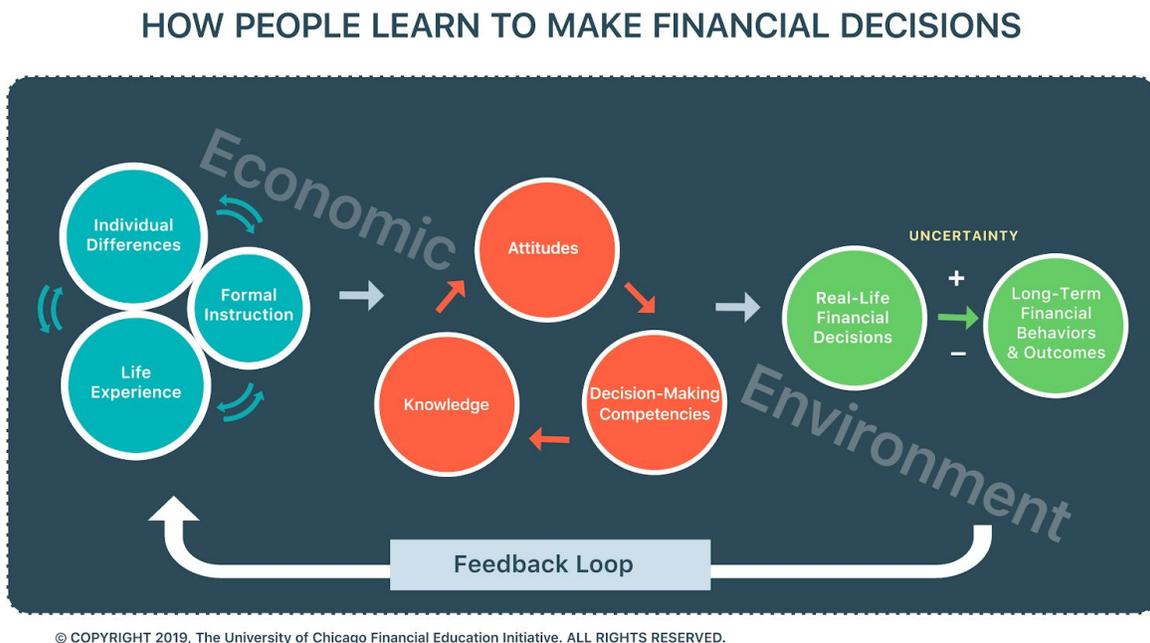


Theory of How People Learn to Make Financial Decisions

To determine how people should be taught a subject matter, one must first understand how people learn it. Figure 1 summarizes our team’s theory of how people, in general, learn to make financial decisions. This theory is synthesized from the review of research our team has done, particularly the literature on teaching for behavioral change and on teaching individual domains within personal finance.

Figure 1. A model of how people learn to make financial decisions.



As shown by the blue circles in Figure 1, people’s learning about financial decision-making is shaped by diverse factors, which can be categorized as three “inputs” that influence each person differently:

- (1) **Individual differences** in executive functioning, self-efficacy, values, goals, interests, and so forth. To put it briefly, some people begin life better equipped to make good financial decisions because they have more self-control (Benartzi & Thaler, 2004; Daly, Delaney, Egan, & Baumeister, 2015; Diamond, 2013; Lusardi, Keller, & Keller, 2007), more interest in long-term financial well-being (Alan & Ertac, 2017), and more confidence to make financial decisions (Allgood & Walstad, 2016).
- (2) **Life experience**, including personal experience with money, along with modeling of financial behaviors by parents and peers and implicit messages from media and culture (Jorgensen & Savla, 2010; Lee & Koh, 2016; Odders-White & Kalish, 2015). For most people, life experience is the most salient influence on their financial decision-making.

This influence can be positive, particularly if people are surrounded with positive financial role models, but can be quite negative if they are not.

(3) **Formal instruction** related to finance, which can include courses in personal finance, mathematics, economics, and so forth, as well as just-in-time workshops on finance provided by workplaces, financial institutions, and other stakeholders. Formal instruction, particularly personal finance instruction, is just one of three inputs. It is necessarily less influential than life experiences and individual differences, as it happens at a point in time rather than in a sustained ongoing manner. Thus, if it is to be successful, it must have an enduring effect on how the learner perceives all of the other inputs.

Based on the interactions of these inputs, each person develops **content knowledge** about financial topics, **attitudes** about interacting with the financial world, and **decision-making competencies** specific to financial topics (Antonietti, Borsetto, & Iannello, 2016; Lee & Koh, 2016). These developments are shown by the orange circles in Figure 1. Keep in mind that a person's knowledge, attitudes, and competencies can be positive or negative, based on whatever previous inputs they've experienced. But, when making a financial decision, every single person brings his or her knowledge, attitudes, and competencies to bear on the decision at hand.

The decisions people make—and the long-term consequences they experience as a result of those decisions—are depicted by the green circles in Figure 1. In short, each person makes **real-life financial decisions** based on his or her accumulated knowledge, attitudes, and competencies. These decisions can be more or less seemingly reasonable or likely to be successful based on the known factors. Over time, in an ideal world, more reasonable financial decision-making should lead to more positive **long-term financial behaviors and outcomes**, while more unreasonable financial decision-making should lead to less positive long-term financial behaviors and outcomes.

People often, but not always, learn from their decisions and outcomes. If a person has a good outcome, he or she often thinks the decision made was a good one, and the same is true for thinking that a bad outcome is the result of a bad decision. The results of these decisions can thus influence people's knowledge, attitudes, and competencies, forming a feedback loop in which people constantly update their understanding of financial decision-making based on lived experience. This feedback loop is illustrated by the long white arrow at the bottom of Figure 1.

The link between decision-making and outcomes is not always predictable, however, in our non-ideal world. Two crucial factors can shape this link. First, financial decision-making exists within an **economic environment**, which is represented by the gray background that encompasses the rest of the model. A person's decision-making is shaped by his or her cultural and economic context, meaning that a rational decision and an irrational decision can be different based on context and on the particular person acting within that context. For instance, saving for the long term could actually be suboptimal or impossible, if it is at the expense of paying for more basic needs, like shelter. Moreover, some people face more barriers or constraints—for instance, some minorities face inequitable access to traditional financial

institutions. These issues affect decision-making as a whole, making it impossible for long-term financial outcomes to be solely determined by individual financial decisions.

Second, **uncertainty**—in the form of random chance, bad financial actors, and changes in life circumstances, information availability, or the market—can cause disruptions in the chain between reasoned real-life financial decisions and long-term financial behaviors and outcomes. A decision that could be seen as unreasonable, such as not putting money aside in emergency savings, can actually end up working out if a person never has an emergency. A decision that might commonly be seen as reasonable, such as investing in a mutual fund, can work out less reasonably if the stock market crashes right before a person's retirement. Part of learning about finance, therefore, is accepting that uncertainty may result in rational decisions having negative outcomes, or irrational decisions having positive outcomes, and understanding how to judge the decision-making process separately from the outcome.

Although financial education is only a small part of this vision of how people learn to make financial decisions, a good financial education program must draw upon this vision. It must attend to the life experiences and individual differences that students bring to the classroom. It must help students build positive knowledge, competencies, and attitudes in finance. It must help students accept uncertainty and articulate the difference between a decision and its outcome. And it must help students acknowledge, critique, and navigate their economic environments.

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