



Guide to Adult Learning with Advice for Speakers

January 2019

Do you know the answers to these questions?



QUIZ

1. The most significant difference between the adult learner and the younger learner is:
 - Younger learners are smarter; older students can't think quickly
 - Adult learners enjoy lectures
 - Adult students are less self-directed
 - Adult learners come with experiences; younger learners are a clean slate
2. The adult learner is more _____ than the younger learner
 - Self-directed
 - Instructor-directed
 - Peer-directed
 - Teacher-directed
3. Which of the following is the best way to approach the adult learner?
 - As a superior
 - As a facilitator
 - As a teacher
 - As a lecturer
4. Which of the following is NOT a characteristic of an adult learner?
 - Adult learners accept what they are being taught
 - Adult learners need to know why they are learning the information
 - Adult learners need to know how to use information immediately
 - Adult learners need to know how information will benefit them
5. One way an instructor can engage the adult learner is by having the students collaborate by acting out real-world situations. This is called:
 - lecture
 - case studies
 - problem-solving ice breakers
 - role-play



Want to **HAVE** a
Mentor for your
Session?

Want to **BE** a
Mentor for other
speakers?

CONTACTS:

STEPHANIE GOULD RABIN, ACAS, MAAA, MA IO Psychology
Chair

Learning Enhancement Process Mentors Committee

+1.347.922.2149

sgould13@msn.com

DAVE CORE

CAS Staff Liaison

Learning Enhancement Process Mentors Committee

+1.703.562.1729

dcore@casact.org



RESOURCES

[Speaker Guidebook](#)

[Project/Speaker Resources](#)

[Call for Presentations Speaker Guidelines](#)

Learning Enhancement Videos

[Speaker Resources Micro-Learning Series*](#)

- How Adults Learn
- Writing Effective Learning Objectives
- Developing Your Session Plan
- Engaging Your Session Participants
- The Power of Visuals - Slides
- The Power of Visuals - Data Slides
- Creating Valuable Handouts

* These videos are free but accessible only via the new UCAS! A “purchase” of \$0 is required to access them.



Contents

Key Principles Underlying Effective Learning

How Adults Learn

Making the Most Out of Your Session

Sample Slides



Key Principles Underlying Effective Learning



Definition of Learning

LEARNING

=

That varied set of processes whereby individuals and groups of individuals acquire knowledge or skill, change attitudes, become better informed about something familiar, or discover, inquire about, or become aware of something new.



What's involved in learning?

- The development of intellectual and emotional capacities
- The ability:
 - to think
 - to build skills
 - to find and solve problems
 - to be creative
 - to manage emotions
 - to change attitudes
 - to perform
 - to learn from experience



What Learning Is

LEARNING IS NOT JUST A SPECTATOR SPORT

- It is **NOT** the accumulation of miscellaneous bits of information
- It **IS** the subtle set of skills involved in knowing what to do with the information
- It **IS** the ability to evaluate, synthesize, and apply information

NOT JUST TO **INFORM....BUT TO TRANSFORM**

THE MORE REALISTIC THE ENVIRONMENT, THE MORE WE LEARN



Where does learning come from?

10%

Formal Programs

classes, eLearning, conference sessions, webinars, etc.

20%

Other people

conversations, networks, resources, asking the right question of the right person at the right time

70%

Experience and Practice

doing your job, trying things to figure out what works, refining it



Fashion Forward Learning



Sage on the Stage

- All about the Speaker



Guide on the Side

- Speaker as a Facilitator

Kitchen Sink Model

- Teach all you know

Outcomes Focused

- Learner Centered / Narrow Focus
- Simple, Engaging Activities

Learner Apathy

- Content dump
- Listening but not learning

Learner in Charge

- Want more than just info
- Want the meaning out of it. Context is king



How Adults Learn



Adult Learning Environment

RELEVANCE

- Active & Self-Directed
- Ready to Learn

CONNECTION

- Address specific challenges
- Relate to what is already known
- Immediately applicable

OPPORTUNITY

- Bring life experiences & ideas to share

CONTRIBUTION

- Connect with others

LEARNING IS A COMMUNITY

BRAIN RULES:



He knows how these work

This is Dr. John Medina



<http://www.brainrules.net/>



BRAIN
RULES:

#1



Exercise Boosts Brain Power!

- Sitting is not brain-friendly
- Movement enhances cognition, memory, reasoning, attention, energy, and problem-solving

“

We can make a species-wide comeback.
All we have to do is move.

”

-- John Medina



BRAIN
RULES:

#3



EVERY BRAIN IS WIRED DIFFERENTLY

- What we do and what we learn PHYSICALLY changes our brain
- There is NO one size fits all approach to learning



BRAIN
RULES:

#4

We Don't Pay



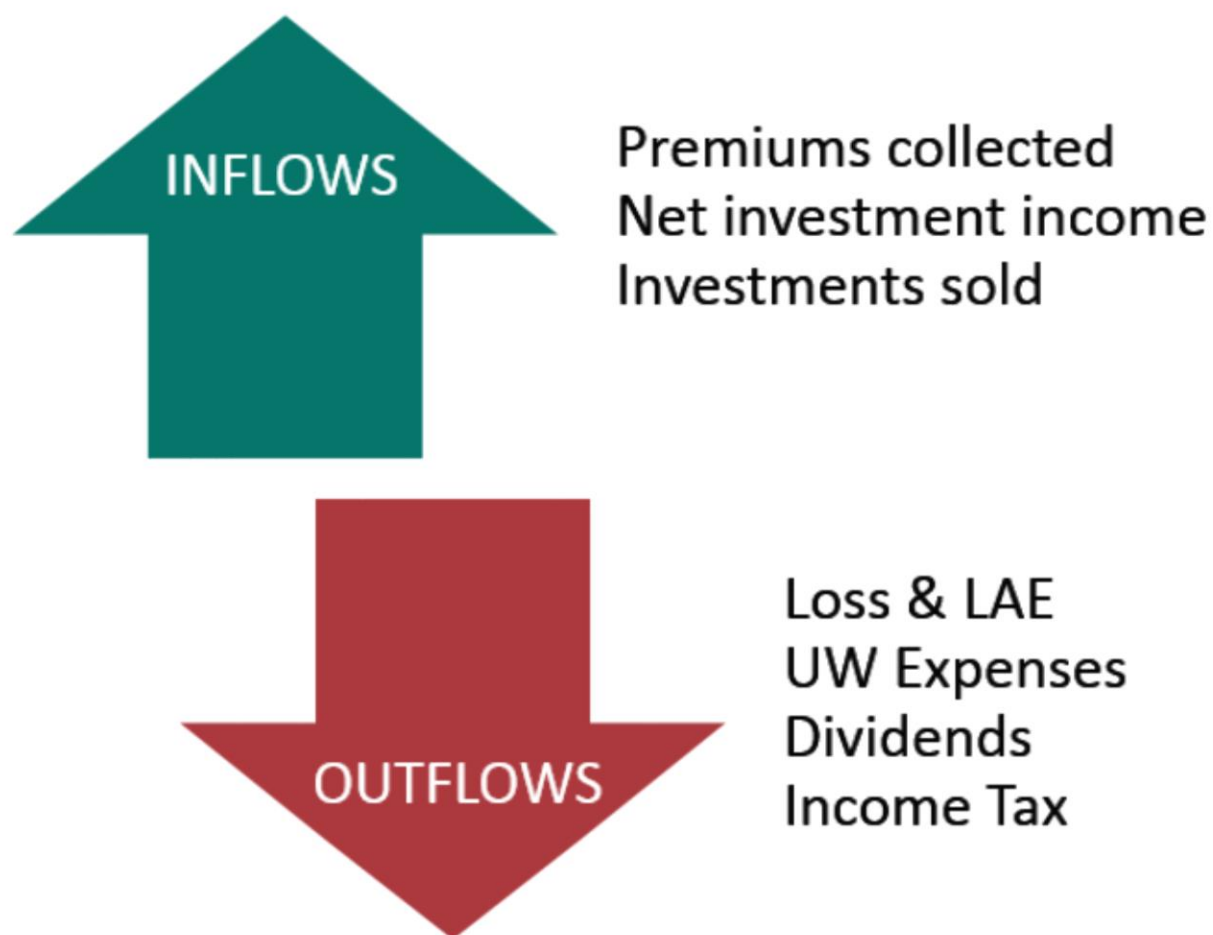
Attention to Boring
Things

Cash Flow Statement

- Inflows – main components are premiums collected, net investment income, proceeds from investments sold and other cash provisions.
- Outflows – main components are loss and loss adjustment expenses paid, underwriting expenses paid, dividends paid to policyholders, income taxes paid, cost of investments acquired and other cash applications.

Is this Memorable?

CASH FLOW STATEMENT



Big Picture and Ideas First

Don't let the audience connect the dots. Help Connect them!

Then...fill In the Details as "Proof" Points.

- Keeps attendees from skipping around
- Tells them what is the goal of the discussion and sets the stage
- Allows you to get questions earlier to be able to pay attention to specific audience knowledge and needs



IRSYMCAKGBIBMFBI

The Brain Pays Attention to Patterns ... and So Should You

Layering or “Chunking” of color helps to add both visual stimulation and ability to see what is critically

IRSYMCAKGBIBMFBI

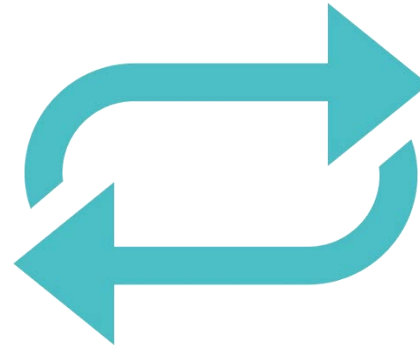


BRAIN RULES:

#5 and #6

REPEAT TO REMEMBER...

- The human brain can hold 7 pieces of information for 30 seconds.
- To remember for even 1-2 hours, repeat/re-expose consistently.
- Thinking or talking about something immediately after it occurs enhances the memory of it.



...REMEMBER TO REPEAT

- To help long-term memory become more reliable, learn new information gradually and repeat it regularly



BRAIN
RULES:

#10

Vision Trumps All Other Senses



- $\frac{1}{2}$ of the Brain's Capacity is tied up in processing visual input → ALL THE TIME
 - We hear information → we'll recall 10% of it.
 - We read it → we'll recall 35% of it
 - Add a picture → we'll recall 65% of it
- Vision is the best single tool we have for learning anything.



Making the Most Out of Your Session



WIIFM!!!

Attendees want to know:

- ❑ **WHY** they need to know the information
- ❑ How they will **BENEFIT** from it
- ❑ How they can **MAKE USE** of it immediately



Quick Tips for Relatable Sessions

Brainstorming

- Put adult learners in groups to brainstorm concepts

Activities

- Use problem-solving activities based on the attendees' likely experiences in their work

Role Play

- Adults retain more of what they learn when they can practice putting their new knowledge to use

BOTTOM LINE

INTERACTION
ACTIVE PARTICIPATION



How do I Apply These Brain Rules?!

RULE #3 **Every Brain is Wired Differently**

- ✓ Know Your Audience
- ✓ Help Them Understand How it Could Fit In with Existing Knowledge
- ✓ For Each Slide - What Three Things are Most Important to Convey

RULE #4 **We Don't Pay Attention to Boring Things**

- ✓ Tell A Story
- ✓ Consider the Big Picture First
- ✓ Use Colour Patterns
- ✓ Use Animation
- ✓ Do a 10 Minute Hustle – don't get stuck in the doldrums

RULES #5 & #6 **Repeat to Remember / Remember to Repeat**

- ✓ Find a Couple Ways To Show Your Data or Results
- ✓ Have a Conclusion Slide to Rehash the Key Items
- ✓ Find a Way to Tap Their Emotions (a Story, Perhaps?)

RULE #10 **Vision Trumps All Other Senses**

- ✓ Remember Vision Is Dominant → Uses Half The Brain's Resources
- ✓ Cut Back On The Text & Make That Text Concrete (not abstract)
- ✓ A Picture Is Worth A Thousand Words
- ✓ Use SmartArt And Adapt for Final Touches

OBTAINING PARTICIPATION

The methods below are particularly suited when time is short, or when people need to be coaxed a bit. Some can be combined.



JOB AID: METHODS FOR ENGAGING PARTICIPANTS

Open Discussion	Create an unstructured question that requires some thinking / reasoning to answer, and ask the group as a whole to consider it. If time is short, lead with "I'd like to ask 3 or 4 of you to share..." If people need to be coaxed, ask "how many of you have a response?" and then call on those that raise their hands.
Response e-cards	Pass out index cards to everyone and ask people to write anonymous answers on the cards, which you can then use to save a little time (writing on the cards requires conciseness) and provide anonymity for responses that might be personally threatening in some way.
Polling	Verbally ask for a show of hands for one question or a series of questions.
Call on the next speaker	When you're sure there will be a lot of interest in the discussion and you want to promote participation, ask participants to raise their hands when they want to share their views and have the current speaker call on the next one rather than the workshop leader doing this.
Learning partners	Form participants into pairs and assign them to work on a task or discuss key questions. Best used when you want to involve everyone but there's not enough time for subgroup discussions (see below). Pairs are great for establishing a supportive relationship or for working on more complex activities that might not be suitable to larger groups.
Buzz groups	Short, casual discussion to quickly discuss a point being made. Best for getting a quick idea of participant feedback or thoughts, then have a few or all groups report using a selected spokesperson.
Subgroup discussion	Divide participants into groups of three or more (ideally 5-7) to share and record information. Best when you have sufficient time to process questions and issues that arise...and it's a key method for getting everyone's participation. Some may interact well at this level but not in full group discussion. This is not the same as dividing people into subgroups for a specific learning activity.
Informal panels	Can be used alone or in combination with discussion groups: <ul style="list-style-type: none">✓ Alone: Select volunteers to serve as representatives of the audience to explore a part of the topic.✓ With discussion groups: Invite a spokesperson from each subgroup to serve on a panel to process and apply the discussion, probing their results a little more deeply.

FOR A MORE STRUCTURED EXPERIENCE...



JOB AID: METHODS FOR ENGAGING PARTICIPANTS

Guided discussion	Also known as the Socratic method. Ask participants a series of questions that draw on participants' knowledge and experience and require them to think about concepts and ideas. Pose questions that are somewhat broad and ask participants to work in pairs or small groups to come up with answers.
Case study	A detailed account of a real or hypothetical event or problem that participants might encounter. The situation is analyzed and discussed; participants are asked to develop a plan of action to address the situation. Can be as elaborate as the focus of an entire session or shorter and simpler...results can be presented verbally or in writing.
Scenario	is a simpler version of a case, often with a little humor and presented as a slightly exaggerated form of what might really happen, to help drive home the point.
Listening team	Some or all of the participants are assigned to pay attention to particular portions of the workshop...ask questions, give a summary of key points, analyze a segment. Worksheets can be provided to organize note-taking. Time is allocated for these participants to share their findings.
Peer consultation	A discussion between two participants, in which one receives advice from the other. Often used to give specific advice or critique a plan of action.
Critical incident	A situation presented in written, verbal or other form that simulates real events...usually requiring participants to make decisions and act at critical moments in a situation. Sometimes used for crisis response training; can also be used to teach people how to respond in sensitive or important situations.
Simulation	An enactment of real-world events...structured so participants can make decisions and use skills in a realistic situation. Think of crisis preparedness training that cities do; also used for business simulations.
Sharing effective practices	Groups of participants respond to a call for ideas about what has worked and do brief presentations, either to the full group or in small groups. Provides ways to recognize creativity and innovation and get ideas they might not have gotten from the content leader.
Consultation triad	Three participants working together in assigned roles...a variation of peer consultation; one person is the consultant, one describes the problem, and the third observes and perhaps critiques the interaction between the other two.
Jigsaw design	<ul style="list-style-type: none"> • Works well with learning material that can be broken into several parts, such as an article. • Participants are divided into small groups based on the number of segments, and each group studies material provided with the idea of mastering it well enough to teach it. • After adequate time, create new "jigsaw" or cooperative learning groups consisting of one person from each of the study groups. • Each member teaches the rest of the group the part s/he studied. • The larger group is then reconvened for review and Q&A to ensure uniform understanding. <p><i>This activity creates interdependence among group members, who are responsible for combining separate pieces of information into a single body of knowledge.</i></p>
Role / skill play	This activity format may be familiar, but perhaps not in its extensive variations.



JOB AID: *Role / Skill Play - Digging in*

Scripted

- Selected participants are provided a script to read in front of the group
- The workshop leader conducts a general discussion with the entire group.
- Best for when you particularly want to demonstrate desired behavior.

Spontaneous

- Used during a general group discussion.
- To make a point, rather than tell participants how to handle a situation, the workshop leader asks a participant to pretend to disagree or argue.
- Spontaneity masks that role-playing is occurring.
- The leader can also reverse roles and ask the participant to handle the situation while the leader plays the “heckler.”

Rotating trio

- Best used near the end of a session to bring learning together, and when sufficient time is available (a minimum of 20-30 minutes for best effectiveness).
- This version consists of three rounds with three different but related scenarios
- Participants take turns taking one of three roles: primary character demonstrating skill, secondary character on the receiving end, observer who constructively critiques what is observed.
- Following the three rotations, the activity is debriefed by full group discussion about what was learned.



Sample Slides

AMV: Another Point of View | Aerosols

BEFORE

Researchers argue that in climate models, radiative forcing on atmospheric conditions from Green House gasses and Aerosols (both natural and man-made) significantly outperform models that rely on ocean currents alone to simulate precipitation and SST variability.

Also, they get very similar results from an atmospheric model where the ocean is just a slab versus an atmospheric model coupled with a complex Ocean model (think AMOC) together.

- *If Ocean currents were playing a strong role in AMV, wouldn't these two approaches give different results?!?*

AMV Trend Probability Density Functions

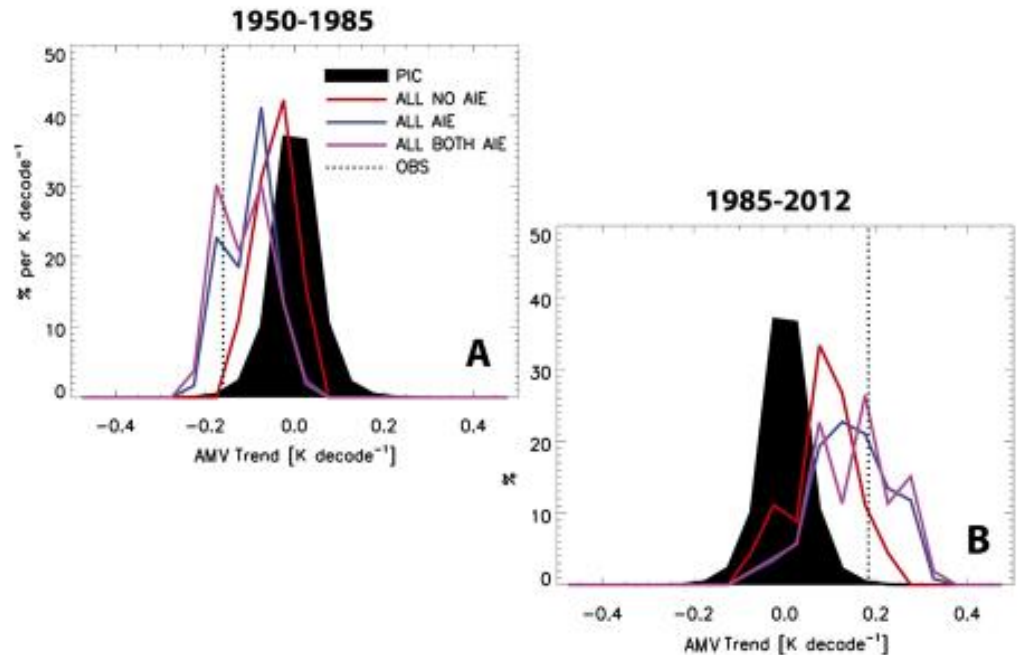


Image Source: AMS; Allen, 2015

Aerosols Provide Best Fit to Observed Climate Results

AFTER

AMV Trend Probability Density Functions

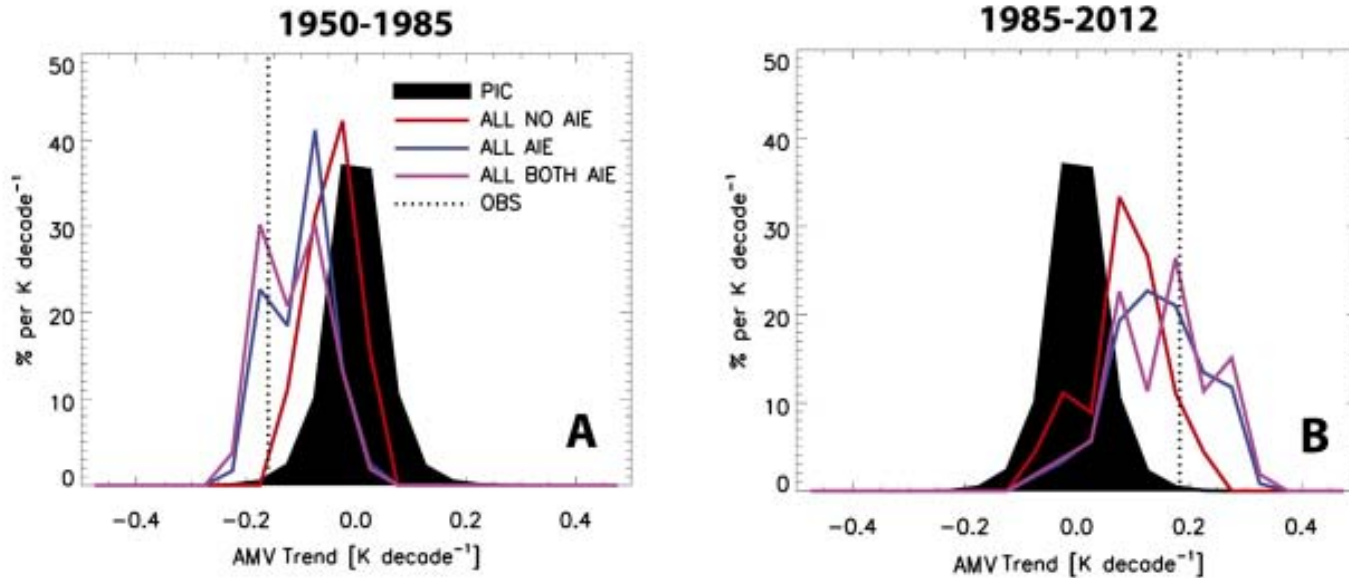


Image Source: AMS; Allen, 2015



Regression

- Given a sample from (X, Y) , the problem of regression is to predict a response Y given a predictor X .
- Parametric (Linear) Regression:

$$Y := \beta_0 + \beta_1 X + \sigma \epsilon \text{ where } \mathbb{E}\{\epsilon|X\} = 0.$$

The problem of prediction is converted into estimation of parameters β_0 and β_1 .

- Nonparametric Regression:

$$Y := m(X) + \sigma(X)\epsilon \text{ where } m(x) := \mathbb{E}\{Y|X = x\}.$$

The problem of prediction is converted into estimation of the regression function $m(x)$.



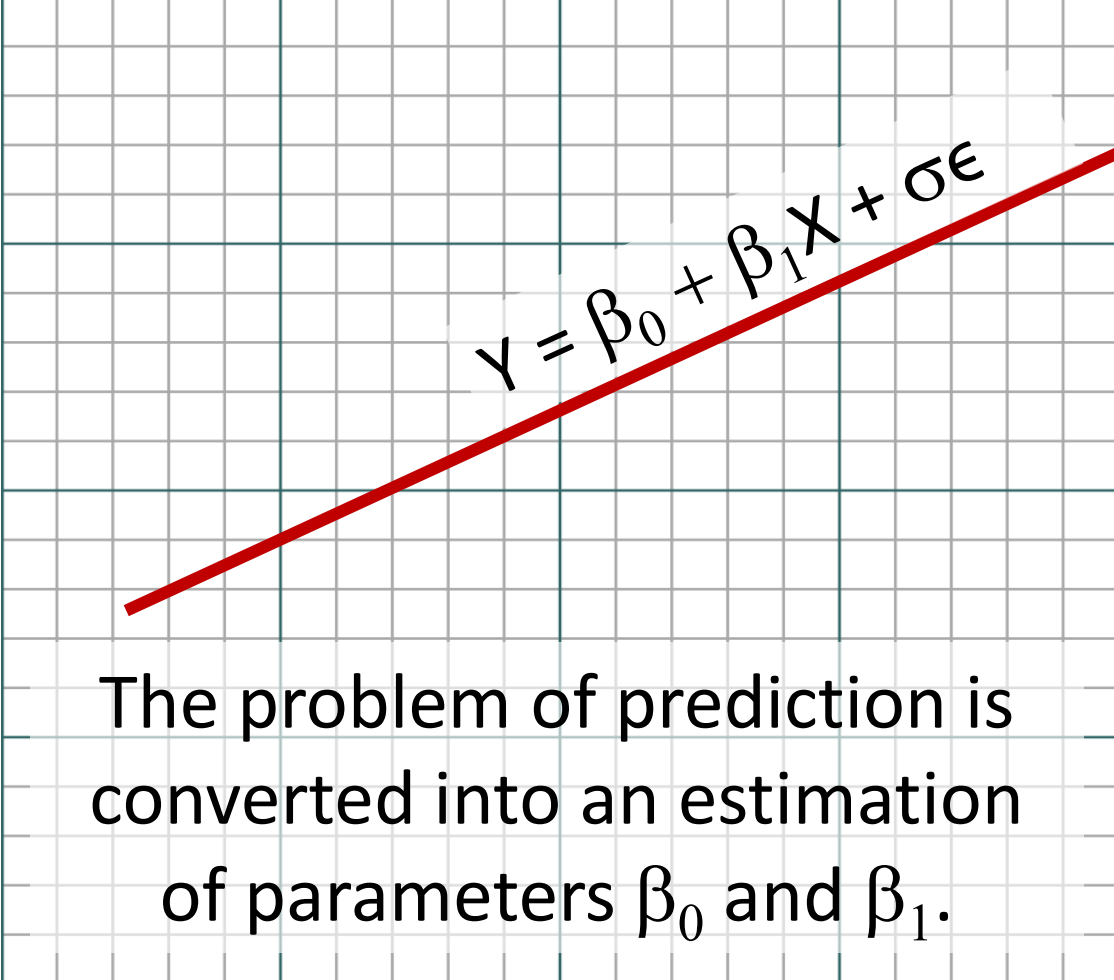
Regression

AFTER

				Predict a response, Y , given a predictor, X .							

Parametric (Linear) Regression

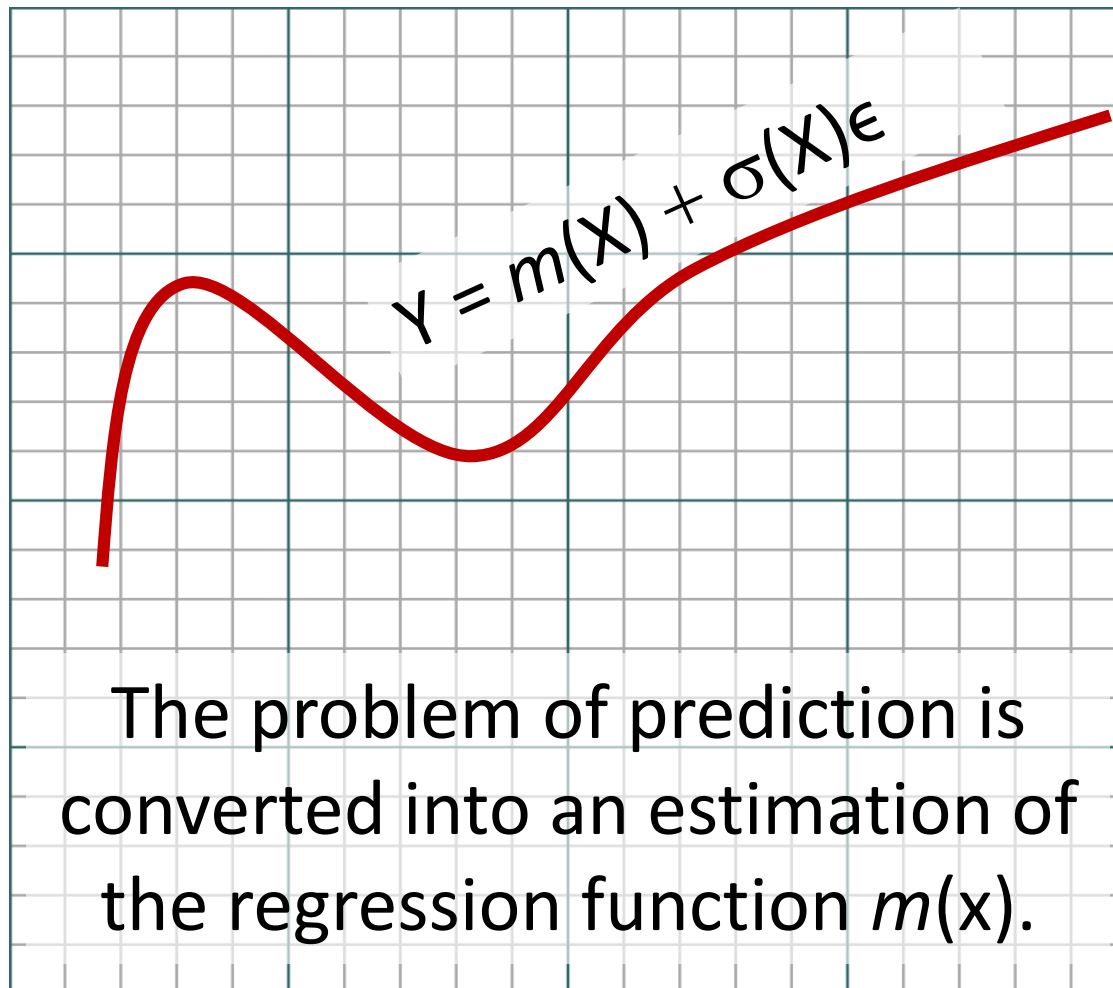
AFTER


$$Y = \beta_0 + \beta_1 X + \sigma \epsilon$$

The problem of prediction is converted into an estimation of parameters β_0 and β_1 .

Nonparametric Regression

AFTER





RECENT WC PER-PERSON CLAIMS (>\$3M)

BEFORE

Date of Loss	Total Incurred	State	Description
3/19/2010	24,216,516	CA	26 y/o employee fell from scaffold suffering closed head injury. Requires assistance with all activities of daily living and will be institutionalized for life
4/28/2006	21,813,785	NJ	42 y/o employee driver fell from truck while washing, landing on his head suffering a closed head injury and quadriplegia. Requires institutional care for life.
11/29/1978	15,826,094	NJ	Technician fell off roof while servicing an air conditioning unit and was rendered a quadriplegic.
10/17/2012	15,512,086	NY	Employee fell 10-15' after stepping into an open elevator rendered a complete quadriplegic, 43 y/o at time of accident.
11/11/2011	14,997,721	SC	21 y/o involved in a single vehicle accident with 2 co-workers suffered TBI
12/6/2011	12,429,566	MO	Truck driver rolled his vehicle resulting in renal failure and requires lifetime dialysis, 45 at time of accident
5/28/1993	12,213,583	OR	Employee fell through roof landing on head suffering a traumatic brain injury requiring assistance in all facets of daily living.
4/20/1978	11,117,807	CA	Insured employee involved in an auto accident suffered closed head injury and paralysis.
4/2/1999	10,386,394	NJ	Cab driver rendered a quadriplegic following auto accident.
3/23/2006	10,152,044	NJ	Bus driver struck a tree and was rendered a quadriplegic.
10/30/2008	10,017,550	IL	Employee rendered a quadriplegic following auto accident.
11/22/1999	9,631,483	MT	Employee fell off of a roof suffering a traumatic brain injury requiring institutional care.

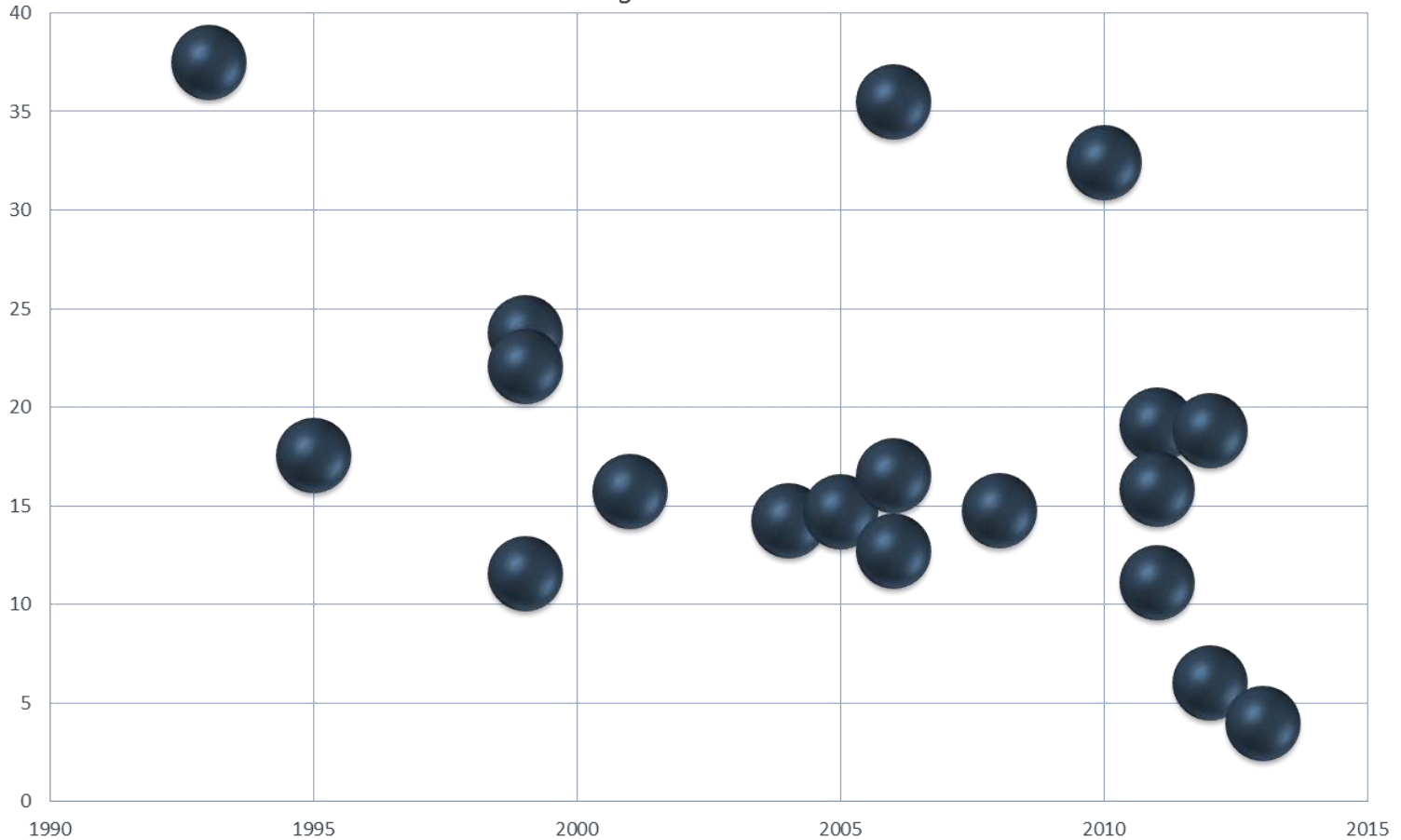
Date of Loss	Total Incurred	State	Description
1/21/2011	8,729,810	IA	22 y/o employee fell from a catwalk suffering a closed head injury. Remains in a coma and will likely require lifetime institutional care.
5/18/2005	8,615,545	CT	Employee fell down unfinished stairwell suffering traumatic brain injury.
6/28/2004	7,955,908	PA	Iron worker fell 10 feet when a crane struck the beam on which he was working.
2/16/2006	7,822,172	IA	33 y/o engineer on a business trip hit a patch of ice lost control of his vehicle and hit a truck in opposite lane of travel head on. Suffered a closed head injury and currently requires 24 hour care and likely will need that level of care for the remainder of his life.
1/1/1979	7,644,180	CA	Dance instructor fell during a lesson and suffered a closed head injury which has required institutional care from the date of injury.
1/17/2001	7,584,730	OR	Cervical spine fracture causing quadriplegia due to a logging accident.
9/28/1995	6,305,922	WI	Truck driver suffered quadriplegia following an auto accident.
1/2/1999	5,050,976	NJ	Employee injured his back while working, suffered multiple disc herniations requiring fusion. Failed surgeries led to chronic pain syndrome and I/W requires Class II Opioid therapy for pain relief.
3/2/2012	4,970,808	AZ	62 y/o fell from scaffold and rendered complete quadriplegic.
5/29/2013	3,460,375	NY	Worker fell from a ladder while painting and was paralyzed



Workers Compensation Per-person Recent Claims Larger than \$3m

AFTER

Workers Compensation Per-Person Claims (>\$3m)
including 5% annual trend





2014 Firearm Deaths: 33,594

Center for Disease Control

Cause	Number	Percent of Total
Unintentional	461	.013
Homicide	11,008	.328
Suicide	21,386	.637
Undetermined	275	.008
"Legal Intervention"	464	.014

BEFORE

So, approximately:

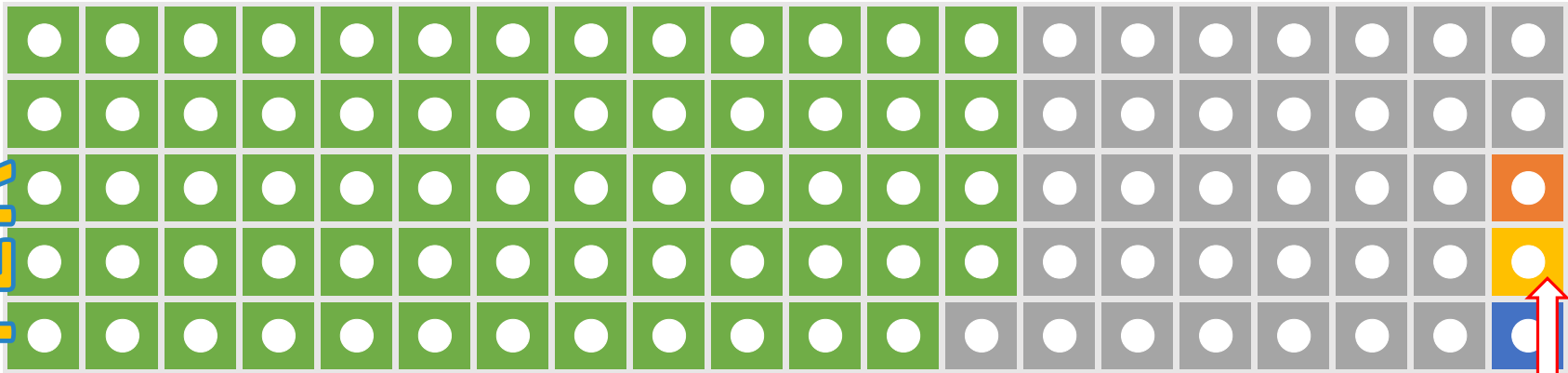
- Suicides = 64% of firearm deaths
- "Homicides" = 33%
- Accidental Discharge = Under 2%
- Homicides not always "Intentional Acts"
- Firearm death and injury stats not complete



2014 Firearm Deaths: 33,594

Center for Disease Control

AFTER



	Suicide	(63.7%)
	Homicide	(32.8%)
	"Legal Intervention"	(1.4%)
	Unintentional	(1.4%)
	Undetermined	(0.8%)

- Homicides not always “Intentional Acts”
- Firearm death and injury stats not complete
- Accidental Discharge under 2%



Required Total Risk Capital vs Capital Allocation

BEFORE

Total Required Risk Capital

- *Amount to cover adverse results*
- *All sources of risk considered except outside business risk*
- *Reflects correlation*

Capital Allocation

- *Allocate to risk sources, LOBs, segments*
- *Needed for pricing and planning ROE calculations*



Adverse Outcomes: Absolute vs Relative

BEFORE

Absolute

- *An adverse result occurs when the company loses money*

Relative

- *An adverse results occurs when results come in below expectation*



Different Perspectives

BEFORE

Regulators

- *Total capital not allocation*
- *Minimum standards*

Rating Agencies

- *Total capital*
- *Grades for Range of standards*

Customers

- *Want well capitalized insurers*
- *Want to pay less for insurance*

Investors

- *Goal to minimize downside*
- *Don't need ins co to diversify risk*
- *Review mgmt capital allocation*

Managers

- *Capitalized to rating agency standards*
- *Allocation needed to measure risk-adjusted return*



Required Total Risk Capital vs Capital Allocation

Total Required Risk Capital

- Amount to cover adverse results
- All sources of risk considered except outside business risk
- Reflects correlation

Capital Allocation

- Allocate to risk sources, LOBs, segments
- Needed for pricing and planning ROE calculations



AFTER



Different Perspectives

AFTER



Regulators



Rating Agencies



Customers

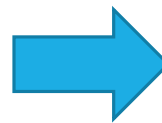


Investors



Managers

Differing
GOALS 



Differing
Capital Concerns





Different Perspectives

AFTER

GOALS:

Regulators

- Minimum Standard

Rating Agencies

- Grades for Range of Standard

Customers

- Viable Insurers
- Pay less

Investors

- Minimize downside risk
- No need for co. to diversify

Managers

- Allocation to measure risk adjusted return





Adverse Outcomes: Absolute vs Relative

AFTER

