

Development of Financial Education in Japan under the Rapid Growth of IOT¹

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Abstract

In recent years, many countries conduct financial education for consumers from primary education. This is because financial products which individuals can access increase recently, and it becomes more important to promote possession of individual financial assets and the importance of consumer protection is increasing. In addition, because almost all trade are done on line, consumers have to learn about information literacy or cyber security. That is to say, the importance of financial education and information literacy is increasing to improve financial literacy from young. However, the international standards about educational contents and educational methods haven't been established yet, and differ from countries. Financial education has been conducted in Japan, and it shows great result these days. This study shows problems that financial education in Japan has had, and what is financial educational innovation that shows great result by international comparison. The result of this study can be a good example for countries which will conduct financial education in the future.

1. Introduction

The importance of financial education has been increasing in modern economic society. Financial education in this thesis refers to the report (OECD(2012)) issued by OECD/INFE(International Network on Financial Education) on Aug, 2012. The report defined it as *“the process by which financial consumers/investors improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective advice develop the skills and confidence*

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to become more aware of (financial) risks and opportunities to make informed choices, to know where to go for help, and take other effective actions to improve their financial well-being” (OECD(2012)p.7). These days, we can see many developed countries have been doing financial education positively.

Japan, which has the second highest volume of household financial assets thinks financial education important similar to United States of America, which has the highest volume. In the 2000s, government mentioned about the importance of financial education and had been doing many kinds of actions in Japan. However, in an early stage of financial education in Japan, they can't evaluate educational effect positively, because the financial education method wasn't established. However, the method of financial education has caused in Japan, educational effect and reputation are increasing. The development and innovation in financial education in Japan can be a good model for other countries which are going to set about it.

Therefore, this theses introduces new perspective and innovation of financial education in Japan, and conducts international comparison.

2. Significance and Purpose of Financial Education in Japan

There are many factors promoting financial education. For example, it is required to improve financial literacy and financial actions for the better after the latest financial crisis, it is required to form financial assets individually in global economic capitalization and financial liberalization, individual can access many kinds of financial products such as stock, investment trust, foreign exchange, money management fund, and many developed countries can't guarantee a pension in the future because cost of social security is increasing. Besides, the number of financial crime targeting individual is increasing, so it is required to develop individual financial literacy to protect consumers. Thus, financial education is one of the most important social policy not only for elderly people who tend to invest excess cash but also for young people.

In the 1990s, developed countries started to conduct financial education, but there is no global standard financial education method by for now, and every country tries to find better methods. Rather financial education might have to be different from economic characters in each country mentioned OECD(2012)(OECD(2012)p.7).

By the way, what is the aim of financial education in Japan? There was no guide to show the necessity of financial education, but a study group on Financial Education (Study Group of Financial Economy Education) formed by Japanese Financial Services Agency showed an official guide. According to this guide, the aim of financial education is summarized as below (Figure 1).

Figure 1. Significance/purpose of financial education

- Financial literacy as a life skill
 - » No one in modern society can avoid involvement with financial matters.
 - » It is important to make life planning a habit and acquire the knowledge and judgment needed to appropriately select/use financial products in order to achieve financial independence and lead a better life as a member of society.
- Financial literacy to encourage the provision of sound, high-quality financial products
 - » Government regulations alone can only go so far in achieving user protection; moreover, excessive regulation could hinder innovation by financial institutions.
 - » As users improve their acumen in selecting financial products, better financial products can be expected to become prevalent.
- Financial literacy encouraging the effective use of household financial assets in Japan
 - » The majority of Japan's approximately 1500 trillion yen in household financial assets is held in cash and savings. One reason for this is inadequate understanding of the benefits of diversified, long-term investment.
 - » If households are encouraged to engage in diversified, medium to long-term investment, the effect would be to help make available to growth sectors a sustained supply of funds.

(Source)Financial Services Agency(2013b)p.1.

As you can read, the aim of financial education is to give individual profit as well as to develop economy of country and local area by “Financial Literacy”. This way of thinking evokes the idea of “Social Common Capital” by Hirofumi Uzawa, who has taught in the University of Tokyo, the University of Stanford, the University of California at Berkeley and the University of Chicago. In Japan, it is sometimes treated with negative image to study about financial transaction and asset formation and to make a profit from investing financial products in Japan even now. However the system of finance is one of the public goods in modern society and to invest unemployed capital in capital market temporarily can develop people seeking funds and society. Investors give society funds to make new value so that getting return as an equivalent for their investment should not be had a guilty (Speculation should be apart from this matter.). Although we think as such, the Financial Services Agency in Japan defined the aim and value of financial education as above and promoted financial education in many kinds of means and support. After that new development of financial education in Japan has begun and has formed an innovative financial education system.

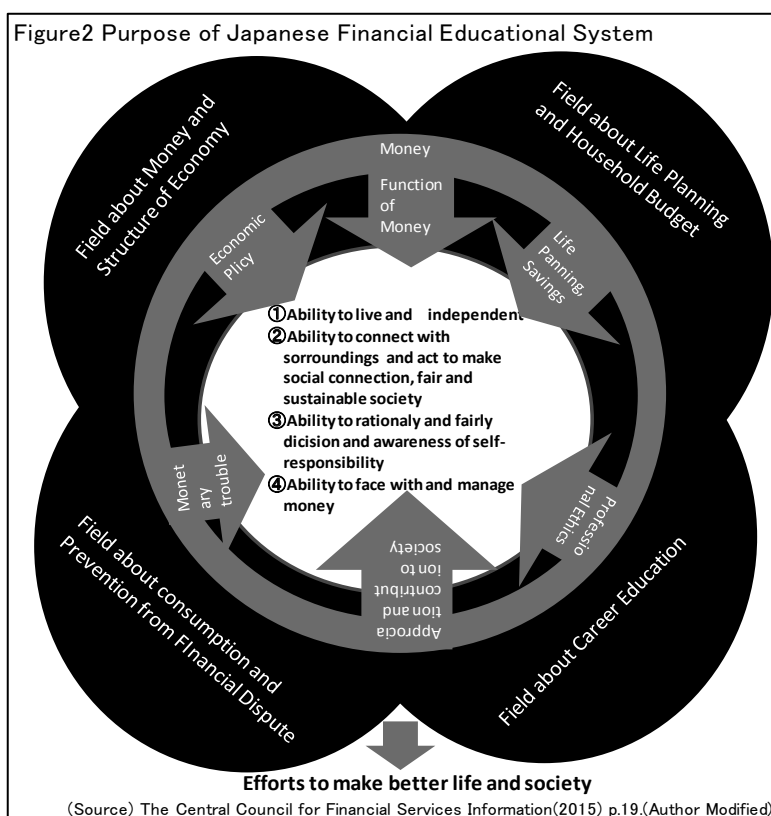
3. New Development and Innovation of Financial Educational in Japan

We can say that financial education has been conducted since the 1960s, the period of rapid economic growth, as a view from just protecting consumers. It was after 2000, when the Financial Services Agency thought financial education of an important policy, and after 2005, when they declared items to be done soon, that modern financial education was conducted. After that, a government, schools, local governments and financial institutions have developed and conducted many kinds of financial education independently. However Study Group on the Promotion of Financial and Economic Education (2014) found that 95 percent teachers who have conducted financial education in junior and senior high school had some difficulties in their financial education. Main difficulties are shown as below.

- The focus on understanding terminology or systems makes it difficult for students to relate lessons to their actual lives.
- Students learned the information, but found it difficult to pick up abilities or attitudes.
- Lack of expertise among teachers makes it difficult for students to understand the relationship between risk and return in investment.
- The main features of financial products were not necessary to teach until after high school.

Such kind of indication causes the dramatic change of financial education in Japan. For example, Japanese government showed the aim of financial education (Figure2) and the way to achieve it and industry-academia collaboration has been promoted. For example, Tokyo Gakugei University, University of Tsukuba and KAGOSHIMA University develop programs of financial education and conduct them collaborating with financial institutions in the suburbs (Some of them started it before 2013). This kind of industry-academia collaboration conducts required education and gets great results in each local area.

The efforts of industry groups also cause this kind of innovation and improve education effect significantly. For example, Japan Banker's Association which most of Japanese banks belong to distributes Web contents, CD-ROMs and pamphlets for free to tell people the roles of banks and promote people to use them appropriately. They make separate educational materials for elementary school, junior high school and senior high school and offer special educational programs for teachers for free. Japan Specialists from Banker's Association have classes at school, sometimes.



Furthermore, the most effective system which Japan Banker's Association offers is the school designation system of financial education. This system designates mainly high schools to concentrate on financial education and offers various education programs for students for free. This system has just started, but they had taught more than 20 schools by last year.

In addition, Bank of Japan and Japan Securities Dealers Association contribute financial education positively. Anyway, financial education in Japan is solving problems by industry-academia collaboration and industry groups and making effective educational methods. New development and innovation of financial education in Japan will be meaningful precedents for other Asian countries having similar sense of values as well as other countries exclude Asia to develop financial education system in the future.

4. The Link between Technological Development and Financial Education

There is a tendency for the financial education to be improved constantly. The rapid growth of internet technologies and spread of the online services cause the dramatic change in the financial behavior of the end-users. The same issue was emphasized in the report on financial education of

the Deputy Governor of a Bank of Japan Kikuo Iwata on January 23, 2015: Financial education in Japan: Challenges presented by aging population and declining birthrate. A wide range of income may be placed on the credit cards and variety of transaction may be implemented in the online banking environment. Therefore it is important to analyze the possible risks appearing in the online banking environment and to describe the measures for prevention of such risks. In addition, and more important, such prevention measures in the online banking environment need to be included into financial education.

Online financial transactions do not create fresh peril groups, but to a certain extent draws attention to the risks that several monetary establishment faces (Michael and Herbert (2009)). Referring to the Olufolabi Osunmuyiwa (2013), the possible risks in online banking environment include transactional, compliance, reputation and risks associated with information security. Transaction risk creates difficulties for individuals and corporations dealing in different currencies, as exchange rates can fluctuate significantly over a short period of time. Compliance risk is the risk related to the violations or nonconformance with, laws, rules, regulations, prescribed practices, or ethical standards. According to Virender Singh Solanki (2012), reputational risk is the risk of getting significant negative public opinion, which may result in a critical loss of funding or customers. Risks associated with information security are referred to the risks arising due to negligent data safekeeping procedures, consequently revealing the organization to scam, information obliteration, viruses, information thieves, vicious hacker, insider assaults and Denial-of-Service (DoS) attacks. The particularly challenging issue is protection of privacy issues of account holders' in online banking environment. Referring to the technical report, made by the University of Cambridge (Matthew Johnson, 2008) privacy issues are involved in almost all the vulnerabilities of online banking. For example, most vulnerable privacy issues are related to the online verification, transaction snooping, shoulder surfing (Matthew Johnson, 2008, p. 17) and phishing (Matthew Johnson, 2008, p. 16, 17 and 32). In addition, other scholars identify distinct online banking risks, such as money laundering risks, strategic risks, foreign exchange risks, price risks etc. However, this theses focuses more on the financial education and therefore for us it is more important to reveal that the described current risks and the prevention measures in the online banking shall be included into financial education.

It was already stated that due to the developing technologies, the number of modern risks in online banking has increased and the prevention measures shall be taken. Prevention measures in the online banking environment are important, because consumers refer to the security and reliability as a priority in digital world. Security issues are major barriers to internet banking and e-commerce activities among consumers (Khasawneh, 2009). Particular prevention measures in online banking include protection of information, constant monitoring, firewalls and cookies,

appropriate identification and similar. However, it is important to note here that all these protection measures will be effective only when it will be the appropriate financial education about possible risks and the ways of avoidance such risks. In the opinion of authors, the minimum set to be included into the financial education shall consist of: an explanation of online banking possible risks; an explanation of the protections provided; the suggestions for online banking customers to perform a related risk assessment and control evaluation periodically; a list of available resources where such information can be found; and, list of appropriate contacts for online banking customers' in the event they notice suspicious account activity. It should be noted that the described set shall constantly be revised due to the changes of the newly appeared online banking risks.

5. Other Countries' Case

Anglo-Saxon countries such as United States of America and England are the birthplace of financial education. So we would like to introduce examples of representative countries shortly. We mainly refer to Kurihara et al (2014) in this chapter.

First, United States of America has financial education programs in each State or school, though these are not public program. Especially the representative is an NPO corporation, Jump\$tart which more than 150 institutions interested in financial education invested and established. Jump\$tart conducts financial education investigations and financial literacy investigations of university students (Kitano et al.(2014)p.299.). In detail, they prepare more than 800 educational materials and offer the system to learn knowledge about finance through SNS and Internet games. VISA also offers educational materials for free, which enables from children to adults to learn finance through games and textbooks. In United States of America, Financial Literacy and Education Commission was established in 2013 and started to develop public financial education. In England, financial education is part of official educational curriculums called Personal, Social, health, and Economic Education. According to the formal document by Department for Education which is in charge of educational policy, financial education is conducted for from 11 to 16 years old students connected with mathematic (Department for Education (2013)p.103.). In Australia, after Melbourne Declaration on Educational Goals for Young Australians in 2008, national curriculum has been made. Financial education plans to be done about personal finance in Business and Economics curriculum for 5th grade students in elementary school though this is still draft curriculum in May 2015 (Miyahara(2014)p.18.). The other countries such as Germany and French become to conduct financial education positively.

Every countries which started financial education earlier than Japan have different systems.

However, to think about United States of America is highly expected to introduce public financial education systems, we can say that government will play important roles and companies and industry groups will support it (Government plays important roles in Germany and French). Unfortunately, there are not so many results of study which show financial education system works effectively. To compare with Japanese case, industry-academia collaboration and collaboration with industry group improve financial education greatly in Japan. Therefore Japan is required to make financial education system as social policy to be a good model to such countries.

6. Conclusion

This theses shows the meaning of financial education and the importance of cyber security, also surveys about United States of America, United Kingdom and Australia and refers to the different points with Japan. This study shows as below.

- Financial education in Japan has problems about teacher's financial acknowledgement, educational materials and lack of relationship between actual life and financial economy.
- The collaboration between government and educational institution to solve problems above may cause financial educational innovation.
- Due to the developing technologies, the number of modern risks in online financial transaction has increased and the prevention measures shall be taken.
- The development of financial education in Japan can be a good example for countries which need financial education in the future.

This theses shows that new development of Japanese financial education and the importance of cyber security, but it will take a few years to get a full scale result. The importance of financial education is increasing in modern society, so it is required to conduct better conducts in schools by trial and error. To improve financial education, it can be great support the view from not only economics but also education policy, teaching methodology.

References

- Bank of Japan. Financial education in Japan: Challenges presented by aging population and declining birthrate. Special Address at the ADBI-Japan-OECD High-Level Global Symposium in Tokyo. Deputy Governor of a Bank of Japan Kikuo Iwata. January 23, 2015.
- Department for Education(2013), *The national curriculum in England*, England : Department for

Education.

Financial Services Agency(2013a), *Report of Study Group on Financial Education*, Japan : Financial Services Agency.

Financial Services Agency(2013b), *Study Group on Financial Education-Report Summary*, Japan : Financial Services Agency.

Khasawneh, A., Al Azzam, I., & Bsoul, M. (2009). A study on e-commerce security in Jordan. *International Journal of Electronic Finance*, 3, (2) 166-176 available from: <http://dx.doi.org/10.1504/IJEF.2009.026358>.

Kitano, Y, Nishio, K, Ujikane, Y, Osanai, K(2014), Deference of the Financial Education in Japan from the Jump\$start in the U.S., *Annals of Society for the Economic Studies of Securities*, No.49, pp298-pp304.

Kurihara, H, Yamane, E, Hotate, M, Miyahara, S, Inose, T, Hattori, S(2014), *Kaigai ni okeru kinyu keizai kyouiku no chousa *kenkyu houkokusyo*, Japan: Japan Securities Dealers Association.

Kusumoto, M(2014), Financial education and teaching materials the foreign currency deposits, *Manabiya Journal of teaching course*, No9, pp1.-pp12.

Matthew Johnson(2008). Technical report No.731. A new approach to internet banking. 2008. University of Cambridge. UCAM-CL-TR-731 ISSN 1476-2986.

Michael, E.W. and J.M. Herbert(2009). *Principles and Practices of Information Security*. Cengage Learning, Indian Edition.

Miyahara, S(2014), Australia ni okeru kinyu keizai kyouiku, H, Kurihara, *Kaigai ni okeru kinyu keizai kyouiku no chousa *kenkyu houkokusyo*(pp.16.-pp.28.), Japan : Japan Securities Dealers Association.

OECD(2012), *OECD/INFE HIGH-LEVEL PRINCIPLES ON NATIONAL STRATEGIES FOR FINANCIAL EDUCATION*, France: OECD.

Olufolabi Osunmuyiwa.(2013). *Online Banking and the Risks Involved*. Research Journal of Information Technology 5(2): 50-54, Maxwell Scientific Organization, 2013.

Study Group on the Promotion of Financial and Economic Education(2014), *Comprehensive Survey of Financial and Economic Education in Japan's JuniorHigh and High Schools*, Japan: Japan Securities Dealers Association.

The Central Council for Financial Services Information(2015), *Financia Education Program(2015 Edited Version)* , Japan: The Central Council for Financial Services Information.

Uzawa, H(2008), *Economic Analysis of Social Common Capital*, United Kingdom: Cambridge University Press.

Virender Singh Solanki(2012). Risks in e-banking and their management. *International Journal of Marketing, Financial Services & Management Research* Vol.1 Issue 9, September 2012,

ISSN 2277 3622.

Yanata.S, Ishibashi.K, Nomakuchi.T(2015). *New Development and Innovation of Financial Education in Japan*, END2015 Internationalconference on Education and New Developments Proceedings, pp. 416-420, June 2015,