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Financial Literacy – A Traditional, Yet New Field for Business Educators

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Abstract

It is the objective of this paper to explore the definitions of financial education, as well as of financial literacy, in order to reveal the many dimensions that these terms comprise. Furthermore, the paper is intended to present, analyze, and discuss recent empirical research findings on various dimensions of financial literacy in an international context. The paper is concluded by summarizing the most important implications for future work and future research and development in this field.

Problem Statement

In 2012, UN General Secretary Ban-Ki Moon wrote in his letter to the Child & Youth Finance International organization, "I strongly support helping young people gain greater financial literacy as well as access to better services that will lead the way to employment, entrepreneurship and investing opportunity." About one year later, on March 19, 2013, EU-Commissioner Tonio Borg held a speech at a conference on financial education at the European Savings Bank Group and stated "from surveys run by the European Commission we found that 45% of Europeans could not calculate 6% of a 50,000 Euro loan. (…) There is therefore a need to build up awareness and empowerment of consumers, to enable them to make the choices best suited to their needs and circumstances. Financial education is one way towards achieving this."

Citations like these show that financial literacy has become a central issue in politics as well as in research. In modern economies, people find themselves in an increasingly globalized, complex, and risky marketplace. Consequently, it has become more and more important for everyone to be able to deal reasonably with money and to make sound decisions in financial matters. Unfortunately, recent research has shown that all around the world there is a considerable number of people who have difficulties to meet these requirements (Atkinson & Messy, 2012; Lusardi & Mitchell, 2011).

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The financial crisis has made the problem evident and drawn the attention of politicians and researchers to the issues of financial literacy and financial education (definitions are given in section 3 of this paper). Financial education is considered to contribute to a person's financial literacy. It seems plausible to assume that the more a person knows about money and investments, interest and compound interest, and savings and loans, the more likely it will be that this person will make well-informed and reasonable decisions. As finance is an important part of business, financial education is a major field of business education. Financial education, teaching how to deal with money competently and how to make reasonable decisions in financial matters, is (and has always been) a field for business educators. Recent research suggests that this field needs much more attention and renewed interest of business educators in order to enhance people's knowledge and support them to become much more financially literate.

What does financial literacy mean; which dimensions of financial literacy are there? What have researchers found out about various dimensions of financial literacy and what can be learned from these findings? Which are the next steps to be taken by business educators who want to work in this field?

Defining Financial Literacy and Financial Education

As with many other complex terms and concepts, there is also no single generally accepted definition of financial literacy. Different researchers and organizations have defined financial literacy in many ways (Hung et al. 2009; Holzmann 2010). Some definitions focus on what people do to manage their financial resources while others – like the definition used by the OECD (2005a, 2005b; OECD/INFE, 2012) – find that financial literacy comprises more than just behavioral aspects. They integrate financial knowledge, skills, attitudes, and behavior, as well as their mutual relationships. This approach is based on the consideration that financial knowledge represents a particularly basic form of financial literacy. Financial knowledge, in turn, is reflected in perceived financial knowledge and influences financial skills that depend on knowledge. Actual financial behavior, in turn, depends on all three (actual knowledge, perceived knowledge, and skills). Finally, the experience gained through financial behavior feeds back to both actual and perceived financial knowledge. Still, the relationships are likely to be imperfect, as each also depends on other factors, internal and external to the individual, like his or her attitudes and resources (Hung et al., 2009).

The idea of considering not only knowledge and behavior but also a person's attitudes is supported by the empirical results of the work of Barry & Breuer (2013). They have shown that there are significant differences in the attitudes of indebted young adults in Germany in comparison to persons of the same age group who are not indebted. Therefore, attitudes complete the picture of a person's financial literacy and need to be assessed when measuring financial literacy (Barry et al., 2013).

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Financial literacy is considered to be the result of financial education, as the definitions of the Child and Youth Finance International group (CYFI 2012) or the OECD definition are pointing out: "financial education is the process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction and/or objective advice, develop the skills and confidence to become aware of (financial) risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being and protection" (OECD 2005a). It is therefore the task of (business) educators to provide information about and enhance understanding of financial matters, to make people reflect on their attitudes and behavior, to help them decide whether they need more information on financial products, and where to find it in order to make sound financial decisions and achieve financial well-being.

Selected Results and Synthesis of Empirical Research on Financial Literacy

There are several research studies on financial literacy in different countries, many of them initiated and analyzed by the OECD, like the recent study "Measuring Financial Literacy" (Atkinson & Messy, 2012). The research design and the findings of this study are consistent with those of most other studies. Therefore, a few results of the "Measuring Financial Literacy" study are selected in order to illustrate the level of financial literacy among people in a range of countries. Each of the 14 participating countries undertook a nationally representative survey using the core questionnaire designed by the OECD and provided a dataset to be analyzed by the OECD. The following questions were used to measure people's level of financial literacy, covering three main areas of financial knowledge: 1) the concept of interest and compound interest, 2) the value of money and inflation, and 3) risk diversification.

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Table 1: Items to measure knowledge of financial matters in the OECD study *Measuring Financial Literacy* (source: Atkinson & Messy 2012) – the correct answers are indicated in bold letters

Area	Items
Division	Imagine that five brothers are given a gift of $1000. If the brothers have to share the money equally, how much does each one get? [Open response. The correct answer is **$200**]
Time-value of money	Now imagine that the brothers must wait for one year to get their share of the X. In one year's time will they be able to buy: Multiple choice: a) More, b) the same amount, or c) **less than they could buy today.**
Interest paid on a loan	You lend X to a friend one evening and he gives you X back the next day. How much interest has he paid on this loan? [Open response. The correct answer is **0**]
Calculation of interest plus principle	Suppose you put $100 into a savings account with a guaranteed interest rate of 2% per year. You don't make any further payments into this account and you don't withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made? [Open response. The correct answer is **102 $**]
Compound interest	And how much would be in the account at the end of five years? Would it be: a) **More than $110** b) Exactly $110 c) Less than $110 d) Or is it impossible to tell from the information given
Risk and return	An investment with a high return is likely to be high risk [**True**/False]
Diversification	It is usually possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares [**True**/False]

In none of the 14 participating countries – not even in well-developed countries like Germany or the UK – more than 70% of the respondents were able to give the correct answer to at least six of the eight questions. In many countries less than 50% were able to do so. The results in table 2 show that most respondents were able to get the division right (except the respondents in Norway) and most respondents are also familiar with the concepts of inflation and the time value of money. It is much more difficult for people to calculate the amount of interest (for exactly one year) and to apply the concept of compound interest. Additionally, most respondents do not have a clue in which way diversification contributes to minimizing financial risk.

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Table 2: Percentage of respondents who were able to give the correct answers (source: Atkinson & Messy 2012)

	Division	Time value of money	Interest paid on loan	Calculation of interest plus principle	Compound interest and correct answer to previous question	Risk and return	Definition of inflation	Diversification
Albania	89%	61%	n.a.	40%	10%	77%	81%	63%
Armenia	86%	83%	87%	53%	18%	67%	57%	59%
Czech Republic	93%	80%	88%	60%	32%	81%	70%	54%
Estonia	93%	86%	84%	64%	31%	72%	85%	57%
Germany	84%	61%	88%	64%	47%	79%	87%	60%
Hungary	96%	78%	95%	61%	46%	86%	91%	61%
Ireland	93%	58%	88%	76%	29%	84%	88%	47%
Malaysia	93%	62%	93%	54%	30%	82%	74%	43%
Norway	61%	87%	61%	75%	54%	18%	68%	51%
Peru	90%	63%	n.a.	40%	14%	69%	86%	51%
Poland	91%	77%	85%	60%	27%	48%	80%	55%
South Africa	79%	49%	65%	44%	21%	73%	78%	48%
UK	76%	61%	90%	61%	37%	77%	94%	55%
British Virgin Islands (BVI)	84%	74%	60%	63%	20%	83%	87%	41%

The OECD survey also comprised some questions on the respondents' attitudes towards dealing with money and their (self-assessed) actual behavior in financial situations. Most respondents indicated that they only make purchases after careful consideration and those they usually do not need a credit card in order to be able to pay for their everyday purchases, but only a minority of the respondents keep track of their expenses and make long-range plans. Just very few respondents seek comprehensive information and advice when selecting financial products (Atkinson & Messy, 2012).

In every country, there is a positive correlation between the respondents' level of financial knowledge and their self-assessed behavior of managing their finances. There is also a positive correlation between the attitude to make plans and financially literate behavior. Of course, these correlations do not prove, but might indicate causal relationships. It seems plausible that people who are knowledgeable about

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money and financial matters are interested in learning even more about financial products and economic development. Consequently, their decisions are based on more information and more careful and critical consideration. They gain first-hand experience in dealing with money and making sound decisions which is again reflected in a more profound knowledge base.

Lusardi & Mitchell (2011) have found similar results in their international studies. A synthesis of their recent research studies has also shown that people in developing and rapidly changing countries such as Russia, as well as in industrialized and well-developed countries like Germany or the UK, lack important knowledge on how to deal with money competently and to make sensible financial choices and plans.

Nevertheless, there are some factors that seem to be conducive to higher financial literacy. To some extent, financial literacy can be predicted by demographic factors as well as by income (Hung et al., 2009). Men usually have higher scores on assessments of financial literacy and rank higher in their self-evaluations than women. More educated people usually are better informed although higher education is no guarantee to make sound financial decisions (Lusardi & Mitchell, 2011). Accordingly, Lusardi and Mitchell (2006 and 2007) find that older adults who displayed better financial knowledge were more likely to plan, to succeed in planning, and to invest in complex assets.

However, there are no consistent findings on the research question whether financial education has a direct impact on financial literacy or not. There are just a few studies that have been able to construct sophisticated measures of financial literacy and definitively establish causal links between financial education, literacy, and behavior. Many studies on financial literacy did not collect sufficiently detailed information on individuals' financial education and variables related to financial decision-making (Hung et al., 2009).

A recent study carried out at the University of Munich has found encouraging results. In a field experiment evaluating the impact of financial literacy training on high school teenagers aged between 14 and 16, researchers measured little interest in financial matters and low levels of self-assessed knowledge in both treatment and control groups before the training. After the training, teenagers in the treatment group exhibited a significant increase in their interest in financial matters, their self-assessed knowledge, and in some dimensions of their actual financial knowledge. According to their self-assessment, the students are less prone to impulse purchases and more likely to save money. These results suggest that teenagers can be influenced towards being more responsible and reflective consumers (Lührmann et al., 2012).

Summary and Implications for Future Work

Several international studies like those presented in Section 4 of this paper have revealed that the majority of people lack profound and comprehensive knowledge of financial matters. Most of them have difficulties to understand and apply the concepts of compound interest and risk diversification. Some people are not able to calculate the amount of interest for a given amount of money and a certain time. Many people indicate that they do not keep track of their expenses and do not plan which is consistent with highly alarming statistics on bankruptcy of businesses as well as of private individuals.

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Obviously, educational systems all over the world have failed to help people gain financial literacy. To explore and identify these shortcomings and to develop and evaluate programs for the improvement of financial literacy will therefore be very ambitious, yet important challenges for business educators soon.

First, more empirical research is needed to gain a deeper understanding of financial knowledge, attitudes, and behavior and how these dimensions of financial literacy are interrelated. It has not been explored yet in which way knowledge, attitudes, and behavior influence each other and which dimension is important to stimulate another. Recent findings of habit formation and learning in children need to be considered (Whitbread & Bingham, 2013). It also seems desirable to learn more about the impact of (different kinds of) financial education on financial literacy. There is just a very small number of evaluation studies and it is not known how effective most of the programs really are.

Secondly, business educators need to analyze curricula and learning objectives as well as evaluate programs for teaching financial matters. Integrating financial education into the curricula – as it has been recently done in the UK – is the most effective way to reach a large portion of the population. Financial education should start at an early stage at (primary) schools. These students have their first pocket money at their disposal and make their first (small) purchases. They have a lot of wishes and need to learn the concept of saving money and of spending it only after careful consideration. Financial education should be continued on to secondary level as well as in higher education when students do not only have their pocket money at their disposal but also money they have earned themselves. Many of them have bank accounts and bank cards, so it has become easier to spend money. Very often parents do not discuss financial issues at home or do not involve their children – regardless of their age – in their financial considerations and decisions. Therefore, many students (at all levels of schooling) have no financial education at home. Therefore teachers should be able to teach these matters at school and help their students become more financially literate. It is also the task of business educators to provide adequate material and programs to support effective financial education.

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