

Financial Education Attributes and Financial Capability of Emerging Adults

Jing Jian Xiao, University of Rhode Island¹
Nilton Porto, University of Rhode Island²

The effectiveness of financial education is controversial, and calls have been made to change its delivery methods. Still, more recent studies show benefits of financial education for consumer capability and wellbeing. In this study, we take advantage of new information available from the 2018 National Financial Capability Study to examine if several specific financial education attributes such as requirement, hours, and quality can enhance multiple benefits brought by financial education among emerging adults. In this study, financial capability is defined as the ability to apply financial knowledge and perform desirable financial behavior for achieving financial wellbeing. Financial education is defined as educational programs aimed at improving people's money management knowledge and skills. Emerging adults refer to young people aged 18-25. Results of multivariate analyses suggest that different financial education attributes may have different effects on financial capability factors. For example, when all financial education attribute variables and control variables are entered to one multivariate regression model, requirement and hours seem more important to improve objective financial knowledge, and quality seems more important to improve confidence in knowledge, behavior, and perceived financial capability. The findings emphasize the importance of financial education quality in improving financial capability of emerging adults.

Significance

Usually, young adults are defined as people aged 18-35 in consumer finance surveys (e.g., Bricker et al., 2017). In the human development literature, young people aged 18-25 are labeled emerging adults (Arnett, 2000). Emerging adults are in a critical transition period, from being financially dependent on their parents to financial independence (Shim, et al. 2009, 2010; Xiao et al., 2011, 2014). Under the theoretical framework of lifecycle hypothesis, Lusardi and Michell (2014) created a conceptual model of financial literacy and predict that investing in financial education at the young age will have the great potential to improve their financial wellbeing in later life with positive impacts on society as well. Financial behaviors, an important component of financial capability, of emerging adults are associated with their financial wellbeing and overall life wellbeing (Xiao et al. 2009). Financial education attributes such as method of delivery and duration may affect education outcomes in their own unique way. For example, a one-time concise 2.5 hours online financial education course may be more effective on raising financial confidence than knowledge of emerging adults (Atlas et al., 2019). Previous research also examined various aspects of young adults' financial capability and wellbeing (e.g., Henager & Cude, 2016; Kim, et al., 2012; Kim et al, 2019; Mimura et al., 2015; Mottola, 2014). To our knowledge, no comprehensive research with nationally representative data focuses on potential effects of financial education attributes such as course requirement, duration and quality on emerging adults' financial capability. The current study is to fill out this research gap.

This study contributes to the field of financial education in two aspects: 1) This study provides new evidence to show multiple benefits of financial education for enhancing financial capability of emerging adults; 2) Because of new data on financial education attributes such as requirement, hours, and quality are available, this study provides new evidence showing which specific financial education attributes help improve emerging adults' financial capability.

Method

Data used was from the 2018 National Financial Capability Study (NFCS), a representative sample of the American population. We limited the sample to emerging adults aged 18 to 25 who participated in any financial education programs. The data set is publicly available at <https://www.usfinancialcapability.org/downloads.php>. This is the only large scale, nationally representative dataset with several important financial education attribute questions that can be used to

¹ Jing Jian Xiao (xiao@uri.edu), Professor, Department of Human Development and Family Studies

² Nilton Porto (nilton_porto@uri.edu), Associate Professor, Department of Human Development and Family Studies

answer our research question. These new financial education questions include curriculum hours, quality of training, and mandated requirements plus previous existing questions such as the source of financial education: high school, college, workplace, and the military. Further, the dataset includes other consumer finance questions pertinent to our research question such as knowledge, behavior, and capability.

Financial education variables included education sources, requirements, hours, and quality. Among them, requirements, hours, and quality are new variables in the 2018 data set. Wordings of these questions are: Were you ever required to take financial education? yes or no; In total, about how many hours of financial education did you receive? 1-2, 3-10, or more than 10 hours; Overall, how would you rate the quality of the financial education you received? 1 (very low) to 7 (very high). Financial capability variables include objective knowledge, subjective knowledge, desirable financial behavior, and perceived financial capability. An index of financial capability was created by adding Z values of these variables following previous research (Xiao & O'Neill, 2016; Xiao & Porto, 2017).

Table 1
Financial Education Attributes and Financial Capability (Emerging Adults 18-25)

	(1) Objective Financial Knowledge (0-6)	(2) Subjective Financial Knowledge (1-7)	(3) Desirable Financial Behaviors (0-3)	(4) Perceived Financial Capability (1-7)	(5) ZIndex Financial Capability (-9.34 to 5.18)
Whole sample (18-25)	2.0	4.63	1.00	5.05	-1.68
Fin Edu: Required	*	*	*	*	*
Yes	2.4	4.97	1.26	5.28	-0.79
No	1.90	4.49	0.90	4.96	-2.02
Fin Edu: Quality	*	*	*	*	*
1-lowest	1.84	3.84	0.90	4.39	-2.92
2	2.20	3.64	0.77	4.47	-2.90
3	2.25	4.13	0.95	4.67	-2.20
4	2.36	4.40	1.07	4.86	-1.70
5	2.45	4.94	1.18	5.33	-0.82
6	2.66	5.40	1.49	5.73	0.20
7-highest	2.53	5.93	1.41	6.02	0.63
Fin Edu: Hours	*	<i>N/S</i>	<i>N/S</i>	*	*
1-2 hours (n=144)	2.25	4.70	1.15	4.95	-1.42
3-10 hours (n=239)	2.25	5.01	1.19	5.16	-1.01
Over 10 hours (n=552)	2.57	4.95	1.23	5.41	-0.64
Fin Edu: Source					
High School	2.44	4.89	1.21	5.32	-0.85
College	2.70	5.23	0.98	5.66	0.05
Workplace	2.22	5.25	1.50	5.22	-0.52
Military	2.03	5.07	1.57	4.96	-0.88
N	925	925	925	925	925

Source: 2018 National Financial Capability Study

Displaying means between financial education attributes and financial capability variables. Bivariate OLS or one-way ANOVAs used to identify results statistically significant at the 5% level.

Table 2
Multiple OLS Regression Results on Financial Capability Variables

	(1) Objective Financial Knowledge b/se	(2) Subjective Financial Knowledge b/se	(3) Desirable Financial Behaviors b/se	(4) Perceived Financial Capability b/se	(5) ZIndex Financial Capability b/se
Female=1	-0.138 (0.092)	-0.135 (0.082)	-0.046 (0.066)	0.118 (0.104)	-0.158 (0.156)
Income ref: over 100k					
Under Income25k	-0.275 (0.181)	-0.438* (0.174)	-0.587*** (0.133)	-0.303 (0.224)	-1.253*** (0.299)
Under Income50k	-0.245 (0.181)	-0.261 (0.173)	-0.427** (0.135)	-0.037 (0.220)	-0.778* (0.302)
Under 100k	-0.242 (0.186)	-0.217 (0.170)	-0.206 (0.134)	0.185 (0.222)	-0.393 (0.308)
Dependent Child(ren)	-0.540*** (0.103)	0.105 (0.104)	-0.080 (0.081)	-0.010 (0.135)	-0.364 (0.188)
Homeowner	0.015 (0.108)	0.170 (0.093)	0.230** (0.077)	-0.115 (0.128)	0.273 (0.180)
Married=1	0.291* (0.115)	0.044 (0.112)	-0.013 (0.090)	-0.017 (0.144)	0.205 (0.210)
Some College or More	0.166 (0.106)	0.097 (0.093)	0.054 (0.076)	0.213 (0.125)	0.373* (0.181)
Required Fin. Ed.	0.217* (0.101)	0.111 (0.092)	0.023 (0.071)	-0.013 (0.116)	0.241 (0.175)
Duration of Fin. Ed. (ref: 1-2 hours)					
Hours 3-10	0.023 (0.143)	-0.075 (0.125)	-0.121 (0.104)	-0.014 (0.174)	-0.162 (0.236)
Hours over 10	0.266* (0.129)	-0.122 (0.117)	-0.010 (0.094)	0.181 (0.157)	0.197 (0.222)
Quality of Fin. Ed.	0.039 (0.027)	0.382*** (0.030)	0.068*** (0.020)	0.279*** (0.039)	0.557*** (0.053)
Source of Fin. Ed (ref: high school)					
Fin. Ed.: College	0.449*** (0.110)	0.179 (0.092)	0.206** (0.077)	0.283* (0.118)	0.811*** (0.183)
Fin. Ed.: Workplace	-0.215 (0.122)	0.106 (0.104)	0.222* (0.092)	-0.188 (0.150)	0.017 (0.214)
Fin. Ed.: Military	-0.249 (0.177)	-0.238 (0.215)	0.222 (0.142)	-0.320 (0.282)	-0.349 (0.371)
Constant	2.056*** (0.253)	3.171*** (0.270)	1.052*** (0.184)	3.636*** (0.337)	-3.654*** (0.447)
Census Region FE	Yes	Yes	Yes	Yes	Yes
N	925	925	925	925	925

Source: 2018 National Financial Capability Study

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Robust standard errors.

For preliminary analyses, a series of bivariate tests, one-way ANOVA or bivariate regressions depending on measurement levels of independent variables, were conducted. To answer the research question, a series of OLS linear regressions were run and the following model was used:

Financial capability variables = f (financial education variables, control variables).

Results

Table 1 displays the means of financial education attributes in relation to a set of financial capability variables. Stars represent significance tests using bivariate regressions or one-way ANOVAs when appropriate. A few interesting patterns are uncovered. Survey participants from states that require financial education self-report better outcomes in all financial capability variables listed. A similar pattern emerges regarding the quality of the financial education where higher scores are associated with better financial capability outcomes. As the number of hours of financial education increases, scores on objective financial knowledge and perceived financial capability show improvements as well.

A review of the source of financial education shows more nuanced results (factorial ANOVA results not shown). Financial education delivered in the military did not show a significant association with any of the financial capability variables, potentially due to the small sample size of only 52 respondents. Financial education received at the workplace had potential positive impacts on financial behaviors and subjective knowledge but not on the other capability variables. Lastly, when the source of financial education was either high school or college compared to no financial education, there are statistically significant improvements on all financial capability variables.

Table 2 shows the results of ordinary least square (OLS) regressions that include all variables of interest plus demographic controls and limited to our sample of interest, emerging adults aged 18-25 who participated in any financial education programs. The requirement of financial education was positively associated with subjective financial knowledge but not with any other financial capability variables. Financial education programs lasting longer than 10 hours are also positively associated with objective financial knowledge. On the other side of the spectrum, the quality of curriculum is associated with all financial capability variables except for objective financial knowledge. Regarding the source of financial education, college performed the best and had positive correlations with all financial capability variables but subjective financial knowledge.

Conclusions

Quality and the dosage of financial education matters. Results of bivariate analyses of the present study show that emerging adults that have been exposed to (perceived) better financial education display a consistent pattern of better financial capability outcomes in all but objective financial knowledge. These emerging adults feel more confident about both their financial knowledge and capability and perform more desirable financial behaviors. Further, when financial education was required, survey respondents fared well in all the financial capability factors irrespective of taking the requirement or not. It seems to point out to two non-mutually exclusive possibilities: higher levels of financial capability are encouraging the required standards or the requirement is leading to better financial capability. In our sample limited to emerging adults that participated in financial education, 69% of the respondents were required to take financial education. The potential for improvement from those that have not yet taken the necessary training is encouraging. Results of multivariate analyses suggest that different financial education attributes may have different effects on financial capability factors. For example, when all financial education attribute variables and control variables are entered to one model, requirement and hours seem more important to improve objective financial knowledge, and quality seems more important to improve confidence in knowledge, behavior, and perceived financial capability. The findings emphasize the importance of financial education quality in improving financial capability of emerging adults.

Based on multivariate analyses of this study, financial education delivered in college emerges as the frontrunner as the most effective source to financial capability. Respondents that received financial education in college scored better in four out of five financial capability variables (exception being subjective financial knowledge) than those that attended the training during high school. The emerging adults polled on this survey are, clearly, on the customary age range to attend college. In our sample of

emerging adults that have taken financial education, 24% are currently in college while another 24% of the sample are graduates. As such, the positive relationship between college as the source of financial education and financial capability might be due to the immediacy of the training. On the other hand, college is the beginning of independent financial lives and the delivery of financial education at this point might be timely and able to generate the best outcomes.

This study generated findings that benefit consumer financial education policy and practices. The findings provided new evidence on multiple benefits of financial education for financial capability of emerging adults, which will encourage consumer financial education policy makers and educators to devote more resources for financial education. The study identified multiple benefits of financial education that are not only increasing knowledge, but also boosting confidence and encouraging action taking, which will be directly informative for consumer educators in curriculum design and implementation. This study identified the extent to which financial education sources, requirements, hours, and quality are more critical for increasing consumer financial capability with direct implications for curriculum design.

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