THE FUTURE OF WORK
AND EDUCATION FOR THE DIGITAL AGE

The Need to Promote Digital Financial Literacy for the Digital Age

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Abstract

Digital financial literacy (DFL) is likely to become an increasingly important aspect of education for the Digital Age. The development of the 'gig' economy means that individuals will become more responsible for their own financial planning, including for retirement. Consumers will need to have increasing financial sophistication to make effective use of financial technology (fintech) products and avoid fraud and costly mistakes. G20 countries need to agree on a standardized definition of digital financial literacy, design tools to assess it, and develop strategies and programs to promote digital financial education, including special programs for vulnerable groups.

Challenge

Digital financial literacy (DFL) is likely to become an increasingly important aspect of education for the Digital Age. The development of the 'gig'[1] economy means that individuals will become more responsible for their own financial planning. Individuals will need to manage their own retirement savings and pensions more, due the trend of switching to defined-contribution from defined-benefit pension plans. Consumers will need to have a higher level financial sophistication to make effective use of financial technology (fintech) products and services, and avoid fraud and costly mistakes. These developments point to the need to develop digital financial education programs to improve digital financial literacy, with a focus on skills likely to be critical for those participating in the Digital Economy. G20 countries need to define digital financial literacy, design tools to assess it, and develop programs to promote digital financial education as well as special programs for vulnerable groups, including the elderly, the less educated, owners of small and medium-sized enterprises (SMEs) and startup firms, and women.

Proposal

G20 countries need to cooperate to develop consistent definitions of digital financial literacy, to design and implement tools to assess it, and develop strategies and programs to promote digital financial education as well as special programs for vulnerable groups, including the elderly, the less educated, owners of small and medium-sized enterprises (SMEs) and startup firms, women, etc.

Increasing recognition of importance of digital financial literacy

Financial technology (fintech), i.e., using software, applications and digital platforms to deliver financial services to consumers and businesses through

[1] The gig economy is a free market system in which temporary positions are common and organizations contract with independent workers for short-term engagements. These systems are frequently implemented on internet-based platforms. (https://whatis.techtarget.com/definition/gig-economy)

digital devices such as smartphones, has become recognized as a promising tool to promote financial inclusion, i.e., access of excluded households and small firms to financial products and services. In 2010, the G20 endorsed the Financial Inclusion Action Plan (FIAP) and established the Global Partnership for Financial Inclusion (GPFI) to coordinate and implement it. The FIAP was updated at the 2014 G20 Leaders Summit in Brisbane and, acknowledging the importance of fintech, includes a commitment to implement the G20 Principles for Innovative Financial Inclusion under a shared vision of universal access (BIS and WB 2016).

However, improved access to financial services via fintech requires higher levels of digital financial literacy to make effective use of them and to avoid miss-selling, frauds such phishing, hacking attacks, unauthorized use of data, discriminatory treatment and behavioral issues such as excessive borrowing. Digital financial literacy is likely to become an increasingly important aspect of education for the Digital Age. The development of the 'gig' economy means that individuals will become more responsible for their own financial planning. Individuals will need to manage their own retirement savings and pensions more, due the trend of switching to defined-contribution from defined-benefit pension plans. Also, the decentralized nature of fintech implies that consumers will need to have increasing financial sophistication to process financial information. This points to the need for nations to include digital financial education in their national financial education strategies.

To be sure, financial literacy has become recognized as an important requirement for effective financial inclusion, along with consumer protection, and has gained an important position in the policy agenda of many countries (OECD/INFE 2015a). At the Los Cabos summit in 2012, G20 leaders endorsed the High-Level Principles on National Strategies for Financial Education proposed by the Organization for Economic Cooperation and the International Network on Financial Education (OECD/INFE), thereby acknowledging the importance of coordinated policy approaches to financial education (G20 2012). In 2016 G20 leaders focused on digital financial literacy more closely and endorsed the High-level Principles for Digital Financial Inclusion, which include Principle 6 on "Strengthen Digital and Financial Literacy and Awareness" (GPFI 2016). However, most national financial education strategies do not address digital financial literacy specifically, but instead focus on basic financial concepts. Moreover, the G20 has not yet developed guidelines for digital financial literacy or digital financial education. We consider this to be an important gap that needs to be filled. Also, digital technology can make financial services borderless, which would allow people to easily access financial products and services in other countries. This shows the importance of global coordination not only in regulating Fintech, but also in improving the digital financial literacy of the public.

Definition of digital financial literacy

Similar to digital literacy and financial literacy, digital financial literacy is a multi-dimensional concept.[2] While some previous literature (e.g., OECD 2017) has described various aspects of digital financial literacy, there is still no standardized definition of digital financial literacy. We propose **four** dimensions of digital financial literacy, including knowledge of digital financial products and services, awareness of digital financial risks, knowledge of digital financial risk control, and knowledge of consumer rights and redress procedures.

The first dimension is ***knowledge of digital financial products and services***, which captures the basic understanding of digital financial products and services. Individuals should be aware of the existence of non-traditional financial products and services provided through digital means such as the internet and mobile phones. These services generally fall into four major categories, although there are overlaps:

- Payments: Electronic money, mobile phone wallets, crypto assets, remittance services;
- Asset management: Internet banking, online brokers, robo advisors, crypto asset trading, personal financial management, mobile trading;

[2] Digital financial literacy straddles the concepts of digital literacy and financial literacy, but has its unique aspects due to the nature of the products and risks involved. For a proposal to define digital literacy, see the earlier policy brief by Chetty, et al (2017). One definition of financial literacy, together with survey questions to measure it, can be found in OECD/INFE (2018).

- Alternative finance: Crowdfunding, peer-to-peer (P2P) lending, online balance sheet lending, invoice and supply chain finance, etc.; and

- Others: Internet-based insurance services, etc.

In addition to being aware of DFS, people should be able to compare the pros and cons of each available DFS. Such knowledge would help them to understand the basic functions of different types of DFS (i.e. either for personal purposes or for business purposes).

The second dimension of digital financial literacy is ***awareness of digital financial risks***. Individuals and firms need to understand the additional risks that they may incur when using DFS, which are more diverse but sometimes harder to spot than those associated with traditional financial products and services. DFS users should be aware of the existence of online fraud and cyber security risks. There is a multitude of potential risks facing DFS users, such as:

- Phishing: When a hacker pretends to be an institution in order to get the user to divulge personal data, like usernames or passwords, via emails or social networks;

- Pharming: When a virus redirects the user to a false page, causing her to divulge personal information;

- Spyware: When malicious software inserts itself into the users' PC or mobile phone and transmits personal data;

- SIM card swap: When someone poses as the user and obtains the user's SIM card, thereby obtaining private data.

DFS users should also be aware that their digital footprint [3], including information they provide to DFS providers, may also be a source of risk, even if it does not result directly in a loss, including:

- Profiling: Users may be excluded from access to certain services based on

[3] A digital footprint is a trail of data one creates while using the Internet, including websites visited, emails sent, and information submitted to online services. This can include both active (intentionally submitted) and passive (unknowingly submitted) footprints. (https://techterms.com/definition/digital_footprint)

their online data and activities.

- Hacking: Thieves may steal personal data from their online activities such as social networks.

Due to easy access to credit enabled by fintech, DFS consumers could also face potential problems of overborrowing or excessively high interest rates. Such risk can trigger unexpected and large losses when the DFS providers are not regulated or only weakly regulated. Overborrowing may also harm their credit rating. Finally, unequal access to DFS could exacerbate gaps between the rich and the poor.

DFS users should fully understand terms and conditions stipulated in contracts they digitally sign with DFS providers. They should also be aware of (risky) implications of digital contracts. They should understand that DFS providers may use their personal information for other purposes such as calculating their credit demands, advertising and credit evaluation. In terms of financial risks, easiness of access to finance may lead to overborrowing.

The third dimension of digital financial literacy is ***digital financial risk control,*** which is related to DFS users' understanding of how to protect themselves from risks arising from such use. They should know how to use computer programs and mobile apps to avoid spamming, phishing, etc. They should also know how to protect their personal identification number (PIN) and other personal information when using financial services provided through digital means.[4]

The fourth dimension is ***knowledge of consumer rights and redress procedures***, in cases where DFS users fall victim to the above-mentioned risks. DFS users should understand their rights and know where they can go and how to obtain redress if they fall victim to fraud or other loss. They should also understand their rights regarding their personal data, and how they can obtain redress against unauthorized use.

Develop and implement tools to measure digital financial literacy

The OECD/INFE recommends that dedicated national surveys or co-ordinated

[4] This overlaps with digital literacy.

international studies be used to collect high-quality, comparable data on levels of financial literacy (OECD/INFE 2019). Internationally standardized surveys of general financial literacy have been developed by the OECD/INFE (OECD/INFE 2018), the World Bank (World Bank 2018) and others. However, these surveys do not include the aspects of DFL described in the previous section. We recommend that a standardized set of questions be developed to cover these dimensions, and that they be included in these questionnaires. The augmented surveys should be carried out as soon as is practicable to acquire baseline literacy on the state of DFL in individual countries.

The data so acquired should be analyzed to identify aspects of DFL that may cause particularly significant issues, especially to the vulnerable groups in greatest need of DFL. Furthermore, it should be used to analyze the financial behavior of the population or specific subgroups in relevant areas, such as accessing and using DFS for the purpose of saving, borrowing, investing and acquiring insurance.

Develop digital financial education strategies and programs

The OECD/INFE also recommends that countries establish and implement national strategies to ensure a co-ordinated approach to financial education (OECD/INFE 2019), including the following aspects:

- recognizing the importance of financial education - through legislation where appropriate - at the national level;

- involving cooperation with relevant stakeholders and identifying a national leader or co-ordinating body/council;

- establishing a roadmap to support the achievement of specific and predetermined objectives;

- providing guidance on individual programs to be implemented under the national strategy in order to efficiently and appropriately contribute to the overall strategy; and

- incorporating monitoring and evaluation processes to assess the progress of the strategy and amend it accordingly.

All of these aspects should be applied to the development and implementation of national strategies and programs for DFE as well. The OECD and other relevant organizations should incorporate such recommendations in to their guidelines for national financial education policies, such as OECD (2012). Within the context of such national strategies, the G20 should also support the development of recommendations for regulating financial service providers such as fintech companies, including requiring them to fully disclose the product information and relevant risks to the general public in an appropriate way.

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