

DOLLAR WORKS 2

Impact Evaluation Report

Jean W. Bauer, Seohee Son, Ju Hur, Shirley Anderson-Porisch, Rosemary Heins, Cindy Petersen, Susan Hooper, Mary Marczak, Patricia D. Olson, and Norman Barrett Wiik

ABSTRACT: Dollar Works 2 education is effective for money behaviors, financial satisfaction, and access to financial information when delivered in a six-hour dosage. The impact evaluation study was with community participants who are considered high risk in the financial education field. If financial education can be effective for this population, it will be effective with groups that have fewer problems and tend to seek solutions to their financial problems. This study was conducted during a time when the economic environment was difficult for many people including those who participated in the study. Dollar Works 2 is a personal financial education program that was developed by the University of Minnesota Extension.

BACKGROUND FOR THE STUDY: Many researchers have pointed out that the lack of personal financial knowledge is a major barrier to an individual's sound financial practices (Financial Literacy & Education Commission, 2006). Thus, greater attention has been paid to increase people's financial literacy. Financial literacy education is more important especially with the current economic hard times since research has reported a positive association between financial knowledge and the financial well-being of families (Kim, 2001). One of the problems is that relatively few program evaluations have been conducted compared to the number of financial literacy programs (Financial Literacy & Education Commission, 2006). In addition, little research has examined the long-term effects of financial literacy program on individual and family well-being.

Previous research has reported that financial literacy and experiences are positively related to sound financial behaviors and financial well-being (Financial Literacy & Education Commission, 2006; Hilgert, Hogarth, & Beverly, 2003). Furthermore, researchers assume that there are long-term effects from financial literacy on a community's well-being. They have reported that financial education helps people make sound financial decisions that can lead to families' economic security and well-being, and in turn, a community's economy would be boosted by these economically secured families (Hilgert et al., 2003). Previous studies have reported if quality financial literacy programs could help people increase their financial knowledge and practice sound financial principles, we could expect some long-term effects of the programs such as better family well-being and stronger social networks (Son, Olson, & Bauer, 2009).

DOLLAR WORKS 2: Dollar Works 2 is an updated and revised version of the Dollar Works curriculum originally developed in 1997. The Dollar Works 2 is a financial education program designed to strengthen people's skills at managing their personal finances and taking control of their financial decision making. It is designed to help individuals and families understand basic economic concepts and learn skills to manage income.

The Dollar Works 2 is based on the assumption that personal financial management is a set of skills that must be learned. These skills are essential for long-term success at managing personal finances to achieve goals. Resources are often the basis for decisions in families. Therefore, managing personal finances is influenced by the family's perception of the situation and of how money and other resources can be used to attain goals as well as the ability of the family unit to work to increase financial stability.

One of the updates of the Dollar Works 2 was cultural adaptation. This decision was based on the need of financial education programs for low income and minority populations. The Dollar Works 2 curriculum was revised to have it

culturally adapted for Spanish speaking audiences while still allowing it to be applicable to other cultural groups and learners. English speaking teachers from various groups use the Dollar Works 2 curriculum to deliver training in their native language.

Specifically, the Dollar Works 2 contains twelve independent units that include teaching goals, learning targets, list of terms, action pages, and evaluation tools. In addition, it is designed to help the instructor teach about financial education and strengthen people's personal financial management skills based on the needs of learners. The curriculum of Dollar Works 2 is unique in that it contains Action Pages that take learners from practice to application of financial concepts in their own lives and experiences. It also includes an on-line evaluation.

RESEARCH PURPOSE: The purpose of the Dollar Works 2 Impact Study was to understand the effectiveness of the Dollar Works 2 education for financial literacy. Specifically, the study aimed to understand the impact of the Dollar Works 2 curriculum at individual, family, and community level, in financial knowledge and money management behaviors.

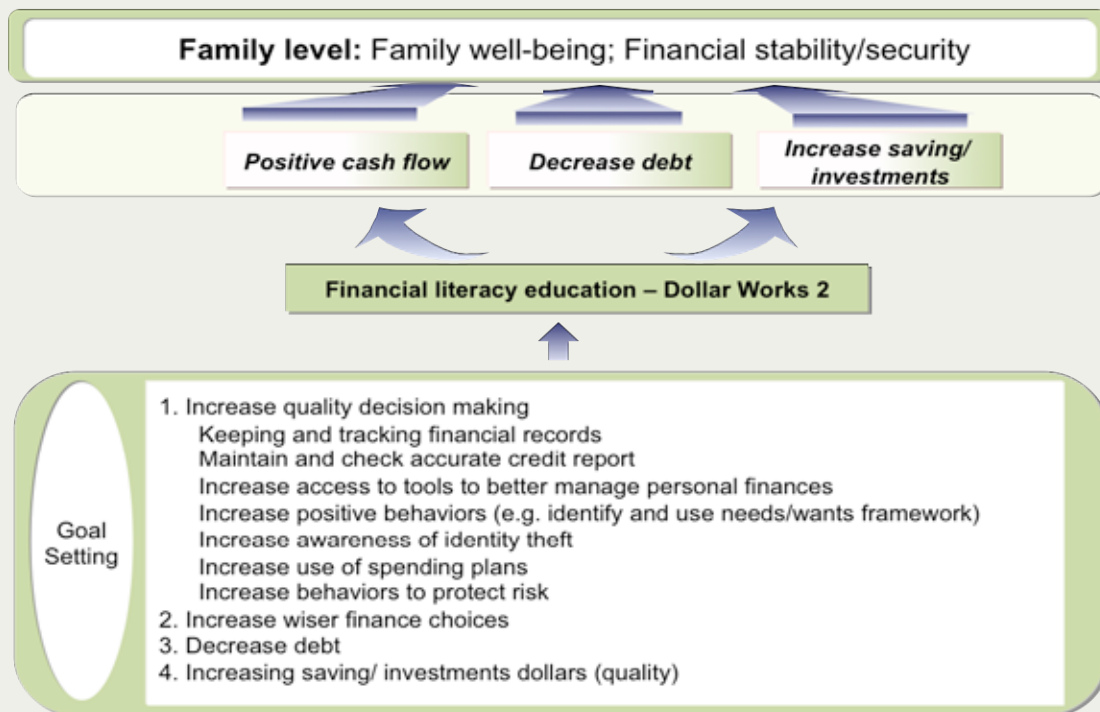


Figure 1. Conceptual Framework

RESEARCH DESIGN:

Methods. A quasi-experimental design was employed with treatment group and control group. At the beginning of the study both groups were given the Dollar Works 2 Impact Evaluation survey to complete. The treatment group then completed six hours of education using the Dollar Works 2 curriculum over the course of two to three sessions. Once the treatment group completed the education, both treatment and control groups completed the same survey a second time. Then the control group received the Dollar Works 2 education. Finally, two months after the control group completed the education, both treatment and control groups were asked to complete the survey a third and final time.

Issues of research design. Schreiner, Clancy, and Sherraden (2002) reported on the effectiveness of increased time spent in financial education programs. In the study, they provided general financial education to people who participated in Individual Development Accounts program and assessed their savings amounts after the educational program.

According to Schreiner and colleagues, participants' average monthly net deposits steadily increased as the participants spent one to eight hours in the lessons, but the increasing rate of the net deposits leveled off after 9 to 16 hours and above. The Dollar Works 2 study chose to have a six-hour dosage test. Therefore all of the findings should be viewed with six hours of teaching as the standard for the groups.

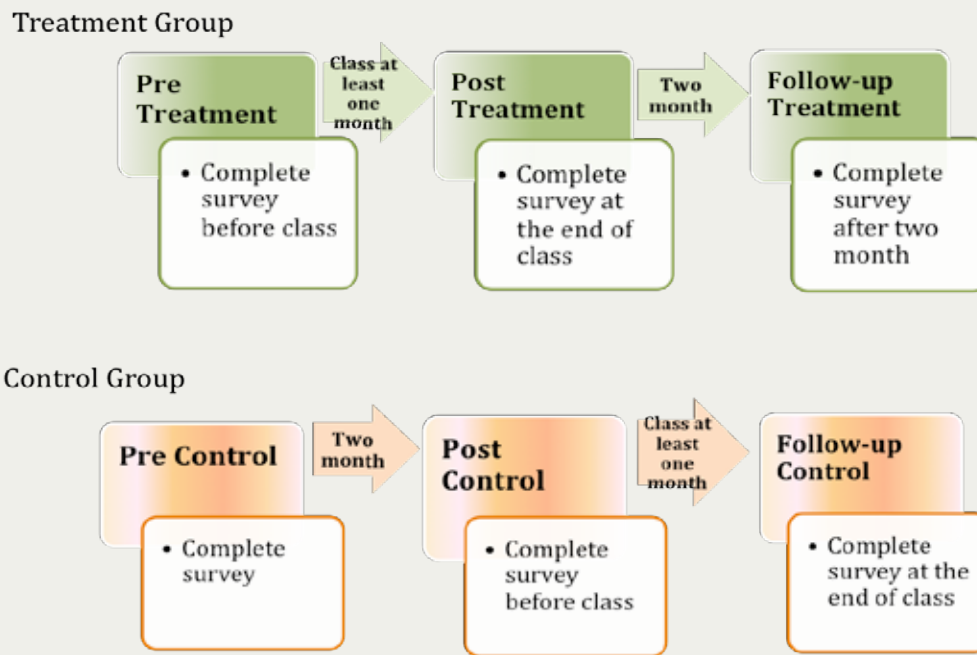


Figure 2. Dollar Works 2 Impact Study Design

Characteristics of participants. A total of 127 participants completed a pre-survey; both pre-treatment (n=69) and pre-control (n=58) groups. As time elapsed, however, some participants were lost. In the treatment group, 53 completed the post-treatment survey and 52 completed the follow-up survey; and for the control group, 45 completed the post control survey and 39 completed the follow-up. Overall, the participants could be characterized as “high risk,” “low-income” population. Some specific characteristics of the participants:

- 62% rented a house or apartment; 23% owned house with mortgage
- 59% were currently receiving or received government assistance in health insurance (Medical Assistance, U Care, Minnesota Care) and 14% had no health insurance
- 54% of the participants were currently receiving or received in the past year food support (Food Stamps or Supplemental Nutrition Assistance Program, SNAP)
- 50% indicated that they do not save at all, and all money was spent
- 50% lived alone; 33% lived with spouse/ partner; and 14% lived with someone family member or roommate(s) (other than family member) sharing living expense
- 59% were female; 52% were male
- 32% were African American; 4% American Indian; 10% Hispanic/Latino; 50% White/Caucasian; and 4% Bi-racial
- Low employment rate (Figure 3 on the next page)

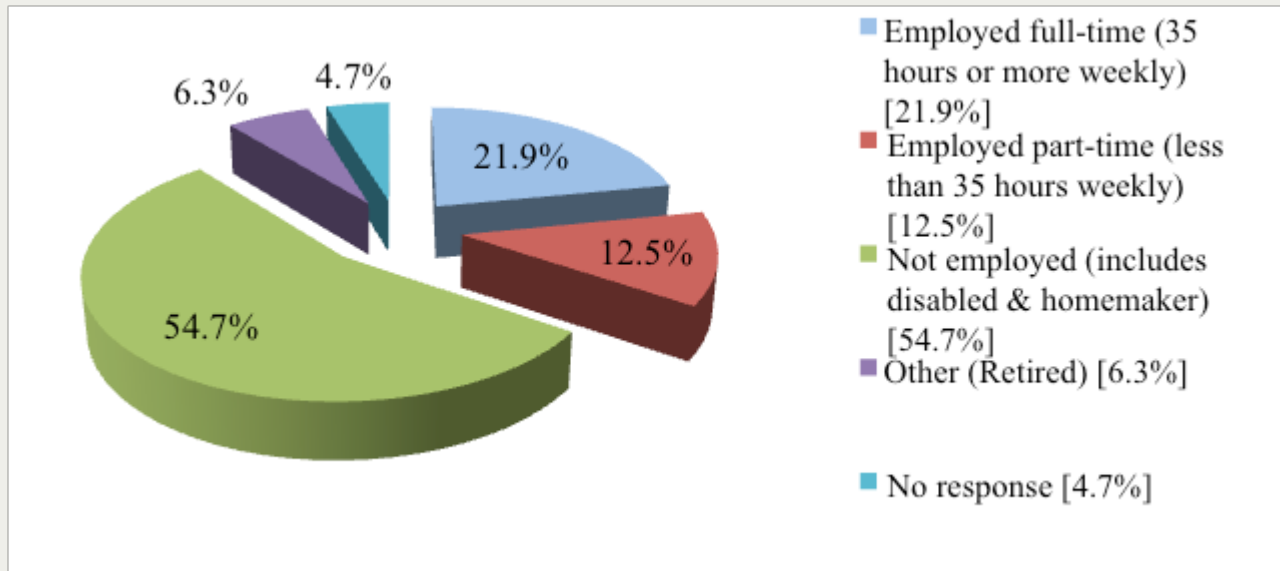


Figure 3. Employment Status of the Participants

Survey instrument. The Dollar Works 2 survey, entitled Money Management Survey was developed to measure financial behavior, knowledge, and attitudes. The survey consisted of 12 pages of questions around these topics. Five major areas of financial literacy were measured. They are money behavior, financial knowledge, access to financial information, financial satisfaction, and intention to change financial behaviors. First, money behavior was measured and analyzed with 26 items with the responses from 1 (strongly disagree) to 5 (strongly agree). These money behavior items consisted within six dimensions; spending, saving, debt, consumer information, financial institution, and pay statement. Second, financial satisfaction was assessed with five items. The responses were from 1 (very dissatisfied) to 5 (very satisfied). Third, participants’ behaviors regarding access to financial information were measured using 11 items and coded as “yes” or “no.” The scores ranged from 0 to 11 with higher numbers indicating that they were more likely to access financial information from reading sources, various forms of media, friends, family, and service organizations. Fourth, financial knowledge was measured with seven items summed to create a scale. These items were around bill payment, credit rating and report, checking account behavior, savings interest, and emergency savings. Finally, 10 questions were asked to measure participants’ intention to change financial behaviors. The responses were coded from 1 to 5, and higher scores indicate more likely to change their financial behaviors compared to lower scores. These questions were modeled after a transtheoretical model of behavior change commonly used in financial education (Bauer & Son, 2009; Khaw & Hardestry, 2007; Shockey & Seiling, 2004; Xiao et al., 2001).

FINDINGS - EFFECTIVENESS OF DOLLAR WORKS 2 FINANCIAL LITERACY EDUCATION:

Prior to financial literacy education. A test was conducted of the groups prior to any education. We would expect to find no significant differences between the pre-treatment group and the pre-control group at the beginning before any education with the Dollar Works 2 curriculum. Table 1 on the next page displays the findings.

In measuring the entire money behavior scale, two sub-categories, we found a difference. The use of financial institutions behavior—meaning whether they have money in a bank or credit union account, they select a bank or credit union for their money, and they balance their checkbook. There was a difference on these behaviors. At the beginning of the study, the treatment group had 35% without a checking account at either a bank or credit union, and 44% without a savings account.

The other money behavior sub-category was pay statement. There was a difference between the treatment and control groups. Getting a check from employment would allow an individual to have a chance at understanding a pay statement. In the beginning of the study, 41% of the treatment group was not employed and 71% of the control group was not employed.

Table 1. Pre-test Comparison for Differences in Beginning Financial Literacy (N=127, Treatment n=69; Control n=58)

Financial Literacy	Mean scores	SD	Difference in mean scores (t-test)
Entire money behavior			
<i>Treatment</i> n=54	3.28	.76	.810
<i>Control</i> n=40	3.15	.77	
Spending			
<i>Treatment</i> n=67	3.46	1.01	.171
<i>Control</i> n=50	3.43	.97	
Saving			
<i>Treatment</i> n=65	2.78	1.03	.876
<i>Control</i> n=55	2.62	.97	
Debt			
<i>Treatment</i> n=64	3.20	1.08	.801
<i>Control</i> n=53	3.04	1.10	
Consumer information			
<i>Treatment</i> n=68	3.95	.78	.618
<i>Control</i> n=54	3.87	.67	
Financial institution			
<i>Treatment</i> n=63	3.27	1.26	2.47*
<i>Control</i> n=54	2.70	1.23	
Pay statement			
<i>Treatment</i> n=62	3.73	.94	2.24*
<i>Control</i> n=54	3.31	1.07	
Financial satisfaction			
<i>Treatment</i> n=67	2.62	1.05	.140
<i>Control</i> n=56	2.49	1.05	
Access to financial information			
<i>Treatment</i> n=62	7.58	2.83	.503
<i>Control</i> n=54	7.30	3.26	
Financial knowledge			
<i>Treatment</i> n=63	6.16	.85	2.29*
<i>Control</i> n=48	5.69	1.07	
Intention to change behaviors			
<i>Treatment</i> n=69	3.20	.90	.882
<i>Control</i> n=58	3.05	1.06	

Note. * = p ≤ .05

Immediately following Dollar Work 2 education. Right after the Dollar Works 2 education was finished we measured their financial literacy in relation to money behaviors (Table 2). We would hope to see that education made a difference. If we look at all money behaviors together, it did not make a difference. However, it did for three sub-categories of the entire money behavior scale, spending, consumer information, and pay statement. These behaviors are built on all the information and activities within the curriculum. So this is a reasonable finding for at the end of the education session. Financial institution is still not significant as it was prior to any education (Table 1). The saving and debt are items are understandable since it takes time to express the behavior. No time was involved since this measure was at the end of the session.

Table 2. Post-test Comparison (N=98, Treatment n=53; Control n=45)

Financial Literacy	Mean scores	SD	Difference in mean scores (t-test)
Entire money behavior			
<i>Treatment</i> n=41	3.49	.80	1.96
<i>Control</i> n=39	3.16	.68	
Spending			
<i>Treatment</i> n=51	3.71	.79	1.99*
<i>Control</i> n=45	3.37	.85	
Saving			
<i>Treatment</i> n=48	2.92	1.05	.990
<i>Control</i> n=43	2.71	.93	
Debt			
<i>Treatment</i> n=50	3.43	1.00	1.80
<i>Control</i> n=44	3.03	1.13	
Consumer information			
<i>Treatment</i> n=52	4.22	.60	3.05*
<i>Control</i> n=43	3.59	1.24	
Financial institution			
<i>Treatment</i> n=51	3.31	1.53	1.36
<i>Control</i> n=43	2.91	1.28	
Pay statement			
<i>Treatment</i> n=50	3.82	.97	2.19*
<i>Control</i> n=44	3.39	.91	
Financial satisfaction			
<i>Treatment</i> n=52	2.82	1.14	.882
<i>Control</i> n=44	2.61	1.19	
Access to financial information			
<i>Treatment</i> n=49	6.41	2.76	-1.48
<i>Control</i> n=42	7.38	3.42	
Financial knowledge			
<i>Treatment</i> n=46	6.09	1.03	.478
<i>Control</i> n=40	5.98	1.14	
Intention to change behaviors			
<i>Treatment</i> n=53	3.29	1.08	.249
<i>Control</i> n=45	3.24	1.10	

Note. *= p ≤.05

Effectiveness of financial literacy curriculum. To measure the effectiveness of the Dollar Works 2 Curriculum a comparison of completely before any education (pre-) to following the education (post-) is necessary (Table 3). It is a pre-test and post-follow up for the combined sample of the control and treatment groups. If the pre- to post- shows a significant difference for both groups, then the Dollar Works 2 curriculum for the 6 hours of education is effective. The entire money behavior scale and some of the sub-categories show effectiveness. Saving and consumer information contributes to the effectiveness of money behaviors.

Spending, debt, and pay statements do not contribute to the entire money behavior scale with the pre-to post-tests. Experience with work may have some influence on the need to know and behaviors related to pay statements. At the end of the study, 45% of the treatment group was not employed (an increase from the beginning of those not employed) and 51% of the control group of were not employed (a large decrease from the beginning of those not employed). More testing is needed to determine the relationship between spending, debt, and pay statements and the entire money behavior.

Table 3. Comparison between Pre-test and Post-test with Combined Sample of Treatment and Control (N=219, Pre-test n=127; Post-test n=92)

Financial Literacy	Mean scores	SD	Difference in mean scores (t-test)
Entire money behavior			
<i>Pre-test</i> <i>n=94</i>	3.22	.77	-2.48*
<i>Post-test</i> <i>n=72</i>	3.51	.72	
Spending			
<i>Pre-test</i> <i>n=117</i>	3.45	.99	-1.58
<i>Post-test</i> <i>n= 88</i>	3.66	.96	
Saving			
<i>Pre-test</i> <i>n=120</i>	2.71	1.00	-2.35*
<i>Post-test</i> <i>n= 85</i>	3.04	1.00	
Debt			
<i>Pre-test</i> <i>n=117</i>	3.13	1.09	-1.93
<i>Post-test</i> <i>n= 86</i>	3.42	1.01	
Consumer information			
<i>Pre-test</i> <i>n=122</i>	3.91	.73	-2.29*
<i>Post-test</i> <i>n= 91</i>	4.24	1.31	
Financial institution			
<i>Pre-test</i> <i>n=117</i>	3.01	1.28	-1.55
<i>Post-test</i> <i>n= 87</i>	3.31	1.49	
Pay statement			
<i>Pre-test</i> <i>n=116</i>	3.53	1.02	-1.70
<i>Post-test</i> <i>n= 87</i>	3.77	.99	
Financial satisfaction			
<i>Pre-test</i> <i>n=122</i>	2.51	1.04	-2.58*
<i>Post-test</i> <i>n= 88</i>	2.90	1.14	
Access to financial information			
<i>Pre-test</i> <i>n=116</i>	7.45	3.03	2.49*
<i>Post-test</i> <i>n= 86</i>	6.34	3.28	

Financial knowledge				
<i>Pre-test</i>	<i>n=111</i>	5.96	1.05	-.279
<i>Post-test</i>	<i>n= 80</i>	6.00	1.17	
Intention to change behaviors				
<i>Pre-test</i>	<i>n=127</i>	3.13	.99	-1.30
<i>Post-test</i>	<i>n= 92</i>	3.30	1.01	

Note. *= $p \leq .05$

FINANCIAL SATISFACTION: In this study of the effectiveness of Dollar Works 2 Curriculum for financial literacy, we included a measure of financial satisfaction. In the beginning there was no difference between the treatment and control group in their current financial situation, the way they use resources, amount of money able to save, the amount of current debt, and the extent to which they can control their financial situation (Table 1). Likewise, immediately following the Dollar Works 2 education session, there was no difference (Table 2). Financial satisfaction was significantly different between pre-test and post-test after the education session (Table 3).

People who are satisfied with their financial situation will be more in control of their finances. This includes the resources they have, the savings, and the level of debt. Financial satisfaction has been studied by many people and it is important to financial literacy.

ACCESS TO FINANCIAL INFORMATION: The score of access to financial information at post test is lower than the score at pre-test. It shows a different pattern from financial satisfaction. Given the education dose of six hours with the Dollar Works 2 curriculum people express they have more access to financial information.

FINANCIAL KNOWLEDGE: The pre-test survey, prior to any financial literacy education found financial knowledge to be significant (Table 1). It is possible that people know considerable financial knowledge prior to coming to class. The comparisons were made for the Pre-test to Post-test (Table 2) and the comparisons made before any education (pre) to following up after the education (Post-follow-up) in Table 3, were not significant. This finding is not unusual. Sometimes people think they know something, only to learn that after education, they did not know as much as they thought they knew. We suspect this is the situation. However, further testing of this concept is needed.

INTENTION TO CHANGE BEHAVIOR: This study adapted a measure developed at Ohio State University (Shockey & Seiling, 2004) to measure what the person is currently doing in relation to financial behavior and what they intend to do in the future to change. In this preliminary analysis, it did not show that financial literacy education made a difference in the intent to change behavior for the community groups. However, the mean response was a solid “I plan to do it within a month” for all the items we asked about. Also, people voluntarily came to the training sessions and we believe this shows intention. Therefore, we need to ask questions to better understand what this means. How much change can we expect with limited income individuals? Given the current economic impact and situation that surrounded this study, can we expect similar pattern of change that other studies have found? Or, what does a change in behavior mean for those not employed? More work on this measure is needed in the future for us to understand some of the questions we are asking.

CONCLUSION: Dollar Works 2 education in a dose of six hours is effective for improvement of financial literacy. Money behaviors change and financial satisfaction increases along with access to financial information following the educational session. This study was designed to test the effectiveness of the Dollar Work 2 curriculum available from University of Minnesota Extension, Family Development Center. The sample was educational classes in both urban and rural communities with higher risk and lower income persons. The study was conducted during a declining economic environment the fall, winter, and spring of 2009-10.

We believe if Dollar Works 2 education is effective for the existing community groups that are low-income with higher risk factors; it should be even more effective for other income and diverse groups.

REFERENCES:

- Bauer, J.W. & Son, S. (2009, March). Transtheoretical theory of change: Model for financial education research. University of Minnesota Extension Family Development Center Professional Development Conference, Nisswa, MN.
- Financial Literacy and Education Commission (2006). Taking ownership of the future: The national strategy for financial literacy. Retrieved from <http://www.mymoney.gov/pdfs/ownership.pdf>
- Hilgert, M. A., Hogarth, J. M., & Beverly, S. G. (2003). Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin*, 89, 309-322.
- Kim, J. (2001). Financial knowledge and subjective and objective financial well-being. *Consumer Interests Annual*, 47, 1-3.
- Khaw, L., & Hardesty, J. L. (2007). Theorizing the process of leaving: Turning points and trajectories in the stages of change. *Family Relations*, 56, 413-425.
- Schreiner, M., Clancy, M., & Sherraden, M. (2002). Saving performance in the American Dream Demonstration: A national demonstration of Individual Development Accounts. Retrieved from http://www.community-wealth.org/_pdfs/articles-publications/individuals/report-schreiner.pdf
- Shockey, S.S. & Seiling, S.B. (2004). Moving into action: Application of the transtheoretical model of behavior change. *Financial Counseling and Planning*, 15(1), 41.-52.
- Son, S., Olson, P.D., & Bauer, J.W. (2009, March). Evaluation of Financial Education Programs. University of Minnesota Extension Family Development Center Professional Development Conference, Nisswa, MN.
- Xiao, J. J., O'Neill, B., Prochaska, J. M., Kerbel, C., Brennan, P., Bristow, B. (2001). Application of the transtheoretical model of change to financial behavior. *Consumer Interest Annual*, 47, 1-9.

AUTHOR AFFILIATIONS:

All are associated with the University of Minnesota Extension, Family Development Center in some capacity.

Jean W. Bauer, Extension faculty, Family Social Science Department, UM campus; Seohee Son, Ph.D. candidate graduate assistant (2008-2010), currently a lecturer at Sookmyung Women's University, South Korea; Ju Hur, Ph.D. candidate graduate assistant; Shirley Anderson-Porisch, Extension Educator, Marshall, MN Regional Office; Rosemary Heins, Extension Educator, Andover, MN Regional Office; Cindy Petersen, Hutchinson, MN Regional Office; Susan Hooper, Extension Educator, Scott and Carver Counties; Mary Marczak, Program Research and Evaluation Leader; Patricia D. Olson, Program Leader; Norman Barrett Wiik, M.S. graduate student intern.



UNIVERSITY OF MINNESOTA EXTENSION

© January 6, 2011, Regents of the University of Minnesota. All rights reserved. Send copyright permission inquiries to:

Copyright Coordinator
University of Minnesota Extension
405 Coffey Hall
1420 Eckles Avenue
St. Paul, MN 55108
Email: extcopy@umn.edu
FAX: 612-625-3967

Dollar Works 2: A Personal Financial Education Program (item 08503) was written in 2007 by Shirley J. Anderson-Porisch, Rosemary K. Heins, Cindy M. Petersen, Susan E. Hooper, and Jean W. Bauer. It is available through University of Minnesota Extension. To order or see samples from the curriculum, visit <http://www.extension.umn.edu/dollarworks>.

This material is available in alternative formats upon request. Direct requests to 612-626-6602.

University of Minnesota Extension shall provide equal access to and opportunity in its programs, facilities, and employment without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression.