# Closing the Gap Between Knowledge and Behavior: Turning Education into Action

## A Symposium Sponsored by the National Endowment for Financial Education

*In August 2005, the National Endowment for Financial Education® (NEFE®) hosted a groundbreaking event, bringing educators from a variety of disciplines together to explore how to make financial literacy programs more effective. This was the first symposium ever to combine financial educators with leaders from other fields—neuroscience, change theory, behavioral economics, and psychology—with the common goal of finding new ways to help move people toward taking positive actions to create a healthier financial future. The symposium, titled "Closing the Gap Between Knowledge and Behavior: Turning Education into Action," was organized around four featured presentations that examined topics as diverse as the implications of brain biology on behavior, effective programs that incorporate change theory, observed economic behavior versus traditional economic theory, and the psychology of an individual's money personality. From this fertile cross-pollination of ideas, participants developed a list of exciting next steps: defining research and resource needs, proposing changes and new directions for financial educators, and identifying relationships that need to be leveraged to build more effective financial literacy programs. A white paper report on this symposium follows.*

*Key Words: financial behavior, financial knowledge, financial literacy*

### Introduction

In an unprecedented gathering of financial educators and experts from other fields, the National Endowment for Financial Education sponsored and hosted a financial literacy symposium that brought together approximately 50 thought leaders from around the nation to discuss behavior change. The event, titled *Closing the Gap Between Knowledge and Behavior: Turning Education into Action*, took place August 10-12, 2005, in Denver, Colorado. Experts from a variety of disciplines participated in a lively exchange of ideas about how to increase the effectiveness of financial education programs.

Participants of the symposium explored the question "How can financial educators motivate people to increase their positive actions toward achieving long-term financial stability?" This fundamental question is common among financial literacy professionals and others who are concerned about a national savings rate near zero (U.S. Bureau of Economic Analysis, 2006), national consumer debt over $2 trillion (Board of Governors, 2006), 1.6 million bankruptcy filings in 2004 (Administrative Office of the United States Courts, 2005), and the belief that many Americans are inadequately preparing for their retirement (Employee Benefit Research Institute, 2005). While much progress has been made in the development of financial literacy programs, educators are increasingly asking themselves how to make those programs even more effective.

The theme of the discussion built and expanded on the outcome of the first NEFE symposium, titled *The State of Financial Literacy in America—Evolutions and Revolutions*, which took place in 2002. From that gathering, participants concluded that Americans' failure to make knowledgeable decisions about their personal finances is having a dramatic national impact. Participants acknowledged that being financially literate requires more than just acquiring knowledge. Individuals who are financially literate must act upon that knowledge and change behaviors that negatively impact their financial well-being.

The 2005 symposium provided an opportunity to examine behavior change through the lenses of other disciplines. Its purpose was to promote learning across multiple disciplines, all of which seek to promote healthy well-being, whether physical, mental, emotional, or financial, and to learn strategies from these other disciplines that may have practical implications for the financial literacy field.

The symposium was organized around four core presentations from experts in neuroscience, change theory, behavioral economics, and psychology who discussed different aspects of how educators can reach their target populations and effect positive change.

The first area of inquiry focused on brain biology and the human tendency to delay taking actions that require effort, including actions about financial issues. Participants learned methods that could be used to help people counteract this tendency to procrastinate and instead take action for a healthier financial future.

In the second area of inquiry, participants discussed behavior change theory and what is required to support individuals who are moving through the various stages of change. By assessing a person's stage of change and adapting interventions that meet people where they are in the process, financial education practitioners can develop more effective programs.

The third area of inquiry focused on behavioral economics: observed human behavior versus human behavior as predicted by traditional economic theory. Expanding on some of the ideas of the first two presentations, participants discussed methods to help people counteract their tendencies toward procrastination and to take positive actions towards increasing savings. Themes of loss aversion, ambiguity aversion, and decision isolation were explored in terms of how people make economic choices.

The final presentation was a psychological analysis of different "money personalities" and a discussion of how an understanding of the psychological and emotional components of people's money decisions is important for maximizing financial well-being. If psychological needs are ignored, people can become "frozen" and fail to take positive actions. Understanding a person's money personality and creating programs to support a person's particular style of money management can help move someone to a healthier financial future.

Ideas generated in the four core areas of inquiry were further discussed and refined in panel discussions, roundtable sessions, and breakout groups. A final general session provided the opportunity for participants to identify the most important next steps needed in the quest to achieve financial education programs that result in positive action.

### Session 1: The Human Brain and Effective Financial Interventions

The symposium began with a thought-provoking presentation about recent and somewhat controversial neuro-imaging research from David Laibson, Ph.D., professor of economics at Harvard University. In his presentation titled *Neuroscience and Savings*, Laibson asked the audience to consider why people sometimes fail to carry out their own best intentions. For example, why do people join a health club but end up failing to exercise regularly? Or, why do people work for a company with a 401(k) program but not sign up for benefits? After sharing results from various research projects, Laibson suggested that the biology of the human brain may provide insights into human behavior and initiated discussion by posing two questions:

(a) "If you were choosing today for next week, would you choose to eat fruit or chocolate next week?"
(b) "If you were choosing for today, would you choose to eat fruit or chocolate today?"

Citing a 1998 research study, Laibson noted that 74% of people selected fruit when they were choosing for next week. But when choosing for today, 70% chose chocolate (Read & Leeuwen, 1998). This was one of several examples Laibson used to demonstrate the difference between the human tendency to go for instant gratification in the "here and now" versus the human tendency to take the patient, careful, conscientious view when making decisions for the future.

Laibson's behavioral model—quasi-hyperbolic discounting—is a framework for thinking about instant gratification. Basically, people want instant gratification now but wish to act patiently in the future. As a result, we postpone effortful tasks to the future. This tendency can lead to self-defeating behaviors, such as planning to join the 401(k) plan but never getting around to actually doing it.

While the brain's long-term intention is "do the right thing," the short-term inclination is to receive "immediate gratification." The tension between these two perspectives is demonstrated by the fact that individuals pursue patient, long-term financial activities, such as choosing to work for companies with defined benefit pension plans, but also act impulsively and go for instant gratification in such

activities as overusing credit cards or failing to enroll in defined contribution plans.

Laibson cited some sobering statistics on credit: two out of three households do not pay their credit card bills in full each month, two out of three households are borrowing on their credit cards at an average interest rate of 14%, and average credit card debt is 13% of annual income (Angeletos, Repetto, Tobacman, & Weinberg, 2001; Repetto & Tobacman, 2003).

This tendency for humans to devalue the future and go for instant gratification affects decisions individuals make every day. While people may know that they should save for retirement, it takes effort to act on that intention. Based on his behavioral model and other research, Laibson argued that "education alone remarkably fails to get people to act." To produce effective behavior change, education is needed in combination with a "mechanism that produces action." If one component is missing from a program, that program will be less effective in moving individuals to change their behavior.

As examples, Laibson discussed two retirement savings solutions that had less effective results than might otherwise have been possible because the programs did not include a "mechanism for action." First, Laibson discussed employer matches in 401(k) programs, which he described as a "riskless, instantaneous return on investment." Yet in a study of seven companies, on average half of people over age 59½ were not fully utilizing their company's 401(k) match (National Bureau of Economic Research [NBER], 2005a). Even educating the workers about the benefits of the match did not improve the participation rate.

In another study of financial education seminars designed to teach employees about setting savings goals, allocating assets, managing credit and debt, and other topics, Laibson also concluded that educational programs without a "mechanism for action" proved to have little effect on worker participation rates in 401(k) programs. Of those who attended the seminar, 100% of the people who were not in the 401(k) program said they were going to join it during a seminar exit interview. However, only 14% did. This compared to a rate of 7% of the population who joined without attending the seminar (Choi & Madrian, 2004; Choi, Madrian, & Metrick, 2002, 2006). While 14% is a 100% improvement in the percentage of people who would have joined even without the education campaign, it is still a significantly lower percentage of people who said they would join immediately after the seminar (100% of the people said they would join). The results from this study demonstrated a big gap between intention and action among the participants.

What is driving this behavior for people to delay actions that they acknowledge could significantly increase their financial stability, such as signing up for a 401(k)? Laibson refers to research on two parts of the human brain—the limbic system and the frontal parietal cortical systems. The limbic system is the older, more primitive, emotional brain. It is activated only when there are immediately available rewards. "This part of the brain has a particular taste for immediate gratification," according to Laibson.

The frontal parietal cortex system is more recently evolved and more rational. It is activated for *all* choices. So, when people are thinking about the future—next week or next year—only the rational brain is active. When people think about the present, then the older, emotional brain also responds. These activation patterns also predict choice. When the rational cortical system is very active relative to the emotional limbic system, people tend to choose delayed rewards.

In considering these two patterns and the examples Laibson discussed, one symposium participant asked Laibson whether the 401(k) participation rate would have increased if participants in educational seminars were given the paperwork to participate in the 401(k) plan and asked to fill it out before they left the seminar. "That is exactly the solution," Laibson said. Providing a mechanism for a person to take an action in the moment (for example, enable employees to enroll at the seminar) or providing a person with a deadline for action (for example, telling employees they must make a decision about joining the 401(k) within 30 days) dramatically increases participation rates. Laibson then talked in more detail about two interventions that have had a dramatic effect on increased savings in 401(k) programs: (a) automatic enrollment and (b) active decisions.

Automatic enrollment programs—automatically enrolling new employees into the company's 401(k) plan—allow the tendency to procrastinate to actually improve decisions. In automatic enrollment programs, the default is that the employee is automatically enrolled at a predetermined

savings rate (for example, 2%) and into a predetermined account (for example, a money market fund). The employee is free to opt out if he or she decides, but if no action is taken, the employee remains enrolled. Participants may change their asset allocation, but if they don't, they are given the default allocation. In a study of one company, the normal enrollment prior to the automatic enrollment program was 25% after six months, 33% after one year, 40% at two years, and about 50% at four years. This compares with immediate participation rates of 80% to 90% in firms with automatic enrollment (Choi, Madrian, & Metrick, 2004). The "mechanism for action" in this case is that employees are automatically enrolled. It's easier for them to stay in than to opt out.

One participant asked if there was any evidence that people spend more via credit cards (or other methods of debt) at the same time they are saving more in a 401(k) account with the automatic enrollment. This participant was concerned about the offset of adding more to a 401(k) account but then "dis-saving" in another account. Laibson commented that very little is known about how money squeezes out of one account when you put pressure on another account. As an example, Laibson pointed out that most Americans will say that they can afford to save, but often they will say they can't afford to do it "right now." So if an automatic savings vehicle is created for them, they may find a way to make it work.

Another intervention that was tried in one company was to give new employees 30 days to make a decision about enrollment—forcing participants to stop procrastinating and make an "active decision." In this study, employees had to say "yes" or "no" to enrolling in the 401(k), just as they had to say "yes" or "no" to enrolling in the health benefits. They were told they could change their minds later, but at the end of 30 days they were required to tell the company if they wanted to participate in the 401(k). If the answer was "no," they were required to respond in the negative. If the answer was "yes," they were required to provide the employer with a savings rate and the asset allocation.

Results showed that whereas the normal enrollment rate was about 40% after three months, the enrollment rate with the active decision intervention was 70% after three months. This rate of participation normally takes workers three years to achieve. Conclusions of this study again show increased 401(k) participation. In addition, average savings rates rose by 50% and participants did not show the same clustering around the default savings fund as they did with the automatic enrollment intervention (NBER, 2005b). The "mechanism for action" in this intervention was the 30-day deadline to respond. Since the employees were required to respond to their human resource department, the option for endless procrastination was taken away.

For Laibson, the key to translating knowledge into action is to make the action easy. By understanding the inherent tensions between the emotional brain that wants instant gratification and the analytical brain that is patient and rational, educators and practitioners can create structures that help people understand their financial situation and options, and then facilitate decisions on the spot or within specified timeframes. "We must yoke education to decision points if we want to achieve behavioral change," according to Laibson.

Insights from the question-and-answer period following the presentation included a discussion of two areas for further research. It was agreed that research to define structures that encourage action and discourage procrastination would be highly valuable. The goal for this research would be to increase our knowledge about the effectiveness of interventions, such as automatic enrollment and active decisions, and to identify other "mechanisms for action" that prevent people from perpetually delaying the process of turning what they already know into a real behavior.

Participants also discussed the need to understand the effects of saving for retirement versus dis-saving in other areas of their lives. Very little is known about whether or not increasing retirement savings will cause people to offset that savings by spending more in other areas (for example, spending more on credit cards or borrowing more via a home equity loan).

### Session 2: Stages of Change: Meeting Your Clients Where They Are

"If I don't like the way my clients are behaving, what is the first thing that I'd have to do?" asked James Prochaska, Ph.D., director of the Cancer Prevention Research Center and professor of clinical and health psychology at the University of Rhode Island. Changing one's own behavior is the necessary first step to subsequently helping change the behavior of others, suggested Prochaska, who feels that

 

this change process starts with changing one's mental model. Prochaska believes that the dominant model of behavior change in America for the last century has been an action-oriented model where we see people changing when they take action. But what we have learned, Prochaska says, is that behavior change is a process.

In the second core area of inquiry for the symposium, titled *Educational Interventions & Human Receptivity to Change*, Prochaska presented his well-known Transtheoretical Model of Change, in which behavior change is defined as a process that unfolds over time and involves progress through a series of six defined stages. The action paradigm—what most people still see as the definition of behavior change—is integrated as one of the six stages of change. Programs that are effective in helping people make behavior changes must address each of these stages. These programs must also take into account the learner's level of readiness for change.

Regardless of the goal desired by the individual, a brief, five-minute assessment can determine which of the six stages a person is in, based on an individual's action level against pre-defined criteria. For example, if the goal is getting out of credit card debt, the person is assessed on whether or not the necessary steps to get out of credit card debt are being taken (paying more than the minimum amount each month, stopping unnecessary purchasing, stopping use of credit cards, etc.). Based on the responses, the individual is determined to be in one of the six stages of change, as shown below.

(a) Precontemplation—person doesn't intend to take action in the next six months
(b) Contemplation—person intends to take action in the next six months
(c) Preparation—person intends to take action in the next 30 days
(d) Action—person has taken action, but for less than six months
(e) Maintenance—person has taken action for more than six months
(f) Termination—person will not revert to self-defeating, self-destructive behaviors

The Transtheoretical Model of Change has been widely used in the health field, and more recently is being implemented across many other well-being programs, including those dealing with financial well-being (Xiao, Newman, et al., 2004; Xiao, O'Neill, et al., 2004). For Prochaska, the key is that effective programs must address the learner's needs no matter what stage of change they are in. The key to developing successful programs in any field is to correctly assess the stage of change a person is in and then provide help to progress toward subsequent stages.

Prochaska discussed some characteristics of each of the stages of change. For example, individuals in the Precontemplation stage often are misunderstood as not wanting to change, but there is a big difference between wanting and intending. "We've typically misunderstood people in this stage as being not motivated, resistant, and not ready for change," Prochaska said. However, people are in this stage for a number of reasons, such as lack of awareness (not knowing that obesity could kill them), demoralization (they've tried to lose weight many times before and failed), and defensiveness (the natural tendency to pull back when someone is pushed into the action stage before they are ready). While developmental or environmental events could propel someone out of this stuck point, it is a myth that one has to experience a crisis before acting, according to Prochaska. In fact, a brief intervention can help people break out of their stuck point and move them toward the Contemplation stage.

In the Precontemplation stage, people tend to overestimate the "cons" of making a behavior change and underestimate the "pros." In the Contemplation stage, the awareness of the benefits of changing increases. Nevertheless, the "cons" to changing increase as well. Contemplation of these pros and cons can lead to considerable ambivalence. The goal in the Precontemplation stage is to increase people's awareness of the advantages of behavior change. In the Contemplation stage, individuals need to be guided through their profound ambivalence so they can break out of the stuck point and move into the Preparation stage.

For example, improving one's finances is a common New Year's resolution. However, Prochaska stated that the average American makes the same New Year's resolution for three years in a row before he or she finally takes some serious action (Norcross & Vangarelli, 1989). For people in the Contemplation stage, even though they're intending to take action in the next six months, they will likely put it off without help. For example, of the average smokers who intend to quit smoking for good in the next six months, less than 50% will quit for 24 hours in the next 12 months

(Prochaska, DiClemente, Velicer, Ginpil, & Norcross, 1985).

People in the Preparation stage are intending to take action within the next 30 days and may make a statement such as, "I am ready to throw away my credit card." The number one anxiety in the Preparation stage is "What if I fail?" This is a realistic fear, Prochaska said, because "across all types of chronic behaviors that we call habits, the rule of thumb is on any single action attempt you're more likely to relapse than you are to sustain that action."

When people are in the Action stage, they are now taking whatever action is being measured, such as reducing their debt, losing weight, or saving more. This is the hardest, most demanding stage. People in this stage should plan that the new behavior will be a top priority for the next six months. They should tell others that they may not be at their best during this time and that they will need support. After about six months, clients will be able to ease up on this prioritization as they move into the Maintenance stage.

The number one reason people relapse into old, self-defeating behaviors, according to Prochaska, is stress (or distress)—for example times of depression, anxiety, loneliness, boredom, or anger—as well as psychological or emotional weakness. In the Maintenance stage, the educator should try to give three good choices for alternative behavior to avoid regression. For example, three choices for alternative behaviors could be: (a) talking (social support is a major buffer for stress and distress), (b) exercise, and (c) relaxation (prayer, meditation, or yoga).

The goal of intervention programs should not be a lifetime of recovery, but rather to be recovered, according to Prochaska. "Recovered" means that no matter how anxious, bored, lonely, or stressed a person is, he or she will not go back to self-defeating, self-destructive behaviors as a way to cope. The goal is not to spend the rest of one's life struggling with finances or struggling with addictive behaviors, but to be recovered and to then enhance other areas of life.

A person who is recovered is in the Termination stage. "Once a behavior is learned and becomes a habit, it is hard-wired into our system," said Prochaska. This behavior changes a person's neurological makeup, requiring the individual to develop new habits that are healthy habits and that then become stronger than the old habits. "That's the challenge with addictions," Prochaska commented, "and it will be part of the challenge with overspending and undersaving."

Prochaska talked about three ways to control behavior: stimulus control, decisional control, and rule control. An example of stimulus control for many people is putting on their seat belt. As a stimulus occurs (getting in the car), it cues the person, and he or she acts (puts on the seat belt). Decisional control, on the other hand, is weaker and involves weighing the pros and cons of a behavior. For example, a person might ponder, "Should I go on a shopping spree to overcome boredom?" Rule control is much stronger. For example, people in the Maintenance stage often have exercise under rule control— "no matter what, I am going to exercise three days a week for 45 minutes."

Effective programs for behavior change must address people's needs no matter what stage of change they are in. Prochaska talked about the need for educators to match their mental model with the actual population they serve. For example, although 80% of all smokers in one study were in the Pre-contemplation or Contemplation stages, there were no evidence-based behavior change programs geared to that population (U.S. Department of Health and Human Services, 2000). Prochaska believes that typical action-oriented models for change have been too small and too restrictive for the population that needs help.

Educators must be able to define the benefits of the programs they propose, Prochaska said. He challenged the symposium participants to define the benefits of any financial behavior they seek to encourage. For example, what are the benefits to completing a counseling program about getting out of debt? He also encouraged participants to define the number one barrier that their constituents have for not taking action towards a particular goal. Once that barrier is defined, Prochaska suggested, educators and practitioners can then help people to find effective ways to reduce the barrier.

In addition to describing the six stages of change, Prochaska also defined 10 change processes that occur during the different stages. The key to developing successful programs is to correctly assess the stage a person is in and then decide what processes that person needs to move forward, Prochaska said. The 10 processes are:

 

(a) Consciousness Raising—education, information
(b) Dramatic Relief—stories of dramatic life changes that illustrate the pros and cons of behavior change
(c) Environmental Reevaluation—realizing the social benefit to others
(d) Self-Reevaluation—taking in images of a healthier future (How do I think and feel about myself as a couch potato? How would I think and feel about myself as an active person?)
(e) Self-Liberation—willpower, commitment to change (Three good choices are the optimal number to enhance willpower to achieve alternative, healthier behavior.)
(f) Reinforcement Management—learning how to give oneself positive reinforcement
(g) Helping Relationships—finding healthy social support from intimate friends or support groups
(h) Counterconditioning—substituting healthy alternatives for unhealthy alternatives
(i) Stimulus Control—getting rid of unhealthy cues or behaviors (e.g, getting rid of the credit card)
(j) Social Liberation—social changes that help people engage in more positive behaviors, (e.g., smoke free restaurants)

Use of these different processes at different stages helps people keep moving ahead and progressing, Prochaska said. In the assessment stages, educators should determine which of the processes are being under-utilized, over-utilized, or utilized appropriately. Then the intervention can be tailored to the processes that will most help the individual.

Effective programs identify at least one technique to apply to each process. Referencing a study published in 2001, Prochaska discussed a demonstration financial education program, *Money 2000*™, which applied the Transtheoretical Model of Change to people's financial behavior. *Money 2000* encouraged participants to save and/or reduce debt by a specific dollar amount. Each process was addressed in the *Money 2000* program. For example, the counterconditioning process "requires the learning of healthier behaviors to substitute for problem behaviors" (Xiao, O'Neill, et al., 2004). *The Money 2000* program provided participants with fact sheets and articles that provided dozens of tips to increase savings and reduce debt, such as saving $3 a day instead of purchasing beverages or lottery tickets to produce $1,000 of savings annually.

Prochaska, like Laibson, argued that education alone is not enough to effect behavior change. He also argues for a holistic approach to behavior change that includes all 10 change processes. "No one process will carry the load of behavior change," Prochaska said. "If you try to put it all on consciousness raising or education, you will fail. If you try to put it all on stimulus control, you will fail." While consciousness raising can start the behavior change process, it cannot sustain it, yet Prochaska noted that this process of education is what we use the most to try and change behavior.

Prochaska believes that his Transtheoretical Model for Change can be applied across many disciplines because the same principles apply to many different behaviors. Symposium participants were encouraged to apply these principles to more financial education programs so that a larger population could be reached and, therefore, a greater number of people could be helped.

"Whether you are a counselor or an educator, a core competency needs to be the ability to help people manage change," Prochaska said. "We want people to be able to have a core competency in being able to change their lives in ways they chose to over time."

Prochaska also encouraged participants to transcend the traditional "silo" thinking—silos of financial well-being, physical well-being, or mental well-being—and to think instead in terms of the common process of behavior change that is relevant to all these fields. Knowledge of behavior change theory and applying that knowledge to well-being programs will reach many more people much more effectively.

Prochaska noted that, "We have tended to believe that the problem of behavioral change has to do with the ability of people rather than the accessibility of our best practices. But if we change our mental model, we can recruit many more people, retain many more people, and help many more people progress to positive behavioral change. The only serious mistake that we can make," Prochaska noted in closing, "is to give up on our ability to change, or on our clients' ability to change."

### Session 3: What Can Behavioral Economics Tell Us About Financial Education?

The symposium's third presentation explored concepts from behavioral economics, a field that continues to make

discoveries about why people make the money decisions they do. Colin Camerer, Ph.D., is professor of business economics at California Institute of Technology. His presentation, titled *Exploring Underlying Assumptions*, focused on three themes: (a) loss aversion, (b) isolation of decisions, and (c) emotional versus cognitive responses. By understanding how these themes play out in people's economic decision making, educators and practitioners can potentially develop programs that help individuals make better decisions.

Camerer began by describing humans as "psycho-physical machines"—individuals are sensitive to changes relative to reference points. For example, an $80 dinner for two in Boston may feel inexpensive to someone living there but expensive to someone visiting from Wisconsin. Conflicting sensations to a reference point can also be produced within the human body. Try a simple experiment with your left and right hands, Camerer suggested. If you put your left hand in 90-degree water for a few minutes and your right hand in 50-degree water for a few minutes, both hands will acclimate. If you then place both hands in lukewarm water (about 70 degrees), your left hand will experience the water as chilly and your right hand will experience the water as warm. In some cases the brain will make sense of the difference—"Wow, I know that the water is 70 degrees but it feels chilly to my left hand and warm to my right hand" or, "Oh, dinners are much more expensive in Boston than I am used to in Wisconsin"— but in other cases the brain may struggle to figure out what's right. This sensitivity to change from a reference point is an important underlying concept in understanding loss aversion.

Camerer uses the idea of loss aversion, popularized by Nobel Laureate-winning psychologists Daniel Kahneman and Amos Tversky, to explain human financial decision-making. Works by the two psychologists demonstrate that human attitudes toward risks concerning gains might be quite different from attitudes toward risks concerning losses. Accordingly, individuals will likely not be as receptive to activities, such as saving for retirement or paying off high interest-bearing credit card debt if doing so means experiencing a reduction in their nominal income.

Traditional economic theory says that people only care about what happens at the end, not the procedure by which things happen, stated Camerer. However, an interesting experiment with Capuchin monkeys shows that this may not always be the case (Chen, Lakshminarayanan, & Santos, in press).

In this experiment, monkeys learned that if they put a token into the experimenter's hand, they got some fruit. The monkeys had 12 "shopping" episodes each day and there were two experimenters in the study. Both of the experimenters were offering a 50/50 gamble between getting one or two pieces of fruit at any given time, but the procedure each used was different.

Over several weeks, the monkeys came to learn that one experimenter always had one piece of fruit to start out, and half of the time that experimenter would give the monkey an extra piece of fruit. The second experimenter started out with two pieces of fruit, but half the time took one piece of fruit away. The difference was that the first experimenter might be adding one piece of fruit and the second experimenter might be taking one away.

What the study found was that 80% of the time, the monkeys preferred to "shop" from the kind of bonus seller who may give them an extra piece of fruit rather than from the experimenter who sometimes took one away. "This is the monkey version of perceiving losses relative to the reference point," said Camerer. The monkeys use the amount of food offered by the first seller as a reference. They dislike getting "cheated," having one taken away, more than they like getting a bonus piece, so they avoid the seller who may generate a perception of loss. Results from the experiment may also help explain the human cognitive process because the structure of the Capuchin monkey brain is similar to the human brain, although the human brain has much more neocortex. "This is going to be a very influential study because it shows that this loss aversion property may be very deeply rooted and a part of human behavior which comes from highly adapted primate behavior," according to Camerer.

What are some ways that educators and practitioners can combat this loss aversion tendency in humans? Camerer referred to the *Save More Tomorrow*™ program (Benartzi & Thaler, 2004), which aimed to increase worker savings without employees experiencing a reduction in their nominal income. In this program, workers commit to saving a portion of their next raise. So perhaps they commit to saving one-third of their next raise, and they get a 6% raise. Then 2% will be diverted automatically into savings. The key property of this system is that on their

 

first paycheck after the raise, workers will not see a drop in their nominal take-home pay (as they would if the savings withheld were not tied to a raise). The additional savings comes from a smaller increase in take-home pay after the raise rather than a nominal cut from current pay, so it doesn't feel like a loss. This commitment to a future event (saving money from the next pay raise) has the added benefit of allowing our natural tendency toward inertia to work for us. While employees always have the ability to change their mind and "opt out" of the program, most people don't end up changing their mind once they've made the commitment.

Programs such as *Save More Tomorrow* look promising in helping individuals create viable savings plans. In this instance, employees experience no loss of nominal income and at the same time have an automatic savings plan in place that otherwise would likely not have been established given the human perception of loss aversion.

To demonstrate the human tendency to think short-term rather than long-term when making financial decisions, Camerer cited a study with New York cab drivers (Camerer, Babcock, Loewenstein, & Thaler, 1997). The results from this study are very interesting because cab driving, according to Camerer, "is one of the few businesses where the amount of money you make hour by hour really fluctuates in a way you can measure." In economics, the standard theory of labor supply states that as the wage for doing a job increases, a worker will choose to work more hours in order to increase earnings. In contrast, if the wage for that job is relatively low, a worker will choose to work fewer hours. However, the results from the New York cab drivers study contradict this traditional theory for newer, more inexperienced drivers.

In general, novice cab drivers act as if they set daily target incomes. Once the target income was earned, drivers would quit working for that day. This meant that when the cab drivers could have earned more money on high-wage days (for example, rainy days or days when special events were occurring), they actually ended up working fewer hours. On low-wage days, the drivers had to work more hours to make their daily target. The results of the study showed that if novice drivers would just flip their hours around (work more hours when the wage was high and work fewer hours when the wage was low) they could make about 20% more income without working any more total hours (Camerer et al., 1997).

Camerer attributed the findings from the cab driver study in part to the human tendency to view situations independently, which he calls the "isolation of decisions." Had the novice cab drivers set a weekly or monthly target income, rather than a daily target income, then they likely would have rationalized that it would be more beneficial to work more hours on high-wage days and work fewer hours on low-wage days. However, this tendency to think of events in isolation can cause individuals to perform myopic acts that are ultimately not in their long-term best interest.

Camerer then discussed the concept of the "hedonic treadmill"—the tendency for life satisfaction levels to return to normal regardless of the external situation. Even after experiencing a massive shift, in either positive or negative events (for example, increased or decreased standard of living, dramatically increased or decreased physical ability, or achievement or nonachievement of a major goal), humans will adapt. They will adapt to something usually perceived as good or something usually perceived as bad. In a study on lottery winners and paraplegics, the surprising finding was that life tended to "return to normal" after the unimaginable—becoming fabulously wealthy overnight by winning the lottery or becoming a paraplegic after a tragic accident (Brickman & Coates, 1978). Lottery winners often found a dark cloud hanging over their financial success ("Life is kind of a pain. My friends look at me differently. I'm expected to pick up all the checks.") and paraplegics found the silver lining in their tragedy ("I spend more time with my family. I've experienced so much love and support.").

This hedonic treadmill concept can also explain people's ability to normalize what might otherwise be considered luxury items when making everyday spending decisions. Individuals preparing budgets are often asked to classify items as "needs" (basic housing, food, and clothing), "wants" (regularly dining out, going to movies, and buying a daily latte), or "luxuries" (sports cars, designer clothing, speedboats) so that basic needs are covered first. What sometimes happens is that items start to slide up the scale, so what is truly a "luxury" becomes a "want" and what is truly a "want" becomes a "need." A popular example is bottled water. Most people can get good water from the tap, yet purchasing bottled water (which is probably a wanted or luxury item) can suddenly be perceived as a needed item.

Camerer provided some consumer tips for making spending decisions. One rule of thumb that can be applied to purchasing consumer goods is to set a dollar amount within one's budget—say $100 or $1,000—for any purchase under which the person will not spend a substantial amount of time contemplating. For anything purchased under this dollar amount, the person will simply go to *Consumer Reports* and pick the middle recommendation and buy that. The theory is that the person won't make any big mistakes by doing this and also won't spend a lot of time and effort in making the decision.

A second tip involves a spending mistake that people make when they think in percentage terms rather than dollar amounts. For example, would a person drive across town to save $10 on a $35 portable CD? Would that same person drive across town to save $10 on a $200 suit? If the answer to the first question is "yes" and the answer to the second questions is "no," the person is thinking in terms of percentages rather than absolute—or, as economists say, "marginal"—benefits. Camerer suggests that the real question should be: "Is it worth my time, gas money, etc. to drive across town to save $10?" The cost of the item shouldn't come into play. This requirement to think in dollar amounts helps individuals recast these questions in terms of money made in dollars per hour, and keeps them from being pennywise and pound foolish.

Camerer has conducted experiments that simulate a life cycle of earning, spending, and saving. Each life cycle consisted of 30 periods in which participants received income in the form of points. In each period, the participant had around 100 points to either spend or save, but the number of points was random; sometimes it was only 20, and other times 200. At the end of the 30 periods, the saved points were summed up and converted to dollars. Participants were paid actual money so they had an incentive to do well.

The optimal consumption path for the life cycle was that people should be under-consuming until about middle age, and later in life they should be dis-saving, or spending down the nest egg. But what happened in the life cycle computer simulation experiments was that people tended to over-consume right up to the age of retirement and then have too little money for the retirement years (California Institute of Technology [Caltech], 2003). The interesting thing is that when the simulations gave people the opportunity to do it again—essentially to learn via trial and error—they had very successful results. By the seventh simulated lifetime, they were earning more than 90% of the maximum that even a very sophisticated optimal computer program analysis would yield them (Caltech, 2003).

In addition, Camerer found that subjects benefited from "social learning" (Caltech, 2003). When participants were given examples of other people's results—one who did well, one who did poorly, and one random sample—participants tended to learn from those examples. They still over-spent, but not as dramatically as when they didn't have the advantage of other people's experience (Caltech, 2003).

In more recent experiments, Camerer is studying the effects of giving participants immediate rewards (rather than points) in the simulations. Instead of cashing in points at the end of the experiment, they get an immediate reward of soda.

By design, the participants haven't had anything to drink for two hours prior to the experiment and they are given salty potato chips to eat prior to the start of the simulation. They are, therefore, very thirsty. In one experiment, they get their soda right away. And even though they understand they could get a larger amount of soda in 15 or 20 minutes because of simulated savings if they choose to wait, they usually have trouble resisting temptation and take the drink right away (Caltech, n.d.). In the second experiment, they make a choice about how many points worth of soda they will get, but they don't get the drink right away—they get it after 10 simulation periods (about 10 minutes). They know their immediate choice will not give them soda any sooner, so their impulsiveness should be turned off. In fact, participants do tend to save more in this scenario (Caltech, n.d.).

According to Camerer, this is the first time that economists have conducted experiments in which participants are given physical rewards, rather than points that convert to dollars. The physical rewards are meant to engage the limbic system of the brain, which appears to be important in creating impulsiveness, and such rewards are more similar to the types of experiments that neuroscientists conduct.

 

Like Laibson, Camerer found that when the limbic system of the brain is presented with the possibility for instant gratification, participants will often go for the quick reward (getting a small drink immediately rather than a larger drink in 15-20 minutes). When participants made a choice up front about how much soda they would get and there was no possibility to get the reward early (participants got the drink after 10 simulation periods), participants tended to perform closer to the optimal consumption path. In the second experiment, the participants were essentially committing in the present for delivery of the soda 10 periods later. "The moral of the story," Camerer said, "is that if you can commit people to save in the future, it really will have some effect. And, if you can put a time delay between tempting choices and when they get to actually consume, that should help them not give in to temptation." For Camerer, these experiments are a "kind of metaphor" that points to the possibility of using certain kinds of delays effectively in helping people save.

Camerer discussed the efficacy of using computer simulation tools in teaching the concepts of an optimal savings life cycle. Symposium participants felt that development of other such tools could be very helpful in teaching the skills necessary for financial well-being. Simulation tools, visual or game-based, to "fast forward" through life would be valuable tools to give people the "look and feel" of what a person's financial life might look like in 10, 20, or 30 years, based on current choices.

When Camerer was asked how practitioners could better structure financial education programs to incorporate experience, he talked about the usefulness of computer simulations in giving people an idea of the consequences of their current spending and savings patterns. He also wondered about using the power of multi-media technology to create "something like a financial flight simulator"—films that would show people three options, one of them in future poverty, one of them if they stay on their current spending/savings path, and one of them as a financially self-sufficient person. Giving people a visual image of their potential financial lives would add a powerful component to education, providing an emotional as well as cognitive experience of the future. Social learning from neighbors and role models may be activating these kinds of emotional systems, but it is possible that technology could enable us to speed up that process and help it work reliably.

Like Laibson, Camerer discussed the tension between the emotional, rapid, affective brain system and the cognitive, deliberative brain system. In talking about human responses to ambiguous choices, he referenced experiments with students who were asked to make bets on events about which they either knew a lot or very little (like investing in familiar stocks or foreign ones that no one's ever heard of). According to Camerer, a study by Hsu and others (2005) showed one part of the brain activates in a type of fear response, "Danger! Danger! You could really lose money here," and another part of the brain is more reasonable and says, "There's nothing dangerous here, but be careful what you're betting on." In response to this fear of the economic unknown—sometimes called ambiguity aversion—people will often choose a type of automatic leveling, said Camerer, even if it doesn't make sense. For example, when participants have several choices for retirement funds and they're really not sure what to do, they tend to allocate equally across all the options, whether or not that gives them the best asset allocation mix of stocks/bonds (Benartzi & Thaler, 2001).

Camerer concluded that understanding the way people actually behave around financial decisions is a powerful tool for designing strategies to effect behavior change. Understanding the tendency for loss aversion, for example, is a powerful and simple tool to use when designing programs to effect positive behavior change about savings, as demonstrated in the *Save More Tomorrow* program. Understanding other aspects of behavioral economics—how people may isolate their decisions or how they may respond when choices are ambiguous—is also important information. When programs are designed that account for observable patterns of real human behavior, educators have the ability to help people make better long-term financial decisions.

### Session 4: Working With Your Client's Money Personality

In Prochaska's presentation about change theory, he reminded symposium participants that just a few years ago two psychologists received the Nobel Prize for showing that economic decision making is not fully conscious and not fully rational. The fourth area of inquiry for the symposium focused on the importance of identifying and working with an individual's money personality to help people make good financial decisions.

"We all have a common goal of helping Americans make the best use of their money," said Kathleen Gurney, Ph.D., President and CEO of Financial Psychology Corporation. In her presentation, titled *Financial Literacy and Real Life: A Sampling of Attitudes and Personalities*, Gurney encouraged participants to develop an understanding of the psychological and emotional components that go into people's money decisions so that practitioners and educators can help clients make the best use of their money.

Gurney observed that a good deal of financial behavior is reflexive, meaning it's so much a part of human nature that people can't see that they're reacting out of deeply habitual patterns. Gurney's work has centered on helping people act more rationally about their money, while at the same time being aware of their emotions so that emotional responses can be effectively managed.

Toward this end, Gurney has developed a simple competency model to help people understand and use their own internal competencies in their quests to become successful managers of their personal finances. For Gurney, success is defined as making the "best use" of the money you have, and she notes that this "best use" will be different for different people.

The model consists of four core competencies: self-awareness, self-control, self-confidence, and self-motivation. The goal of financial education or counseling is to help strengthen each of the four core competencies. The first step, in the self-awareness stage, is to help people self-identify. People can be well adjusted in many areas of their lives, but when it comes to money they may feel they have no identity about who they are and how they think and feel about money. They may feel the pain of financial anxiety, but have no idea what to do about their financial situation. They may have no context in which to discuss financial matters. This type of anxiety can become paralyzing, preventing individuals from taking action. The goal of self-awareness is to understand the attitudes and feelings that make an impact on how one earns, spends, saves, and invests money.

In developing the second core competency—self-control—the goal is to give someone new ways to think about their habitual patterns. Using cognitive behavioral psychology methods, educators can teach people how to give themselves positive messages such as, "I am smart and I can learn this," or, "I can start a savings account." Gurney said that many people who work with financial educators and counselors feel like failures. They may be in pain or denial. "Help someone change their self-attribution," said Gurney, "because that alone can change their future."

Gurney believes the self-control competency is often where people need the most help. "We are a nation of people who cannot regulate ourselves," Gurney noted, and self-controlling behaviors are key to financial well-being. Even giving people very small steps to take will help build self-control. "We need to get people to start acting," she said, "so that they can start to think differently about their money situation." She believes that sometimes you have to force action because the emotions are so frozen and people have so much resistance. Once people take an action, their response will often be, "Oh, that wasn't so bad."

Gurney noted that the third competency, self-confidence, is rarely found without some self-controlling behaviors already in place, such as starting to save money or starting to learn how to invest. When people are in the fourth competency—self-motivation—they can sustain positive actions, even when it's difficult or feels a little risky.

These four core competencies consist of a continuous feedback loop. Once you have started taking action (saving more money, spending less), you start to see yourself as more financially healthy and it helps to further energize you to sustain and increase the healthy behaviors.

In studying people's relationship with money, Gurney found that people tended to cluster together around how they think and feel about money. These groups of people shared similar attitudes and feelings about money, managed money similarly, invested similarly, and even shared similar preferences for financial education communication. Gurney (1997) developed nine different Moneymax® personalities to help people understand themselves and their relationship to money. The nine Moneymax® personalities are:

(a) Safety Players—cautious and security-oriented; they avoid the chance of losing money
(b) Entrepreneurs—performance-driven, goal-oriented, and comfortable taking risks
(c) Optimists—positive and confident; their priority is maintaining peace of mind
(d) Hunters—aspiring but self-doubting with a

tendency to worry about their future security
(e) Achievers—proud and conservative with a strong need to control money
(f) Producers—hard-working but frustrated; they can profit from financial education
(g) High Rollers—sensation-seeking and creative; they seek out challenges for gain
(h) Perfectionists—highly analytical and thorough, but fearful of making mistakes
(i) Money Masters—wise wealth-accumulators who focus on value and being practical

Gurney also identified 13 traits (such as involvement, anxiety, risk-taking, self-determination, or emotionality) that are characteristic of the money personalities. "Think of our traits in terms of a balance sheet," said Gurney. "A particular trait can be an asset or a liability." For example, internal self-determination is vital for success. On the other hand, people who are more externally self-determined tend to be money victims.

"The goal is to understand yourself," said Gurney, "not to aspire to be in one group or another. Aspire to have assets that are traits in your group. It's fine to be who you are. Just make sure that your traits are working in your best interest."

For example, Entrepreneurs, one of the nine money personalities, are high-income earners. They are usually affluent and they always have money saved. Making money gives Entrepreneurs a sense of achievement. However, they don't manage money as well as they earn it. They can tend to take too much risk. They sometimes don't focus enough. They usually don't want to give their money up to someone else to manage.

Each of the nine personalities has positive and negative traits to manage. The goal, said Gurney, is for clients to make themselves their own best asset. For each of the personality groups, one can define how money management will play out if it is left to chance or to the unconscious. But if a person works on it, he or she can really be successful. People's traits and tendencies tend to remain constant over time (the maturation process doesn't change it unless there is a conscious effort to change), so it's important to keep working and continually reinforce the healthier behaviors.

Effective financial education must be personalized, engaging, attainable, reinforcing, and relevant, Gurney said. We tend to flood people with information and detail, but the unconscious doesn't like detail because it tends to confuse people and make them feel more anxious and unskilled. Educators should keep things simple, Gurney said. They should make workshops and seminars engaging and fun, because the people who are frozen about money don't want to go in and immediately talk about money and numbers. Talking about personalities and preferences is engaging, Gurney said, and it gives people a feeling that the seminar or workshop is truly about them. "Don't hit people over the head with what they're *not* doing," Gurney said. "Just make your presentation more fun, more engaging."

"Our education needs to be tied into looking at our core competencies, looking at the traits," Gurney said. "If we ignore the emotional component, or the psychological component, we're not addressing everything that is going on for our clients." To create successful financial education programs, we must match education and communication to consumer traits, competencies, and needs.

Following Gurney's presentation, symposium participants discussed the need to develop human capital skills, or "soft skills," to increase that ability to meet people where they are. The non-linear soft skills that allow practitioners to better understand how people feel about money and how those feelings and emotions affect their decisions are important to improving behavior change programs. Participants also discussed the need to leverage "soft" variables into the curricula of higher education, business schools, and financial planning courses so that people can become more conversant with the social-psychological variables that affect financial choices.

## Next Steps

The symposium culminated with a panel discussion in which professionals from the academic, financial services, nonprofit, and public sectors spoke on critical next steps needed to move individuals toward positive financial behavior. From earlier presentations and discussions, there was a consensus that education alone would not effectively address this challenge. Accordingly, panel participants were asked questions regarding research that needs to be undertaken, resources needed to overcome challenges and

obstacles, changes that financial education professionals need to make, and relationships or partnerships that need to be leveraged. All symposium participants addressed these questions during breakout groups and the ideas generated were summarized in the final panel discussion.

These many discussions among symposium participants during the three-day meeting, whether in presentations, question-and-answer periods, roundtable sessions, panel discussions, or breakout groups, resulted in a number of ideas about how to use the information from the symposium in creating more effective financial education programs. Following are nine topic areas that were proposed during the fifth and final session of the symposium as important "next steps" to support financial education professionals in closing the gap between knowledge and behavior.

*Outcome Measurement Tools*
Standardized measurement tools would help financial educators determine the client's mastery of key financial concepts and practices as well as objectively determine the effectiveness of programs across different populations. Such tools would allow practitioners to measure behavior change over time.

*Longitudinal Studies*
An overwhelming number of symposium participants felt that longitudinal studies were very important in understanding financial behavior over time. While longitudinal studies are difficult to fund because of their very high cost, participants acknowledged that more information is needed to better understand individuals' long-term behavior with regard to their finances.

*Program Evaluation*
Many participants talked about the importance of conducting impact studies to measure the effectiveness of current financial education programs. Impact studies would allow practitioners to know which financial education curricula are most effective and in what settings. Part of the program evaluation may be to research and identify people who do *not* come to financial education classes. What are their needs? How can we help them?

*Identification of Best Practices*
A recurring need identified by symposium participants and echoed in Prochaska's presentation is the need to identify best practices—those professional practices that, when used, offer the greatest positive outcomes. For example, are face-to-face programs, online programs, or at-home programs most effective? What kind of human interaction is most effective and when? When does adding an interactive, online tool help a person progress? Or, is the most effective program one that uses all of these components?

*New Delivery Mechanisms for Financial Education*
Participants felt that it was important to research the concept of just-in-time delivery of financial education and measure its effectiveness. It's important to know the best methods for delivery of financial education so that educators can respond effectively to "teachable moments" and time-critical functional literacy requirements. Participants also talked about not expecting a "one-size-fits-all" approach to education to be very effective. One participant suggested that we need a "spiral curriculum" to address the skills that are needed at various life stages.

Another discussion focused on creating new products in the marketplace that could be beneficial learning tools. For example, credit cards with low limits might be issued to minors so that they could practice using credit responsibly while under supervision. Another example is savings accounts for children in elementary schools.

Participants also talked about the need to get positive messages out to the public about financial well-being. One suggestion was to solicit a champion—a credible public figure, such as a politician, sports star, or rock star—who would raise consciousness about the benefits of financial responsibility. Other participants talked about developing strong messages via public service announcements or TV, radio, or print advertising that would reinforce positive images of building a healthy financial life.

*Funding*
Participants talked about the need for identifying new sources of funding for financial education programs by finding corporate sponsors in sectors other than the financial services industry. Educators were encouraged to look at their target population and then solicit support from companies marketing products that align with that population. For example, if the target population is the elderly, think about companies who create products for the elderly. If the target population is teenagers, think of companies who target teens, such as clothing retailers or electronic product companies.

 

*Partnerships with the Private Sector*
Many ideas surfaced about how to create and leverage partnerships with the private sector. Participants talked about using a different approach in marketing to and soliciting funds from foundations and corporations by focusing on financial well-being or life skills rather than simply financial education. Participants also talked about creating new partnering opportunities with private sector companies and agencies that could help bring positive financial education messages to large populations. For example, partnering with a payroll company that provides services to millions of American households each year is a tremendous opportunity for financial education through such simple practices as brochures included with regular paychecks.

*Creation of Centralized Research Repository*
Participants talked about the importance of establishing one centralized repository for research reports. Participants also noted that it would be helpful for such a repository to provide a "translation function"—possibly in the form of research summaries—so that the research gets out to the practitioner community in a condensed and usable format.

*Additional Research and Creation of an Expert Panel*
Each featured speaker, as well as participants, presented research ideas. For example, participants discussed the need for research in order to define "teachable moments" and functional financial literacy requirements. As Prochaska pointed out in his presentation, a crisis will not necessarily move someone to another stage of change, but intervention added to a crisis situation—a potential "teachable moment"—can help people break out of their stuck point and progress along the path. For example, are there "teachable moments" that will result from the bankruptcy reform measures that are being implemented late in 2005? Perhaps there are new opportunities for debtor education and counseling as a result of these new reform measures.

Similarly, research to define critical age-related skills would be beneficial to know when designing programs for target populations. This research would answer this question: What are the skills that people need to know in order to accomplish prescribed goals at every age level? Skills needed as a young adult will be very different than those needed by a person in his or her 50s who is contemplating retirement. Defining these functional financial literacy requirements and how to measure them is key to successful program implementation.

Further discussion about research needs covered a wide range of topics, such as the need for meta-research, multi-disciplinary studies, studies of successful people, and studies of mandates in other countries. Meta-research—a survey of the existing literature in order to identify research gaps—would be helpful in allocating limited research funds. Multi-disciplinary studies, linking psychological and social history factors with financial education, may help practitioners improve education to target populations. Studies of successful people may provide insights into current programs—what works and what doesn't. Mandates have been used in other countries to increase individual financial well-being. A study of these mandates could help answer the question: Can mandates solve problems that education can't solve?

One participant felt that in order to design and implement effective interventions for any behavior change, the target community must be involved in a collaborative way. If educators use the target community to help design programs, they may find that the best practices that are identified in the literature may need to be tweaked or may not work. As Prochaska also pointed out in his presentation, the goal of any intervention is to meet the clients where they are. One participant felt that if a "one-size-fits-all" curriculum is used, educators are not necessarily helping their population, they're just making it easier for themselves.

In considering how the Transtheoretical Model of Change might be applied to financial education programs, Prochaska discussed several areas where additional research would be helpful. For example, action criteria for each financial well-being program must be carefully and critically defined to correctly assess the stage of change an individual is. Practitioners must know where a client is in terms of stages of change to design appropriate interventions.

Another research need is to identify the barriers to taking a particular action and the benefits of taking that action, Prochaska suggested. It's important to understand the barriers that people have for not taking an action towards a particular goal. For example, what is the number one barrier that people have for not joining a 401(k) retirement

plan? What is the primary barrier that people have for not opening a savings account? Once educators and practitioners know what those barriers are, they can help people see the benefits. Laibson also talked about understanding barriers to action when he said that one barrier for people joining a 401(k) program "on the spot" is that they want to discuss their options with their spouse or partner prior to signing up. Knowing this fact can help in designing a program such as the "active decision" intervention, where employees are given 30 days to make a decision, but at the end of 30 days they had to give the company a "yes" or "no" answer to joining the 401(k).

A third area for research that was discussed after Prochaska's presentation was the need to understand the developmental processes of financial behavior. This research would provide insight into the specific developmental age at which someone is interested and engaged with financial issues. For example, what is the mean age at which people finally start to want to save more money? Such information could help practitioners target education to specific populations.

Prochaska said that in some studies, best practice included the use of computer feedback guides. Symposium participants felt that further research on the effectiveness of online programs versus face-to-face counseling would be helpful. This research would answer questions such as: What kind of human interaction is most effective and when? When does adding an interactive, online tool help a person progress? Camerer discussed another use of computer tools in his optimal savings life cycle simulations. Further development of computer simulation models could help people envision their financial future based on current earnings, spending, and saving.

Laibson's presentation also generated some ideas for research, including research to define structures that encourage action and discourage procrastination. He presented two such structures that have been studied and applied to savings in a 401(k) program—automatic enrollment and active decisions. Research could further refine the best uses of these mechanisms as well as identify new structures that might accomplish similar goals. In addition, participants felt research was required to understand the effects of additional saving in one account versus dis-saving in another account.

Finally, participants suggested the creation of a panel of experts who could identify and prioritize key areas for research in the financial education field. The panel of experts could guide research efforts to ensure that top priorities are funded first. They could also serve as a review panel for new research topics.

### A New Paradigm for Financial Education

Throughout the symposium, participants began discussing the importance of thinking in terms of behavior change and not just education. Laibson talked about the importance of yoking education to a "mechanism for action." Prochaska talked about the importance of gearing interventions to the learner's stage of change so that they can proceed to action. Symposium participants recognized the need to change their own thinking so that behavior change and not just information exchange is part of the goal of teaching financial well-being.

One participant discussed how he planned to change his own behavior as a result of the symposium. He committed to talking with his clients about using automatic enrollment of their employees in 401(k) accounts *before* his company conducted seminars to educate the employees about investment options. His company would then be educating employees "after the fact" (after they were enrolled in the 401(k) plan), when employees would have a context in which to understand and apply the knowledge.

Participants agreed that talking with experts from other disciplines and reading the literature from other well-being fields will continue the dialogue that began during this symposium, *Closing the Gap Between Knowledge and Behavior: Turning Education into Action*. This continuing dialogue provides an opportunity to learn new strategies for affecting behavior change. The symposium opened new ground in the discussion of how economic, psychological, sociological, and biological factors may affect the financial education field. This multidisciplinary dialogue is important to continue so that best practices from other disciplines that also use education to affect behavior change can be understood and adapted to financial well-being programs.

In summing up the symposium, one participant stated, "After the first presentation, I didn't feel that I was at the right symposium. A 401(k) discussion would have little meaning for my clients. They are people who are just

 

trying to get back on their feet and pay their bills each month. But after listening to all the presentations and talking with other symposium participants, I realized that we are all at different levels of learning. And it's important to look at information and programs across disciplines, as we did here in the symposium, because we don't exist in a vacuum. There's a lot that can be applied to financial education at all levels from these disparate fields. The crucial component is to decide what success looks like for a particular population and then to design effective programs to help them achieve their goals. Everyone learned something here. And I hope we can continue our lifelong learning and bring these new ideas to other practitioners and educators so that we continue to help our clients create healthier financial futures."

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