitchell 2009) and as “empowering individuals to make rational decisions about financial forecast, income and expenses and their usage of financial products and service” (ANZ Banking Group 2003). The OECD/INFE defines the financial literacy of adults as “a combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve financial well-being” (Atkinson and Messy 2012). Applying this definition to the context of financial education of MSMEs, financial literacy can be defined as:

**“The combination of awareness, knowledge, skills, attitudes and behaviour that a potential entrepreneur or an owner or manager of a micro, small or medium sized enterprise should have in order to make effective financial decisions to start a business, run a business, and ultimately ensure its sustainability and growth (OECD 2018).<sup>1</sup>”**

”

Here, it is important to note that this definition refers to individuals (entrepreneurs and entrepreneurs-to-be) and not to the MSME as a whole and is specific to business issues rather than personal ones. Financial literacy for entrepreneurs and financial literacy for adults in general are often summarised under the same term. However, as both terms have conveyed different meanings, the differentiation of the two terms would be beneficial.

Financial literacy comprises different competence areas including choice and use of financial services, financial and business planning, risk and insurance as well as financial landscape. It offers a wide spectrum of benefits for (potential) entrepreneurs. It enables individuals to have better knowledge of various financial products and services available and prepares them for difficult times via risk management strategies such as purchasing insurance and enhancing assets (Wachira and Kihui 2012). Additionally, financial literacy helps to make informed decisions in financial planning, savings and investments.

In the EU, there are large discrepancies in terms of financial literacy between the member states. North-western countries - most notably Denmark, Sweden (both 71%) and Germany (66%) - have the highest levels of financial literacy among their population. South and Central Eastern European countries, however, perform significantly worse in this regard, with Portugal at the bottom of the table (26%) (Klapper and Lusardi 2019).

---

<sup>1</sup> It is important to note that this definition refers to individuals (entrepreneurs and entrepreneurs-to-be) and not to the MSME as a whole and is specific to business issues rather than personal ones.

Financial literacy plays a key role in helping MSMEs access finance and utilise financial services. Securing sufficient finance to start or grow a business is often considered to be one of the main obstacles to entrepreneurship and small business developments, regarding both the availability of external sources of finances and the conditions applying to such financing (interest rates, fees, collateral required) (Kaigama and Ashari 2016).

When seeking external financing evidence suggests that MSMEs and potential entrepreneurs rely heavily on traditional bank lending and may tend to approach their local bank for financing. For example, the second quarter of 2020 saw a 62% increase in demand for business loans to provide emergency liquidity (European Central Bank Lending Survey July 2020). However, in the wake of recent crises, the quantity and distribution of credit has reduced in many countries and the effects of this have been felt particularly strongly by MSMEs.

While most countries in the EU provide alternative sources of financing for MSMEs to some extent, many entrepreneurs - due to low levels of financial literacy - are unaware or ill-informed about these possibilities. Even those MSMEs who are aware of alternative financing options, find themselves unable to apply for them due to misconceptions or lack of confidence. Additionally, (potential) entrepreneurs with low levels of financial literacy are likely to struggle to assess the appropriateness and suitability of equity vs. debt finance for their business model and evaluate the terms and conditions applying to the proposed instruments. Thus, low levels of financial literacy can increase difficulties accessing and utilising finance in the early stages of business creation and can hinder the sustainability and growth of business that are more established (Ali et al 2018).



In contrast, high levels of financial literacy can have several positive effects when it comes to accessing finance. Well-informed entrepreneurs have the potential to reduce market failures that are due to asymmetries of information between provider and receiver of financing (Miller 2003). Better financial analysis and reporting skills will improve the ways in which entrepreneurs describe their financial profile to their creditors during the loan application process, improving their chances of success. Moreover, more financially literate MSMEs are more likely to understand the importance of servicing their loan without missing interest/ capital payments or breaking covenants and have the skills to make this possible (Atkinson 2017).

While the beneficial effects of financial literacy are undisputed (Lusardi and Mitchell 2014), the evidence base regarding this topic is poor. Particularly, there is no significant literature with data on the current state of financial literacy education in higher education institution and the financial literacy levels of students and future entrepreneurs. This implies that there is a strong need for research to collect data on the financial literacy levels of students and future entrepreneurs as well as on the education of financial literacy they have received in higher education institutions. In order to improve the evidence, base on the topic, we have carried out surveys that will be presented in detail in the section “Results”.

## Methodology

# 07

The project utilized various data collection methods to derive recommendations for the target groups. For this report, a survey across 881 university students and 124 entrepreneurs was conducted to gather information and opinions from respondents, providing a systematic and efficient approach for data collection. Surveys are widely used across different fields and serve multiple purposes, including data collection, research and analysis, understanding opinions and attitudes, decision-making, market research, feedback and evaluation, planning and forecasting, and public opinion and polling. The survey's well-designed questions and appropriate sampling techniques ensured valuable data and insights were obtained for informed decision-making.

Additionally, focus group sessions were conducted to gather in-depth insights and perceptions through guided discussions among a small group of participants. The focus group method allowed for interactive group dynamics, exploration of complex issues, and qualitative data generation that contributed to the development of recommendations tailored to the target audience.

The development of a simulator that accurately reflects real-life situations was and is a complex and challenging task, requiring extensive research and analysis of real scenarios to create virtual reality models. This meticulous approach ensured that the simulator provides an authentic and engaging experience, allowing users to explore decision-making in a safe and controlled environment.

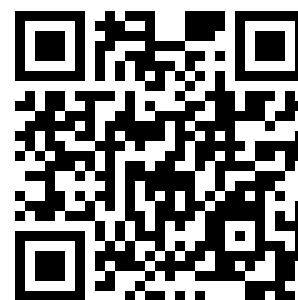
To achieve this goal, financial researchers and experts collaborated with developers to create scripts encompassing a wide range of real-life situations. These scripts serve as guidelines for storytelling in specific scenarios, enabling users to observe the consequences of their actions and learn from their mistakes. The incorporation of gamification further enhances user engagement, motivating them to explore different decision-making scenarios and learn from their experiences.

In the software development process, the project adopted three popular agile methodologies: SCRUM, KANBAN, and SCRUMBAN. These methodologies emphasize teamwork, transparency, and continuous improvement, making them well-suited for the complexity of the online learning platform. Additionally, storytelling was integrated into the simulator to create immersive narratives around real-life decision-making scenarios. These narratives are grouped based on the characteristics of each simulator case, enabling users to explore different decision-making situations in a structured manner. To further enhance realism, a case-statement generator was introduced, offering users fresh challenges and learning opportunities. Each new scenario's resolution depends on the initial variables defined in the statement, providing a unique and personalized experience.

Moreover, the Learning Management System (LMS) was designed as a self-learning platform for students. While the initial idea involved implementing neural networks to learn from student-teacher interactions and offer advice similar to an expert, it was found that the data generated lacked the variability needed to accommodate diverse case resolutions and student behavior. Consequently, decision trees were utilized to create an artificial intelligence system based on teacher-defined rules. The system identifies certain parameters based on each case's problem and data, suggesting specific calculations or decision-making processes for students to review through relevant texts.

In conclusion, the development of the simulator involved a multidimensional approach that encompassed thorough research, agile methodologies, storytelling, and AI implementation. By incorporating these elements, an engaging and realistic simulator was crafted, providing users with a rich and varied experience to explore decision-making in a safe and controlled virtual environment.

Access to the simulation platform:  
<https://sim.financenlab.com/>



# 08 Results

The surveys we conducted with both students and entrepreneurs indicate moderate levels of financial literacy. A considerable share of surveyed entrepreneurs (around 60%) state that they are capable of managing personal and business finances and that they have participated in additional courses related to entrepreneurship. As for the funding of their business development, a vast majority of entrepreneurs usually resort to personal funding (90%), with around 40% utilising government subsidies and bank loans. Few entrepreneurs (10,5-17%), however, have used alternative sources of financing such as crowdfunding and business angels. This may be related to the surveyed entrepreneurs stating they have little knowledge regarding these financing options (20-25%) and the communication about financial concepts and lack the required skills for long-term investment and financial planning.

In comparison with entrepreneurs, students show lower levels of financial literacy. Approximately half of the students state they are capable of managing personal and business finances and the perceived knowledge regarding non-traditional financing sources is low, with only 4-10% of students being familiar with them. In addition to that, only 17% surveyed students consider themselves capable of communicating about financial concepts and think they do not have the required skills for long-term investment and financial planning.

The results suggest of the surveys suggest a pressing need for initiatives aimed at raising the level of financial literacy of both students (as potential entrepreneurs) and current entrepreneurs. As for students, this would increase the awareness of available financing sources and improve knowledge of their use, which, in turn, will lead to more and financially more sound business creations. With respect to current entrepreneurs, higher levels of financial literacy would equip them with the knowledge and skills to obtain the most suitable financial products and services and efficiently manage the finances of their enterprises, thus ensuring the survival and growth of the company.







The survey results have shed light on the critical issue of financial literacy among both students and entrepreneurs. With moderate levels of financial literacy observed in our research, it is evident that there is a significant need for targeted initiatives aimed at enhancing financial education. In response to these findings, we have developed a comprehensive set of recommendations specifically tailored for policymakers, financial agents, and trainers. These key stakeholders play a vital role in shaping the entrepreneurial ecosystem, and by implementing these recommendations, they can collectively contribute to closing the financial literacy gap. Our recommendations aim to empower policymakers to create supportive regulatory frameworks, encourage financial agents to develop innovative funding mechanisms, and equip trainers with the necessary tools to deliver effective financial literacy programs. By embracing these recommendations, we can foster a more financially literate generation of potential entrepreneurs and provide current entrepreneurs with the knowledge and skills essential for their businesses' sustainable growth and success.

## Recommendations for policy makers

### Long-term and holistic approach to enhancing financial literacy education

Policy makers should develop a long-term strategic approach aimed at enhancing the financial literacy of (potential) entrepreneurs and facilitating their access to the full spectrum of available funding. To this end, it is paramount that financial literacy is embedded profoundly into the education system.

Financial literacy modules that cover basic skills needed for business creation and business management should be integrated into existing entrepreneurship training, including in cooperation with the private and not-for-profit sector. This will serve to ensure that (future) entrepreneurs are provided with the necessary skills and materials when they are most needed, that is, when they are about to start their business. The focus of such financial literacy education should be on practical knowledge and skill instead of abstract concepts that cannot be directly applied to their daily business activities.

In addition to basic financial literacy training, education programmes should also serve the needs of entrepreneurs that already run a business. Such programmes should aim at enabling entrepreneurs to develop a long-term strategic approach to finance and improve their business prospects. This should include the promotion of awareness and understanding of the broad range of available financial instruments and advice for entrepreneurs to improve their communication skills with investors.

Policy makers should also develop more specific financial literacy programmes that are tailored to the needs and financial literacy levels of different target groups, including groups that are underserved by financial markets, such as women, young entrepreneurs, minorities and entrepreneurs in the informal sector. Evidence shows that, on average, these groups have relatively lower levels of financial literacy skills, resulting in less knowledge about the types of financing available and how they can be accessed (Bates, Bradford and Seamans 2018).

Financial literacy can also be improved through the integration in curricula of formal schools, as part of a more general effort to teach entrepreneurship skills. Following a phased approach, younger students will be taught basic financial concepts, while older students will be taught increasingly complex and more business-related concepts. Evaluations suggest that financial education for students is most effective when delivered to small group in short modules (e.g., two hours per week) over longer periods (e.g., 10-12 weeks) (Kaiser and Menkhoff 2018).

### Provision of online platforms with free financial literacy resources

Another effective approach to providing financial literacy is to build online platforms that contain resource materials such as glossaries, short instructional videos, diagnostic tools, short articles and templates for financial materials (e.g., reporting forms, presentations). The main advantage of this approach is that it can respond to on-demand needs for information at the moment it is needed. Another important benefit is that it is easier to keep small packages of information and materials updated over larger integrated learning programmes. With the EU funding of the Financen\_Lab simulation platform, an important foundation has already been laid.

Short on-demand training modules and videos are an important resource and are increasingly appearing on public websites for businesses. The materials should provide practice-oriented training that considers the different needs of entrepreneurs at different stages in the development of their businesses:

- Pre-start-up: financial planning, securing start-up financing, basic accounting;
- Early-stage entrepreneurship: formalising financial plans and reporting, implementing greater financial control systems;
- Established business: formalising and professionalising financing management; and,
- Growing businesses: securing growth capital, managing supply chains and human resources.

## Promoting Alternative Financing Channels and Raising Awareness for Funding Opportunities

Policy makers should take proactive steps to promote the use of alternative financing channels, such as crowdfunding, peer-to-peer lending, and impact investing. These channels offer additional funding opportunities for entrepreneurs, especially those who face challenges in accessing traditional sources of finance. To encourage the growth and popularity of these alternative channels, policy measures like tax incentives and regulatory frameworks should be implemented to support and protect investors.

Simultaneously, efforts should be made to raise awareness among (potential) entrepreneurs about the full spectrum of available financing options. Effective communication strategies through multiple channels are necessary to ensure broad outreach. Information programs, campaigns, and online platforms specifically designed for entrepreneurs can provide comprehensive and tailored information on potential funding sources. Collaboration with various stakeholders, including public financial institutions and chambers of commerce, can facilitate awareness actions such as seminars, complemented by tailored consulting services. These initiatives aim to expand the financing base for entrepreneurs and empower them with knowledge to access suitable funding opportunities.



## Measurement, monitoring and evaluation of financial literacy levels

Currently, very few countries have developed tools to specifically measure and monitor the financial literacy level of (potential) entrepreneurs (as opposed to most financial literacy surveys that are targeted to households/consumers), including basic knowledge of financial concept, understanding traditional and alternative financial products as well as accessing and managing credit. Consequently, the data available regarding financial literacy levels is scarce.

Developing a shared framework to systematically measure, monitor and evaluate financial literacy levels would provide policy makers with valuable up-to-date information about the level of knowledge and skills of the target groups. The empirical evidence would serve as the basis for the development of evidence-informed policies and financial education to tackle the challenges of MSMEs and potential entrepreneurs identified and could be used to monitor and evaluate the impact of such measures. In addition to that, the adoption of EU-wide standardized measurement tools - possibly with the involvement of the EU - would enable policy makers to make cross-country comparisons, exchange good practices and set common targets (Nicolini and Haupt 2019).

The EntreComp framework could be used as a European frame of reference for policy makers in the development of such measurement tools. Moreover, the combination with qualitative research designs would provide additional insights into financial literacy developments taking into account the context specificity of the topic (Baggen and Kaffka 2022)





## Evaluation, Adaptation, and Collaboration

Finally, policy makers should regularly evaluate the effectiveness of existing policies and programs supporting entrepreneurial finance. Furthermore, policy makers should closely monitor the evolving needs of entrepreneurs and the changing financial landscape. This involves staying abreast of emerging trends, technological advancements, and market dynamics that impact entrepreneurial finance. By gathering and analyzing relevant data and feedback from stakeholders, policy makers can identify gaps, address emerging challenges, and capitalize on new opportunities.

The continuous evaluation process should involve collaboration with key stakeholders, including entrepreneurs, financial agents, industry experts, and academia. Their insights and expertise can provide valuable perspectives on the effectiveness of policies and programs, as well as recommendations for improvement. Assessments should identify areas for improvement, address emerging challenges, and capitalize on new opportunities. By staying informed about evolving needs and the changing financial landscape, policy makers can ensure their interventions remain relevant and impactful. Therefore, they should adapt policies based on evaluation findings to refine eligibility criteria, enhance access to resources, streamline processes, and introduce new initiatives. This approach fosters an enabling environment that supports entrepreneurship, drives innovation, and fuels economic growth.

In conclusion, enhancing financial literacy education, providing online platforms with free resources, increasing awareness of available financing options, and measuring and monitoring financial literacy levels are crucial steps for creating a supportive ecosystem for entrepreneurs. Policy makers should adopt a long-term strategic approach that integrates financial literacy into the education system, tailors programs to different target groups, and promotes effective communication channels to raise awareness. Additionally, the development of measurement tools and continuous evaluation are essential for evidence-informed policies and effective interventions.

These recommendations for policy makers lay a solid foundation for addressing the financial literacy needs of entrepreneurs and fostering an environment conducive to their success. However, the active participation of financial actors is vital in implementing these recommendations effectively. Therefore, the following set of recommendations is directed towards financial agents, including banks, business angels, investors, and incubators, to further support and facilitate entrepreneurs in their financial journey.

## Recommendations for financial agents

### Increase involvement of financial agents in financial literacy education

Financial agents can play an integral part in providing financial literacy education as they have valuable insights on the investors' and banks' needs. Therefore, their involvement in financial literacy education should be increased.

One way is the establishment of collaborations with educational institutions, such as universities and vocational schools, for the integration of financial literacy education into their curriculum. This collaboration can involve guest lectures, workshops, and internships where students can gain hands-on experience in financial management and entrepreneurship. By working closely with educational institutions, financial agents can ensure that future entrepreneurs receive comprehensive financial education and are well-prepared to navigate the complexities of the business world.

But even detached from educational institutions, approaches such as training, mentoring and coaching can help entrepreneurs understand how different instruments serve different financing needs at specific stages of the life cycle, the possibility to leverage different sources of finance and how to approach different types of investors and meet their information requirements. Another important function is that they provide advice and capacity building to accompany the business creation and growth process.

Successful examples include events such as "Meet the funders" that offer entrepreneurs the opportunity to get in touch with funding providers and discuss, in private and on a one-to-one basis, their individual funding plans.

Also, investment readiness programmes can be an effective instrument to support MSMEs in understanding investor's specific needs, gathering information and developing business plans to address these needs appropriately.

### Facilitate access to different sources of finance

Financial actors should actively promote and facilitate access to different sources of finance for entrepreneurs. This includes not only traditional bank loans, but also alternative financing options such as venture capital, angel investments, crowdfunding and grants. By educating entrepreneurs about the different sources of funding available and connecting them with the appropriate investors and platforms, financial intermediaries can expand their financial options and increase their chances of obtaining the necessary capital for their ventures.

Connect in our LinkedIn group:



## Promote ongoing financial monitoring and performance evaluation

Financial agents play a crucial role in promoting the practice of ongoing financial monitoring and performance evaluation among entrepreneurs. They should actively emphasize the importance of establishing effective financial tracking systems and regularly evaluating key financial metrics. By assisting entrepreneurs in setting up these systems and providing guidance on financial analysis, financial agents enable entrepreneurs to gain a comprehensive understanding of their businesses' financial health. Regular reviews and assessments of financial performance help entrepreneurs identify potential challenges, opportunities, and areas for improvement. This proactive approach allows entrepreneurs to make informed decisions, adjust their strategies when necessary, and ensure the long-term financial sustainability and success of their ventures.

Furthermore, financial monitoring and performance evaluation can contribute to the popularity and awareness of alternative financing channels. By closely tracking and analyzing financial data, entrepreneurs can identify the need for additional funding or explore alternative sources of financing, such as crowdfunding or angel investments. This increased awareness and utilization of alternative financing options reduce the hurdles entrepreneurs may face when seeking traditional funding from banks or government programs. Financial agents can play a key role in educating entrepreneurs about these alternative channels, providing insights into their benefits and risks, and facilitating connections with relevant networks or platforms. By integrating financial monitoring with a focus on alternative financing, financial agents help entrepreneurs diversify their funding strategies and increase their chances of accessing the necessary capital to fuel their growth and innovation.



## Fostering a supportive ecosystem and fair financial practices

Financial agents, including incubators, angel networks, and other stakeholders, should foster a supportive ecosystem for early-stage startups by organizing networking events, mentorship programs, and knowledge-sharing platforms. These initiatives create opportunities for entrepreneurs to connect with experienced professionals, receive guidance on financial matters, and navigate the challenges of the early stages. By fostering collaboration and knowledge exchange, financial agents contribute to the long-term success of startups and promote a thriving entrepreneurial ecosystem.

In addition, financial agents should prioritize transparency and fair financial practices when engaging with entrepreneurs. This involves providing clear and comprehensive information about financial products, terms, and conditions, as well as ensuring fair and transparent investment and lending processes. By promoting ethical and responsible financial practices, financial agents build trust and credibility with entrepreneurs, establishing stronger and more sustainable business relationships. Such an approach enhances the overall integrity of the entrepreneurial finance landscape and contributes to the growth and success of startups.

## Financial literacy education as a precondition for loans

As research shows, there is a strong correlation between the entrepreneurs' financial literacy level and his/her ability to repay the credit. Hence, it is recommended that financial institutions offer loans tailored to the needs of (future) entrepreneurs that also require the participation in financial literacy training and support offers. This includes pre- and post-investment technical assistance to support the capital-raising process and reinforce management skills.

In conclusion, the involvement of financial agents in financial literacy education, the facilitation of access to different sources of finance, and the promotion of ongoing financial monitoring and performance evaluation are critical for creating an enabling environment for entrepreneurial finance. However, policymakers and financial agents alone do not carry significant influence over the financial education of students and aspiring entrepreneurs. Higher education teachers and mentors can also play their part in improving financial literacy, as the following recommendations suggest.



## Higher Education Teachers and Mentors:

### Use of the digital simulator as complementary and self-learning tool to increase the practical side of teaching of finances for entrepreneurs.

Although the FinancenLab simulator is thought initially as a self-learning tool, its use for HEI contexts is much more effective as a complementary tool to theoretical explanation of topics related to financing. It can be also exploited for ongoing assessment and extra academic training. In both cases it aims at increasing the financial awareness of students providing virtual contexts, which helps users to build and consolidate their background for further learning. This experience is also helpful for them to understand better the entrepreneurial ecosystem.

As an autonomous learning tool, it suits the collective of more prepared students who wish to broaden their knowledge on the application of non-traditional funding sources. It allow students to practice planning and estimating the financial needs without risking real money. As in the previous group, they can apply theoretical concepts in real scenarios and gain hands-on experience in financial decision-making. The challenging point for more advanced students would be the application of any of these solutions to real entrepreneurial projects and present them in group justifying the choice and analysing the consequences. This is absolutely essential for generation of critical thinking about application of any of the funding sources included in the FinancenLab simulator.

### Increased use of financial analysis tools

It is always good to encourage students to use financial analysis tools like Excel, Google Sheets, or specialized financial software. These tools enable students to analyse financial data, create financial models, and perform calculations more efficiently. It is highly recommended to HEI teachers and mentors to provide tutorials or resources to help students learn these tools effectively, so the Financen\_Lab simulator is one these resources combining tutorials on the use of each case study and support for calculation and analysis of different aspects. As stressed previously, the Financen\_Lab tool is perfect or complementary use to any of the before mentioned ones.

## Increased interaction teacher/instructor and students/users

Generally, HEI teachers and mentors are encouraged to create discussion forums, both face-to-face and online, or utilize social media platforms to foster student engagement and foster peer-to-peer learning. These platforms enable students to ask questions, share resources, and participate in discussions beyond the classroom. Monitor and moderate these platforms to ensure a positive and inclusive learning environment. This is perfect to accompany the students in their exploration of the Financen\_Lab simulator. The interactions can be done on the platform itself, which is helpful for all users and roles and also for the machine learning process.

## Significant experience to be included in the CV

The Financen\_Lab simulator offers its users the diploma on completing successfully each case. So, HEI teachers and mentors can orient the students towards the use of this digital tool to ensure the achievement of diplomas that should be included in their CVs. In this way, more emphasis is placed on the construction of the curriculum as an important element for young people that facilitates their introduction into the labour market. It is also important for them to understand that this type of transversal training is highly valued among professionals.



The importance of collaboration among policymakers, educational institutions, financial intermediaries, and entrepreneurs is evident in addressing the need for comprehensive financial literacy, promoting accessible alternative financing options, and equipping entrepreneurs with essential financial management skills. The recommendations presented here are founded on substantial data and offer guidance to enhance financial literacy across Europe. Embracing these recommendations can empower entrepreneurs, foster innovation, and fuel economic growth, creating a vibrant ecosystem where businesses flourish and succeed.

# 10

## Sources and Recommended Readings

- Ali, Husniyati, Omar, Emi Normalina, Nasir, Hanisah Abu and Osman, Muhamad Rahimi R. (2018): Financial literacy of entrepreneurs in the small and medium enterprises”, in Noordin, Fauziah, Othman, Abdul Kadir and Kassim, Erne Suzila (Eds), Proceedings of the 2nd Advances in Business Research, International Conference, Springer, Singapore.
- ANZ Banking Group (2003): ANZ Survey of Adult Financial Literacy in Australia. Roy Morgan Research, Melbourne, Victoria.
- Atkinson, Adele (2017): Financial Education for MSMEs and Potential Entrepreneurs. OECD Working Papers on Finance, Insurance and Private Pensions No. 43, <http://dx.doi.org/10.1787/bb2cd70c-en>
- Atkinson, Adele and Messy, Flore-Anne (2012): Measuring Financial Literacy: Results of the OECD/International Network on Financial Education (INFE) Pilot Study. OECD Working Papers on Finance, Insurance and Private Pensions, No. 15, OECD Publishing, [http://www.oecd-ilibrary.org/finance-and-investment/measuring-financial-literacy\\_5k9csfs90fr4-en](http://www.oecd-ilibrary.org/finance-and-investment/measuring-financial-literacy_5k9csfs90fr4-en)
- Baggen, Yvette and Kaffka, Gabi (2022): Entrepreneurial literacy and skills. Publication for the committee on Employment and Social Affairs. Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, Strasbourg, <https://op.europa.eu/en/publication-detail/-/publication/9a67de64-e862-11ec-a534-01aa75ed71a1/language-en>
- Daniel, Caroline, Herrington, Mike and Kew, Penny (2016): Entrepreneurial Finance. Global Entrepreneurship Monitor. Special Report on Social Entrepreneurship. Global Entrepreneurship Research Association.
- European Central Bank (2020): The Euro area bank lending survey, First quarter of 2020. [https://www.ecb.europa.eu/stats/ecb\\_surveys/bank\\_lending\\_survey/pdf/ecb.blssurvey2020q1~17a1b2b7d2.en.pdf](https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey/pdf/ecb.blssurvey2020q1~17a1b2b7d2.en.pdf)
- Kaigama, Y.M. and Ashari, N.A. (2016): Moderating effect of financial literacy in the relationship between microfinance banks and small business survival, Indian Journal of Innovations and Developments, Vol. 5 No. 12, pp. 1-6.

# Sources and Recommended Readings

- Kaiser, Tim and Menkhoff (2020): Financial education in schools: A meta-analysis of experimental studies. *Economics of Education Review*, Vol. 9 Issue C.
- Klapper, Leora and Lusardi, Annamaria (2020): Financial literacy and financial resilience: Evidence from around the world. *Financial Management*, Financial Management Association International, Vol. 49 No. 3, pp. 589-614.
- Lusardi, Annamaria and Mitchell, Olivia S. (2009): How Ordinary Consumers Make Complex Economic Decisions: Financial Literacy and Retirement Readiness. National Bureau of Economic Research Working Paper 15350.
- Miller, Margaret (Ed.) (2003): *Credit Reporting Systems and the International Economy*, MIT Press.
- Nicolini, Gianni and Haupt, Marlene (2019): The Assessment of Financial Literacy: New Evidence from Europe. *International Journal of Financial Studies*, Vol 7 No. 3.
- OECD (2018): *OECD/INFE Core competencies framework on financial literacy for MSMEs*:
- Wachira, Isaac M. and Wihiu, Evelyne N. (2012): Impact of Financial Literacy on Access to Financial Services in Kenya. *International Journal of Business and Social Science*, Vol. 3 No. 19, pp. 40-50.



## Report on recommendations for entrepreneurial finance stakeholders and entrepreneurial policy makers

Authors: Julian Kühlborn, the vision works

Project: FINANCEn\_LAB

Project Coordinator: Dr. Inna Alexeeva Alexeev

Fundación Universitaria Iberoamericana (FUNIBER)

[www.financenlab.com](http://www.financenlab.com)



Co-funded by  
the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.