

Educational Methodologies of Personal Finance



Table of Contents

Introduction	3
Program Design & User Experience	8
Understanding the Learner	13
Introduction Lesson Segment	18
Warm-up Activities	20
Reasons for Learning	24
Visual Education	29
Previewing	32
Case Method	37
Lecture	42
Skill-building Activities	47
Project-Based Learning	50
Assessment	54
Ongoing Education	58
Conclusion	61

Introduction

Basic financial literacy lessons are simple. Even through taking just a short course, most people can understand essential personal finance topics and be ‘financially literate.’ But financial literacy is not enough when it comes to teaching personal finance.

Just knowing the subject matter does little to improve a person’s financial behaviors and potential for a secure future. Helping improve a person’s long-term financial outlook requires helping them adopt positive financial behaviors and systems that support their journey toward financial security

The Challenge: Overcoming Pre-existing Habits & Unique Needs

Every person you are teaching has different financial habits, emotional connections with money, and current financial realities – each learner is different, and their unique needs should be considered in the programming.

From an early age, our financial attitudes and habits start to form. Brown University’s research on chores demonstrates that financial habits tend to form and take firm root by as young as age nine (Jackson, 2017).

Unfortunately, Americans are not developing ideal habits for long-term financial security. Instead, an array of data demonstrate the need for learning a different approach to handling money. For example, 84% are short of retirement savings targets (NFCC, 2019), 48% are poor or low-income (U.S. Census Bureau, 2019), 46% do not have \$400 saved for an emergency (CFPB, 2016), and 72% are experiencing financial stress (American Psychological Association, 2015)



How Outcomes are Measured

As mentioned above, every learner is different. Well-constructed programs consider more than just content knowledge. Here are four measures that will help maximize program impact:

- **Financial Knowledge.** For programs to be truly effective, the educator and educational resources should work toward activities that develop higher-order thinking skills and require increased cognitive processing. Pre-, post-, and long-term testing provide ways to measure content knowledge gains.
- **Financial Sentiment.** Financial sentiment indicators measure a person's feelings/attitudes toward money and level of confidence when making financial decisions. The data will guide the overall program design, educational methodologies, and financial education resources.
- **Financial Behaviors.** A top goal of financial education should be to encourage the adoption of positive financial behaviors that help lead participants toward the results they desire. Behavioral measures can be quantified through Stages of Change model surveys and observation.
- **Financial Systems.** Lesson plans should include activities that encourage participants to establish financial systems. These systems should range from their accounts, to how their finances are managed, to calendar reminders of future activities. The systems can be measured to demonstrate participant action.
- **Overall Results.** The ultimate goal of financial education programming is improvement in people's financial situation. Financial education programs should include systems and procedures to ensure the best results and measure their impact on a person's finances.



To reach these goals, the program is built around reinstructional methodologies, including

- Backwards planning to ensure that lessons and activities build upon each other to support learner progress toward pre-defined outcomes;
- Active learning techniques, including visual, social, self-regulated, and project-based learning;
- Audience adaptation to enable instructors to scaffold and adjust activities to support learners of all different motivations, knowledge levels, and learning styles;
- Engagement with the affective dimension of learning and motivation in general, and of changing financial behaviors more specifically;
- Recommendations for system development and long-term follow-up and support to encourage permanent change.

Overarching Benefit: Learn more about insurance options that can protect your finances and livelihood.

Benefits: Most people are uncertain about what their insurance covers and the coverage gaps they may have. By the end of this workshop, you will have identified areas where you may need added protection and a clear plan in place to address those areas.



Lessons from the NFEC: Research-guided instruction for deep learning and long-term change

The NFEC's curriculum aims to support educators to help students across the age spectrum not only to acquire financial knowledge, but to transform their habits over the long run. As such, the curriculum incorporates insights from both the pedagogical canon and the body of research on how people change attitudes and behavior.

As a result, the following elements are key components of the NFEC curriculum:

Intentional Program Design

“Why are we even doing this?”
“What's the point?”

The curriculum has been designed in a modular format to support a range of learner needs and abilities, but each module scaffolds learner progress toward measurable outcomes in terms of knowledge, abilities, beliefs, and habits.

Each lesson supports learner progress in a structured way, flowing from warm-ups that activate prior knowledge and develop learner engagement/motivation, to interactive learning activities that support diverse learning styles, to targeted assessments that help both instructors and students evaluate what has been learned, and what remains murky.

Audience Adaptation

“But what I really want to know is...”
“I can't learn this way...?”

Learners vary widely, from their learning styles and motivation levels to their content knowledge and financial habits. The NFEC recommends ongoing assessment and adaptation along different dimensions of learning as a critical step. For example, pre-course surveys can help instructors understand both what users hope to get out of a course, and how students learn best. They can then adapt the material to focus on and connect with high-priority topics, while offering visual, kinesthetic, or social adaptations to common activities.

From Passive to Active Learning

**“I’m so bored. Are we gonna be tested on this?”
“Just tell me what to do and I’ll do it.”**

Making long-term behavioral change is exceedingly difficult. The NFEC recommends using metacognition, personal reason development, and self-regulated learning to invest students in the process. For example, offering learners choices about lesson focus or how they will complete certain activities, as well as opportunities to reflect on what is working in their learning – and what they still need to learn – not only boosts engagement, but helps instructors and learners monitor progress.

Moreover, activities – particularly visual and social learning modes – help learners to actively process and apply information as they learn it, and project-based learning extends the effect of these activities by providing authentic opportunities for learners to put financial knowledge into action and solve complex problems in scaffolded ways.

Engaging the Affective Dimension of Learning and Change

**“I just get so overwhelmed. I feel like giving up.”
“Shopping makes me feel better!”**

Even more than financial barriers, emotions loom large when trying to change financial habits. For some, this means feeling overwhelmed or not knowing where to start. For others, it means spending as a way of managing emotions. Critically, NFEC recommends ongoing assessment and adaptation along all dimensions of learning, and particularly using sentiment surveys to evaluate how users feel about their learning and to help address the emotional roadblocks they may encounter.

Change for the Long Run

“I was doing so well, but now ...”

Although the NFEC aims to boost financial literacy knowledge, the real challenge is to help Americans develop positive financial habits over the long-term. As a result, we highly recommend setting up systems that can provide long-term social and technical support for learners’ attempts at change. At the same time, developing an understanding of the transtheoretical model can help both learners and instructors develop patience and fortitude to move past the inevitable setbacks and relapses in their long-term efforts to instigate change.

Program Design & User Experience

Considering the user experience in course design is one of the keys to creating a pleasant, productive experience for learners. Our course program is designed to carry out information smoothly between the student and the instructor, and vice versa. Ideally this process starts in advance of the training and continues after the training, through the relationships built between instructors and learners as well as between the learners themselves. The techniques employed in the course design place the student at the center of the learning experience, in accordance with strategies that are known as High Impact Practices (HIP) by the National Survey of Student Engagement and the Association of American Colleges and Universities.

The NFEC's lesson plans use High Impact Practices in the following ways

- ***A curriculum built on backwards design.*** lessons are built around clearly-defined learning objectives that target students' content knowledge, sentiment, behaviors, and outcomes. As a result, the activities follow a sequential process to help learners build their knowledge and skills and change their attitudes and behaviors.
- ***Meaningful engagement.*** the curriculum is organized around financial events that learners may be experiencing, or can anticipate experiencing. NFEC also recommends that instructors drill down on students' answers to better understand their motivation, and do as much as possible to incorporate students' individual interests within the content of the course.
- ***Active and applied learning.*** students will present discussion topics related to the course, thus bringing real-life application to what they are learning. As established by the affective domain of learning in Bloom's Taxonomy, when a learner gives his or her own meaning to the learning experience, the learning becomes more vivid and significant to the student.



Before the Program Begins

To work toward a positive user experience, take care prior to the start of the education session to set the stage and better understand the audience.

- ***Program Design.*** Program design considers the flow of information and overall program organization. It is built around clearly-defined objectives that include students' content knowledge, behaviors, sentiment, and outcome. The educational lessons are selected to address financial life events for which participants are preparing, or which they are currently experiencing.
- ***Incorporate Student Interests through Pre-lesson Surveys.*** Use surveys to directly ask students what they want to learn and better understand their interests. When your audience feels that you're listening and are there to maximize their time and really help them, they move into a better state to pick up the information you are sharing. This positive regard helps you build relationships with them before the event and lets them know their thoughts are valued.
- ***Pre-program Marketing & Communication.*** Professional communication and benefit-driven marketing help encourage interest in the subject. This early communication sets the stage for your event and includes program details, participant benefits, and a call to action. Communications may include information about what to expect and pre-education lessons. They provide a way to help the learners feel secure in the program and the learning environment.



Tips for Implementation

For teachers who wish to create a learning environment that is more interesting to the student, learner interest surveys are a simple and efficient tool. According to Edutopia expert Rebecca Alber, “min[ing] for topics of interest by presenting students with questions, and then look[ing] for any patterns in their responses (around music, for example)” is one of the best ways to cater to their interests and discover new ways to relate their interests to the course. Decide which of their interests would be best for you to employ in the class.

For example, a learner interest survey could include questions such as:

- 1) Make a list of the things you want to learn about.***
- 2) Mention five financial issues that are affecting people your age.***
- 3) What is one of your most memorable courses? Why?***
- 4) Describe something you enjoy doing as a hobby or to relax***

You can have learners fill out the survey using pen and paper, or ask them to fill out a Google Form. If you want students to respond quickly, you can make the interest survey a game using free programs like Kahoot (which also is mobile-friendly!).

In addition to creating the questions yourself, you can ask the students to bring in questions of their own to ask their classmates, or brainstorm together with their peers to gather topics they would like to learn within the course.



Sources:

Alber, R. (2017). "Fire up your class with student-interest surveys." Edutopia, <https://www.edutopia.org/blog/fire-up-class-student-interest-surveys-rebecca-alber> [Accessed 5 Sep 2018].

American Psychological Association (2015). American Psychological Association survey shows money stress weighing on Americans' health nationwide. <https://www.apa.org/news/press/releases/2015/02/money-stress> [Accessed 5 Sep 2018].

Bloom, B.S. (1984). Taxonomy of educational objectives: The classification of educational goals. New York: Longmans Green.

Consumer Financial Protection Bureau (CFPB) (2016). Financial literacy annual report. https://s3.amazonaws.com/files.consumerfinance.gov/f/documents/102016_cfpb_FinancialLiteracyReport.pdf [Accessed 5 Sep 2018].

DePasquale, J. (2018). "Student interest surveys: Getting to know you." Scholastic.com, <https://www.scholastic.com/teachers/blog-posts/john-depasquale/2017/Student-Interest-Surveys-Getting-to-Know-You/> [Accessed 5 Sep 2018].

Jackson, R. (2017). Study finds habits in children take root by age 9 – Here's what that means for parents. The Huffington Post, https://www.huffingtonpost.com/rebecca-jackson/study-finds-habits-in-children-take-root-by-age-9_b_6755276.html [Accessed 5 Sep 2018].

McGill (2017). "Program design strategies to promote a healthy learning environment" [online]. Teaching and Learning Services (TLS), <https://www.mcgill.ca/tls/teaching/program-design/healthy-program-design> [Accessed 5 Sep 2018].

NFCC (2019). 2019 Consumer Financial Literacy Survey. <https://www.nfcc.org/2019-consumer-financial-literacy-survey/> [Accessed 6 Aug 2019].

U.S. Census Bureau (2018). Income and poverty in the United States: 2017. Washington, DC: U.S. Census Bureau. <https://www.census.gov/library/publications/2018/demo/p60-263.html> [Accessed 6 Aug 2019].

Understanding the Learner

Understanding the learner is essential to ensure success in education, because each learner has individual needs and challenges that will affect their ability to learn and apply knowledge. In order to guarantee success, it is important to acknowledge these needs through intentionally designed instruction that accommodates student variables, including both knowledge and emotional state.

An educator who has a good understanding of the learner will practice a strategy called “scaffolding” in order to meet content-based needs by gradually moving students from instructor-led practice to independent implementation of a concept or skill. Scaffolding is defined as an educational practice in which the instructor identifies what a learner currently can do, selects an issue outside their skill level, then provides guided instruction to help the student reach that new skill level (Pinantoan, 2013; Vygotsky, 1978). Although it may take more time to plan instruction that responds to students’ varying skill levels, scaffolding is extremely beneficial to learners, as they are more likely to acquire the desired skill or knowledge; is ultimately more efficient to implement; and increases learner motivation and engagement (Pinantoan, 2013).

Informed educators also practice sentiment analysis in order to get insight into a learner’s feelings or opinions toward the content and instruction, enabling the educator to more effectively respond to individual needs. Sentiment is an expression of how a person feels about a situation, event, or person. Sentiment analysis studies a person’s communications to determine their tonality – that is, whether the feelings being expressed are positive, negative, or neutral (Redmore, 2017). When teaching a financial literacy lesson or workshop, asking students to tell you how they feel about a topic – either orally or in writing – can help you target the problems that need the most immediate attention (Grossmann, n.d.), or adjust how you present material to make it more interesting, accessible, or simply less daunting.

Sentiment analysis in written form allows the educator to collect and analyze data for learners, and sometimes enables participants to be more forthcoming. Asking students to share their feelings about a topic out loud, on the other hand, can build community and make participants feel less alone. Either way, the educator can be much more successful in determining and increasing learner motivation.

Finally, an educator can use the Transtheoretical Model of Behavior Change (aka Stages of Change Model; prochange.com, 2015) to determine a learner’s progress toward effecting their own changes and subsequently come up with a plan appropriate to their developmental level to maximize that change. Researchers Prochaska, Diclemente, and Norcross created the Transtheoretical Model to establish the process from thinking about, to permanently implementing behavioral change. They posited that change can be categorized into five Stages of Change: precontemplation (not ready), contemplation (getting ready), preparation (ready), action, and maintenance. The process of effecting complete change is often complex, as those in process of making a change will often fluctuate between levels when they experience setbacks.

For educators, the transtheoretical model points to:

- The need to keep education light, especially for those who are not yet ready to change (i.e. the precontemplation stage). Focus on benefits, give them freedom to explore, and allow them to stray off course if they desire. Remember the goal we have for people at this stage is to push them up to the preparation stage.
- Scaffolding helps learners at all stages, but particularly learners at the earlier stages of change. Give them smaller, easily achievable activities where they actually work on their finances (i.e. start on their budget by entering in the income, then enter in housing, etc.). These little successes produce momentum, which can help encourage further action.
- Even people with highly-developed skills (maintenance level) can backslide. Once people arrive at the maintenance stage, we shift the conversation toward additional planning and preparation for life events that can have impact on their finances. We view this stage as an excellent opportunity to help them mentally prepare for potential financial disasters and more advanced planning.
- Your primary task is to provide learners with tools to facilitate the changes they have decided to undertake. In conjunction with scaffolding methods, intentionally setting goals is one of the most essential tools for promoting self-efficacy to achieve change (Shockey & Seiling, 2004).



Tips for Implementation

Implementing the above practices effectively requires intentional design and planning. If done properly, the time spent in the planning phase of instruction will help ensure that subsequent teaching is both more efficient and more effective. Each practice is intrinsically related to the other two. To begin, programs and instructors can assess learners in the following ways:

- Use pre-testing to measure content knowledge. When instructors know more about the students' cognitive abilities and current topic knowledge, they can ensure suitable scaffolding and identify areas on which to focus.
- Sentiment Survey. This survey measures a person's feelings and attitudes toward money, level of confidence when making financial decisions, and hope for the future. The purpose of the survey is to help people understand their relationships with money and emotions around handling their personal finances. It gives the educator valuable cues about how best to communicate with the students. When using sentiment analysis:
 - › Pay attention to written communication from the learners, or implement periodic surveys or other modes of feedback to pinpoint the learner's feelings on the instruction or subject matter (Grossmann, n.d.).
 - › Be aware that an individual learner may not be fully honest on a survey or may miscommunicate a feeling. Focus instead on the information as a whole, looking for trends and patterns among all learners (Grossmann, n.d.).
 - › Use the information you gather to intentionally target and resolve learners' concerns and struggles. However, be wary of singling out any individual learner (Grossmann, n.d.).
- Current Situation Survey. This survey measures a person's assessment of his or her financial situation. Participants answer questions regarding their income, credit, savings rate, loans and debt obligations, savings, and investments. The goal is to better understand the participants' current financial situations to best prescribe educational solutions. When delivering this survey in group settings, you will receive a variety of answers; but you will often find commonalities that you can use to group participants.
- Financial Behaviors Survey. This survey helps learners identify their personal financial behaviors. After completion, they diagnose the results and identify positive financial behaviors (actions that help them work toward personal goals) and negative financial behaviors (those that take them away from their goals).

The NFEC includes all these measures in its training to help you understand the learners' unique situations and needs. Once you have determined the learners' current capabilities, you can determine what you want them to achieve with scaffolding (e.g. help from you or a more skilled partner; Pinantoan, 2013). For example:

- One way to scaffold learning is by modeling an expert version of the task (Pinantoan, 2013; Zhao & Orey, 1999). For example, instructors may want to show students their own financial plans before helping students develop their budgets.
- You can also break the task into bite-sized, accomplishable tasks. Provide as much help as learners need to prevent them from becoming discouraged, but try to get them to do as much as they can on their own (or with peers) to promote their own skill development and confidence (Pinantoan, 2013).



Sources:

Grossman, C. (n.d.). "Sentiment analysis to help your internal communications." Beekeeper Blog. <https://blog.beekeeper.io/how-sentiment-analysis-can-help-your-internal-communication-strategy/> [Accessed 8 Aug 2019].

Noar, S.M., Benac, C.N., & Harris, M.S. (2007). Does tailoring matter? Meta-analytic review of tailored print health behavior change interventions. *Psychological Bulletin*, 4, 673-693.

Pinantoan, A. (2013). "Instructional scaffolding: A definitive guide." InformED, <https://www.opencolleges.edu.au/informed/teacher-resources/scaffolding-in-education-a-definitive-guide/> [Accessed 5 Sep 2018].

Prochange.com (2015). Transtheoretical Model (or Stages of Change). Prochange.com. <https://www.prochange.com/transtheoretical-model-of-behavior-change> [Accessed 10 Mar 2017].

Redmore, S. (2017). "Using sentiment analysis to dig deeper into written communication." Quirk's Media. <https://www.quirks.com/articles/using-sentiment-analysis-to-dig-deeper-into-written-communication> [Accessed 6 Aug 2019].

Shockey, S.S., & Seiling, S.B. (2004). Moving into action: Application of the Transtheoretical Model of Behavior Change to financial education. *Association for Financial Counseling and Planning Education. Financial Counseling and Planning*, 15(1), 41-52.

Vygotsky, L.S. (1978). *Mind in society*. Cambridge, MA: Harvard University Press.

Zhao, R., & Orey, M. (1999). "The scaffolding process: Concepts, features, and empirical studies." Unpublished manuscript, University of Georgia.

Introduction Lesson Segment

The introductory segment to any lesson is used to help students understand how a subject relates to their lives, build interest in the program, preview the upcoming lesson, and engage your learners. This is a time for the instructor to establish initial rapport and gain better understanding of the audience's needs. During the introduction, the educator's focus should be on the accomplishment of these goals:

- **Build rapport.** Provides the educator opportunity to connect with participants and build rapport.
- **Gain a better understanding of students.** Discussions centered around the participants' feedback will help the educator understand their needs.
- **Provide an overview.** Preview the upcoming lessons so students know the direction of the course. Ask Essential Questions. Include the essential questions – problems to be answered – to help students develop a framework for understanding the overall big picture of the lesson.
- **Build interest and engagement.** Build excitement and interest in the program and differentiate the subject matter from other trainings the participants have gone through.
- **Cite personal relevance and reasons.** Help students understand the personal benefits and reasons for learning about this topic, and the areas of life on which it has impact
- **Activate prior knowledge.** Look for ways to actively integrate students' prior knowledge in all activities, creating lasting learning connections.
- **Strengthen understanding.** Through asking questions, getting feedback, and observations, the educator can better understand the audience and adjust the presentation to meet their needs.
- **Simplify.** Help the learners gain confidence in their ability to learn the materials by simplifying the lessons taught.
- **Connect with various learning styles.** Engaging with various learning styles gives both the learner and educator flexibility in class. Demonstrate to participants that they have some freedom to learn in ways that appeal to them.

The NFEC integrates all these aspects into its curriculum. Be sure to modify the introductory presentation to reflect your personality. Consider adding a personal anecdote that can help you connect with your audience. Have questions ready and be prepared to ask follow-up questions to the students' responses to deepen your understanding of their true motivations for learning about money.

Sources:

Bransford, J.D. Brown, A.L., & Cocking, R.R. [Eds.] (2000). How people learn: Brain, mind, experience, and school. Expanded Edition. Washington, DC: National Academies Press.

Center for Instructional Development & Distance Education (2014). “The lecture method.” University of Pittsburgh. <http://www.cidde.pitt.edu/teaching/lecture-method> [Accessed 6 Aug 2019].

Brigham Young University (n.d.). “Lesson planning: Introduction & presentation.” BYU. linguistics.byu.edu/faculty/henrichsen/LessonPlanning/lp_12.html [Accessed 6 Aug 2019].

Washington University in St. Louis (n.d.) “Teaching with lectures.” The Teaching Center. teachingcenter.wustl.edu/resources/teaching-methods/lectures/teaching-with-lectures/ [Accessed 6 Aug 2019].

Warm-up Activities

Warm-up activities represent one important aspect of introducing a lesson. The warm-up activities NFEC uses focus on using visual and auditory cues to present essential questions, activate prior knowledge, and support metacognition.

An essential question is a big question that the lesson will answer. Integrating essential questions into a warm-up activity provides students with a roadmap for understanding the lessons and applying them to real-world action (Essential Questions Handbook). When students know the question(s) a lesson will answer, they comprehend the focus and where the lesson is going. Essential questions also encourage more meaningful discussion as students try to work out answers to essential questions (Faculty Focus, 2017).

As students think about the essential questions, they can be encouraged to draw on prior knowledge. Research shows that constructing learning based on previously-acquired knowledge improves the learning experience (Shelley, Bridwell, et al) because it enables people to tap into their motivation to learn the subject matter and because they can attach new concepts to prior “schemata,” resulting in better long-term retention. For example, researchers have found that when students talk about what they already know, it encourages struggling or disinterested students to engage in the learning process because they feel that they have something to contribute.

In addition to activating prior knowledge and drawing on multiple learning styles, the warm-up period can be strengthened even further through metacognitive questioning and reflection. By metacognition, educators mean the processes through which learners assess their own abilities and the strengths and weaknesses of particular strategies.

Metacognition has two distinct benefits to the learner:

1. It allows the learner to regulate his or her own learning (Piper 1992) and behavior. Self-regulation encourages the learner to seek out knowledge and look for information they are missing.
2. It also allows the learner to compensate for any struggles in acquiring information (Piper 1992). While the learner had decided what knowledge they need, they are better able to develop strategies to acquire knowledge. This is especially important for students who struggle with material in any way.

According to Piper (1992), the use of metacognition in a warm-up increases the learner’s understanding of his or her own existing skills and information and what they need to do to increase their level of knowledge or understanding.

Tips for Implementation

Each lesson begins with a warm-up activity. These activities focus employ various strategies: asking essential questions, KWR, VIQOS, and metacognition. Extension lesson options are provided to leverage tactile learning opportunities and to gain a better understanding of students.

The most important element of essential questions is that they center around the “big picture” of any lesson. For example:

- How can I save money if I don’t make enough?
- How much do I need to save for retirement, and how can I start?
- Is it better to buy or rent a home?
- How can I improve my credit rating, and how will that help me?

As you implement the essential questions in the warm-up, consider the following:

- Focus on the fundamental concepts that extend to all elements of the lesson. What do you want students to take away from the learning?
- Focus on ideas that will stick with students and provide value to their lives.
- Make sure the essential questions relate to the real world and are transferable to a variety of situations



The teacher can come up with the essential question of a lesson, or students can come up with the questions based on one of the following activities.

KWR Chart. The KWR strategy has been modified from a research-based methodology, the KWL Chart, in which students list what they already know, what they want to know, and what they have learned. The NFEC substituted ‘how it relates to my life’ for ‘what I learned’ because it’s important for learners to understand their personal relationships with money early in the instruction. The lesson plans have the participants complete activities and reflect on what they learned later in the training.

VIQQS Activity. The NFEC developed the VIQQS activity to support students with various learning styles and to provide freedom to activate existing knowledge in ways that work for each student. The VIQQS acronym stands for Video, Image, Quote, Questions, Sounds. Learners are given these different cues and instructed to free-write, reflect, or participate in a variety of group activities to activate prior knowledge and lay the foundation to connect with new information. The VIQQS method uses visual, auditory, reading, and kinesthetic learning styles to continue the activation of prior knowledge used in the KWR strategy.

Students also can activate their prior knowledge on a topic through metacognitive questions such as:

- How well did I manage my money this month/year, and why?
- When I made a budget, what helped me stay on track? What threw me off?
- When I feel frustrated/down/depressed, how does it affect my spending? How does feeling happy/excited affect my spending?

Implementing warm-up activities requires preparation. When designing your warm-up activities, you will need to gather materials, pre-assess student knowledge (where possible), and identify what you want students to learn in the lesson.



Sources:

Gardner, H. (1983). *Frames of mind: The Theory of Multiple Intelligences*. New York: Basic Books.

McConnell, Carolyn (2011). *The essential questions handbook*. New York: Scholastic Teacher Resources.

Schrock, J., & Benko, S. (2015). "Using fundamental concepts and essential questions to promote critical thinking." *Faculty Focus*. www.facultyfocus.com/articles/course-design-ideas/using-fundamental-concepts-essential-questions-promote-critical-thinking/ [Accessed 6 Aug 2019].

Tecweb.org (n.d.). "Gardner's Multiple Intelligences." *History of Telecourses*. www.tecweb.org/styles/gardner.html [Accessed 6 Aug 2019].

Tileston, D.W. (2011). *10 best teaching practices: How brain research and learning styles define teaching competencies*. New York: Sage.

Wilhelm, J.D. (n.d.) "Essential questions." Scholastic Publishers. www.scholastic.com/teachers/articles/teaching-content/essential-questions/ [Accessed 6 Aug 2019].

Willingham, D.T. (n.d.) "Ask the cognitive scientist." *American Federation of Teachers*. www.aft.org/ae/summer2005/willingham [Accessed 11 Mar 2015].

Reasons for Learning

In addition to students understanding what they will learn in a lesson, they must understand why it's important to learn it. Identifying the purpose of each lesson provides both teacher and student with many benefits. Reasons for learning, often called learning objectives, “establish a direction to guide learning” (Dean et al., 2012). Establishing reasons for learning prior to designing an instructional strategy creates a roadmap for all content that you will present in a lesson. According to the University of Aberdeen, stating the reasons to learn a lesson helps the instructor design all aspects of the course in a way that supports those reasons – from the content itself to how the content is delivered. Any interactive activities stem from those reasons for learning. The reasons for learning also determine the resources needed and guide the creation of assessment activities because when you, as an instructor, know what you want students to take away from a lesson, those takeaways determine what you should assess.

Besides guiding the teacher, reasons for learning also help guide and motivate the students. Stating reasons for each lesson clarifies to learners what they should expect to learn, and how the learning may help them in their personal, academic, or financial lives.

In the same way, encouraging students to determine their own reasons for learning can also help them develop their own direction and guide their own learning. Researchers have found that when students participate in developing their own reasons for learning, they develop a better sense of control over their learning process (Dean et al., 2012). They also develop self-regulatory skills that determine how well they grasp new concepts.

When students develop reasons for wanting to learn each objective, their personal motivation and engagement in the lesson increase. In turn, engagement and motivation is particularly important for effecting real behavior change. After all, learners must have strong reasons and motivation in order to resist giving in to old habits when temptations arise.



Defining reasons for learning is an important element of the experiential learning model created by David Kolb (Kolb, 1984). Kolb's theory largely relies on the idea that meaning must be made from all learning experiences in order for students to assimilate new information into their existing knowledge. Consider the following stages of experiential learning as defined by Kolb:

1. The learner must be a willing participant in the learning
2. The learner must reflect on his or her learning experience
3. The learner must be able to conceptualize the experience
4. The learner must have problem-solving skills to apply the new information to life (McLeod, 1970)

When students develop reasons for learning, they actively participate in their own learning process. In order to write or discuss their reasons for learning about a particular topic, students must reflect on what knowledge they need, how they want to acquire that knowledge, and why it could be important in their lives. As a result, students are more likely to retain the information over the long run. Moreover, hearing or reading about students' reasons for learning also helps instructors more fully understand the students, enabling them to further adapt and customize the learning to students' needs and desires.



Tips for Implementation

Start with your own reasons. When developing your own reasons for teaching a particular lesson, consider the following questions:

- What is the focus of the lesson you are about to deliver?
- What is the final outcome of the lesson? That is, what do you want your students to take away from the instruction?
- What are the components of the lesson?
- How do you use content from the lesson in your own life?
- What elements in the lesson do you think will benefit your audience the most?

Communicate your reasons to students. When you explain the reasons to learners, think about the following:

- **Be sufficiently precise.** You don't want reasons that are too broad (i.e. this will help you financially) or too narrow (i.e. this will help you save for the birth of your first child if you have the child before you turn 30) (Dean et al., 2012).
- **Communicate the reasons clearly.** Make sure students understand the reasons before the lesson begins. This step will allow them to take ownership of the learning and understand how all elements of the lesson relate back to the stated reasons (Dean et al., 2012).
- **Provide Opportunity to Reason.** Provide students with opportunities and structures to come up with their own reasons. To engage students in actively exploring their reasons for learning, NFEC recommends the following two activities:
 - **Learner-developed Reasons.** The goal of this activity is to get students to connect the lesson to personal reasons for why they want to learn. Ask students to reflect – either in writing or discussion – about how the subject matter will affect their lives. Invite students to explore a range of goals, including: Lifestyle goals (life experiences), relationships (family, friends, significant other), primal needs (security, shelter, survival), status (comparison with peers, fun, splurges), and emotional state (confidence, hope, stress). Lesson expansions allow students to explore high-contrast examples of successful outcomes versus consequences (pain vs. pleasure) and how the subject can affect their lives.
 - **Imagery Activities.** To deepen the reasons for learning the subject matter, imagery activities and guided visualizations help students create a mental picture of the potential results of their learning and actions. For example, students who are planning a budget can be invited to imagine the particular consequences of sticking to that budget – or not sticking to it. This type of image-driven activity enables students to break through their reptilian brain filters – as described by neuroscientist Paul MacLean (MacLean, 1990) – because they get participants to feel the pain and pleasure of potential outcomes on a visceral, emotional level.

To successfully implement the activities, the educator should:

- **Provide students with a framework** for writing or saying their reasons for wanting to learn about a certain topic. This framework can be presented in the form of a sentence stem or as keywords. You can also use the KWR strategy to ensure that students understand what they already know and what information they lack about a topic. While identifying the W (what they want to know), they will discover their reasons for wanting to learn about the topic.
- **Give students freedom.** Allow them to develop their own reasons and connections to how the topic you are teaching affects their lives on a personal level.
- **Use vivid imagery.** To impart the most benefit, use descriptive language that helps students imagine the situation.
- **Align imagery with audience.** Ensure that you deliver guided visualizations to which the learners can relate. For example, young people may relate to wanting to buy things like sneakers or a new phone, or even saving for college; whereas adults might be more motivated by paying mortgage/rent and saving for retirement.
- **Utilize props.** Bring in visuals or other props to deepen the imagery and add entertainment value to the activity.
- **Have learners consider different goals.** Have students consider all the areas where the topic you are teaching affects their lives: lifestyle, relationships, emotional state, etc.
- **Invite learners to share their reasons with the group.** Provide opportunity for learners to become inspired by new reasons to engage with the material, and for you as an instructor to make sure the reasons are realistic and fall in line with the lesson content (Dean et al., 2012).
- **Respect learners' privacy.** These discussions may touch on personal issues, particularly if the reasons reveal an aspect of learners' finances about which they feel ashamed. Therefore it's important to respect students' privacy: encourage sharing, but do not call on anyone who does not volunteer.

The NFEC's lesson plans integrate all these activities and extensions into the curriculum. There are a variety of imagery activities, so be sure to select the ones that best fit your audience's situation and modify them as your understanding of their reasoning increases

Sources:

Dean, C.B., Hubbell, E.R., Pitler, H., & Stone, B.J. (2012). Classroom instruction that works: Research-based strategies for increasing student achievement. Alexandria, VA: ASCD.

Everette, M. (2017). The hidden power of learning objectives. Scholastic.com. <https://www.scholastic.com/teachers/blog-posts/meghan-everette/17-18/The-Hidden-Power-of-Learning-Objectives/> [Accessed 7 Aug 2019].

Kolb, D.A. (1984). Experiential learning: Experience as the source of learning and development. Upper Saddle River, NJ: Prentice Hall.

MacLean, P.D. (1990). The triune brain: Role in paleocerebral functions. New York: Springer.

McLeod, Saul (2017). Kolb's learning styles and experiential learning cycle. Simply Psychology. www.simplypsychology.org/learning-kolb.html [Accessed 7 Aug 2019].

University of Aberdeen, "Guidance on aims and objectives for teaching and learning." www.abdn.ac.uk/admin/aimsofs.shtml [Accessed 7 Aug 2019].

Visual Education

Whether you're previewing a lesson or getting into the details, visualization is one of the best tools for learning and long-term retention. Human brains are wired to rapidly process and remember visual input (Ebner & Bruff, 2010). Providing a variety of visual learning resources can help an instructor incorporate key topics and themes to engage students in the lesson and help them grasp key concepts quickly.

The power of visual learning has been well-documented. First, incorporating visuals supports speed, accuracy, and retention. Researchers at MIT have found that the human brain can process entire images in as little as 13 milliseconds (Trafton, 2014).

Dr. Haig Kouyoumdjian's work states that the brain is largely a visual processor; only a small portion of the brain processes words. As a result, the brain remembers visual images better than it remembers words. If you use images to introduce lessons and topics, students are more likely to remember the images throughout the lesson and across the long-term (Kouyoumdjian, 2012).

Using images while presenting the "big picture" of a lesson also incorporates Richard Mayer's Cognitive Theory of Multimedia Layering (Learning Theories.com, 2016). The crux of Mayer's theory is that humans learn better when both images and words are present. Mayer notes that our brains do not receive input via images and text separately. Instead, both types of information are processed by the brain as a single entity. Together they are coded in a different place in the brain than either images or words would be separately, supporting long-term retention.

Visualizations such as diagrams, charts, and infographics can also help students break down and understand complex information. That's why well-designed visual images can yield a much more powerful and memorable learning experience than mere verbal or textual descriptions (Ebner & Bruff, 2010).

Moreover, Shabiralyani et al. have found that the use of visual resources not only helped students retain information, but also increased motivation and attentiveness to information and lessons (Shabiralyani et al., 2015). According to a study published in the American Journal of Pharmaceutical Education, integrating images into the classroom can appeal to a wider range of learning styles. That is, while any group of students may have a variety of learning styles, imagery appeals to different types of learners. Visual aids also create a positive learning environment for students, one significantly more interesting than environments that rely upon teacher instruction alone (Shabiralyani et al., 2015). That is why the NFEC particularly recommends that instructors use visuals in their warm-up activities, to engage learners visually and emotionally and to set the stage for learning.

Tips for Implementation

The NFEC’s curriculum utilizes visual education as a means of instruction. With over 200 visual education components, the lesson plans are designed to provide a robust visual learning experience with two unique purposes: 1) to provide visual cues to deeply engage the learner; 2) to provide visual cues and organization to help students better understand the information.

- ***Big picture discussion visuals.*** Using visuals during the “big picture” discussion helps learners relate various personal finance topics and their overall financial health to multiple areas of their own lives. For example, a cartoon of a person buying a candy bar in the checkout aisle of a grocery store can spark a discussion about impulse spending in a way that a dry verbal introduction would not. Visual education works in much the same fashion as previewing by helping students develop neuropathways in advance of more detailed skill-building activities.
- ***Topic-based visuals.*** These visual components are presented early in the lesson plans to illustrate key points and help simplify the lesson for learners. Visuals such as graphic organizers or infographics about investments or debt can help learners absorb critical money management lessons more easily.

Integrating visuals requires preparation. Instructors should have an idea of the lesson theme and intended outcomes prior to the lesson. When using visual education elements, consider the following:

- ***When should you use visual elements?*** Images are nice, but avoid using them if they are not the best way to explain information (Willingham, n.d.). Instead, use visual elements when they boost engagement, to explain abstract concepts that would ordinarily be difficult for students to understand without scaffolding (Tileston, 2011, p. 22), or to demonstrate relationships between concepts within the lesson.
- ***Which visuals should you choose?*** Remember to choose images that are age-appropriate and relevant to your audience. Try to avoid allusions to popular culture or other dated information that might not make sense to your learners. Thinking about your audience can also help you choose visual elements that connect to prior knowledge. Triggering prior knowledge helps students create a foundation for learning new lessons (Tileston, 2011, p. 22).
- ***How much time do you have?*** Consider your time constraints when choosing visual presentations. For example, if you are planning to show a video, make sure it fits within one learning session

Sources:

Davis, S. (2014). Using Bloom's Taxonomy to write learning outcomes. Pearson Blog. www.pearsoned.com/using-blooms-taxonomy-to-write-learning-outcomes/ [Accessed 7 Aug 2019].

Ebner, M., & Bruff, D. (2010). "Visual thinking." Center for Teaching and Learning, Vanderbilt University. <https://cft.vanderbilt.edu/guides-sub-pages/visual-thinking/> [Accessed 7 Aug 2019].

Kouyoumdjian, H. (2012). "Learning through visuals: Visual imagery in the classroom." Psychology Today. <https://www.psychologytoday.com/us/blog/get-psyched/201207/learning-through-visuals> [Accessed 7 Aug 2019].

LearningTheories.com (2016). "Cognitive Theory of Multimedia Learning (Mayer)." Learning Theories. www.learning-theories.com/cognitive-theory-of-multimedia-learning-mayer.html [Accessed 10 Oct 2016].

Poorvu Center for Teaching and Learning (n.d.). "Preparing for class." Yale University. ctl.yale.edu/teaching/teaching-how/chapter-2-teaching-successful-section/preparing-class [Accessed 7 Aug 2019].

Shabiralyani, G., Hasan, K.S., Hamad, N., & Iqbal, N. (2015). Impact of visual aids in enhancing the learning process case research: District Dera Ghazi Khan. Journal of Education and Practice, 6(19). <https://files.eric.ed.gov/fulltext/EJ1079541.pdf> [Accessed 7 Aug 2019].

Tileston, D.W. (2011). 10 best teaching practices: How brain research and learning styles define teaching competencies. New York: Sage.

Trafton, A. (2014). "In the blink of an eye." MIT News. <http://news.mit.edu/2014/in-the-blink-of-an-eye-0116> [Accessed 7 Aug 2019].

Willingham, D.T. (n.d.) "Ask the cognitive scientist." American Federation of Teachers. www.aft.org/ae/summer2005/willingham [Accessed 11 Mar 2015].

Previewing

Both warm-up activities and reasons for learning help instructors preview the lesson that's coming. A preview of a lesson works just like a movie trailer: by offering a glimpse into the big ideas without going into detail, it builds anticipation and interest in what's to come (Grellet, 2010, p. 18). Giving learners a preview of the topic content increases anticipation for the lesson and helps them understand what will be covered in advance of the education. It helps them identify the most important parts of the lesson and those areas that pique their interest.

According to Françoise Grellet in *Developing Reading Skills*, previewing learning also helps learners determine what they already know about a topic, which helps them connect what will be taught with previous activities – increasing both motivation and comprehension. Previewing may, in fact, create a more authentic learning experience because students are not going into the learning phase of instruction completely blind (Grellet, 2010). Consider organic learning situations in which learners research topics of their own choosing. They generally have a foundation of interest and some preexisting knowledge of the topic before they begin to study and learn more.

Previewing is beneficial both in the larger scheme of presenting a lesson, and also when asking students to read and understand a text. In a 2007 study by Erten and Karakas, previewing was found to be beneficial both before and during reading. Along with scanning and skimming, previewing was found to increase literal comprehension (Erten & Karakas, 2007). Previewing techniques like THIEVES helps students tap into prior knowledge, determine what they will learn from the lesson, and create a learning plan. Through previewing, students create a roadmap for learning because they know what to look for throughout the lesson. Erten and Karakas also found that previewing strategies were instrumental during the lesson itself, allowing students to focus in on the key information identified prior to the start of the lesson, ask questions, and make any corrections to the information they intended to learn.

Tips for Implementation

Previewing helps students understand the lesson and builds excitement about what they will be learning. To maximize the impact of the preview, consider these tips.

- Post the agenda with the titles of topics and activities to be covered during the lesson.
- Build interest through mystery and brevity. You can have students guess the topic or activity by posting a single word or hint, and ask students to guess what they will be studying.
- Engage through reasons: once students know what to expect, communicate why they will be learning about these topics and give them opportunity to construct and share their own reasons for learning. Ask students which areas are important to them, and focus on those areas.
- Tap into prior knowledge. Help students identify prior knowledge by asking them what they already know about the topic.

Tips for Implementation When Having Students Read a Text

Although previewing adds an additional step to the teaching and learning process, it can be valuable to both learners and teachers by increasing anticipation for the lesson and enabling students to attach new learning to preexisting knowledge. This is particularly true if you ask students to read a demanding text.

When asking students to read difficult texts, the NFEC encourages instructors to use the THIEVES previewing method. Scanning key elements of the lessons enables students to determine the key topics of the entire lesson. Thus they can begin to organize and categorize the information they will be taught. The THIEVES method also relies on elements of active learning, which requires students to acknowledge existing schemas (prior knowledge) and add to those schemas on their own. According to the THIEVES model, students preview:

- Title
- Headings
- Introduction
- Every first sentence
- Visuals and vocabulary
- End-of-chapter questions
- Summary

According to Forget (2004), previewing strategies must be modeled, taught, and practiced in order to be effective. Forget suggests using the strategy repeatedly until students become used to the steps and the reasons for the steps (Forget, 2004, p. 109). Forget suggests the following tips for introducing previewing strategies, particularly THIEVES:

- Explain to students that previewing texts is a strategy for reading informational material.
- Explain all the elements of the previewing strategy and make sure students understand them before you begin.
- Read the title and first paragraph to the students.
- Identify the main idea at this point as a group.
- As you lead discussion about main ideas and topics of the lesson, include all students, but try to come to a consensus.
- Assure students that since they are previewing, they don't have to have everything correct yet.
- After the lesson is complete, ask students to reflect on the previewing strategy and determine what they might change or do differently when using it for another lesson.



Manz (2002) also provides tips for using the THIEVES strategy:

- Title – Ask students what the proper nouns are in the title. Ask them about prior knowledge of those keywords. Ask them if they have any questions about the topics.
- Headings – Have students analyze headings and subheadings just as they analyzed the title. Then ask them to look at all subheadings and try to develop an overall summary of what the lesson is about.
- Introduction – Ask students to determine the thesis or main idea based on the introduction. Ask them to consider the title and subheadings in relationship to the introduction.
- Every First Sentence – Remind students that the first sentences of each paragraph are topic sentences that give them a clue to the content of each paragraph. Ask them to consider the topics of each paragraph in relation to the subheadings.
- Visuals and Vocabulary – Ask students to look for all pictures and graphs. Again, remind them to look at these images in relationship to the overall themes and ideas they determined from the first four steps. As they identify vocabulary, remind them again of overall themes and main ideas.
- End-of-chapter Questions – Remind students that the end-of-chapter questions are designed to check their understanding of main ideas. They should be able to review all main ideas by looking at the questions.
- Summary – Remind students that the summary should provide an overview of all the key items learned in the lesson.

Guiding students through THIEVES will increase the likelihood that they complete all aspects of the exercise. The process also will remind them that they need to look for commonalities between all stages of the exercise, which will help them identify key points to look for during

Sources:

Erten, I.H., & Karakas, M. (2007). Understanding the divergent influences of reading activities on the comprehension of short stories. *The Reading Matrix*, 7(3), p. 113.

Forget, M.A. (2004). *MAX teaching with reading and writing: Classroom activities to help students* (4th ed.). Victoria, BC, Canada: Trafford Publishing.

Grellet, F. (2010). *Developing reading skills: A practical guide to reading comprehension exercises*. Cambridge, UK: Cambridge University Press.

Kelly, M. (2019). "Teach students to preview reading assignments." ThoughtCo. www.thoughtco.com/teach-students-preview-reading-assignments-7787 [Accessed 7 Aug 2019].

Machi, L.A., & McEvoy, B.T. (2016). *The literature review: Six steps to success*. Thousand Oaks, CA: Corwin.

Manz, S.L. (2002). A strategy for previewing textbooks: Teaching readers to become THIEVES. *The Reading Teacher*, 55(5), pp. 434–435.

University of New South Wales (n.d.) "Reading strategies to save time." student.unsw.edu.au/reading-strategies [Accessed 7 Aug 2019].

Case Method

As instructors move into the main activities of the lesson, they may want to use the case method to help learners engage in content more actively. The case method of teaching involves immersing students in a simulated learning situation that requires them to work through a problem to develop better understanding of a concept or topic. Generally, the case method strategy involves real-world situations that are both engaging and thought-provoking. Students are placed in the role of decision-maker and their decisions ultimately influence the resolution of the problem. Whether the problem is solved or new questions are created, students learn through the activity how to construct their own meaning of a concept.

Procedures in the case method strategy include analyzing the information presented in the case study, researching additional information on pertinent topics, and designing a solution to the problem. Students are usually required to work in groups, participate in discussions, and evaluate potential strategies together.

While the case method of teaching develops many soft skills in students (discussion and collaboration), studies show that the method has positive effects on all aspects of learning. Historically used in business and medical courses, the case method has been shown to be effective in many subjects. In his 2015 study, researcher Kevin M. Bonney found that the case method affects students in two primary ways:

1. Students who learned using the case method scored, on average, 18% higher on assessments than did those who learned by traditional lecture methods. It's important to note that the exams were based directly on the situations in the case method (Bonney, 2015).
2. Students' perceptions of their own learning was heightened in classes that used the case method. In Bonney's study, 82% of students who participated in the case method lessons reported that they had a "good" or "great" understanding of the material; 70% of students engaged in classroom discussion; and 58% of students who only read the textbook reported the same level of understanding.

A further study published in the *Journal of Education and Learning* identifies additional benefits to the case study method of teaching. Primarily, applying the case method in any classroom ensures that students are active participants in the acquisition of knowledge, rather than simply passive recipients (Cakmak & Akgun, 2017). The case method also requires students to draw upon their previous knowledge and, in doing so, requires students to determine which knowledge is applicable to the current situation. This process allows students both to understand the importance of prior knowledge and learn to identify gaps in their own learning (Cakmak & Akgun, 2017).

The case method also appeals to active learning strategies and affective domain, according to the Science Education Resource Center at Carleton College (Pedagogy in Action, 2018). Active learning is any type of instructional strategy that makes students active participants in the development of schemas and the addition of new information to existing schemas. Active learning strategies increase student engagement, allowing students both to retain more information and to transfer information to new situations (University of Minnesota, n.d.).

The affective domain of learning was identified in Bloom's Taxonomy as one of the three general domains of learning. In the affective domain, students learn based on elements of emotion including feelings, values, attitude, and motivation. Activities that correspond to the affective domain require students to respond to and place value on new information. By assigning it a value, students prioritize the information within their learning (Bloom, 1984, p. 7).

The case method increases student comprehension, targets both cognitive and affective domains of learning, and builds greater engagement and motivation to learn the material.



Tips for Implementation

With over 90 case study problems in the NFEC’s curriculum, the educator can present students with real-world problems to resolve. This learner-centered approach deepens learning and helps participants develop practical skill sets. When planning your lessons, choose from among three different types of case study activities:

Warm-up Activities: Basic case method lessons. These activities take place before formal education begins. Participants analyze the case studies and draw on prior knowledge to help resolve each challenge. Peer case examples and celebrities are also used in this section to engage students in learning. These methods serve as a warm-up to get students interested, activate prior knowledge, and raise questions that will further motivate students to learn the topics in the lesson.

Advanced Case Method Lessons: Taking place after lecture and/or skill building activities, learners participate in detailed evaluation and create solutions for the characters in the case studies. These activities are focused on Webb’s extended thinking level and are designed to require the learner to provide specific solutions to the problems presented.

Personal Case Method Creation: Learners create case studies based on their personal financial situations and apply the case method problem-solving technique to their own personal issues. This activity is most appropriate for adult learners, who will be most engaged in thinking through their own finances; but can also be used with younger learners.

Implementing the case method in the classroom requires planning and clear direction. To begin, develop a clear goal and objective for applying the case method approach to teaching. Decide what your students know, what you would like them to learn, and how you will determine if they have met these goals.

Once you have determined your learning objectives, begin to look for a case that fits your goals. Some considerations for picking a case for your students:

- Cases should have a rich set of data. There should be a variety of situations, questions, and statistics for students to consider, discuss, and question (University of Illinois, n.d.).
- Cases should be finished – try to avoid using a case that does not have an answer, especially if you cannot be sure that the answer will come while your students are investigating (University of Illinois, n.d.).

To successfully implement case method learning in the classroom, we suggest educators consider the following (Schwartz, 2018; Stanford University, n.d.; University of Illinois, n.d.):

- Prepare your students to think about problem-solving in advance.
- Set ground rules for discussion and collaboration.
- If your students will receive a grade, make sure they are clear about how they will be graded – whether individually or as a group.

- Give students time to become familiar with the case. Make sure they fully understand both the problem and the information they have found in their research before asking them to engage in discussion.
- Circulate around the room during group discussions to make sure everyone is participating; provide guidance to groups that appear off-course.
- To begin the larger group discussion, ask questions. Use questions that begin with how and why to engage students in thinking about the problem. Encourage students to back up their answers with research.
- Use a whiteboard or projector to compile information and responses so the whole class can see all of the information.

In addition to research and discussion, you can also integrate other activities into a case method lesson. Consider the following options to help engage your students:

- Vote on elements of the case and the direction to take. You can use live voting apps like Socratic, Poll Everywhere, or Micropoli and broadcast the results on an overhead projector.
- Case presentations. Have students present findings related to a certain element of the case. You can use as much or as little technology as you wish.
- Debate. Integrate debate into the classroom, particularly if there is an aspect or direction in the case upon which students cannot agree.

Finally, decide how you will evaluate the conclusions. Consider the idea that some case studies have no correct or incorrect answer. So focus on the skills you want students to learn: research, communication, debate, presentation, argument.

Sources:

Bloom, B.S. (1984). *Taxonomy of educational objectives: The classification of educational goals*. New York: Longmans Green.

Bonney, K.M. (2015). Case study teaching method improves student performance and perceptions of learning gains. *Journal of Microbiology & Biology Education*, 16(1), pp. 21–28. doi:10.1128/jmbe.v16i1.846

Cakmak, Z., and Akgün, I.H. (2017). A theoretical perspective on the case study method. *Journal of Education and Learning*, 7(1), pp. 96-102. doi:10.5539/jel.v7n1p96.

Clark, D. (2015). “Bloom’s Taxonomy: The affective domain.” Leadership Self-Assessment Questionnaire. www.nwlink.com/~donclark/hrd/Bloom/affective_domain.html [Accessed 8 Aug 2019].

Hsu, W. (2016). Harvard Business School (HBS) case method to teaching English for Business Communication. *Education and Linguistics Research*, 2(2), p. 95. doi:10.5296/elr.v2i2.10192

Pedagogy in Action (2018). “Why teach with the case method?” Using Media to Enhance Teaching and Learning, Science Education Research Center at Carleton College. serc.carleton.edu/sp/library/cases/why.html [Accessed 8 Aug 2019].

Schwartz, M. (2018). “Active learning.” Learning & Teaching Office, Ryerson University. <https://www.ryerson.ca/content/dam/lt/resources/handouts/activelearning.pdf> [Accessed 8 Aug 2019].

Stanford University (n.d.) “Case method teaching.” Undergraduate Main Site. teachingcommons.stanford.edu/resources/learning/learning-activities/case-method-teaching [Accessed 8 Aug 2019].

University of Illinois (n.d.) “The case method.” Center for Innovation in Teaching and Learning. citl.illinois.edu/citl-101/teaching-learning/resources/teaching-strategies/the-case-method [Accessed 8 Aug 2019].

University of Minnesota (n.d.) “Active learning.” Center for Educational Innovation. cei.umn.edu/active-learning [Accessed 8 Aug 2019].

Lecture

While the bulk of teaching should support students' active participation, the use of lecture in classrooms has been used for centuries and remains a common teaching method. Lectures are largely considered a “traditional” means of instruction, but there are still many instances in which mini-lectures can still be an effective means of conveying information.

Using lecture to deliver material ensures that the most up-to-date information is shared with learners. It also allows the instructor to build anticipation and excitement for the upcoming lesson, which can increase student motivation for the topic and overall success in learning.

At NFEC, we integrate the latest research on effective pedagogy into all of our curricular units. The delivery of key information during lecture sessions is used in every main subtopic and during the closing and recap of each lesson. During lecture sections, we consider the following:

- **Engagement.** Best practices in lecture delivery includes engaging students in the lecture process to increase motivation.
- **Learning Styles.** We consider learning styles and break up lectures with visual, auditory, and kinesthetic components to allow multiple inputs of information.
- **Motivation Theory.** We consider ways to ensure that students are engaged in the materials and motivated to learn.
- **Rapport.** Educators take the opportunity to connect with students and build rapport.
- **Reinforcement of Reasons.** The benefits of learning about personal finance are directly connected with student's lifestyle goals, so the lecturer should leverage this connection to strengthen their personal reasons for learning.

The NFEC's lesson plans provide lecturer engagement cues, instructional resources, and outlines to enhance the effectiveness of the lecture. Have questions ready and be prepared to drill down on students' answers to understand their true motivations for learning about money.

Although droning professors have given lectures a bad reputation, short and effective mini-lectures can give teachers the opportunity to explain complex concepts in simple terms and refer to multiple sources. The lecturer can also include content and sources most appropriate for their learners. Another benefit of lectures, according to the University of Wisconsin-Madison, is that they can be written quickly, which means information can be updated frequently.

The use of lecture in delivering content can also be useful for summarizing large volumes of information (Indiana University, n.d.). At the same time, the lecture can focus on topics of most interest to the learners.

Researchers at Ryerson University also have found that lectures can be especially engaging and informative when they are used in conjunction with discussion and the case method of teaching. Developing the lecture as the central element of instruction can increase student engagement in other lesson elements.

Engagement opportunities for lecture-based instruction beyond the case method and discussion include creating interactive components, integrating problem-solving, and including organizational prompts.

Michelle Schwartz, Instructional Design and Research Strategist at the Learning and Teaching Office at Ryerson University, suggests placing interactive elements like brainstorming sessions in the middle of the lecture. Asking students to brainstorm about topics as they are introduced will increase engagement before they receive the official information from the teacher. Another way to engage students is to create a pattern for discussion. Examples of patterns could be stopping for student discussion every 20 minutes or after each subtopic is introduced (Schwartz, 2018). Finally, organizational prompts (like outlines or Venn diagrams) can help students to develop their own schemas. Interaction with the material also appeals to students who learn best visually and verbally.



Tips for Implementation

The key to maximizing the success of lecture-based teaching is to make it as engaging as possible. Some things to consider while planning lectures:

- The human brain's maximum attention span for lecture-based learning is 20 minutes.
- Consider prior knowledge while planning and delivering lectures. If students already have some knowledge of the topic or no knowledge of the topic, it will help to shape the depth of the lecture content.
- Understand that emotion plays a huge role in retention. Having students connect their own experiences, goals, or deeply-held opinions to the topic can activate emotions and deepen attachment to the content.
- Information is retained more readily by the human brain when its practical purpose is clear. That's why previewing the lessons and having students reflect on their own reasons for learning the information help increase both engagement and long-term retention (adapted from Schwartz, 2018).

When integrating discussion into lectures, consider the following ways to encourage student participation in discussion:

- Ask the students to consider alternate points of view – either theoretical or those of their classmates.
- Consider pros and cons. Ask students to determine the pros and cons of a concept or idea.
- Use follow-up questions to help students think more deeply about the topic.
- Use polling techniques and ask learners to discuss the poll results.
- Enlist volunteers to help encourage everyone to participate in the discussion.
- Create incentives for active participation. (adapted from Schwartz, 2018)

Finally, students will understand and retain information better if you use accompanying visuals or structured note-taking. During the lecture, consider the following organizational prompts to help guide students toward understanding lecture content:

- **T-charts:** Create columns to make notes based on the information presented.
- **Venn Diagrams:** Have students compare two different concepts presented in lecture information.
- **Outlines:** Give students outlines with keywords pre-filled. Have students fill in the blanks as they listen to the lecture.
- **Webs:** Provide students with blank webs or pre-filled webs for lectures that center on a single theme and include multiple subtopics.

Overall, remember that you should go into every lecture with a plan. Decide what you would like students to know before you start drafting or delivering your lecture. Always keep your students in mind when designing a lecture – know their attention spans, their interests, and their background knowledge about the topic. As you deliver the lecture, make sure to keep an eye on students' reactions and their level of engagement. If they seem to be unfocused, utilize engagement activities and strategies to bring them back to the learning.



Sources:

Indiana University (n.d.). “Making lectures more active.” IUPUI Center for Teaching and Learning. ctl.iupui.edu/Resources/Teaching-Strategies/Tips-for-Making-Lectures-More-Active [Accessed 8 Aug 2019].

Schwartz, M. (2018). “Making lectures more engaging.” Learning & Teaching Office, Ryerson University. www.ryerson.ca/content/dam/lt/resources/handouts/EngagingLectures.pdf [Accessed 8 Aug 2019].

Skill-building Activities

Whether or not you use lectures to deliver information, it's crucial to integrate varied skill-building activities, which appeal to various learning styles and help learners put information into practice.

Skill development activities often serve as the “guided practice” of any lesson. They provide opportunities for students to practice the skills they learned in the lecture portion of the skill development section. These activities provide students with a way to use and reinforce skills before they apply those skills to real-life situations. These activities also enable both the educator and learners to monitor their comprehension of the subject.

Traditional skill-building activities include worksheets and drilling exercises. However, as ideas about education have evolved, skill-building activities have become more complex, and there are many different options for integrating these activities into teaching. Some activity options include:

- **Fill in the missing information.** This activity, called clozentropy, eliminates some elements of information. This technique gets students engaged by activating their brains in the quest to find the missing information (Marzano et al., 2011).
- **Games.** The use of games in the classroom has been shown to increase teamwork and cooperative learning skills (Stathakis, 2013). Games help develop critical thinking skills and creativity. Even more importantly, games increase both connection with the content itself and learning in the affective domain (one of the three learning domains identified by Bloom). Finally, games draw students in and hold their attention, increasing motivation to learn.
- **Project-based learning (PBL).** PBL has been shown to increase teamwork, attention to detail, and use of presentation skills (Stanford University, n.d.). Researchers have found that this particular activity increases both active learning and students' thinking about how course content has larger significance. Additionally, students who participate in PBL activities have better knowledge retention (Guido, 2018).
- **Skits.** Skits as a skill-building activity can engage students in creative problem-solving and decision-making. For example, students might act out a scenario in which they are tempted to exceed their budgets. These activities also engage students both verbally and nonverbally, reaching learners of many types. Creation of skits increases student concentration on the tasks at hand, which leads to greater comprehension (Romano et al., n.d.).

At NFEC, we consider the following factors in our Skill-building Activities sections:

- **Learning Domains:** We consider the affective domain in trying to help students make connections with the content and increase their engagement and motivation.
- **Learning Styles:** We integrate a variety of activities and techniques that appeal to oral, visual, and kinesthetic learners.
- **Assessment:** We make use of frequent oral feedback as a means of formative assessment, allowing students to modify their plans of action and learn from their mistakes.

All topics in the NFEC curriculum include activities and extensions to build further understanding of the lessons. These activities prepare students for the final project-based learning lesson where they complete their personal financial plans. The activities help them not only to develop skills, but also to complete pieces of their financial plans.

Tips for Implementation

- **Use the learning objectives to guide your planning.** Keep the desired end result in mind as you plan. Think about what you want your students to learn and work backwards to create the prompt or activity.
- **Use activities to break up the lesson.** For every ten minutes of instruction, take a break for a brief activity (some researchers suggest two minutes) to maintain student engagement (Reading Horizons, 2013).
- **Offer choices.** Choices – in which activity to do, or how to share the findings or results of the activities – can help increase intrinsic motivation for learning (Marzano et al., 2011). However, don't overwhelm students with too many options for skill-building activities. Aim to offer two to three choices. Limiting the choices offers autonomy, but doesn't create confusion.
- **Appeal to kinesthetic and visual learners.** Getting students moving, interacting, and drawing or responding to visuals will help engage different kinds of learners.
- **Provide “just-right” support. Learn to step away from actively teaching. Your role in project-based learning activities is to serve as facilitator and guide, rather than instructor.** Nevertheless, stay available to provide support and offer feedback throughout the activity; you may need to provide hints or inspiration toward a solution. You can use your knowledge of students' interests and abilities to gauge how much your students can do independently.

Integrating activities into each lesson can be daunting, so start small. Consider brief question-and-answer periods or traditional “think-pair-share” discussion techniques. Then, as you become more comfortable with your students and the content, you can develop more complex skill-building activities.

Sources:

- Berkeley, M. (2017). "The role of the teacher in high-quality PBL." [Gettingsmart.com. www.gettingsmart.com/2017/04/role-teacher-student-centered-learning/](http://www.gettingsmart.com/2017/04/role-teacher-student-centered-learning/) [Accessed 8 Aug 2019].
- Guido, M. (2018). "The definitive project-based learning (PBL) guide." Prodigy Blog. www.prodigygame.com/blog/project-based-learning/ [Accessed 8 Aug 2019].
- Marzano, R.J., & Pickering, D.J., with Heflebower, T. (2011). *The highly engaged classroom*. Bloomington, IN: Marzano Research.
- Practical PBLA (n.d.). "Skill-building activities." Practical PBLA, [Weebly.com. practicalpbla.weebly.com/skill-building-activities.html](http://www.weebly.com/skill-building-activities.html) [Accessed 8 Aug 2019].
- Provenzano, N. (2016). "4 practices for increasing student engagement." Edutopia, George Lucas Educational Foundation. www.edutopia.org/blog/practices-for-increasing-student-engagement-nicholas-provenzano [Accessed 8 Aug 2019].
- Reading Horizons (2013). "Seven ways to increase student engagement in the classroom." ReadingHorizons.com. www.readinghorizons.com/blog/seven-ways-to-increase-student-engagement-in-the-classroom [Accessed 8 Aug 2019].
- Romano, L., Papa, L., & Saulle, E. (n.d.). "12 fascinating ways to use drama in the curriculum." [TeachHUB.com. www.teachhub.com/12-fascinating-ways-use-drama-curriculum](http://www.teachhub.com/12-fascinating-ways-use-drama-curriculum) [Accessed 8 Aug 2019].
- Stanford University (n.d.). "Project-based learning." Undergraduate Main Site. teachingcommons.stanford.edu/resources/learning/learning-activities/project-based-learning [Accessed 8 Aug 2019].
- Stathakis, R. (2013). "Five reasons to use games in the classroom." Education World. www.educationworld.com/a_curr/reasons-to-play-games-in-the-classroom.shtml [Accessed 8 Aug 2019].
- TeachThought Staff (2017). "4 things all project-based learning teachers should do." TeachThought. www.teachthought.com/project-based-learning/4-things-project-based-learning-teachers/ [Accessed 8 Aug 2019].

Project-Based Learning

In project-based learning, students investigate a problem or question and create an authentic product based on their investigation. This method allows students to actively engage in the learning process and apply their knowledge and skills to something tangible. It mimics the real world like few other instructional techniques, and students can immediately see the payoff from their hard work in the form of a product that everyone can see.

The research surrounding project-based learning is substantial. According to the Buck Institute for Education, 40 years of research has shown PBL to be “more effective than traditional instruction for long-term retention, skill development and satisfaction of students and teachers” (Buck Institute for Education, n.d.). Students retain information better than in traditional learning settings because they are able to unite knowledge with action, honing their skills through that action. According to a 2010 Buck Institute study, “students demonstrate better problem-solving skills in PBL than in more traditional classes and are able to apply what they learn to real-life situations” (Buck Institute for Education, 2010). There is nothing like working through a problem with your own hands, tinkering and wrestling with it until everything comes together. Students are also more motivated to learn and more willing to take initiative in their education. Project-based learning can be incredibly exciting and intriguing for many students, which spurs them to persevere even when times get tough.

In 2000, John W. Thomas, PhD authored a review of all the scholarly research officially conducted on the subject of PBL, going back to the early 1990s (Thomas, 2000). This document showed that project-based learning produces gains in student achievement, problem-solving capacity, comprehension (both of the broader subject and of specific skills), and work habits.

College professor John Spencer, at a recent Nova Now conference at Kent Innovation High School, witnessed students working on a project on aquaponics and was struck by how real the project was (Spencer, 2015). Students were engaging in authentic collaboration that wasn't forced. Their roles reflected those that you might see in business or scientific research in the real world. Students are able to work together sometimes, and other times in solitude. They had a chance to fail and learn from their failures.

Two levels of project-based learning activities can be offered when teaching personal finance courses. These levels are based upon the learner’s current financial situation and position.

- **Self-sufficiency PBL.** This basic PBL activity is for those students who do not manage their finances or have limited financial needs. The goal is to have them explore what self-sufficiency looks like through real-world planning. They explore financial needs such as rent, transportation, and education, as well as accounts, budgeting and expense planning, saving money, and basic investment strategies to encourage long-term vision. They develop plans to manage their finances on their own, in a safe environment where they can explore the outcomes of various decisions.
- **Personal Planning PBL.** For those who do manage their finances, this advanced PBL activity has participants build personal financial plans across five areas: Understanding, Diagnosis, Planning, Prioritization, and Systemization. Participants start by gaining a deeper understanding of their current financial situations through a variety of assessments that measure their overall financial health. They diagnose the root causes of any problems and explore what’s working for them. Then they create a plan and prioritize action steps to improve their finances. The final step is setting up systems and reminders that help them apply and instill the skills and behaviors to achieve positive outcomes.

The NFEC’s curriculum contains both levels of PBL instruction to accommodate people at different financial life stages.



Tips for Implementation

The implementation of a project-based learning program can seem daunting, especially because most of us grew up learning in traditional classroom settings. Here are some key elements of a project-based learning environment:

- ***Driving Question or Problem:*** Similar to a hypothesis, this simple statement drives the entire process of student inquiry. Teachers should write the question or problem down and display it where everyone can see. It will act as a sort of mission statement for the whole project.
- ***Foster Critical Thinking, Collaboration, and Communication:*** Students cannot simply absorb information. They must ask high-level questions. They must learn to work as a team. They must listen to the ideas and opinions of other students and be able to clearly express their own.
- ***Meaningful Content:*** Objectives for learning are derived from financial education standards and important ideas at the core of the financial discipline. Objectives give students a clear pathway toward learning goals and help them place value on those goals.
- ***Inquiry:*** Students should constantly be asking questions, seeking answers, and making conclusions. This process will lead them to produce something entirely new and entirely their own.
- ***Student Voice and Choice:*** Giving students choices in how they learn increases their motivation. Choice also allows students to see the value of learning in their own lives.
- ***Reevaluation:*** Sometimes students can get into a project and realize things aren't turning out quite the way they planned. At this point, it's time to reassess and decide the best next course of action. This situation also presents an opportunity to receive valuable feedback from other students and the teacher, which they may use to make modifications.
- ***Public Exhibition:*** Students demonstrate their work to people outside the classroom. Public exhibition motivates students to do their best work and put their best selves forward, producing an extremely high-quality, authentic result.

Sources:

Baghi, U. (2017). “12 reasons why project-based learning is better than traditional classroom learning. eLearning Industry. <https://elearningindustry.com/project-based-learning-better-traditional-classroom> [Accessed 8 Aug 2019].

Buck Institute for Education (n.d.). “Does PBL work?” PBLWorks. https://www.bie.org/object/document/does_pbl_work [Accessed 8 Aug 2019].

Buck Institute for Education (2010). “Research summary on the benefits of PBL.” PBLWorks. http://www.bie.org/object/document/research_summary_on_the_benefits_of_pbl [Accessed 8 Aug 2019].

Imaginative Minds Group (n.d.). “Project-based learning.” Teaching Times. <https://www.teachingtimes.com/kb/60/project-based-learning.htm> [Accessed 8 Aug 2019].

Spencer, J. (2015). “What makes project-based learning work?” John Spencer Blog. <http://www.spencerauthor.com/what-makes-project-based-learning-work/> [Accessed 8 Aug 2019].

Thomas, J.W. (2000). “A review of research on project-based learning.” The Autodesk Foundation. https://documents.sd61.bc.ca/ANED/educationalResources/StudentSuccess/A_Review_of_Research_on_Project_Based_Learning.pdf [Accessed 8 Aug 2019].

Assessment

No learning activity can be considered complete without a way to measure what students have learned. Before enacting a lesson, therefore, it is important to understand how you will assess learner acquisition. With effective measurements in place, you can use the data you acquire to promote learner success, encourage positive behaviors and long-term skill development, as well as determine how you – as an educator – can more effectively spend your time when giving instruction.

The primary impact measures you should consider are content knowledge, sentiment, and behavior change. When you consider these measures appropriately, you can effectively recognize participants' achievements to encourage continued learning and application of the instruction.

- **Measuring Content Knowledge.** When measuring content knowledge, it is important to provide multiple opportunities and styles with which to test learners' knowledge, because no single assessment can tell an educator everything he or she needs to know (Lewis et al., n.d.). Traditional tests, independent or small-group assignments, and projects all provide important insights into learner acquisition. The ultimate goal when measuring content knowledge is to check for learning transfer: that is, allowing students to demonstrate ability to apply what they were taught in new situations (Bransford et al., 2001). For instance, if students are learning about economic psychology, you might assess their learning by asking them to apply economic psychology principles to new situations – or to come up with new example situations of their own.

Low-stakes assignments, where learners do work with room for error without a high cost, allow learners to develop a positive outlook on the process of learning. Projects are excellent modes of measuring knowledge, because they allow work on real-world problems and can improve problem-solving and attitudes toward the learning itself (Walker & Leary, 2009). When implemented effectively and regularly, testing can provide data to guide instructional decisions and meet learners' needs, which in turn can raise learner achievement (Bongiorno, 2011).

- **Behavior & Sentiment Survey.** Sentiment is the expression of how a person feels about a situation, event, or person. You can ask learners to describe – in writing or verbally – how they feel about their behaviors, habits, and knowledge. Sentiment analysis in written form allows the educator to collect and analyze data for learners. By doing so, the educator can be much more successful in determining and increasing learner motivation.
- **Participant Recognition.** Recognition of learner achievement has a demonstrable effect on learner success, both on behavior and on achievement. This effect occurs largely because recognizing a new insight or behavior is its own reward, making the behavior more likely to be repeated (Peters, 2010). Teachers can notice students’ achievements, but the most powerful form of recognition comes from students’ authentic recognition of their own progress. As a result, asking students to reflect periodically – through surveys, journal entries, or pair shares – about their progress and learning helps students monitor their needs as well as developing intrinsic motivation. Researchers Fuchs and Fuchs determined that allowing learners to track their growth through demonstrable data in graphs or other means of tracking had a noteworthy 26% gain in achievement (Fuchs & Fuchs, 1986).



Tips for Implementation

The above means of measuring impact can make your teaching experience much more efficient and effective. Using data to drive instruction and recognize learner achievement promotes a healthier attitude and continued achievement.

- Design assessments with learning objectives established in advance, provide multiple types of assessments to gather a wider range of learner data, and document the data you gather in an accessible way (Council on Alberta Teaching Standards).
- Ensure that you respond to the data that you collect. You may modify your instructional pace or focus to target areas of weakness (Council on Alberta Teaching Standards).
- Assessments should be tangible and relevant to the desired skill acquisition (Council on Alberta Teaching Standards). When possible, create questions that demonstrate real-world application to create higher levels of knowledge transfer.
- Create a system to visually demonstrate learner growth that both you and the learners can use to demonstrate their strengths and weaknesses and improve growth (Fuchs & Fuchs, 1986). For example, you may track learners' real-world (or imagined) savings or investments using visual tools.

Conducting Sentiment Analysis:

- Pay attention to written communication from learners, or implement periodic surveys or other modes of feedback to pinpoint learners' feelings about the instruction or subject matter (Grossmann, n.d.).
- Be aware that an individual learner may not be fully honest on a survey or may miscommunicate a feeling. Focus instead on the information as a whole, looking for trends and patterns among all learners (Grossmann, n.d.).
- Use the information you gather to intentionally target and resolve learners' concerns and struggles. However, be wary of singling out an individual learner (Grossmann, n.d.).

Participant Recognition

- Make sure that you recognize learners for growth relevant to their own stages, not just the general top performers (Alstad-Davies, 2014).
- Recognize learners in ways that are meaningful and tangible; for example, both verbal recognition in class and written comments on work reinforce positive behavior and learning.
- If you recognize students publicly, ensure that recognition is given to many learners. Do not leave anyone feeling left out or unappreciated.

Sources:

- Alstad-Davies, Candace. (2014). "As a teacher, how do you recognize students' achievements?" A+ Teachers' Career Edge. <https://resumes-for-teachers.com/blog/interview-questions/as-a-teacher-how-do-you-recognize-students-achievements/> [Accessed 8 Aug 2019].
- Bongiorno, D. (2011). Using student achievement data to support instructional decision making. Alexandria, VA: NAESP. http://www.naesp.org/sites/default/files/Student%20Achievement_blue.pdf [Accessed 8 Aug 2019].
- Bransford, J.D. Brown, A.L., & Cocking, R.R. [Eds.] (2000). How people learn: Brain, mind, experience, and school. Expanded Edition. Washington, DC: National Academies Press.
- Cutler, David. (2015). "Making learning meaningful and lasting." Edutopia. <https://www.edutopia.org/blog/making-learning-meaningful-and-lasting-david-cutler> [Accessed 8 Aug 2019].
- Fuchs, L. S., & Fuchs, D. (1986). Effects of systematic formative evaluation: A meta-analysis. *Exceptional Children*, 53(3), 199–208.
- Grossman, C. (n.d.). "Sentiment analysis to help your internal communications." Beekeeper Blog. <https://blog.beekeeper.io/how-sentiment-analysis-can-help-your-internal-communication-strategy/> [Accessed 8 Aug 2019].
- Lewis, D., Madison-Harris, R., Muoneke, A., & Times, C. (2010). Using data to guide instruction and improve student learning. *SEDL Letter*, American Institutes for Research, 22(2). <http://www.sedl.org/pubs/sedl-letter/v22n02/using-data.html> [Accessed 8 Aug 2019].
- Peters, L. (2010). "Reinforcement in the classroom improves student motivation and performance." *Innovations & Perspectives*, VCU. <http://www.ttacnews.vcu.edu/2010/01/reinforcement-in-the-classroom-improves-student-motivation-and-performance/> [Accessed 8 Aug 2019].
- Redmore, S. (2017). "Using sentiment analysis to dig deeper into written communication." *Quirk's Media*. <https://www.quirks.com/articles/using-sentiment-analysis-to-dig-deeper-into-written-communication> [Accessed 6 Aug 2019].
- Vega, V. (2015). "Project-based learning research review." Edutopia. <https://www.edutopia.org/pbl-research-learning-outcomes> [Accessed 8 Aug 2019].
- Walker, A., & Leary, H. (2009). A problem-based learning meta analysis: Differences across problem types, implementation types, disciplines, and assessment levels. *Interdisciplinary Journal of Problem-based learning*, 3(1), pp. 12-43.
- Wiggins, G. (2010). "What is transfer?" *Authentic Education*. http://www.authenticeducation.org/ae_bigideas/article.lasso?artid=60#_edn3 [Accessed 8 Aug 2019].

Ongoing Education

While all types of education are concerned with content and skills acquisition, financial education demands a particular emphasis on long-term change, which requires both follow-up education and systemization.

Follow-up education simply involves reinforcing previous lessons, and can be adjusted to meet the person's needs at different stages in life. Repetition not only improves retention, but also helps students stay motivated. Without consistent follow-up education, people are at greater risk of losing their enthusiasm and desire for financial knowledge.

Research has consistently shown that ongoing education is essential to financial literacy. A 2017 study on evaluating the impact of financial education (Lusardi et al., 2017) concluded that:

1. Programs that included follow-up education were significantly more effective than those that did not. In this instance, financial knowledge was sustained, and employees' savings were raised by almost 10% at the time of retirement.
2. Programs that did not incorporate follow-up education experienced short-term gains, but no long-term effects. Participants were excited to implement the practices at first, but this interest was not sustainable.

The evidence concerning systemization is also considerable. According to Leslie Allan, Managing Director of Business Performance Pty Ltd., "most mistakes and errors in business are the end result of not having clearly defined procedures for common tasks" (Allan, 2017). Research has shown that only 20% of business problems can be attributed to fixed factors such as dishonest employees or defective raw materials. The other 80% are simply due to inefficiencies in processes. Author David Finkel relates the story of Tammy, who "was smart, successful, and totally overwhelmed by her business" (Finkel, 2016; Hoffman & Finkel, 2014). But, Finkel goes on to say, with effective and efficient systems in place this needn't be the case.

Systemization involves the creation of routine processes for regularly occurring tasks. Because of the complexity of financial literacy programs, implementing the skills learned can seem overwhelming to many participants. However, if students reflect on their own experiences of success and failure, they can establish a standardized way to approach their goals. Using an efficient follow-up system, students can set up reminders for themselves, which also aids retention. With much practice, the application of these systems will become second nature.

The NFEC includes comprehensive follow-up education training materials to give students continued guidance, reminders, and ongoing education to encourage them to apply what they have learned.

Tips for Implementation

The implementation of follow-up education consists of four key parts:

- ***Collaborative Learning:*** Give students opportunities to connect with each other and share what they have learned. Discussion and the exchange of ideas help solidify concepts, and motivate participants to try new things when they see the impact they have had on the lives of others.
- ***Regular Release:*** Consistently generate new information and lessons on a regular basis, and not just on basic beginner concepts. Gradually release more in-depth instruction so students always have opportunity to learn something new, but at a reasonable pace.
- ***Let the Students be the Teachers:*** Many people insist that the best way to learn is to teach others. Students who teach other students experience greater comprehension and remember the information longer than those who only passively absorb it.
- ***Combine eLearning with Real-world Experience:*** The digital world is a powerful tool in financial education and produces good results when united with real-life experiences. Students might watch a video on creating a budget and then be asked to go home, have a look at their monthly spending, and create budgets for themselves.

Educators should consider the following steps in order to help participants systemize their financial literacy:

- ***Consolidate Relevant Information:*** Make sure everything is in one easily accessible place, and get rid of any fluff that is not essential to the process.
- ***Prioritize:*** Make a list of the core components of the student's financial plan, in order of importance. Focus in on the most important one, and have the student implement that action before moving on to the next priority.
- ***Establish Best Practices:*** For each component, determine the best way to approach the task. What has research proven? What has worked for others in similar situations?
- ***Never Stop Learning:*** Stay up-to-date with current information and ideas. Regularly reevaluate the system; look at what's working and what isn't. Have the attitude of a lifelong learner, and be willing to adapt to new situations and circumstances.

Sources:

Allan, L. (2017). "10 steps to creating effective systems for your business." Business know-how. <https://www.businessknowhow.com/manage/systematize.htm> [Accessed 8 Aug 2019].

Finkel, D. (2016). "A secret 4-step process to systematize your business starting in as little as 90 days." Inc. This Morning. <https://www.inc.com/david-finkel/a-secret-4-step-process-to-systematize-your-business-starting-in-as-little-as-90.html> [Accessed 8 Aug 2019].

Hoffman, J., & Finkel, D. (2014). Scale: Seven proven principles to grow your business and get your life back. New York: Portfolio/Penguin.

Jarrett, C. (2018). Learning by teaching others is extremely effective – a new study tested a key reason why. The British Psychology Society Research Digest. <https://digest.bps.org.uk/2018/05/04/learning-by-teaching-others-is-extremely-effective-a-new-study-tested-a-key-reason-why/> [Accessed 8 Aug 2019].

Kaufman, J. (2012). The personal MBA: Master the art of business. New York: Portfolio/Penguin. <https://personalmba.com/systemization/>

Lusardi, A., Michaud, P-C., & Mitchell, O.S. (2017). Assessing the impact of financial education programs: A quantitative model. TIAA-CREF. <https://www.aeaweb.org/conference/2018/preliminary/paper/TSKYFFn6> [Accessed 8 Aug 2019].

Resnick, N. (2017). "4 achievable steps to systemize your business." Business.com. <https://www.business.com/articles/nathan-resnick-business-growth-systemization/> [Accessed 8 Aug 2019].

Watkins, A. (2018). "The importance of ongoing training and follow-up". eLeap. <https://www.eleapsoftware.com/importance-ongoing-training-follow/> [Accessed 8 Aug 2019].

Wharton, University of Pennsylvania (2015). "Why financial literacy programs require long-term follow-up." Knowledge@Wharton. <http://knowledge.wharton.upenn.edu/article/why-financial-literacy-programs-require-long-term-follow-up/> [Accessed 8 Aug 2019].

Conclusion

Financial literacy education is a relative newcomer to the field of pedagogy, and requires its own unique approaches with particular attention to deeply ingrained emotions and habits. By drawing on academic research in education and psychology, the financial educators at the NFEC have laid the groundwork for creating well-structured, engaging programs that can be adapted to the needs of diverse learners. We look forward to working with you – and your learners – to develop and sustain healthy financial habits for the long-term.

