Using Social Media, Social Marketing and Brain Research to Improve the Design and Delivery of Financial Education
Using Social Media, Social Marketing and Brain Research to Improve the Design and Delivery of Financial Education

As individuals and families are expected to take on more and more responsibility for their financial security, the need for sound and effective financial education has never been greater. Social media, social marketing and psychological and brain sciences offer new ways to think about how to provide diverse audiences with the financial knowledge, skills and techniques they need to make sound decisions and take action now and for the future.

The key concepts, practical tips, examples and readings presented in this document are based on a June 2010 symposium co-sponsored by the Tuck School of Business at Dartmouth and the FINRA Investor Education Foundation. The faculty for this symposium included the following:

Paul A. Argenti, Professor of Corporate Communications at the Tuck School at Dartmouth, contributed insights on how digital communication platforms, such as blogs and social media, have changed the methods that businesses—and now government and non-profit organizations—must use to effectively connect with their constituencies.

Punam Anand Keller, Charles Henry Jones Third Century Professor of Management at the Tuck School, and an expert on social marketing, discussed how marketing concepts can be used to improve financial literacy and investor education.

G. Christian Jernstedt, Professor Emeritus and Research Professor of Psychological and Brain Sciences at Dartmouth College, provided brain principles and practical suggestions that can enable learners to take advantage of the brain’s capacities to learn and act effectively.
# Table of Contents

**Using Social Media to Improve Financial Education**  .......... 1  
  What Is Web 2.0? ................................................................. 1  
  Using Social Media ............................................................ 4  
  Implementing a Social Media Program ............................... 6  
  Communication Strategy Framework .................................... 6  
  Reaching Younger Audiences and Women Constituents ........... 8  
  Online Engagement with Teens ............................................ 8  
  Online Engagement with Young Adults ................................. 9  
  Online Engagement with Women ........................................... 9  
  Suggested Reading ............................................................... 10  

**Using Social Marketing for More Effective Financial Education**  .......... **11**  
  Positioning ............................................................................. 11  
  Types of Positioning ............................................................. 12  
  Financial Decision-Making ................................................... 15  
  Variation in Decision and Choice Processes ......................... 15  
  Systematic/Utilitarian Decision-Making ................................. 16  
  Low Involvement Decision-Making .......................................... 17  
  Hedonic and Ego-Expressive Decision-Making ....................... 18  
  Suggested Reading ............................................................... 18  

**Using Findings from Brain Research to Improve Financial Education Outcomes**  .......... **19**  
  Some Basic Brain Principles .................................................. 19  
  Key Principles and Practical Suggestions .............................. 20  
  Key Things to Remember ........................................................ 24  
  How to Reach Different Audiences .......................................... 24  
  Suggested Reading ............................................................... 25
Using Social Media to Improve Financial Education

Professor Paul A. Argenti, Tuck School of Business at Dartmouth

The emergence of digital communication platforms, including blogs and social media, has shifted the center of control and influence away from institutions to communities of individuals. Online learning is a new form of literacy, and it is profoundly interactive. Harnessing the power of social media involves empowering people to master new media tools for facilitating two-way conversations and nurturing collaborative relationships. This section presents key concepts about the new online environment and related tips and techniques for using social media to improve the design and delivery of financial education.

What Is Web 2.0?

According to socialnomics.net, here’s what the online world we live in looks like:

- In 2009, more than 25% of the world’s population used the internet
- By the end of 2010, Gen Y outnumbered Baby Boomers. Approximately 96% of Generation Y have joined a social network
- YouTube is the world’s 2nd largest search engine
- 1/8th of the couples who married in the US in 2009 met online
- 80% of companies use LinkedIn as a primary tool to find employees
- If Facebook were a country, it would be among the world’s largest
- 80% of internet users look online before buying a product
- 78% of consumers trust peer recommendations; only 14% trust ads

Web 1.0 was dominated by published content, publicly accessible online. It has matured into Web 2.0, the interactive, dynamic internet we know today. The defining characteristic of Web 2.0 is the collaborative environment that facilitates the creation and exchange of user-generated content via dynamic channels, including blogs, wikis and social networks. Web 2.0 platforms include videosharing, search engine marketing and optimization, online newsrooms, mash-ups and viral and word-of-mouth (WOM) marketing.
These media are all about social interaction, using highly accessible and scalable publishing techniques. Social media promote the democratization of content and the understanding of the role people play in the process of not only reading and disseminating information, but also sharing and creating content. Social media use web-based technologies to turn communication into interactive dialogues.

- Communication is in the form of conversation, not monologue
- Social media bring people and organizations together
- Honesty and transparency are core requirements
- It’s all about pull, not push
- It’s about distribution instead of centralization

Social media tools offer new ways to share, collaborate and build communities. People share news and opinions, photos and videos. They work together using software, and collectively create and share knowledge. They join communities of business contacts, friends, family, even strangers who share their personal and professional interests.
Here are some top Web 2.0 applications and what they do best:

- **Social Networks**: Enable users to customize, maintain and control their own personal network of contacts. 
  **Leaders**: Facebook, MySpace, Friendster, LinkedIn, YouTube

- **Blogs**: Allow rapid publication of online journals with commentary, descriptions, and other content, often focused on a particular area of interest. Blogs can include text, photos, video and other media, and allow visitors to add their own comments. 
  **Leading Blog Enablers**: TypePad, WordPress, Blogger, Weblogs, Windows Live Spaces

- **Podcasts**: Let users easily download audio and/or video content to a device like an iPod for playback. 
  **Leaders**: Podcast Alley, Odeo, PodShow, Juice, iTunes

- **Wikis**: Allow users to edit content using shared web publishing software. 
  **Leaders**: Wikipedia, Socialtext, Basecamp, jotspot

- **Search Engines**: Let users search the web based on user specified terms. 
  **Leaders**: Google, Yahoo!, MSN, AOL, Technorati, Ask

- **Rich Site Summary (RSS)**: Simplifies publication of frequently updated content such as news, blog entries, audio and video using a standardized web feed format. 
  **Leaders**: Bloglines, Newsfire, FeedBurner, Pluck, NewsGater

- **Tagging**: Facilitates in-site searching and sharing using descriptive words assigned to content like blog postings, photos or videos. 
  **Leaders**: Flickr, Del.icio.us, Digg, Shadows

“Social media use web-based technologies to turn communication into interactive dialogues.”
Using Social Media

Constituents differ in how they use the internet, so you want to learn as much as you can about their online behaviors. A snapshot of levels of users and their likely online activities looks something like this:

<table>
<thead>
<tr>
<th>Constituents</th>
<th>Likely Online Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creators 24%</td>
<td>- Publish a blog&lt;br&gt; - Publish your own Web pages&lt;br&gt; - Upload video you created&lt;br&gt; - Upload audio/music you created&lt;br&gt; - Write articles or stories and post them</td>
</tr>
<tr>
<td>Conversationalists 33%</td>
<td>- Update status on a social networking site&lt;br&gt; - Post updates on Twitter*</td>
</tr>
<tr>
<td>Critics 37%</td>
<td>- Post ratings/reviews of products or services&lt;br&gt; - Comment on someone else's blog&lt;br&gt; - Contribute to online forums&lt;br&gt; - Contribute to/edit articles in a wiki</td>
</tr>
<tr>
<td>Collectors 20%</td>
<td>- Use RRS feeds&lt;br&gt; - Vote for Web sites online&lt;br&gt; - Add “tags” to Web pages or photos</td>
</tr>
<tr>
<td>Joiners 59%</td>
<td>- Maintain profile on a social networking site&lt;br&gt; - Visit social networking sites</td>
</tr>
<tr>
<td>Spectators 70%</td>
<td>- Read blogs&lt;br&gt; - Listen to podcasts&lt;br&gt; - Watch video from other users&lt;br&gt; - Read online forums&lt;br&gt; - Read customer ratings/reviews&lt;br&gt; - Read tweets</td>
</tr>
<tr>
<td>Inactives 17%</td>
<td>- None of the above</td>
</tr>
</tbody>
</table>

Base: U.S. Online Adults

“Conversationalists” participate in at least one of the indicated activities at least weekly. For all other groups, consumers participate in at least one of the indicated activities at least monthly.

Source: North American Technographics® Empowerment Online Survey, Q4 2009 (US)
Source: Forrester Research, Inc.
Social media represent a shift from one-dimensional institutional communication to conversations with constituents who are ready and willing to engage. These conversations allow your organization to more effectively reach them through different pathways by:

- Conducting marketing research through listening to your consumers via ongoing monitoring of constituents’ conversations with each other, instead of occasional surveys and focus groups
- Marketing your materials and services through listening to, participating in and stimulating the two-way conversations that constituents have with each other, and not just using outbound communications
- Making it possible for your most enthusiastic constituents to be your best sales people and sell to each other
- Enabling your constituents to support each other
- Relying on your most engaged constituents to work with each other to come up with ideas to improve your services

The internet’s open structure encourages concise and flexible messaging for all users. As you reach out to your constituents, here are some tips for how best to convey your material online:

- Use straight, clear headlines and subheads
- Deliver one idea per paragraph
- Cut word count to half that of conventional writing
- Employ bulleted lists
- Use outbound hypertext links to establish credibility

Having a strong, clear voice has grown more important, and certain technologies demand different modes of expression. For example, blog posts resemble conversations; blog comments sharpen debate skills; Twitter enforces economy.

Active users or “digital natives” expect a two-way dialogue, not a one-way monologue. Instead of absorbing information, they go out and find it, and create their own story. Concise and flexible messaging and a strong clear voice are still critical to capturing their attention, and they expect transparency and honesty, in tone and style. The Semel Institute for Neuroscience and Human Behavior at UCLA identifies other key attributes of digital natives:

- They don’t necessarily read from left to right, or from beginning to end
- They are sensitive to visual icons and absorb more information when it is presented with visual images
Your social media program should be integrated into your overall communications efforts. A coherent communication strategy includes four key components:

- defining the organization’s overall strategy for the communication
- analyzing the relevant constituencies
- delivering messages appropriately
- analyzing constituent responses to determine whether the communication was successful

This framework applies to social media initiatives, as well as other forms of communications.

### Communications Strategy Framework

**Messages**
- What is the best communication channel?
- How should the organization structure the message?

**Constituencies**
- What does the organization want each constituency to do?
- What resources are available?
- What is the organization’s reputation?

**Constituency’s Response**
- Did each constituency respond in the way the organization wished?
- Should the organization revise the message in light of the constituency responses?

- They process visual information quickly
- They scan rather than read, in a frenetic cognitive style, displaying “continuous partial attention”
- They are highly influenced by text size
- They quickly switch tasks, using Google and other digital probes to obtain information to evaluate
- They abhor promotional language and hyperbole
Here are some steps to follow as you design, develop and implement your social media program:

**Development:**
- Plan what active participation will look like and develop a “playbook”
- Decide who has authority to post and/or respond
- Determine legal parameters
- Develop rules, online etiquette and a “persona” for engaging
- Develop guidelines and protocols for responding and/or incident reporting
- Develop a decision tree or process flow, if necessary

**Content Considerations:**
- Create pre-scripted responses or legal copy needed for specific situations
- Think about what you want to say and develop an engagement calendar
- Map out planned posts
- Depending on the channel, create or plan content in advance
- Include new program or service announcements
- Set up a process for blog or Twitter posts from the organization’s leadership related to current issues

**Implementation:**
- Start talking—launch active participation
- Publicize channels, i.e., Twitter, YouTube, etc.
- Send emails to stakeholders
- Put a link on website home page
- Build a follower base
- Engage in conversation, within rules and guidelines
- Monitor, report, track metrics to determine continued value or identify success/areas of improvement

**Some key things to remember:** Listen and then speak. You want to monitor what your constituents are saying, then post responses, engage and become social through conversation, social networking, content sharing and collaboration. You want to monitor the effectiveness of your efforts.

**Most important of all, remember this:** Communicate online or others will do it for you. Not communicating is communicating.
Reaching Younger Audiences and Women Constituents

Different demographics behave differently online. Organizations that understand this will be better positioned to reach their target audiences. Age and education are the strongest determinants of internet usage, but the digital divide is narrowing. Teens and young adults seem to live online, but older generations are catching up. Once online, behavior differences within different age groups are subtle, but important. For example, teens are more likely to use instant messaging than email, but are very particular about which social networks they choose. Women are a key demographic that any organization devising a digital communications strategy needs to pay attention to. They are the fastest growing segment of the Web 2.0 audience, and control 85% of household income in the U.S.

Social media are playing a significant role in the changing landscape of American youth. This has huge learning implications among teenagers. According to Boyd (Living and Learning with Social Media, Penn State Symposium for Teaching and Learning with Technology, April 2009):

• Youth engage with each other to work out boundaries and to understand norms; this is how they learn authority. Today, they’re working through these social issues online.
• Youth leverage social media for educational purposes and share online content more than any other age group through links, references, ideas and original content.
• Educators have a critical responsibility when it comes to helping youth navigate social media. Young people need to know more than just how to use the tools; they need to understand the structures around them.

Online Engagement with Teens

• Youth do not engage in networking. They do not meet new people online, but reinforce their everyday networks. Social media comprise the gathering space.
• Email is no longer the place for sociable communication. Today’s teens are stuck between instant messaging (IM), MySpace, Facebook, and short message service (SMS).
• Teens don’t care if they lose track of something they put hours into building; they willingly recreate profiles and passwords.
• Concerning Facebook vs. MySpace, you must know your demographic. Teens are very particular about which social network is most relevant.
Online Engagement with Young Adults

According to the Pew Research Center:

- Young adults ages 18–32 are most likely to be engaged in all the various online activities—communication, entertainment, e-commerce and entertainment-seeking.
- Unlike teens, young adults use social networks primarily for networking purposes.
- When compared to older users, young adults are more active online reputation managers—71% of social network users ages 18–29 have changed the privacy settings on their profiles.
- 75% of adults ages 18–24 use social networks, compared to just 7% of adults ages 65 and over. At its core, use of online social networks is still a phenomenon of the young, though the number of older users keeps rising.
- Internet users in their 20s do not dominate online life. Gen X (ages 33–44) is still more likely to bank, shop and look for health information online.
- 67% of Gen X users bank online, 80% buy products online (compared with 71% of Gen Y).
- Gen X uses the internet for watching videos and socializing, but less so than Gen Y.

Online Engagement with Women

According to Blogher, there are important reasons your organization should care about women:

- Women control 85% of household income.
- Women account for the majority of users on most social media sites (including Facebook, MySpace and Twitter).
- Women are the fastest growing segment of the Web 2.0 audience.
- As women spend more time with social media, they spend correspondingly less time with traditional media—39% less on newspapers, 36% less time reading magazines and 30% less time watching TV.
- Web 2.0 is all about being social. Traditionally, men are the early adopters of new technologies, but when it comes to social media, women are at the forefront.
Organizations looking to reach women have an unprecedented opportunity through social media to engage them. They can:

- Leverage the opportunity to secure real-time feedback
- Tap into huge growth of interest-based types of sites
- Use data on women’s internet behavior to gain a better idea of how to develop communities that garner maximum participation from women
- Leverage the fact that online social tools help people to connect across barriers to interaction. For example, for women in business, this alleviates difficulties in securing capital, gaining access to key decision-makers and finding opportunities to demonstrate their expertise.

**Suggested Reading**

*Digital Strategies for Powerful Corporate Communications*, Paul A. Argenti & Courtney N. Barnes, 2009, McGraw-Hill


“Women are the fastest growing segment of the Web 2.0 audience, and control 85% of household income in the U.S.”
Using Social Marketing for More Effective Financial Education

Professor Punam Anand Keller, Tuck School of Business at Dartmouth

Positioning

Systematic financial literacy problems are pervasive despite an exponential increase in providers of financial education. Most times the blame is put squarely on the individual’s inability to grasp basic math and lack of motivation to act in his/her best interest. However, this perspective does not empower the provider to improve financial literacy outcomes. This essay stresses the importance of positioning in the financial literacy and investor education marketplace.

Positioning is the act of designing the organization’s offerings (products and services) and its image to occupy a distinct place in the mind of the target consumer. As such, positioning is integral to creating and communicating value to target consumers. Segmentation and targeting need to be followed by a positioning strategy to create a clear customer-focused value proposition in the mind of the target audience. In other words, why should the organization be the go-to place for information on financial literacy and investor education?

An offering’s position is a complex set of perceptions, impressions, and feelings. A positioning statement is often considered an internal value proposition that can be used to guide the positioning strategy. An organization/offer has many associations that combine to form a total impression. The positioning decision often means selecting those associations that are to be built on/emphasized (and de-emphasized). There are three key positioning options varying in depth of relationship with your audience: natural (feature) positioning, image (who, what, where, when, why) positioning and relationship or symbolic positioning (level of closeness or connection).
Types of Positioning

No organization can succeed if its products and service offerings resemble every other product and service offering. Organizations that are designing their products and services to meet the needs of specific target markets—such as women, high school students or low-income populations—are in a better position to satisfy their audiences than are organizations who mass market.

Rather than letting the consumer figure out where the product or service exists, successful organizations position their offerings by pointing out the similarities and differences between organizational “brands.” Therefore, a positioning strategy requires that an organization determine a “competitive” frame of reference by identifying the target market, the nature of the competition (other providers) and the ideal points-of-parity and points-of-difference in brand associations for the providers. Points-of-parity are associations not necessarily unique to the brand but may in fact be shared with other brands. For example, in order to present their offerings as unbiased or consumer friendly, organizations may share a claim that their recommendations are not paid for by investment firms or banks. Points-of-difference are strong positive associations consumers hold for one organization and believe they could not find with another “competing” organization.

A starting point in defining a competitive frame of reference for a brand position is to determine category membership, the sets of products and services with which a brand competes and that function as close substitutes. In the United Kingdom, for example, the Automobile Association has positioned itself as the fourth emergency service after police, fire and ambulance, to convey credibility and urgency. Organizations have three main options to communicate their category membership:
1. **Use category benefits.** Primary benefits are often used to announce the category and to reassure consumers that they will deliver on the fundamental reasons for using the category. Thus an investor education organization may claim to provide guidelines on how to invest for retirement.

2. **Compare to exemplars.** Well-known partnerships in a category can also be used to specify category membership. For example, an organization can publicize its affiliations to the U.S. Department of Treasury.

3. **Short descriptors.** Relying on the descriptor that follows the brand is often an effective and concise means of conveying category membership. For example, the FINRA Foundation uses “Investor Education Foundation” to explain its category. Or the description can highlight the target audience, for example, the senior investor.

The choice of points-of-parity and points-of-difference should be based on desirability and deliverability criteria. Desirability criteria are based on what the target audience finds personally relevant, important, distinctive and superior. Deliverability criteria are based on what the organization can deliver (feasibility), what the organization can substantiate (communicate) and what the organization can defend (sustainability). Factors influencing the choice of positioning strategy include:

1. the organizational brand’s existing market position
2. compatibility with consumer perceptions
3. positioning of other providers/competitors
4. desire for innovativeness
5. legal environment

The table below provides a set of differentiation variables.

<table>
<thead>
<tr>
<th>Products</th>
<th>Services</th>
<th>Personnel</th>
<th>Channel</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Ease of use and accessibility (distribution and communication)</td>
<td>Competence, expertise</td>
<td>Coverage</td>
<td>Symbols, colors, slogans</td>
</tr>
<tr>
<td>Features (e.g., innovation)</td>
<td>Delivery of products and services including level of customization</td>
<td>Courtesy</td>
<td>Expertise</td>
<td>Atmosphere</td>
</tr>
<tr>
<td>Conformance (e.g., standardization)</td>
<td>Installation of software, binders, posters, etc.</td>
<td>Credibility</td>
<td>Performance</td>
<td>Events</td>
</tr>
<tr>
<td>Durability</td>
<td>Training for providers or consumers</td>
<td>Reliability</td>
<td>Technology support</td>
<td>Brand contacts</td>
</tr>
<tr>
<td>Reliability</td>
<td>Consulting for providers or consumers</td>
<td>Responsiveness, empathy</td>
<td>Resources</td>
<td></td>
</tr>
</tbody>
</table>
Consumers will position offerings with or without the input of the institution. Rather than leave the positioning of their offers to chance, good marketers include continuous input from target consumers to avoid five main pitfalls:

1. Under-positioning, where consumers end up with only a vague idea of the product/service
2. Over-positioning or consumers have too narrow a picture of the product/service
3. Confused positioning due to too many claims, claims that conflict, or frequently changing claims
4. Doubtful positioning because claims are hard to believe
5. Mass positioning because you forgot you aren’t the only institution who may be attempting to position/reposition products or change the determinant dimensions

Like a true marketer, I have emphasized the value of positioning from a customer and an organization’s perspective. Positioning also has important public policy implications. We would reduce redundancy and waste if every organization had a clear position in the financial literacy and investor education marketplace. Imagine a world where all foundations, agencies, endowments, institutions and organizations were viewed as specialists and experts for providing specific types of financial literacy and investor education to different target audiences. Consumers would know that organization A had the best products for seniors interested in investing and organization B provided the best guidelines to prevent investor fraud. Organizations serving the same target segment would form more efficient and fewer strategic partnerships. Along the same lines, products and services would be more effective because they would be based on in-depth knowledge of smaller target audiences shared by organizations in the “target group partnerships.”
Financial Decision-Making

Providers of financial literacy and investor education are interested in consumer behavior from two perspectives. They are interested in how their target audiences “consume” an organization’s products and services on financial literacy and investor education. For this purpose, they research consumer decisions in great detail to answer myriad questions about what they know, where they learned it, when they learned it, whom they trust, how confident they are and why they use or don’t use what they know. They are also interested in how consumers use information on financial literacy and investor education to inform their behavior in the marketplace; how they make trade-offs between current costs and benefits compared to future costs and benefits; how they think about emergency funds; and whether they have positive or negative associations about retirement.

Consumer behavior is the process people engage in when searching for, selecting, purchasing, using, evaluating and disposing of products and services to meet their goals. Some products and services require a long, systematic process starting from an extensive information search, comparisons of competitive offerings in the marketplace, trial, evaluation and adoption. Other products and services are consumed automatically with little apparent thought. And some products and services are consumed primarily on their appeal to the senses such as the way they look and feel. These three processes are described in detail below in order to provide guidelines on how an organization’s offering of products and services needs to correspond with the decision-making and choice process used by the target audience.

Variation in Decision and Choice Processes

**Systematic/Utilitarian**
- **Know → Feel → Do**
  - Trigger = Problem Recognition (Actual–Desired)
  - Active Search
  - Rational Evaluation of Alternatives
  - Mindset: Deliberative
  - Choice Heuristic: “Buy the Best”
  - Ultimate Choice: Trade-off Among Competing Alternatives

**Low Involvement**
- **Know → Do** (Feel)
  - Trigger = Stock depletion, Environment Cue
  - Passive/Automatic Search
  - Limited/No Evaluation of Alternatives/Least Effort
  - Mindset: Implemental
  - “Buy the Cheapest”

**Hedonic/Ego-Expressive**
- **Feel → Do** (Know)
  - Trigger = Impulse, Emotional Need
  - Confirmatory Search
  - Rational Evaluation of Alternatives
  - Mindset: Emotional
  - Choice Heuristic: “Buy What I Like.”
Problem recognition occurs when there is a gap between an actual and desired state. “Teachable moments” are created when consumers are motivated to solve the problem. Sources of problem recognition include need to replenish (defaulting on loans, declaring bankruptcy), dissatisfaction with current product/service or state of affairs (weak economy or stability of Social Security benefits), new needs and wants (new parents or home owners, newly divorced or widowed), complementary products/services (401(k) matches, tax credits) and the availability of a new product/service in the marketplace (health care law).

Once consumers realize the problem can be solved, they begin to search for information. Initially, they try to scan information in memory, such as whom they asked for advice in the past. If the internal search is not satisfactory, they search externally among personal sources (friends, relatives, co-workers), public sources (internet sources like mymoney.gov, magazines, books, newspapers, TV, radio shows) or marketer-controlled sources such as investment firm websites and loan consolidators.

Evaluation takes place during and after information acquisition. The various options deemed to have the potential to solve the consumer’s problem are entered into the “evoked” set. The evoked set is the subset of alternatives that are manageable or make it into the next stage. Communication and reminders are necessary to create top-of-mind awareness to ensure the organization’s brand is included in the evoked set.
The alternatives in the evoked set are then compared on attributes important to the consumer—such as easy to use, credible, objective, customized—to maximize functional and psychological consequences. Functional consequences are concrete outcomes, such as ability to accurately forecast retirement needs. Psychological consequences are abstract, subjective, personal outcomes, such as how the service will make you feel or how others will view you for using it—for example, using a VITA service.

Final attitude toward the organization or the service is based on combining beliefs about the organization and its products/services with the importance of the features of the products/services to the individual. To predict attitudes, organizations must know how much importance the target audience attaches to each feature (e.g., ease of use) with their beliefs about the user-friendliness of each brand.

The consumer process does not end with purchase or consumption. Consumer expectations are compared with perceived performance to assess satisfaction with the product/service. Consumers may feel cognitive dissonance or tension if they have doubts about their choice. They may rationalize their choice even if they are unhappy or they may spread negative word-of-mouth if they are dissatisfied. Social media enhances the speed and reach of negative comments. Post-purchase communication on Web 2.0 is an important source of influence for consumers who believe unsponsored information on Web 2.0 is more credible and objective than traditional sources of information.

**Low Involvement Decision-Making**

Financial literacy and investor education providers typically face a low-involvement audience. The audience is deemed relatively uninvolved when consumers are not particularly interested in engaging in an active search for information. Rather their decision and choice processes are triggered by life-stage and/or environmental cues such as getting divorced or starting a new job. These triggers are often appropriately referred to as teachable moments. Rather than engage in a systematic process of information search and evaluation, consumers who are less involved will use a variety of heuristics to minimize effort to make or avoid choices. These heuristics include easy access to sources (a relative), materials (online), and decision-rules (familiar or least risky).

Low-involvement consumers present more challenges for educators and marketers because their decisions are typically impulsive or short in duration, with the focus on implementation rather than deliberation. As such, it is vital for the organization to be the go-to source for the less involved consumer. Organizations will need to invest heavily in making low-involvement consumers aware of their offerings in addition to making the offerings accessible when and where the consumer needs them.
Hedonic and Ego-Expressive Decision-Making

Reckless financial decisions are often based on hedonic or ego-expressive decision-making. White collar professionals and seniors are often victims of financial fraud because they do not engage in a systematic decision-making that would involve searching for information such as FINRA BrokerCheck. White collar professionals make impulsive decisions based on emotions because financial scammers appeal to their egos and confidence in decision-making in other spheres of their lives. Seniors become fraud victims because scammers prey on their need for attention and need to feel valued.

Financial literacy and investor education offerings need to correspond with the decision-making process used by our target audiences. We need to redesign our offerings and use a variety of communication strategies to help our audiences become aware of their decision biases. We need pre-commitment goals and plans to prevent loss of control, such as a budget before a shopping trip or waiting 24 hours before purchasing a big-ticket item. We need to remember our audiences will use a variety of decision-making processes—automatic, hedonic and systematic. Finally, we need to make our services more accessible to help our target audiences remember our services while they are in the midst of relatively short decision and choice processes.

Suggested Reading


Using Findings from Brain Research to Improve Financial Education Outcomes

The brain is eager to learn new knowledge and skills. In fact, we cannot stop the brain from learning, from even before birth. Yet in financial education, we know that learning and remembering can be difficult—changing behavior even harder.

What do brain research findings tell us about how to be more successful in promoting financial literacy and sound financial decision-making and behavior? Problems are typically not because our audiences cannot learn, but because we do not use methods that maximize the likelihood they will. This section describes key principles from neuroscience research and related tips and techniques for improving the design and delivery of financial education materials and services.

Some Basic Brain Principles

When we learn, we are physically changing our brain, and we can change most everything, right down to the brain’s circuits, even the expression of genes. When we learn, our brain grows new connections among the many neurons that encode the fragments of knowledge and skills that have already been acquired. The brain continuously collects these bits of knowledge and skills and then links them into more complex knowledge and abilities. In this way, learning is like an archaeological dig, rather than a simple filing system. The problem we encounter in remembering is retrieval, more than storage.

1 A note from Professor G. Christian Jernstedt: A serious concern in modern neuroscience is maintaining a balance between narrowly limiting and too broadly generalizing the findings from scientific research on the brain. Important leading-edge neuroscience findings were discussed at the symposium. These findings are still being integrated into a comprehensive understanding of the human brain. Thus, the descriptions in the current document are broad overviews of concepts that might be used to think about effective design of financial education materials and processes in light of evolving trends in neuroscience. They should be understood as ideas to consider rather than factual prescriptions that must be followed.
When the brain learns, it relies in part on two specialized modules. The association module monitors the sequence of events that happen in the external world and in our head, so we can accurately predict events that occur with some regularity. The outcomes module monitors how we feel after doing something, so we learn to do things that bring satisfaction and to avoid things that are painful. When the association module notices events that occur together reliably, it changes the brain to anticipate this in the future. When the outcomes module notices actions reliably followed by desired outcomes, it changes the brain to remember these actions and do them more frequently in the future.

These and other things we have learned about the brain strongly suggest how to most effectively design and deliver learning experiences.

Key Principles and Practical Suggestions

1. Keep your message short and simple. Keep conscious tasks simple. Limit the number choices you offer your learners—not too few, not too many.

   Consciousness has a narrow capacity. Studies have shown it is difficult for the brain to do more than one thing at a time—even blink and think—in the conscious association areas of the brain. Also, offering too many choices results in less action taken. One study showed that when consumers were offered many different flavors of jam to sample, they made fewer purchases than when they were offered only a few choices. Consumers were more likely to take action when they had fewer alternatives for selections.
2. **Encourage small steps and provide quick rewards.**

Outcomes are enhanced when we receive useful or desired feedback, consistent feedback and rapid feedback. We learn and we establish habits when the brain notices the outcome that immediately follows our taking an action. For new skills, it is most effective to provide practice in very small steps with quick, helpful feedback, and then very gradually increase the complexity of the practice.

3. **Engage both the emotions and intellectual thought in your messages.**

   **Balance emotion and cognition.**

   The brain is rational and emotional. It is important to find a balance between emotion and cognition in your materials. Brain studies have shown that the limbic system—which performs a primary role in the processing of emotional reactions—shuts down the cognitive systems of some pilots during night aircraft carrier landings. Pilots’ emotions ran so high, they did not see the warning lights on deck or hear the landing officer’s commands inside their helmets telling them to abort. They crashed their planes in spite of all their knowledge, skill and training. Conversely, a patient with a brain injury that robbed his rational center of emotional input and left only his cognitive system was overwhelmed by all the decisions he faced—daily, hourly, minute-by-minute—and was unable to act. In other words, not only does too much emotion wreak havoc on reasoning, but paradoxically, too little emotion wreaks havoc on reasoning. A balance is needed: not too much emotion, not too little.

4. **Provide opportunities for your learners to do things three ways.**

   **Remember that doing is far more important than simply knowing.**

   Doing is learning. You want your learners to be actively engaged in using the knowledge and skills while they are learning. Doing something in three or more different situations while learning maximizes the ability to use it in new situations.

   Practicing specific desired skills as much as possible improves learning far more than simply trying to know the material. Studies showed that when subjects spent 40–80% of the time thinking about the meaning of material in assigned articles, and not reading all of them, their performance was better than those who spent 100% of the time reading all the articles and never practicing the use of the information they contained. You want your learners to connect, talk, think, write, type—not just read, watch and listen.
5. **Talk about the desired knowledge and actions.** Talk only about what you want your learners to do, not about what not to do.

   Positive framing trumps negative framing. Negative information inhibits behavior. The presence of words like “not” or the presence of statements about what not to do can both produce negative emotional states connected with educational materials and make the materials harder to understand.

6. **Help your learners take breaks frequently while examining your materials. Give them breaks between practice sessions for new knowledge or skills.**

   Remembering produces revision, so it makes learning vulnerable to change. The processes that shape the networks of neurons in the brain to remember new learning need time to strengthen and be able to resist interference. The interference comes from the brain’s making connections with existing fragments of knowledge and skills, especially ones that are similar to the new information, that are strongly established, or that are so large in number as to be overwhelming. New learning requires consolidation—and protection—as soon as possible after learning. Properly timed practice builds permanence.

7. **Incubate complex ideas. Give time for them to sit.**

   Up to 98% of what we do is typically done outside conscious awareness. Studies have shown excellent decision making with large amounts of information when time was allowed for processing the information outside conscious awareness.

8. **Use visual images and words to remind people of learned associations.**

   We learn associations when the brain notices and stores the sequence of events, so that what reliably comes first will acquire the properties of what reliably follows it. Photographs and words can be used to remind people of learned associations. One cited example describes legislators at a hearing who noticeably sat up straighter when told the person testifying was a teacher.

9. **Use common images—well understood and quickly grasped—to build scripts of action into materials.**

   Externally, life is filled with events that subtly prompt behaviors. Internally, everyday events invoke scripts of expected behavior. Even colors can be prompts. For example, studies have shown that the color red can inhibit performance on examinations.
10. **Use stories and concrete examples to create meaning. Connect everything to the natural, authentic environment.**

The meaningfulness of experiences is built from the structure, imagery and elaboration built into materials. One study showed that putting information to be learned into a personally meaningful story increased learning six-fold. Real typically beats fiction, so use real-life case examples whenever you can.

11. **Plan the sequence that people will follow through material that must be connected together.**

Association is created through consistent sequence. Because the association module of the brain is highly sensitive to connections between what we are learning and what we already know, it is important to guide learners. Prompting learners with images or words that are related to their world and suggest desired behaviors is a very powerful way to help people know when and how to act effectively.

12. **Consider the entire context of materials for your learners. Think about every word, image and aspect of every message in every media.**

Physical experience, perceptual thought and imagined reality can all be equal in the brain. Everything plays a role in the brain. It does not matter so much what actually happens; more important is what we think happened. In this sense, reality is what we create inside our brains, and we can help people create their reality. Context determines what we see and know. It is important to consider not only how much information to show at any one time, but also how to present it.

13. **Early in learning, protect the new knowledge and skills by making them simple and easy to achieve. Later in learning, challenge your learners to integrate various pieces of knowledge and skills into a coherent whole.**

Our habits are stable, our environment is generally stable, and the two are connected everywhere in well learned sequences that must be changed if behavior is to change. This is difficult to accomplish. There is a difference between temporary and long-lasting behavior change, and differences for the acquisition and retention phases of learning.
Key Things to Remember

- Effective learning is about what the learner does, not what information you provide to the learner.
- Carefully design materials to guide the learner in doing the most effective activities.
- In the beginning, seek a bit, not a lot. Start with very small steps with rapid, rewarding outcomes. Take your time.
- Change your training and materials as you proceed. Start simple; end with naturally complex, realistic steps.
- Ensure that every item and element—word or image—on a page or screen serves the purpose of that page or screen.
- Simplify materials so that the user’s attention is easily and naturally guided to the essential information or ideas.

How to Reach Different Audiences

1. **Present less information to novices. Help them learn how to filter what is important.**

   There are differences in the way the brain works based on factors such as level of experience, age and gender. These differences have implications for how to be most effective in connecting with different audiences.

   Novices and experts can benefit from having information presented in different ways. Studies have shown that novices tend to try to process too much information and get overloaded, while experts tend to need and use less.

2. **Provide frameworks for adolescents, not rigid rules.**

   Adolescents, midlife adults and elder adults can have different processes occurring in their brains. New imaging studies are revealing patterns of brain development that extend well into the teenage years. For example, studies have shown the prefrontal lobe—the seat of “executive functions” such as planning, impulse control and reasoning—not fully maturing until young adulthood. When working with teens, it is helpful to provide guidelines and boundaries that they are not yet prepared to establish for themselves. For example, advising them to wait a day before buying something they have seen and want can be more effective than telling them not to buy on impulse.
3. **Provide materials that connect elders to their life experience.**

   Many studies showed the “Big Five” factors of personality—extraversion, agreeableness, emotional stability, conscientiousness and openness—to have a high degree of stability during adulthood. However, recent research and meta-analyses of previous studies indicate that change occurs in all five traits at various points in the lifespan. On average, levels of agreeableness and conscientiousness typically increase with time, whereas extraversion, emotional stability and openness tend to decrease or plateau. To work effectively with elders, you want to create connections to their deep history.

4. **Provide both small bits of focused information and larger nets of related information to enable a message to reach both male and female brains.**

   Males and females also tend to process information differently. In a very general sense, male brains are good at focusing on one thing and female brains are good at processing a lot of information at the same time. So an effective message for men might emphasize the #1 thing to think about, while a message for women might provide 10 things to think about. Remember, though, that both men and women can do both, and can learn and practice both.

**Suggested Reading**

**Well written, authoritative, fascinating books that connect to basic science about the brain:**


**Books that consider important and useful aspects of the brain and how to use it well:**


*White Bears and Other Unwanted Thoughts: Suppression, Obsession and the Psychology of Mental Control*, Daniel M. Wegner, 1994, Guilford Publications

Broad summaries of the scientific literature emerging from the brain sciences:

*Stumbling on Happiness*, Daniel Gilbert, 2007, Knopf Doubleday

*The Neuroscience of Fair Play: Why We (Usually) Follow the Golden Rule*, Donald W. Pfaff & Sandra J. Ackerman, 2007, Dana Press

Writers drawing in part on brain science and writing on popular topics for a broad audience:


*Sway: The Irresistible Pull of Irrational Behavior*, Rom Brafman & Ori Brafman, 2008, Knopf Doubleday


This list is a sample of some readings in brain processes that have relevance for the design of financial education. Reading from this list will keep your own brain young and will provide further ideas to help you use effective methods to support your financial learners.