

Improve islamic financial literacy and optimize the islamic economy through financial technology: INPES apps

Y.M. Hidayati, A. Machmud
Universitas Pendidikan Indonesia
yusuf.murtadlo@upi.edu

ABSTRACT

In recent years, sharia financial technology has been growing rapidly in Indonesia. In early 2019, there were 55 sharia fintech companies registered as members of the Indonesian Fintech Sharia Association (AFSI). However, interestingly, according to survey conducted by The Financial Services Authority (OJK), the Islamic financial literacy index is still very low (8.11%), whereas understanding / knowing the law of *muamalah* is obligatory for every Muslim before they make any transaction. INPES platform integrates sharia learning and sharia financing in an online based application, where users must complete their *muamalah* course before they access financing services. This application can be applied at amil zakat institutions, Islamic boarding schools, and other non-bank financial institutions.

ARTICLE INFO:

Article history:

Received 12 July 2019

Revised 15 September 2019

Accepted 15 September 2019

Available online 30

September 2019

Keywords:

sharia fintech, sharia learning, muamalah, financial literacy

INTRODUCTION

The past three years, financial technology (fintech) services growing rapidly in Indonesia (Amidjono et al., 2016). As of April 2019 there were 106 fintech services companies registered in The Financial Services Authority (OJK, 2016). According to OJK’s publication data, the number of accumulated fintech lender accounts as of June 2019 increased 140.39% year to date as shown in Fig 1.

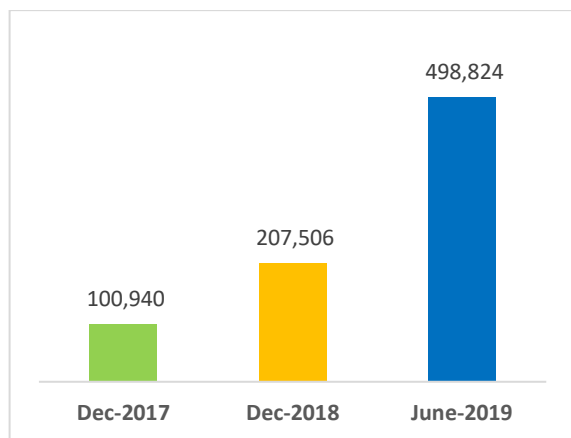


Fig. 1. Accumulated fintech lender accounts.

As the largest muslim country, fintech based on sharia also growing rapidly in Indonesia (Firmansyah & Anwar, 2019). In early 2019, there were 55 sharia fintech companies registered as members of the Indonesian Fintech Sharia Association (AFSI) and three of them have been registered in the Financial Services Authority (OJK) (Rusydia, 2018).

However, despite of this rapidly growth, the sharia financial literacy index was very low (8.11%), especially areas outside of Java as shown in Fig 2.

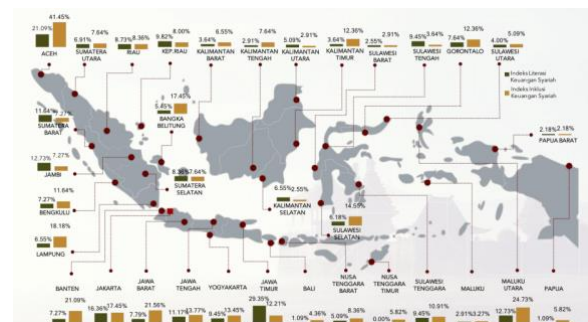


Fig. 2. Sharia financial literacy index 2016 (source: OJK)

In sharia principle, knowledge of *muamalah* is an important thing, because without it, transactions potentially violate sharia rules such as *zhulm*, *usur* and *gharar* (Akhtar et al., 2008). The solution to this phenomenon has been exemplified by the Caliphate of Umar ‘ibn Khattab by implementing a preventive policy such as sending special officers to expel traders in markets that did not understand *muamalah* (Al-Albani, 2005). This tradition continues until the 14th century in Islamic countries such as Morocco, where state officials conduct checks on the market by testing shop owners about *muamalah* laws, about how usury can occur in transactions, and ways to avoid usury (Al-Zarqa, 1968). A believer must not wish to do anything before he knows the law of Allah about it, so whoever studies and practices it according to his knowledge, he truly obeys Allah twice. and whoever does not practice truly disobeys Allah twice (Al-Qarafi, 1900). Imam Bukhari also state that “*Al ‘ilmu qoblal qouli wal ‘amali* (knowledge before saying and doing) (Bukhari, 2009).

Previous studies have reported that sharia financial literacy has a significant impact on the preference of the islamic financial services (Sardiana, 2016). Susilowati & Santoso (2009) mentions the significant relationship between sharia financial learning and investment intention.

In the disruptive era, financial literacy and knowledge, specifically sharia financial literacy must continue to innovate (Laldin & Furqani, 2019). This literacy is not only obtained in studies or books. Furthermore, financial literacy will have more accessibility through digital technology (Al-Salem, 2009).

INPES (Islamic Financial Inclusion) is an android-based application that makes it easy for people to pay Zakat, Infaq & Sadaqoh through Islamic Boarding Schools. In addition, INPES presents solutions to provide financing based on sharia principles and to improve the financial literacy of its users in one integrated application. This application requires users to go through the process of learning the principles of *muamalah* first before accessing financing. It is hoped that through this process, users will understand the principles of *muamalah*.

The financing services that INPES application product including three services that tailored to the needs of users, those services are:

1. Mudharabah

Mudharabah contract is business cooperation contract between capital owner that provide throughout capital (*shohibul mal*/silent partner) with working partner (*‘amil/mudharib*) and business profit divided between them accordingly ratio that agreed upon in contract. This financing service cover productive financing and refers to the Indonesian Ulema Council fatwa (DSN MUI) number 115/DSN-MUI/IX/2017.

The order of mudharabah financing can be seen in the Fig 3

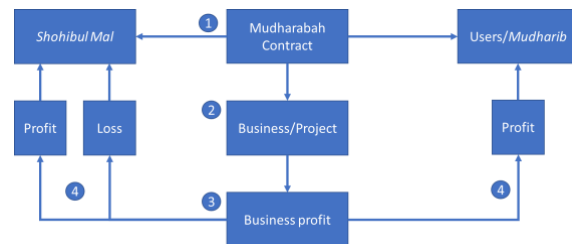


Fig. 3. *Mudharabah* financing

2. Murabahah

Murabahah contract is contract selling/buy an item with confirmed purchase price to buyer and buyer pay it with price more as profit (Yoshida, 2019). This financing services covers both consumptive and productive financing (Alam et al., 2019). The order of *murabahah* financing can be seen in the Fig 4

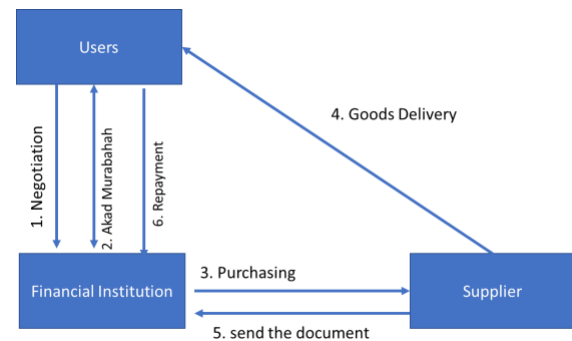


Fig. 4. *Murabahah* financing

3. *Qardh Hasan*

Qard Hasan is loans given to users (*muqtaridh*) which requires for various needs. This type of financing service is provided if the designation is outside of productive and consumptive purposes, for example medical treatment or pay off loan sharks (Jamil & Seman, 2019). The order of *qardh* financing can be seen in the Fig 5.

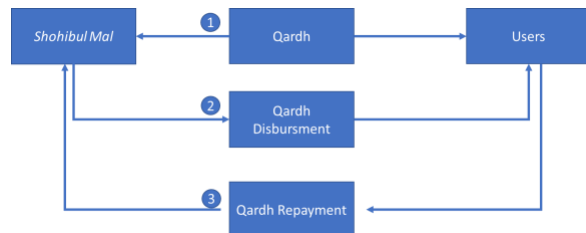


Fig. 5. Qardh Hasan

Method

The method used in this study is Research and Development (R&D) by develop an application that integrate financing and learning based on sharia principle which can be accessed via a smart phone. The programming language used is Javascript and MySQL. There are three roles in e-maslahat application: muzakki (giver), mudharib (administrator/institution), and (mustahiq (deserver).

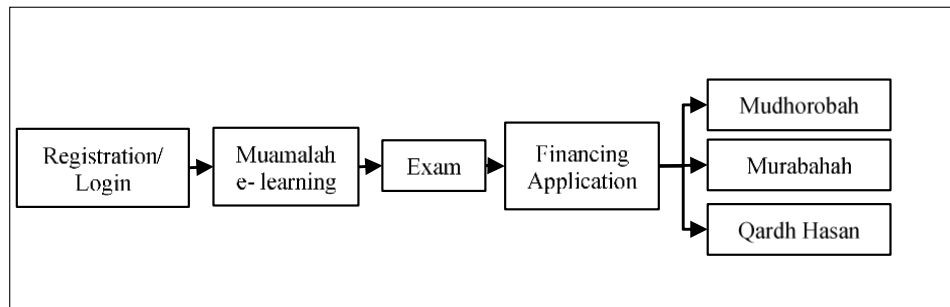


Fig. 6. INPES flowchart process

As shown in Figure 6, this application flowchart consists of several stages. The first stage is registration and login form, then after administrator approval, users can access e-learning stages. At the end of each course, users will be given an exam to evaluate their understanding of muamalah. If the users passes the exam, then the users can access financing menu. In the financing menu, users are allowed to choose 3 products that match their needs, including

- 1) Mudharabah
- 2) Murabahah
- 3) Qardh Hasan

After choose the product that users needs, than users apply for financing. The administrator then analyzes the financing application and then approves or reject those financing application.

Results and Discussion

The first form of risk mitigation from financing is to obtain user biodata through the registration form (Jorion, 2009). In Islam, risk management is very important in financial transactions, it can be achieved by the practice of the Sharia principles and laws (Lajis, 2019). In this stage, users must fill all mandatory field including their phone number as seen in Fig 7. The administrator will verify this phone number through activation code then users will get their password via email.

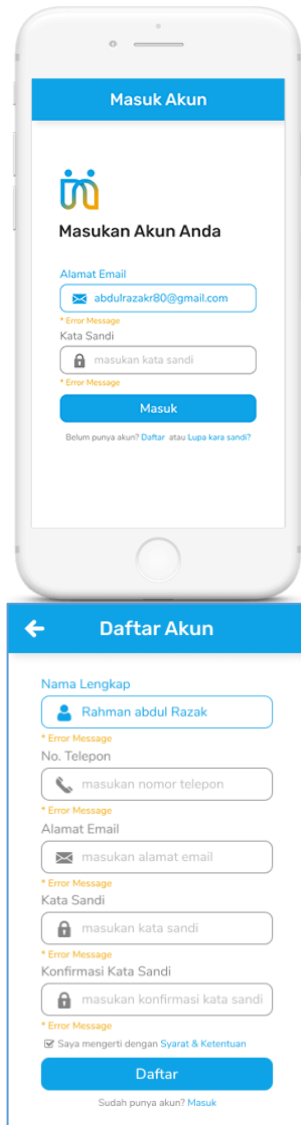


Fig. 7. Prototype login and registration menu.

After users get their password, they can access the main menu as describe in Fig. 8 below. There is 3 menu including ZIS (Zakat, Infaq, and Sadaqoh), *Edukasi* (Learning), and *Pembiayaan* (Financing).

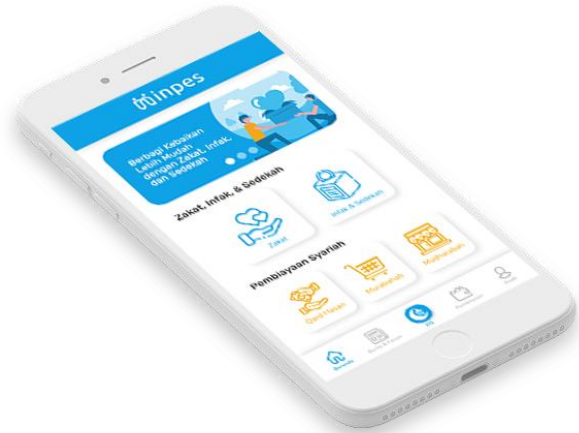


Fig. 8. Prototype main menu.

The menu list in INPES application is as follows:

1. ZIS

ZIS is a menu that allows users to pay charity. Users can choose the sub menu according to their needs as shown in fig. 9 such as:

a. Zakat

Users allow to choose type of zakat they will pay starting from the zakat of wealth, zakat of income, zakat of agriculture, and others.

b. Infaq/shadaqah

Users allow to choose infaq to donate to the poor

c. Waqaf

Users allow to choose infaq to dedicate of a property by a person through a will or otherwise for pious purposes, religious purposes or for charitable purposes.



Fig. 9. ZIS menu.

2. Edukasi (e-learning)

This menu provides e-learning to learn the principles of muamalah about zakat, infaq, sadaqah, and muamalah principles. *Edukasi* is a menu as a condition for a user to access financing. There will be an exam or quiz after each section.

3. Financing

As explained before, financing menu can be access by users after take all the course and passes the exams. If the user has not completed the course yet, a notification will appear as shown in Fig 9 left side. On the right side, shown the course menu, where users can choose and see status progress of their course.

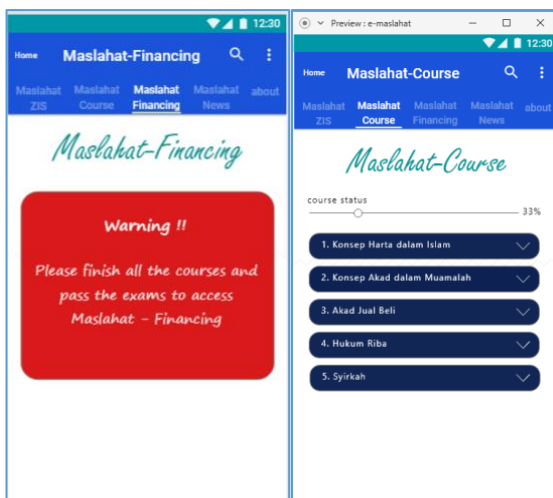


Fig. 10. Prototype course menu.

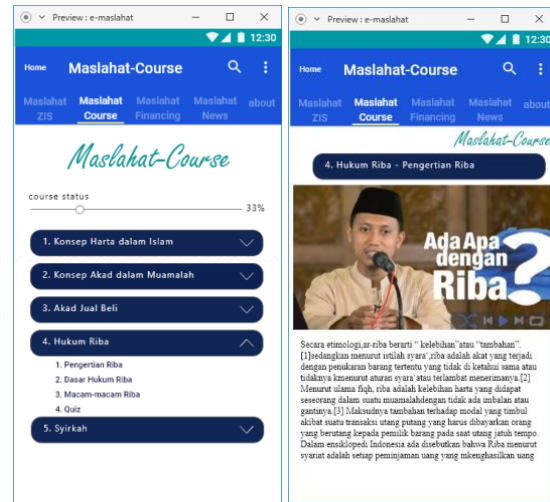


Fig. 11. Prototype course menu

There are several course in the Course menu, some courses are videos that must be watched by users. After completing all the course then users must passes the exam to evaluate their knowledge after joining the courses. Users now can access financing menu as shown in Fig. 12 below.

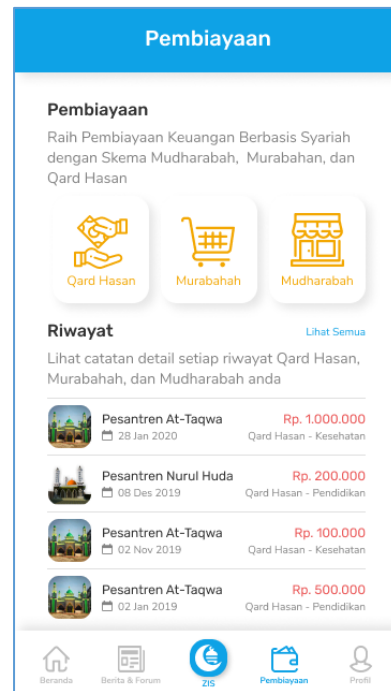


Fig. 11. Prototype *Pembiayaan* (financing) menu.

Conclusions

The concept of financial services as well as e-learning provided by the INPES platform provides multi-layered solutions for the society, especially in the Islamic society. This platform can contribute to increasing sharia financial literacy so that it is hoped that the society will avoid *zhulm*, usury and *gharar* transactions. The INPES platform is also a non-bank alternative financing solution which allows it to be widely applied in amil zakat institutions, mosques, Islamic boarding schools and other community. As financial literacy and distribution of zakat, infaq, shadaqah increase, hopefully the economic level will also increase, this will be the subject of the next research.

Acknowledgement

This research supported by Ministry of Research, Technology and Higher Education of the Republic of Indonesia. We also thank our colleagues from Universitas Pendidikan Indonesia who provided insight and expertise that greatly assisted the research.

REFERENCES

- Akhtar; Shamshad; Zeti Akhtar Aziz; Robert W. Hefner; Nik Norzrul Thani; Angelo Venardos; Frank E. Vogel; and Ibrahim Warde. "Understanding Islamic finance: Local innovation and global integration." *Asia policy* 6, no. 1 (2008): 1-14.
- Al-Albani, M. N.; Rania, A.; Alnayati, F.; Yuswaji, A.; Fakhturrazi; and Facrurazi. (2005). *Shahih Sunan Tirmidzi*. Pustaka Azzam.
- Alam, N.; Gupta, L.; and Zamani, A. (2019). Application of Blockchain in Islamic Finance Landscape. In *Fintech and Islamic Finance* (pp. 81-98). Palgrave Macmillan, Cham.
- Al-Qarafi. (1900). *al-Furuq*. Dar al-Ma'arifa.
- Al-Salem, Fouad H. (2009). "Islamic financial product innovation." *International Journal of Islamic and Middle Eastern Finance and Management* 2, no. 3: 187-200.
- Al-Zarqa, M. A. (1968). *al-Madkhal al-Fiqhi al-Am. Beirut: Dar al-Feker*.
- Amidjono, D. S.; Brock, J.; & Junaidi, E. (2016). Financial literacy in Indonesia. In *International Handbook of Financial Literacy* (pp. 277-290). Springer, Singapore.
- Bukhari, I. (2009). *Sahih al-Bukhari*, trans. *Muhammad Muhsin Khan (Beirut: Dar al-Arabia, 1985)*, 4, 165.
- Firmansyah, E. A.; & Anwar, M. (2019). ISLAMIC FINANCIAL TECHNOLOGY (FINTECH): ITS CHALLENGES AND PROSPECT. In *Achieving and Sustaining SDGs 2018 Conference: Harnessing the Power of Frontier Technology to Achieve the Sustainable Development Goals (ASSDG 2018)*. Atlantis Press.
- Jamil, N. N.; and Seman, J. A. (2019). The Impact of Fintech On The Sustainability Of Islamic Accounting And Finance Education In Malaysia. *Journal of Islamic, Social, Economics and Development (JISED)*, 4(17), 74-88.
- Jorion, P. (2009). Risk management lessons from the credit crisis. *European Financial Management*, 15(5), 923-933
- Keuangan, O.J. (2016). Survei Nasional Literasi dan Inklusi Keuangan 2016. *Departemen Literasi dan Inklusi Keuangan Bidang Edukasi dan Perlindungan Konsumen, Financial Services Authority*.
- Lajis, S. M. (2019). Fintech and Risk-Sharing: A Catalyst for Islamic Finance. In *Islamic Finance, Risk-Sharing and Macroeconomic Stability* (pp. 237-254). Palgrave Macmillan, Cham.

Laldin, M. A.; and Furqani, H. (2019). FinTech and Islamic Finance. *Fintech in Islamic Finance: Theory and Practice*.

Rusyidiana, A. S. (2018). Developing Islamic financial technology in Indonesia. *Hasanuddin Economics and Business Review*, 2(2), 143-152.

Sardiana, A. (2016). The Impact of Literacy to Shariah Financial Service Preferences. *Etikonomi*, 15(1), 43-62.

Susilowati, T., & Santoso, A. (2018). THE EFFECT OF SHARIA FINANCIAL LEARNING AND SHARIA FINANCIAL LITERACY ON INVESTMENT INTENTION. *Journal of Islam and Science*, 5(1), 23-28.

Yoshida, E. (2019). Fintech-Enabled Islamic Financial System and Financial Stability. In *Islamic Monetary Economics and Institutions* (pp. 181-192). Springer, Cham.

Appendix A

A. Programme Structure and Description of Subroutines

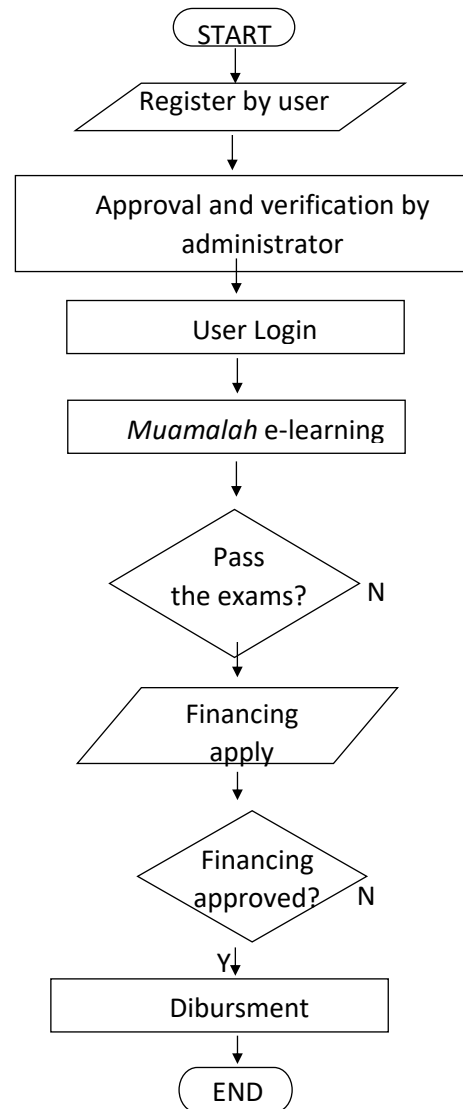


Fig. A-1. Main Flow Chart of the Computer Programme Used in this Study.