Student Teachers' Capacity and Willingness to Teach Financial Literacy in Flanders

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The purpose of this article is to assess the student teachers' capacity and willingness to teach financial literacy in Flanders via on-site paper surveys of 368 final-year teacher education students. We argue that the Flemish teacher education program needs to be revised to introduce financial education in secondary schools. We find that revisions to the program can improve student teachers' capacity and increase their willingness to teach for financial literacy. Moreover, student teachers support such reforms. Thus, policymakers and researchers can use this article as a guideline for revising teacher education programs with respect to financial education.

Keywords: financial attitude, financial behavior, financial knowledge, financial literacy, student teacher, teacher education

Financial literacy is often incorrectly equated with financial knowledge (Huston, 2010), with the terms wrongfully used as synonyms. Financial knowledge does play an important part in financial literacy, although the latter includes much more than just knowledge. Huston (2010) combines several definitions of financial literacy into one: "Measuring how well an individual can understand and use personal finance-related information" (p. 306). The Organisation for Economic Co-operation and Development and the International Network on Financial Education (OECD INFE, 2011) defines financial literacy as the necessary combination of consciousness, knowledge, skills, attitudes, and behaviors to make wise financial decisions and achieve individual financial well-being.

An increase in financial knowledge leads to a positive change in financial behavior and an improvement of an individual's financial well-being (Huston, 2010). Lusardi and Mitchell (2011) have shown that financial literacy has a major influence on whether an individual establishes a private pension plan, thus securing his or her future financial well-being. However, most people, particularly youth, tend to have a low level of financial knowledge. For example, Danes, Huddleston-Casas, and Boyce (1999) argue that teenagers have insufficient financial knowledge and are thus poorly prepared to enter the financial world.

The following recent studies support the current landscape of youth financial literacy. Bowen (2002) found significant relationships between the teens' and parents' money knowledge. Varcoe, Martin, Devitto, and Go (2005) indicate that using the curriculum improves the financial literacy of high school students. Danes and Haberman (2007) found that male teens reinforce their existing knowledge, whereas female teens learn significantly more about finances in areas in which they are unfamiliar with prior to the curriculum. Koonce, Mimura, Mauldin, Rupured, and Jordan (2008) found that setting financial goals and saving some or all of their earnings is associated with obtaining more financial information from parents, whereas having spending plans is associated with using the media/Internet as information sources. McCormick (2009) explores the state of youth financial education and policy, including definitions and measures of effectiveness, reports on impact data and best practices, and highlights some controversies. Lusardi, Mitchell, and Curto (2010) show that financial literacy is low; fewer than one third of young adults possess basic knowledge of interest rates, inflation, and risk diversification. Financial literacy is strongly related to sociodemographic characteristics and family financial sophistication. Zick, Mayer, and Glaubitz (2012) found that in response to the Great Recession, the older cohorts among university employees were more likely to have sought advice from a financial planner but were less

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http://dx.doi.org/10.1891/1052-3073.28.2.313

likely to have increased time spent educating themselves about financial topics. Older cohorts were also less likely to be saving more for retirement and more likely to be delaying retirement compared to the youngest cohort. The youngest cohort members were relatively more likely to be confident that they will have sufficient funds to live comfortably after retirement. Older cohorts responded to the Great Recession by seeking safety for their retirement assets, and they resigned themselves to working longer before retirement. Kim and Chatterjee (2013) reveal that childhood financial socialization experiences are positively associated with the beneficial financial practices and financial asset ownership of respondents in young adulthood. However, financial outcomes were found to vary by types of parental socialization. Respondents who owned bank accounts and had their spending monitored by parents in childhood were more likely to own financial assets and had more positive attitudes toward personal finance as young adults. Friedline (2014) found that when savings accounts are opened in the children's names earlier in life, either independently from and or simultaneously with accounts in which parents save on children's behalf, this generates a positive effect on the latter young adults' savings account ownership; however, only children's savings account ownership was significantly related to savings accumulation. Mimura, Koonce, Plunkett, and Pleskus (2015) suggest that personal financial information obtained from parents is positively associated with levels of financial knowledge and financial practices, and information obtained from other family members and college courses was positively associated with better financial practices. The findings suggest that parents and college personal finance courses may serve as positive inputs for financial socialization among young adults regardless of their demographic backgrounds.

Moreover, Denhart (2013) notes that because two-thirds of U.S. students who graduate from college have student loan debt, amounting to nearly $27,000 on average, an increasing number of young people are handicapped with long-term repayment difficulties. Debt costs young people time in their savings potential, thus delaying or preventing their ability to buy a home, start a family, open a small business, or access capital.

The following recent studies provide additional insights into young adults' debt behavior. Hayhoe, Leach, Allen, and Edwards (2005) found that attitudes toward credit, money beliefs and behavior, and imagined conversations with parents about credit and debt differ between students with and without credit cards. Jones (2005) found that the majority of incoming college freshmen have already access to credit or have acquired debt. However, most of the students know little about credit, and credit knowledge was not significantly related to debt levels or access to credit/charge cards. Dilworth, Chenoweth, and Engelbrecht (2000) found that parents and their children hold different ideas about financial planning and, specifically, goal setting. An unexpected emphasis on savings was observed among college students, whereas both parents and students de-emphasized debt reduction in their responses. Cha and Weagley (2002) examined which factors influence the decision to borrow and the amount of borrowing for higher education. Current income and asset holdings have generally negative impacts on higher education debt, whereas expected future income increase amounts borrowed. Total grants received have a negative influence on amount borrowed, but a positive influence on the participation decision. Goetz, Mimura, Desai, and Cude (2008) found that students who initially had Helping Outstanding Pupils Educationally (HOPE) Scholarships but lost them are less likely to use recommended financial management practices and have higher credit card as well as student loan debt than students who retained HOPE Scholarships. Kim, Chatterjee, and Kim (2012) indicate that age, gender, race, and work status are associated with the debt burden of young adults. Conversely, closeness to mother and communication, parental resources, and human capital attainment are negatively associated with borrowing behavior. Archuleta, Dale, and Spann (2013) studied the influence of debt on student financial anxiety and found that financial satisfaction, student loans, and gender are associated with financial anxiety. Lim, Heckman, Letkiewicz, and Montalto (2014) found that college students who have had a financial education course, have larger current student loan debt, experience higher levels of financial stress, and have high financial self-efficacy tend to seek help from professionals. Britt, Canale, Fernatt, Stutz, and Tibbetts (2015) found that students more likely to experience financial stress include freshmen, those with low perceived mastery and net worth, and those with median student loan debt as compared to those with no student loan debt.

Young people must be prepared to face a range of financial situations that will influence their future well-being. Consequently, it is important to find a way to improve their financial knowledge at an early stage. One such way is to

teach them about personal finance which requires teachers who are able and willing to do so. In Belgium, the regional authorities are responsible for educational policy. Flanders is the Dutch-speaking regional authority in the northern part of Belgium. The purpose of this article is to assess the student teachers' capacity and willingness to teach financial literacy in Flanders via on-site paper surveys of 368 final-year teacher education students. The contribution of this article is that policymakers and researchers can use this article as a guideline for revising teacher education programs with respect to financial education.

Literature Review and Research Questions

Financial Education

McCormick (2009) argues that providing financial education through schools offers several advantages. For example, it can reach all young people, whereas financial education within the family is highly dependent on socioeconomic factors. Several studies focus on the influence of parental factors on the financial socialization of their children (Bowen, 2002; Dilworth et al., 2000; Friedline, 2014; Kim & Chatterjee, 2013; Mimura et al., 2015). The OECD (2005) contends that "financial education should start at school and people should be educated about financial matters as early as possible in their lives" (p. 3). The OECD considers the financial education of youth a priority and has called for its timely introduction at school. Way and Holden (2009) also argue that financial education has moved from a largely private concern to a national public policy issue. The Flemish government has decided that, from 2010 onward, financial education should be part of secondary education goals (Vlaams Ministerie van Onderwijs en Vorming, Agentschap voor Kwaliteitszorg in Onderwijs en Vorming, 2010; Vlaamse Jeugdraad, 2009). However, if one looks at the current educational goals for Flanders in general, it is hard to find specific goals concerning financial education. Flemish policy on secondary education contains seven cross-curricular goals, including "socioeconomic community." Within this context, one educational goal states that students should be able to manage their own personal budget, suggesting that financial education is only a very small part of the curriculum.

Teacher Preparedness

Despite the growing emphasis on financial education, little attention has been paid to understanding the characteristics and needs of teachers, who are pivotal to the implementation and success of financial education. One should ask whether teachers themselves are sufficiently financially literate to teach personal finance. The educational goals identified as part of Flemish teacher training for secondary schools are divided into 10 contexts, the last of which states that a teacher must be able to develop topical themes and adopt a critical attitude toward five domains (Vlaamse Regering, 2008), one of which concerns socioeconomics. Although student teachers must have basic financial knowledge, there are no specific content goals that student teachers must obtain. To illustrate, based on a large-scale survey of U.S. K-12 teachers, Way and Holden (2009) report that, on average, 39% of teachers consider themselves unable to teach financial literacy, with more than half unsuited to teach more technical topics, for example, risk management and insurance. These U.S. teachers indicate that they feel too insecure, in terms of both knowledge and pedagogy, to teach the subject matter. The authors of this paper assume that this sentiment is widely held around the world.

The result of this real or perceived inadequacy is that only a very limited group of teachers teach financial literacy, a reality that is all the more striking given that 89% of teachers recognize the importance of financial education and think that students should complete a course or pass a test on financial literacy during their secondary education.

Financial Literacy

If one wants to measure financial literacy as a proxy for the capacity to teach personal finance, it is clear that both attitudes and behaviors are of great importance in addition to financial knowledge. This study does not confuse financial literacy with financial knowledge but rather takes a broader approach inspired by the OECD INFE's (2011) definition of financial literacy, the definition articulated in Huston's (2010) meta-analysis and the closely related concept of financial capability (Xiao & O'Neill, 2016).

This article focuses on three main interrelated aspects of financial literacy: financial knowledge, financial attitudes, and financial behaviors. Moreover, consistent with the OECD INFE's (2011) definition of financial literacy, this study also explores whether student teachers are conscious of their own level of financial understanding. Our approach does not investigate the "skill" dimension. Rather, this study characterizes the capabilities and willingness of student teachers to teach financial literacy and pinpoints the implications for student teachers' education.

Research Questions

Four research questions guide this study:

RQ1: Do student teachers have adequate financial knowledge to teach financial literacy?
RQ2: Do student teachers have adequate financial attitudes and behaviors to teach financial literacy?
RQ3: Are student teachers willing to teach financial literacy?
RQ4: Do student teachers support the implications of incorporating financial education into the teacher education program?

Method

Data

Data for the study were collected via on-site paper surveys of 368 final-year teacher education students who expressed their willingness to participate in the study. They were chosen from among the secondary teacher training programs of eight Flemish colleges located in the Dutch-speaking northern part of Belgium. During a separate visit in 2014 to each college, the final-year students were gathered in one classroom to complete the paper survey. All present students completed the survey.

Instrument

In the survey instrument, financial knowledge was evaluated based on 14 questions covering eight themes ("wages and income," "savings," "debt management," "investment," "credit," "insurance," "budget management," and "fraud and scams"). The 14 questions were based on the OECD INFE (2011) survey. The study questionnaire also contained questions, on a 5-point scale, which assessed the financial attitude of student teachers. The students were asked to declare if they disagreed or agreed with several statements about the importance of using money. These questions were based on the work of the OECD INFE (2011) and Sohn, Joo, Grable, Lee, and Kim (2012). The questions assessing the financial behavior of the respondents were based on the work of Van Laere and Vranken (2013) and Mandell and Klein (2009). These questions, also on a 5-point scale, measured the extent to which the students have engaged in certain financial behaviors in the last year, such as active saving, borrowing, or lending money. Finally, the instrument incorporated questions to reveal the personal and socioeconomic background of the respondents, which may play a role in their financial knowledge, attitudes, and behaviors (i.e., gender, parental educational level, graduation level in secondary school).

To answer the other research questions, multiple-choice questions were added. First, student teachers had to evaluate their own financial literacy on a scale from *very good* to *inadequate*. In another section of the survey, student teachers had to indicate which statements fit them best; these statements are related to financial education on the secondary level, the implementation of financial education in secondary education, and their own capability to teach financial education. We tested the questionnaire on a group of 15 student teachers who were not included in the final sample. Based on their comments and questions, we made final adjustments. The complete questionnaire (in Dutch) is available upon request.

Sample Characteristics

The final sample consisted of 141 (38%) males and 227 (62%) females. The average age was 21.5 years. Educational background (in secondary school), especially with respect to economics, may have an impact on the student teachers' financial literacy. Therefore, with respect to their educational background, the respondents are categorized into three groups: student teachers with an economic secondary school diploma (35%), a noneconomic secondary school diploma with at least one economic course (42%), and a secondary school diploma without a single economic course (23%). The respondents are also categorized with respect to their choice of two majors in the teacher education program to be able to investigate whether certain majors influence the ability of student teachers to teach financial literacy. We distinguished between economic majors (i.e., "economics" or "office management"), socioeconomic majors (i.e., "history" or "information technology"), and noneconomic majors. This distinction gave also more insight into curriculum changes that might be appropriate if pursuing remedial education. Furthermore, it was studied whether student teachers differed in their knowledge of various financial themes. As a result, a better view was obtained of the themes for which additional adjustment or support would be appropriate.

Data Analysis

Multivariate analysis was used to determine which variables are connected. The dependent variables were financial knowledge, financial attitude, financial behavior, and

general financial literacy, all of which were examined separately. The independent variables were gender, age, parental educational level, type of secondary school diploma, and teacher education program major.

Results and Discussion

In this section, the results of the survey analysis are reported and discussed in conjunction with the research questions.

RQ1: Do student teachers have adequate financial knowledge to teach financial literacy?

In accordance with the OECD INFE (2012), a participant who answered 75% or more questions correctly was categorized as having a "good" level of financial knowledge, which may be considered a preferred minimum level for teaching personal finance. Students who completed the survey received an average score of 58%, which is under the proposed standard of 75%. Only 16% of prospective students met the proposed standard; the number of students with an excellent result (>85%) was 6%.

Even among those student teachers pursuing an economic major in the curriculum, only 31% demonstrated "good" financial knowledge. Among the other students, this percentage fell to 18% for socioeconomic majors, and 9% for noneconomic majors. The scores of the majority of student teachers were "mediocre" (OECD INFE, 2013), which is regarded as insufficient for teaching financial literacy.

An important message is that the education of student teachers seems to have an impact on their capacity to teach personal finance. To further support this claim, we applied a stepwise multiple regression in which the dependent variable is the financial knowledge score and the independent variables are an educational variable (for the three types of majors in the curriculum) plus control variables (e.g., gender, age, and prior economic education in secondary school). The educational variable is significant (Table 1, $t = 5.38$, $p < .001$), which confirms that student teachers' education has an impact on their capacity to teach personal finance. Only a few student teachers with an economic major demonstrated a low level of financial knowledge because only 4% demonstrated a "bad" (and therefore difficult to remedy) level of financial knowledge. One third exceeded the minimum standard. Most of the student teachers with an economic major scored well across all of the financial themes, except for "wages and income" (with a score of only 34%). They seemed to have mastered the themes of "budget control" (61%) and "fraud" (93%).

In summary, we find that, on average, student teachers have insufficient financial knowledge to adequately teach financial literacy. However, this lack of financial knowledge can be remedied. We also find that financial courses in teacher education have a significantly positive effect on student teachers' financial knowledge, even when we control for other variables in a multivariate setting. We therefore conclude that investing in teacher education with respect to financial knowledge is both required and effective for improving student teachers' financial knowledge to a sufficient level. When separating financial knowledge into various themes (wages and income, savings, debt management, investments, loans, insurance, budget control, and fraud), we find that the subjects "wages and income," "savings," and "loans" are the least known and therefore deserve special attention in the teacher education program.

TABLE 1. Regression Model for Financial Knowledge

	Unstandardized Coefficients		Standardized Coefficients		
Model	**B**	***SE***	**β**	***t***	**Significance**
(Constant)	5.830	.930		6.270	.000
Economic major	1.574	.293	.296	5.381	.000
Economics in secondary school	0.597	.248	.132	2.406	.017
Age	0.094	.042	.110	2.247	.025
Gender	−0.494	.227	−.107	−2.183	.030

Note. $R^2 = .402$; $F = 17.175$; $p < .01$.

RQ2: Do student teachers have adequate financial attitudes and behaviors to teach financial literacy?

Regarding policy implications, it is necessary to analyze the attitudes and behaviors of student teachers with respect to financial-economic issues. Financial knowledge is only one part of financial literacy, along with financial attitudes and behaviors. Together, these three elements provide a comprehensive assessment of student teachers' financial literacy and therefore their capacity to teach the subject.

We measured an average score of 65% for financial behaviors and 57% for attitude, both of which are below the threshold of 75% and thus too low to teach financial literacy. Student teachers therefore lack the proper attitudes and behaviors to set an example for their students. The important policy message here is that financial attitudes and behaviors should have an important role in teacher education in addition to financial knowledge. Moreover, when looking at the correlation between financial knowledge, attitudes, and behaviors, we find that only financial attitudes and financial behaviors are positively correlated ($r = .36$, $p < .01$), meaning that financial attitude is a more important driver for financial behavior than financial knowledge.

We also analyzed financial attitudes with respect to the control variables and found that the educational level is important. We found that lower level student teachers exhibited significantly lower financial attitudes ($t = -3.07$, $p < .01$). The policy message here is that special attention is required for the lower level student teachers, perhaps in the form of a preparatory financial course.

In summary, this study measures, in addition to financial knowledge, financial attitudes and behaviors. We find, on average, that student teachers have insufficient financial attitudes and behaviors to set a good example for their students. Moreover, we find that, from a correlation analysis, attitude is an important driver for sound financial behavior even more so than financial knowledge. It is therefore important that teacher education not only pays attention to financial knowledge but also develops sound financial attitudes, which are even more important for generating sound financial behavior. We find that financial attitudes and behaviors are less among student teachers with a lower level educational background in particular. These student teachers require special attention, such as in the form of preparatory financial courses.

RQ3: Are student teachers willing to teach financial literacy?

To teach financial literacy, student teachers need both the capacity (including proper knowledge, attitudes, and behaviors, which can be remedied in the teacher education program) and a willingness to teach financial literacy. Otherwise, investing in the teacher education program by improving the capacity of student teachers to teach financial education will not find fruition among youth. Therefore, it is important to measure student teachers' willingness to teach financial education before investing in teacher education programs.

To be willing to teach financial education, student teachers must be convinced not only that they have the knowledge and ability to teach personal finance but also that personal finance education is needed in secondary education. We therefore measure student teachers' perceived financial knowledge, their perceived ability to teach financial education, and their beliefs in the necessity of financial education for youth.

Among student teachers, 35% perceived their financial knowledge as good or excellent and only 30% perceived themselves able to teach financial education; however, this percentage is raised to 74% if they receive extra support in their teacher education program. But, most important, 97% affirmed that financial education should be a necessary topic in secondary education. Student teachers are convinced that financial education is important for youth and should be included in secondary education. However, the teachers had low confidence in their own financial knowledge and ability to teach financial education. Student teachers are therefore prepared to teach financial education if they receive extra support through the teacher education program, which will augment their own financial knowledge and improve their ability to teach personal finance.

In summary, teachers must have not only the capacity to teach personal finance (i.e., financial literacy consisting of proper knowledge, attitudes, and behaviors) but also the willingness to teach personal finance. Otherwise, the investments in teacher education to improve the financial literacy of student teachers will not yield the desired personal finance education among youth. Student teachers are already convinced of the importance of financial education for youth, but their belief in their own financial knowledge

and ability to teach financial education is low. Nonetheless, they are prepared to teach financial education if they receive extra support in their teacher education program. So, the investment to include financial education in teacher education will result in more financial education for youth.

RQ4: Do student teachers support the implications for the teacher education program?

In the previous sections, we found that incorporating financial education into the teacher education program is necessary and effective for improving teachers' capacity and willingness to teaching financial literacy to youth. In addition, it is also important that student teachers support the inclusion of financial education into the teacher education program. We therefore measured whether student teachers agree with the statement that the current teacher education program lacks the appropriate amount of financial education, both generally and for certain specific financial topics. We find that 86% of student teachers are not satisfied with the current amount of financial education in the teachers program for any financial topic.

We also asked the student teachers to indicate in order of importance which sources they consult for financial information (parents, friends, school, books, media, Internet sources, job, life experience, government, nongovernmental organization [NGOs], financial agents, or other). We found that "school" ranks only in seventh place, which supports our conclusion that financial education in the teacher education program is too low even for the teachers' personal life, let alone for their ability to teach financial education in schools. We therefore conclude that student teachers will support improvements to the position of financial education in the teachers program.

We elaborated further on the inclusion of financial education in the teachers program by asking student teachers which themes they would like to see in the program. We compared this information with student teachers' financial knowledge across different topics. In general, student teachers believed that all of the topics should be included in the program. More specifically, we see that the small differences in importance correspond well to the differences in their measured financial knowledge. For example, the scores on the topic "wages and income" were the lowest, and student teachers listed this topic as needing the greatest amount of additional education. On the other hand, "fraud," which had the best scores, was in last place in terms of needing additional training. So, we see that student teachers are aware of their areas of knowledge and their corresponding areas of need for additional financial education. This supports the conclusion that student teachers are generally aware of the areas in which they lack adequate financial knowledge and need supplemental financial education.

Student teachers will likely support the introduction of general and thematic financial education into teacher education programs and secondary education. We therefore asked student teachers how they would like to see financial education included in the educational program. The majority of student teachers (66%) support the inclusion of financial topics into existing courses. From a practical point of view, this is an important result because it is also the most logical approach for fitting financial education into an already existing and full program. From a policy perceptive, it is important that student teachers support the most workable approach for incorporating financial education into teacher education programs and secondary education. In summary, incorporating financial education into teacher education programs is not only necessary and effective for improving teacher capacity and willingness but is also supported and considered feasible by the teachers themselves.

Conclusion

This article reveals that the teacher education program needs to be revised to implement financial education in secondary schools in the Flemish education system. By mapping student teachers' financial knowledge, attitudes, and behaviors, this study characterizes student teachers' capabilities and willingness to teach financial literacy. More specifically, we find that (a) student teachers have insufficient financial knowledge and attitudes; (b) financial attitude is the most important driver of financial behavior and therefore needs more appropriate attention in addition to financial knowledge; (c) revising teacher education with respect to financial education would be effective in bringing financial education to youth, as student teachers are convinced that financial education is important and are willing to teach financial topics if they receive support from their teacher education program, which can help them overcome their fears that they lack the necessary knowledge and skills to teach the material; and (d) student teachers support the inclusion of both general and thematic financial education

into the teacher education program and advocate for incorporating financial topics into existing courses, which is the most logical approach.

We find that revisions to the teacher education program are required for improving the capacity and willingness of student teachers to teach financial literacy and that student teachers support these changes. The results of this study provide a basis for educational policymakers to assess the need for additional financial education and to formulate recommendations for improving teachers' educational curriculum and stimulating financial training during the careers of teachers. Other possibilities include promoting opportunities for cooperation between the Flemish government and external organizations such as the financial industry, private initiatives, and financial counselors and planners. The current curriculum of Flemish teacher training for secondary education supports the implementation of financial education (Vlaamse Regering, 2008). Other stakeholders, such as the Flemish minister for education and the Flemish education council (Vlor), which is made up of representatives across the educational, socioeconomic, and sociocultural domain and gives advice to the Flemish minister for education, must also be convinced of the importance of financial education. After all, as Baron-Donovan, Wiener, Gross, and Block-Lieb (2005) demonstrated, with the right financial training, teachers with very different backgrounds can become quality financial educators.

Suggestions for further research are the exploration of other factors relevant in explaining the financial knowledge, attitude, behavior, and literacy of student teachers, and the investigation of how financial education should be implemented in the teacher education program. A shortcoming of this study is the lack of insight into the willingness of the government to consider the suggestions made in this study.

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Acknowledgments. The authors thank Geert Van Campenhout and Jana De Smedt for research support and helpful discussions. Part of this research was executed during Lindsey Verschetze's stay at KU Leuven FEB Campus Brussel.