### **NSS Labs** TEACHING CONSUMERS SECURITY HABITS

Randy Abrams Research Director NSS Labs, Inc.

#### **EDUCATION** TECHNOLGY!

# *"If you only see one solution then you probably don't understand the problem"*

-Author Unknown

## **NSS Labs** Why some of the best universities are giving away their courses

Daphne Koller, a co-founder of Coursera, says the default form of college classes — a professor standing in front of her students, lecturing for an hour — developed 300 years ago, when books were rare and the professor essentially read the contents.

This is 2012. We're wired. We can do better, Koller says.

http://seattletimes.com/html/pacificnw/2019133492\_pacificpedupunk23.html

# Why some of the best universities are giving away their courses

What's different? First, Lazowska says, the technology has vastly improved, allowing us to do things (like live chats over the Web) that we couldn't do before. Second, a slew of discoveries in brain science have helped us understand how best to use the new technology and make learning stick.

For example: Breaking the video lectures into small chunks helps students retain information better. Embedded quizzes keep them focused. Drawings appeal to the visual learner.

Ed Lazowska, Bill & Melinda Gates chair in computer science at the UW http://seattletimes.com/html/pacificnw/2019133492\_pacificpedupunk23.html

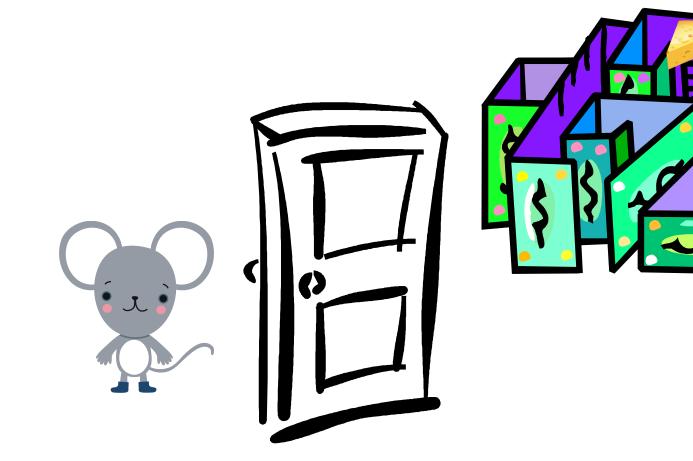
#### The Habit Loop

The Power of Habit: Why We Do What We Do in Life and Business

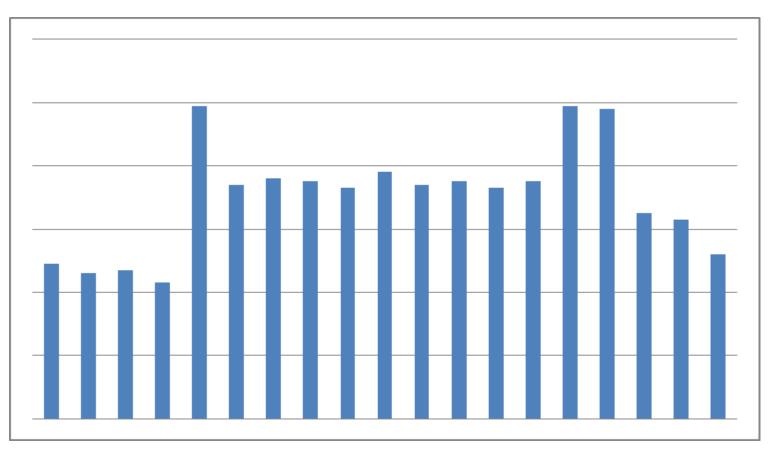
-Charles Duhigg

- Trigger
- Routine
- Reward

#### The Habit Loop Brain Activity

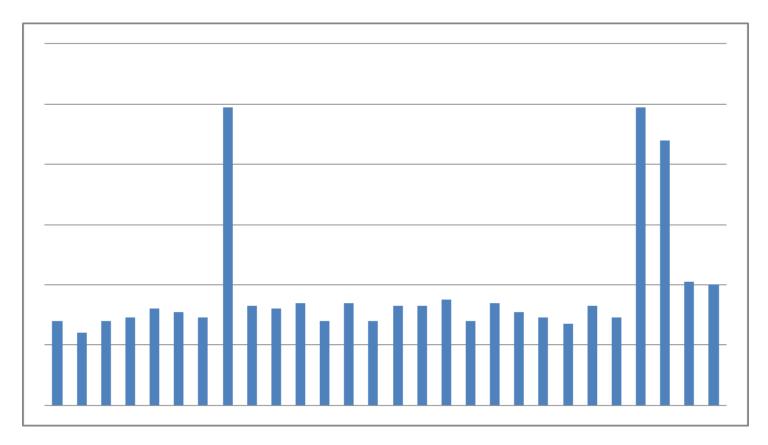


#### Mouse Vs. Maze: Round 1



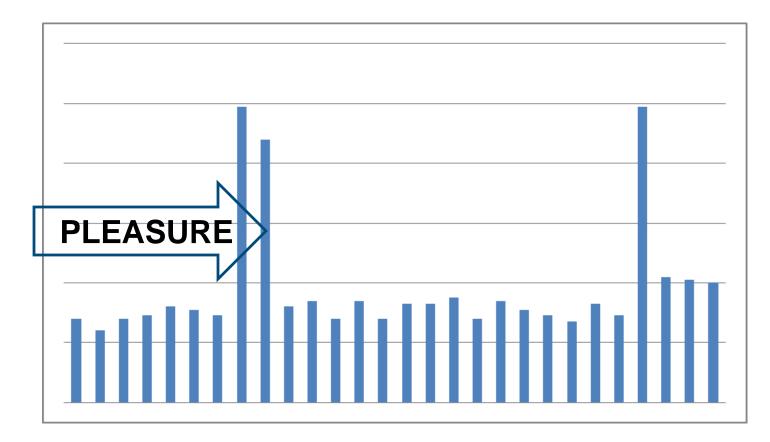
Gate Opens - mouse searches - mouse finds reward

#### Mouse Vs. Maze: Round 10



Gate Opens - mouse searches - mouse finds reward

#### Mousy gets a Craving



Gate Opens - mouse searches - mouse finds reward

#### What Were You Thinking?

When a habit emerges, the brain stops fully participating in decision making. It stops working so hard, or diverts focus to other tasks. So unless you deliberately fight a habit—unless you find new routines— the pattern will unfold automatically.

Duhigg, Charles (2012-02-28). The Power of Habit: Why We Do What We Do in Life and Business (p. 20). Random House, Inc.. Kindle Edition.

#### Habit Routines Must Be Replaced

- Stress > Cigarette > Satisfaction
- Stress > Exercise > Satisfaction
- Email > Click > Funny Video (or Malware)
- Email > THINK > Reward

#### You Have to Believe

- A higher power
- A system can work
- Thinks will get better
- You can learn and understand technology

#### **Social Habits**

- Reducing the infant mortality rate
- Identify major sources
- Identify major cause
- Solution social change

#### **Educate To Create Habits**

- Games
- Live "phishing"
- Live use of password crackers

#### We Have to do this Smarter!

- Fight habits with habit remediation
- Fight ignorance with education
- Build good habits with education



## Thank You!!!

Randy Abrams Research Director NSS Labs, Inc.