



# 21st Century Training & Performance Support for Today's Consumer Driven Learners

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Senior Director of Product Strategy

4D Technologies – [www.CADLearning.com](http://www.CADLearning.com)



# 21st Century Training & Performance Support for Today's Consumer Driven Learners – Revealed!

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# About me

- 35 years teaching and training
  - Secondary, post-secondary, collegiate and corporate training
  - ATC – Instructor, Manager, Director, ATCEC and ATCAB
  - AUGI CAD Camps
- 23-year veteran and 7-time award-winning Autodesk University Speaker
- Featured columnist for *CADalyst* and *AUGIWorld* magazines
- AutoCAD Exchange – Ask the Expert Series
- AutoCAD Mentor All-Star
- Autodesk University Advisory Council
- Senior Director of Product Strategy for 4D Technologies

# Housekeeping

Your Questions

Polling Questions

Audience Participation

**I'm hearing...**

**We need more training!**

**We don't have time for training!**

**Does training make us more productive?**

**The training doesn't address our issues!**

# Today's Reality

Years ago there were only two ways to become productive with Autodesk® software: you could go to a training class or hire a trainer to teach you.

With cuts in companies' traditional training budgets, major corporations are shifting training resources away from costly traditional instructor-led training to cost-effective solutions.

But what really works?

Today's learners are driving how they want to learn and consume content.



# Today's Choices



## Learning Panorama





12 December 2013 Last updated at 07:18 ET

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## Blockbuster to close remaining stores







# Today's Internet Video

50 trillion terabytes of storage/consumption will be video

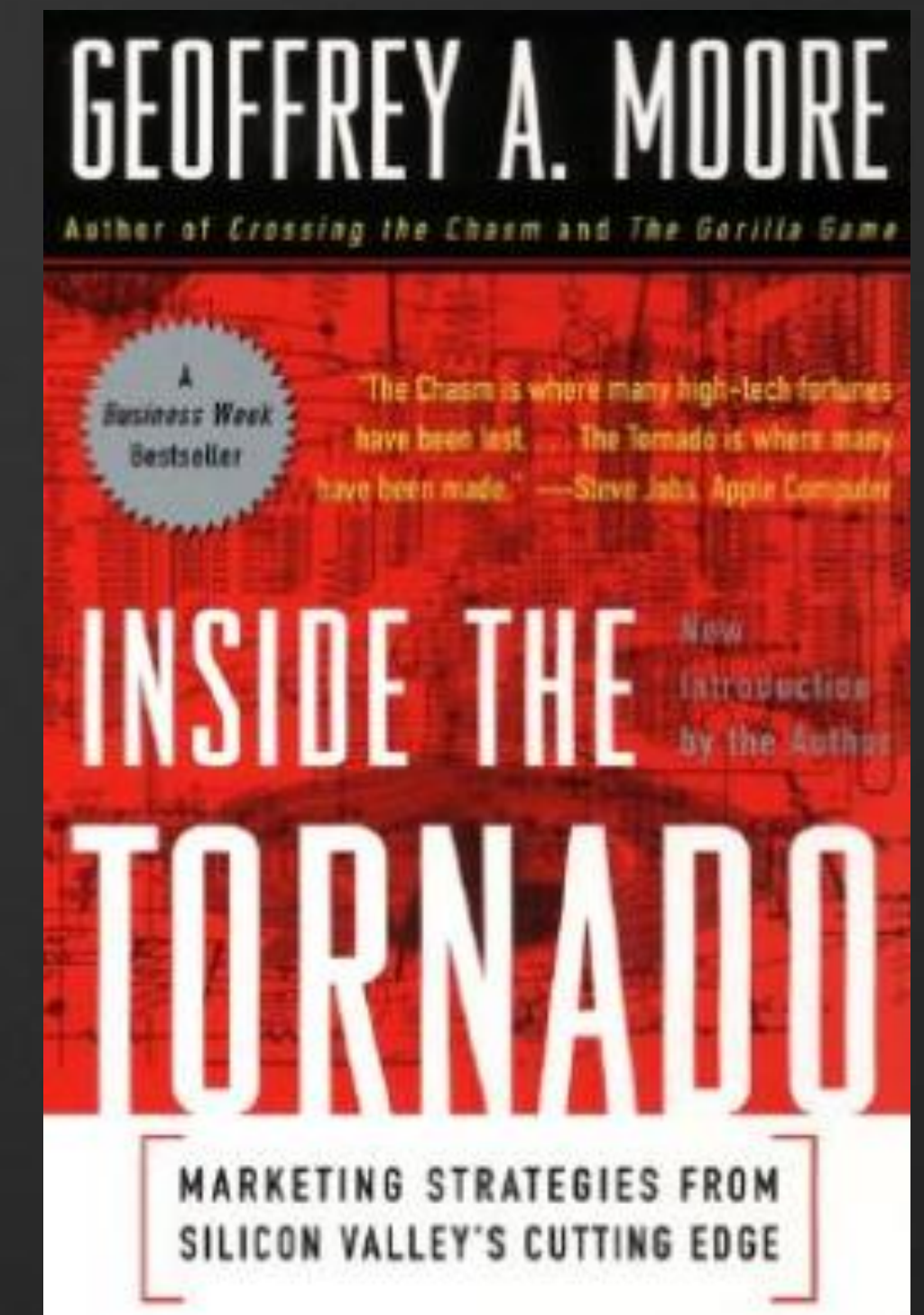
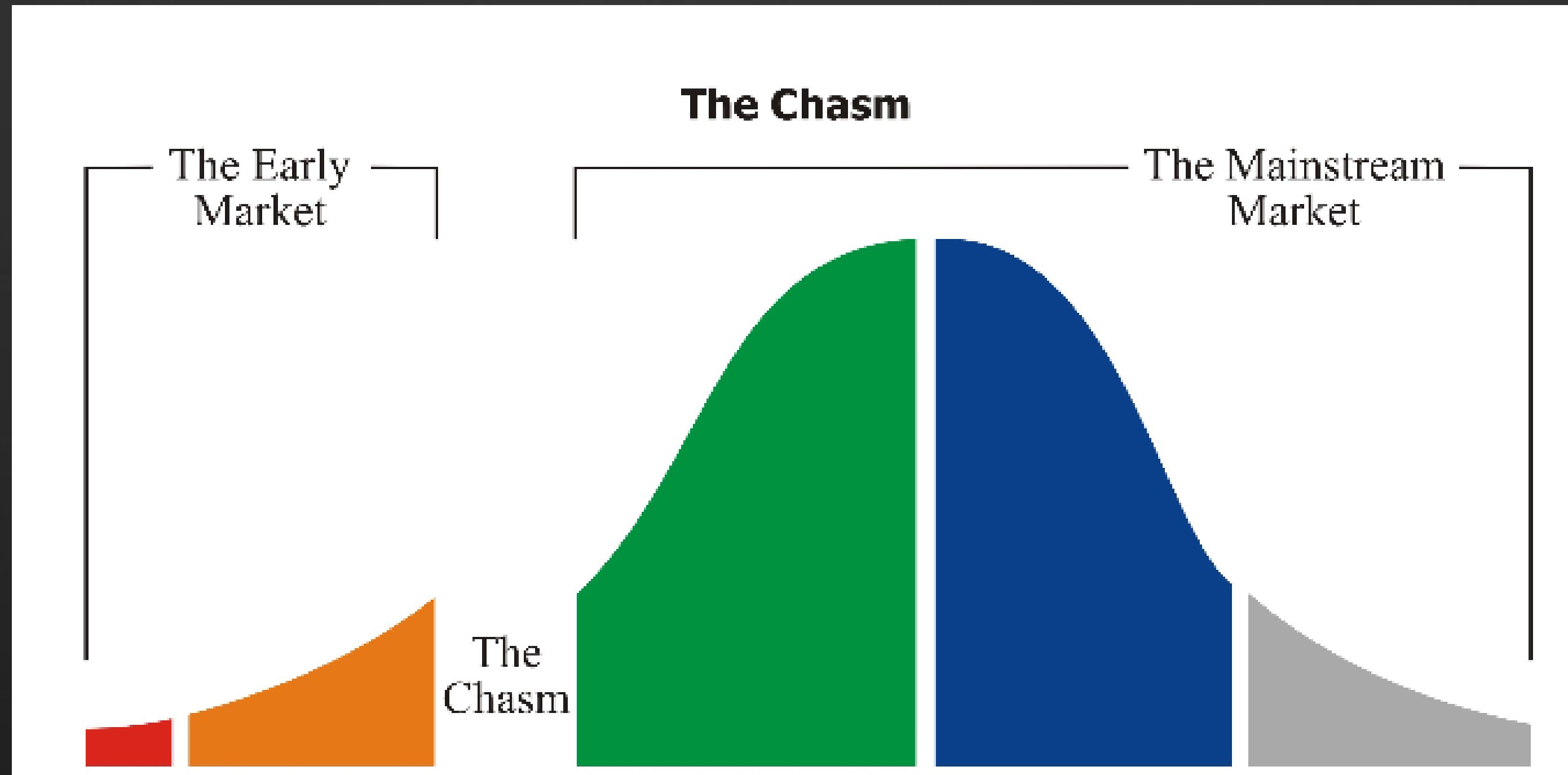
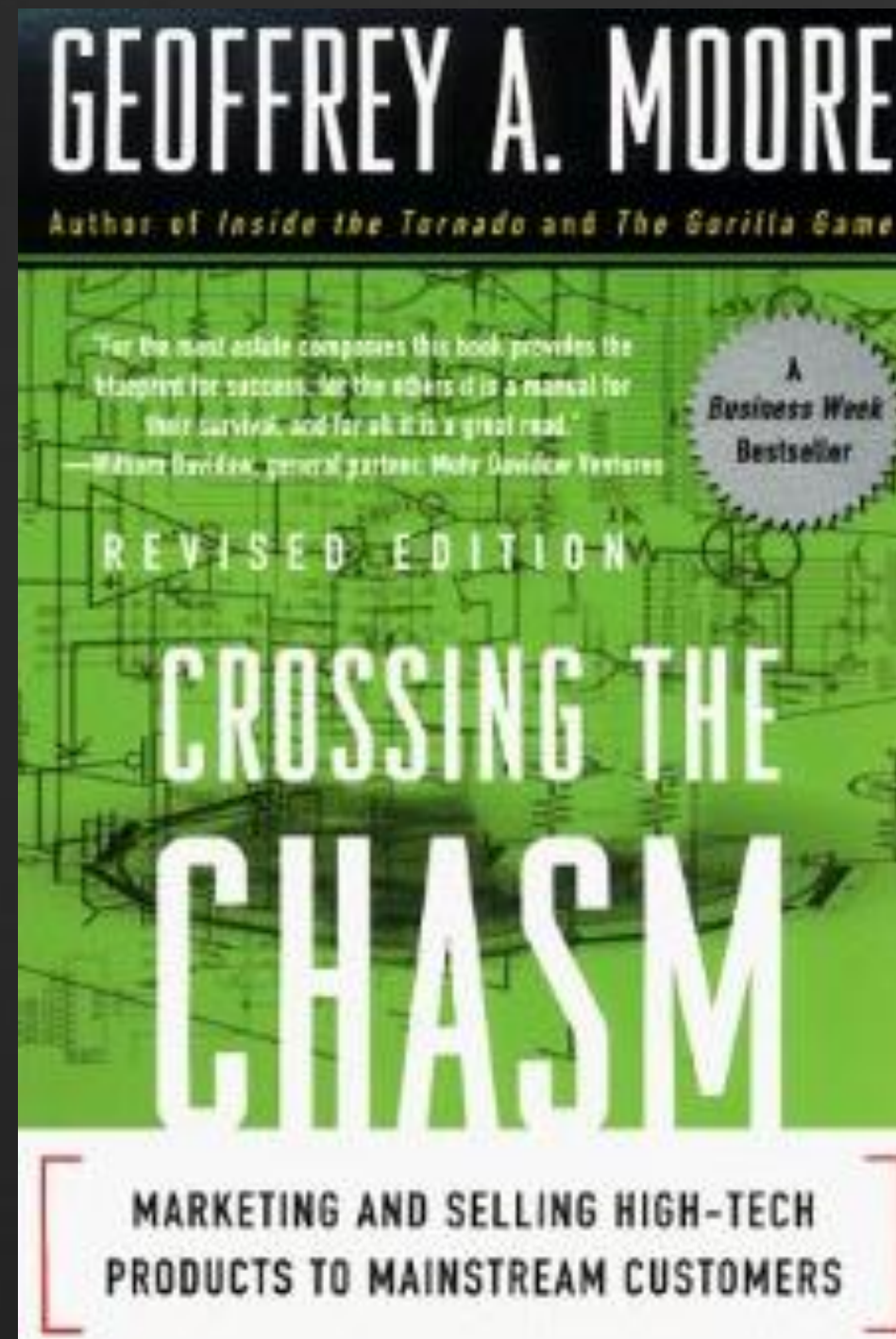
80% of Internet content consumption by those aged 18-34 is video

90% of Internet traffic will be video in 2017

US college students average 2.7 Internet enabled devices

Now one billion smartphones worldwide and five billion by 2019



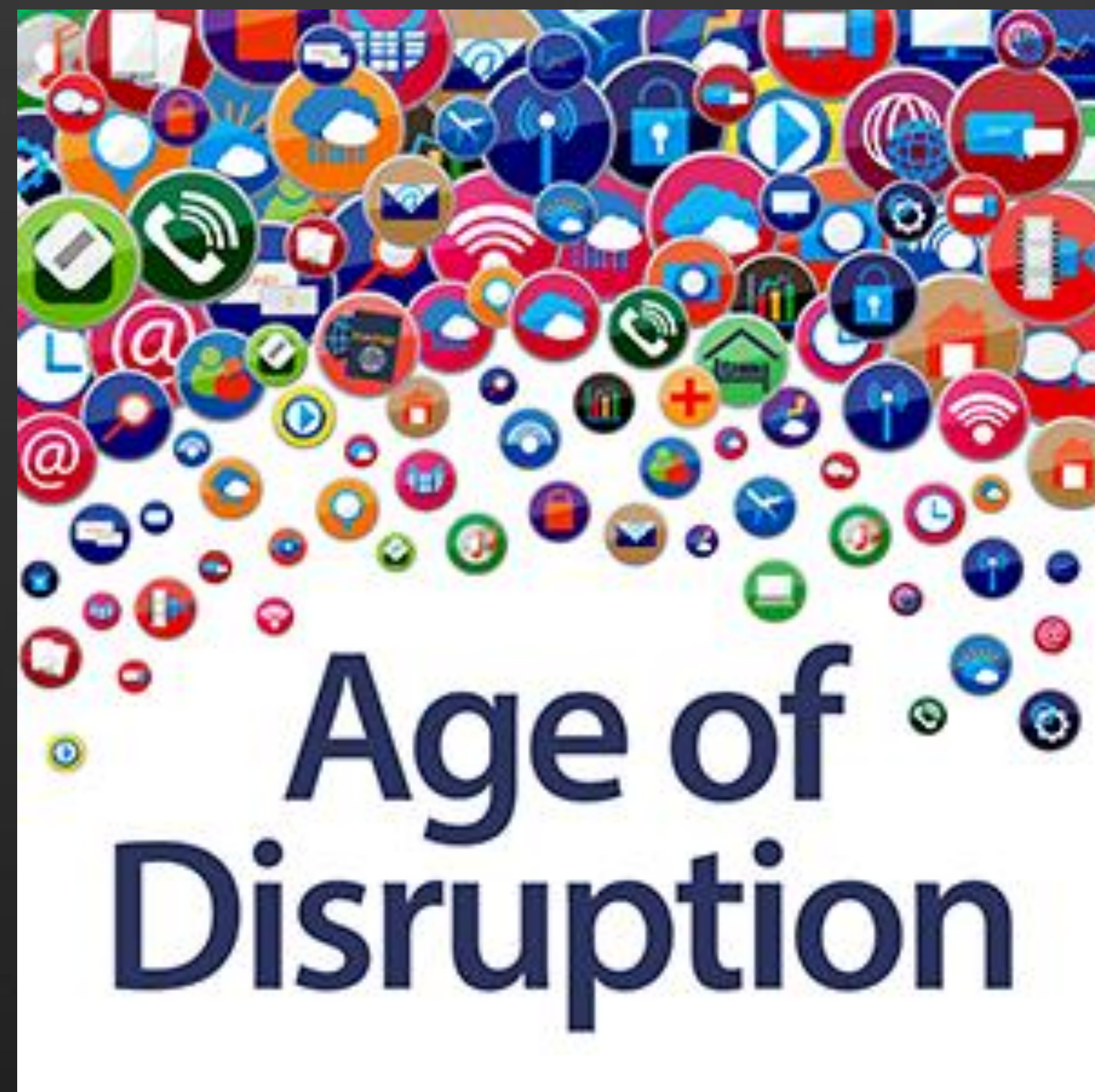


# What is the Disruptive Agent?

Training as usual  
Training unusual  
Disruptive education

You can't tinker your way into a systemic change





# 5 Constraints to Learning Disruption

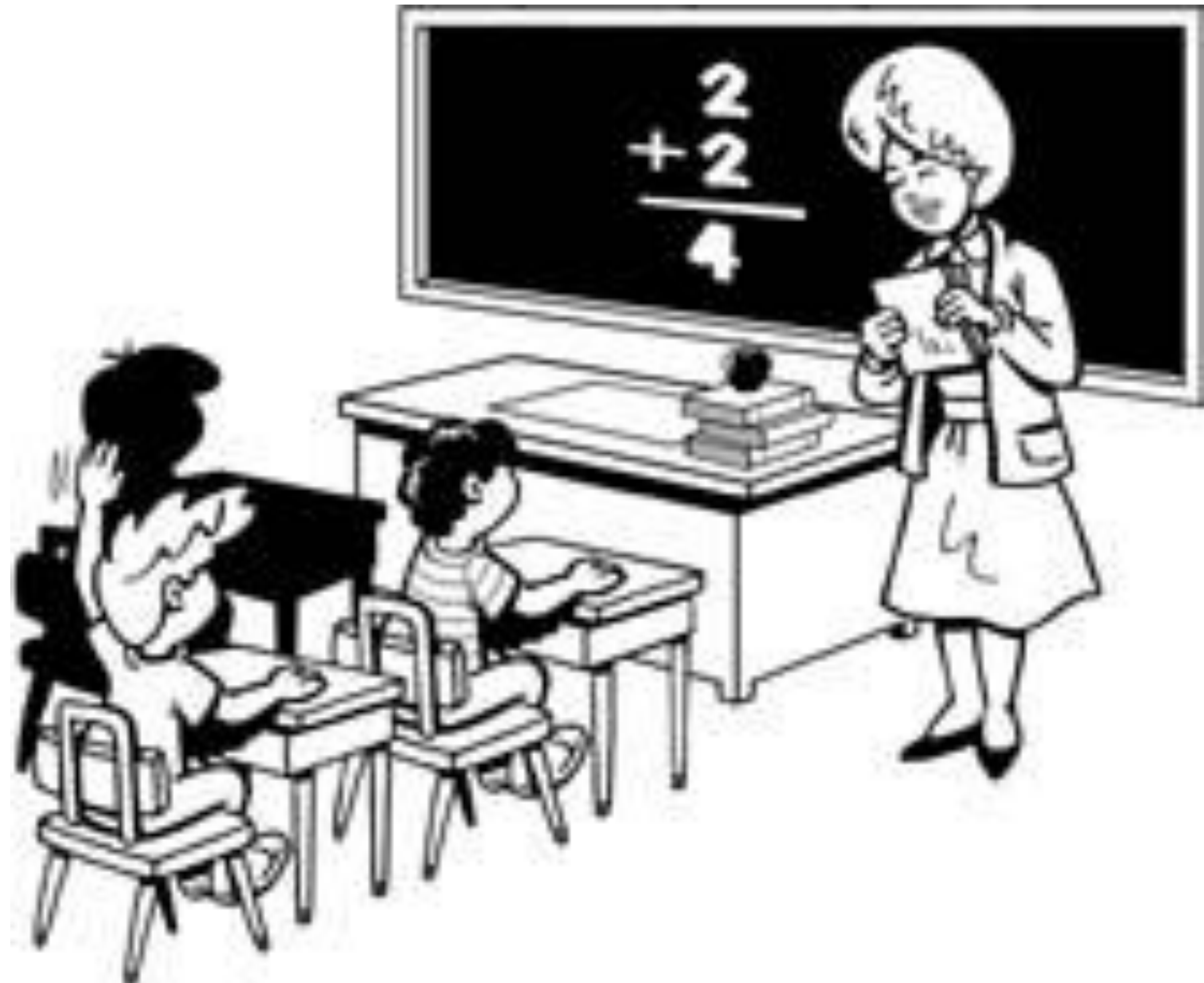


**#1**

# **Industrialized Education or Personalized Education**

# Industrialized Education

- Meets the needs of the system
  - Mass learning
  - Proceed by age and year group
  - Reading and memorization
  - “One Size Fits All”





# Personalized Education

- Meets the needs of the learner
  - Learner chooses presentation options
  - Learner progresses at their pace
  - Mass customized learning
  - Personalized!!
  - “One Size Fits One”



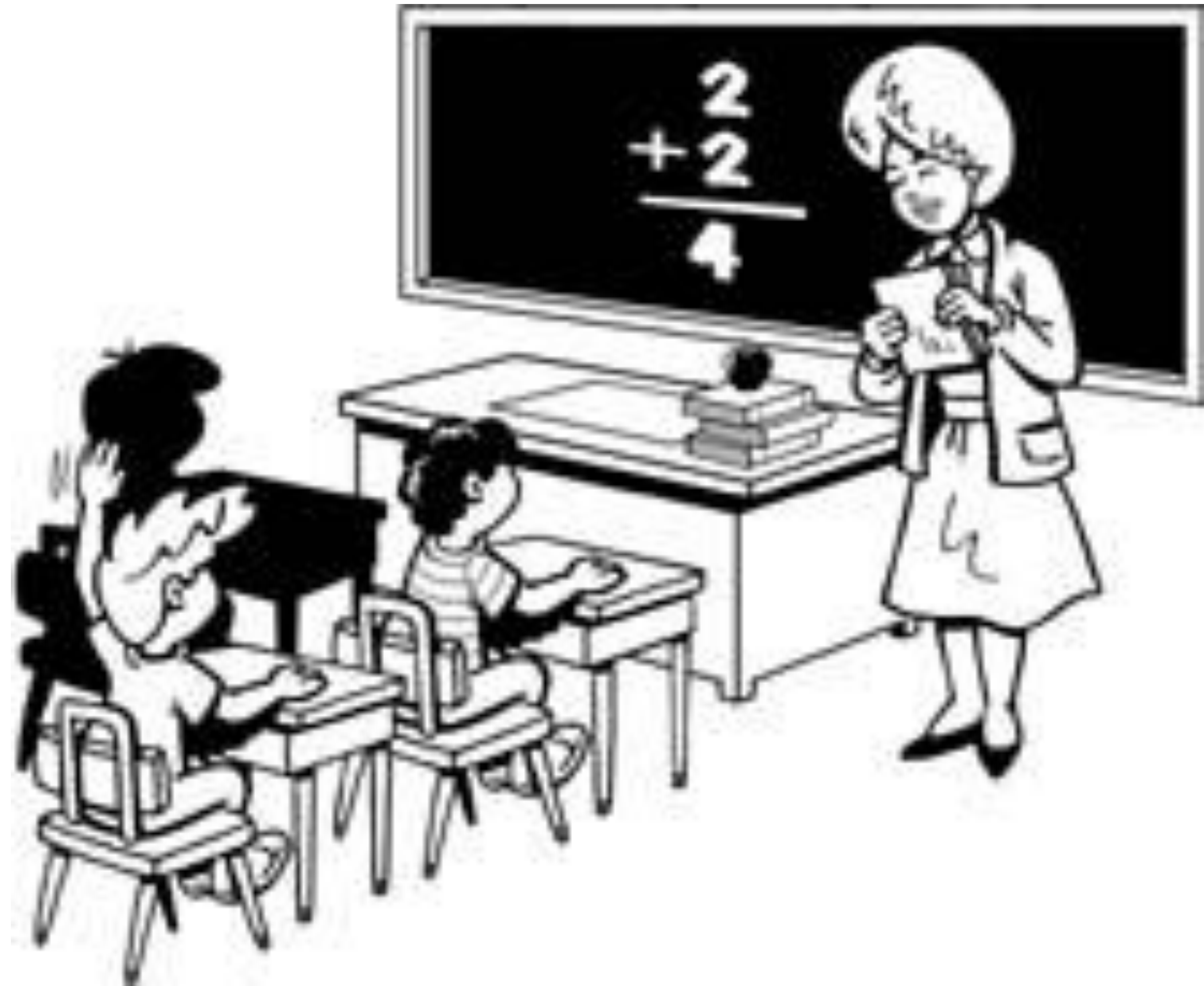
# #2

## Formal Learning or Informal Learning



# Formal Learning

- The training or learning department sets the goals
- Intentional learning
  - Date
  - Time
  - Place



# Informal Learning

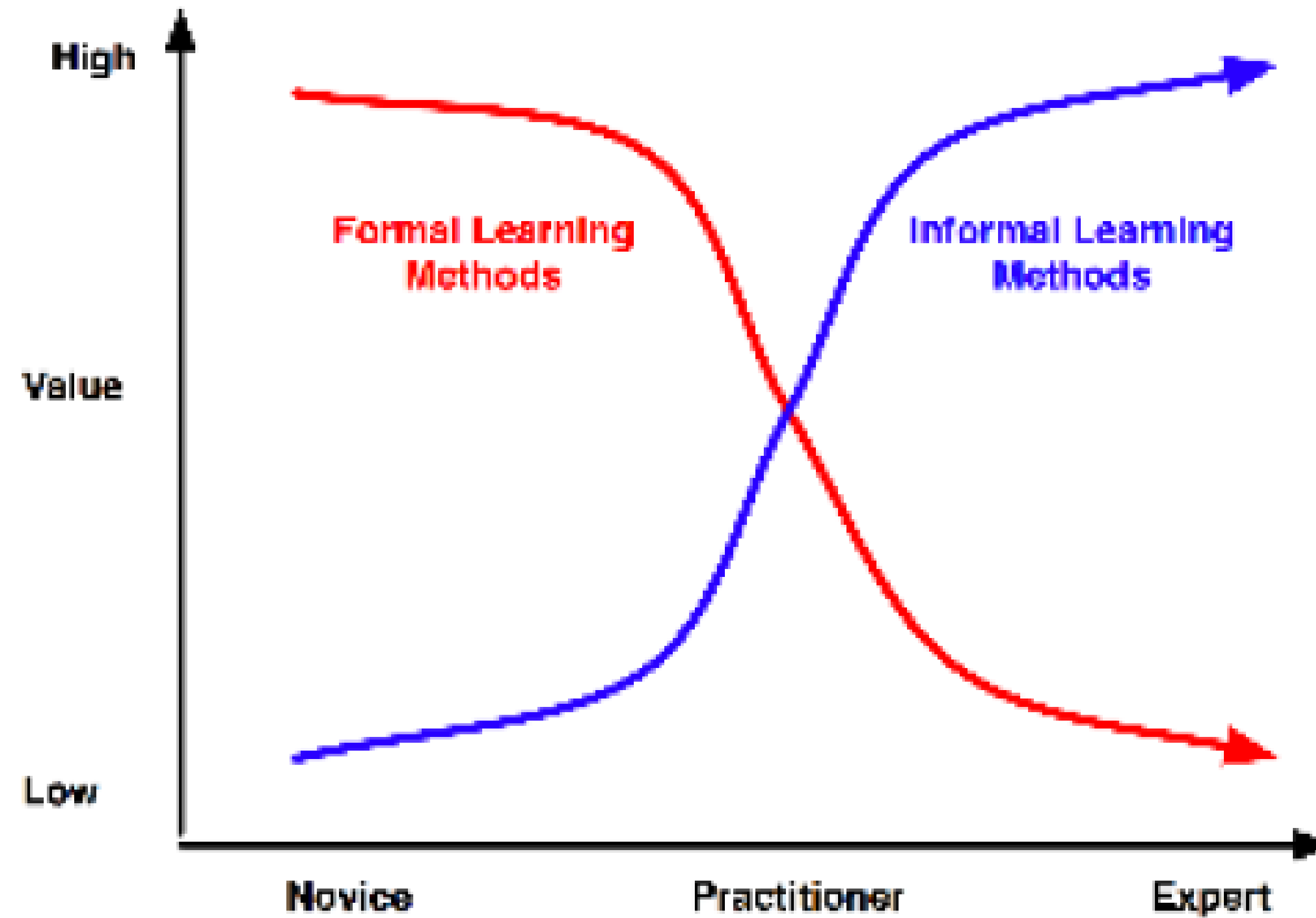
- The learner sets the goals
- Incidental learning
  - Great white box of hope!





# Full Learning Continuum

- How do you become an expert?
  - Formal or informal?



# Deliberate Distributed Practice

- Defined as: “**Where self-reflection, work ethic and ambition meet**”
- Requires careful reflection on what worked and what didn't work
- Provides immediate corrective feedback based on activity
- Develop consistency





**#3**

# **Training by Immersion or Training by Vignettes**

# Training by Immersion

- Training immersion
  - Consecutive days of intensive training
  - Attendance is mandatory





# Training by Vignettes

- Training vignettes
  - Short doses of training
  - Attendance as needed



# eLearning – eBooks



**What does the “e” stand for?**

# What could the “e” stand for?

- eLearning/eBooks
  - Enhanced
  - Engaging
  - Effective
  - Efficient
  - Elevated
  - Experiential
  - Energizing
  - Everywhere
  - Eternal
  - Evolving
  - Express





# eBooks

- Is this what an “e” book should be?





# The First...

- Classroom





# #4

## Traditional Classroom or Flipped Classroom



# Traditional Classroom

- Industrialized
- Formal
- Immersion
- Synchronous
- Instructor provides live lecture





# Flipped Classroom

- Personalized
- Informal
- Vignettes
- Asynchronous
- Instructor provides live mentoring



Just in time  
Just enough  
Just for me!



# Leaders

- College for America at Southern New Hampshire University
  - Eliminated the Credit Hour
  - Eliminated the Lecture Hall
  - Competency based degree
  - \$3000/year tuition



Just in time  
Just enough  
Just for me!



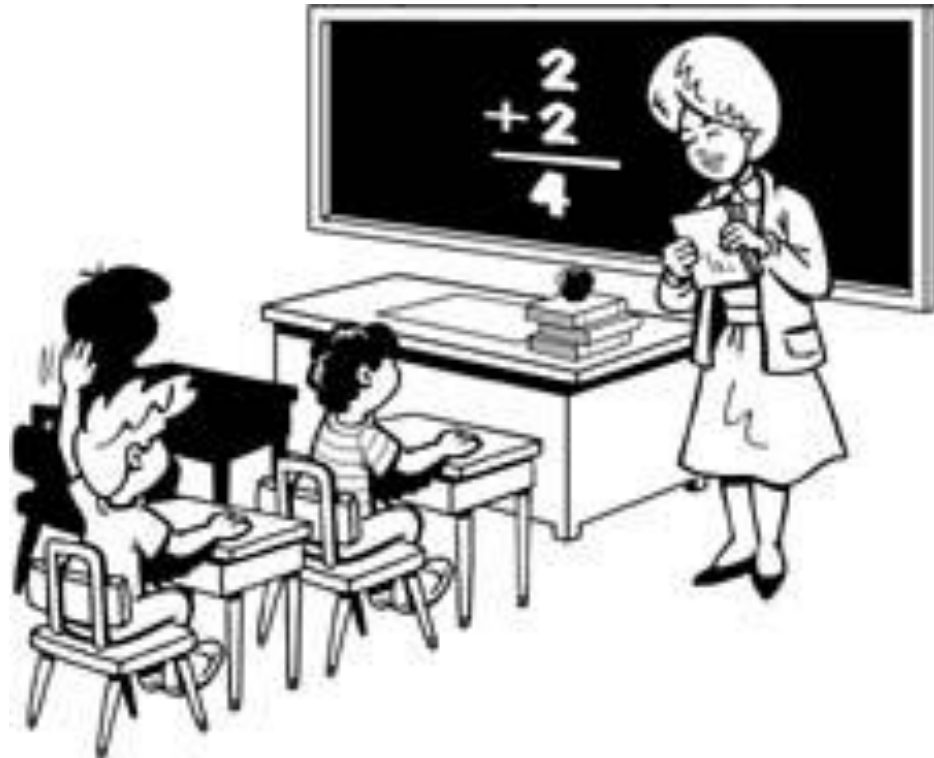
**#5**

# **Blended Learning or Adaptive Learning**

# Blended Learning



+



+



+



# Blended Learning





# Adaptive Learning

- Provides immediate corrective feedback based on activity
- Example?





# Adaptive Learning Technology

- Amazon

Hello. [Sign in](#) to get personalized recommendations. New customer? [Start here](#).

Your Amazon.com | 📦 Today's Deals | Gifts & Wish Lists | Gift Cards





**So how do we get there?**

# Disruptive Agents for Learning in the 21st Century?



# #1

## Microlearning Performance Support

# Microlearning





# Performance Support and Ubiquitous Learning

- LMS (Learning Management System)
  - Pull learning
  - Learning controller determines the learning objectives
- Ambient Technology or Ubiquitous Computing
  - Push learning
- Time Certain
- When do we learn and retain knowledge?
  - When we are confronted with a problem
  - Example?





# Performance Support and Ubiquitous Learning



## Revit Modeling and Drafting for Architectur...

Chris Yiannias • Computers & Electronics

In this Helpout I am offering a range of services centered on the use of Autodesk Revit in design and architectural a...

Next available on  
Jun 18, 2014 at 8:00 PM

**\$22.00** for 30 minutes or  
**\$2.00** per minute



## Revit for Construction

Daniel Fahmi • Computers & Electronics

LOW PRICE FOR A LIMITED TIME! Autodesk Revit is a BIM tool used primarily by Designers for the design of building pr...

Next available on  
Jun 18, 2014 at 12:00 PM

**\$1.00** for 15 minutes or  
**\$2.00** per minute



## After Effects or 3D Studio Max

Paul Lipsky • Computers & Electronics

Need help in Adobe After Effects or Autodesk 3D Studio Max?  
No matter what level you are at I can probably help you w...

No times available

**\$25.00** for 30 minutes or  
**\$1.00** per minute



## Microlearning Performance Support



WIKIMEDIA  
COMMONS



# #2

## Personalized Playlists and Content Curation



# #2

## Personalized Playlists and Content Curation

# Personalized Playlists and Content Curation

- Make Content Relevant
  - Vetting





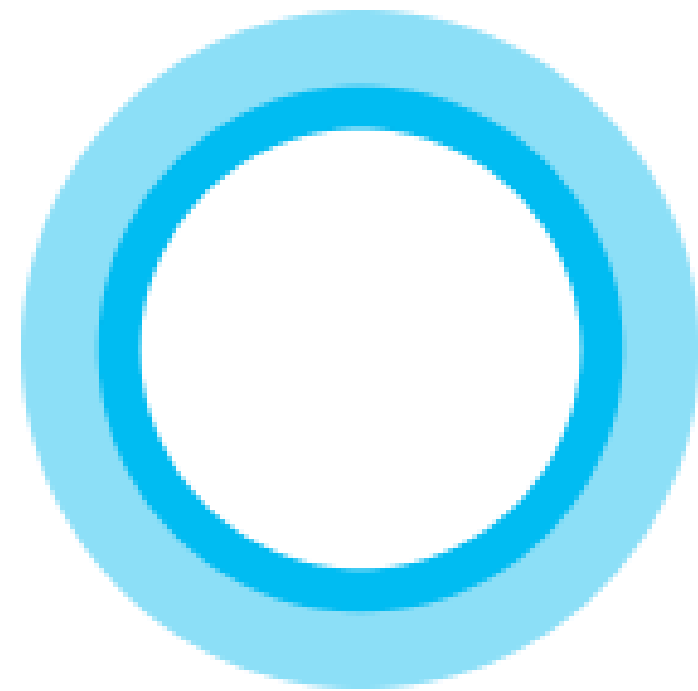
**#3**

# **Advanced Recommendation Systems**

## Advanced Recommendation Systems

NLS

amazon<sup>®</sup>



Hi, I'm Cortana.



**Siri**

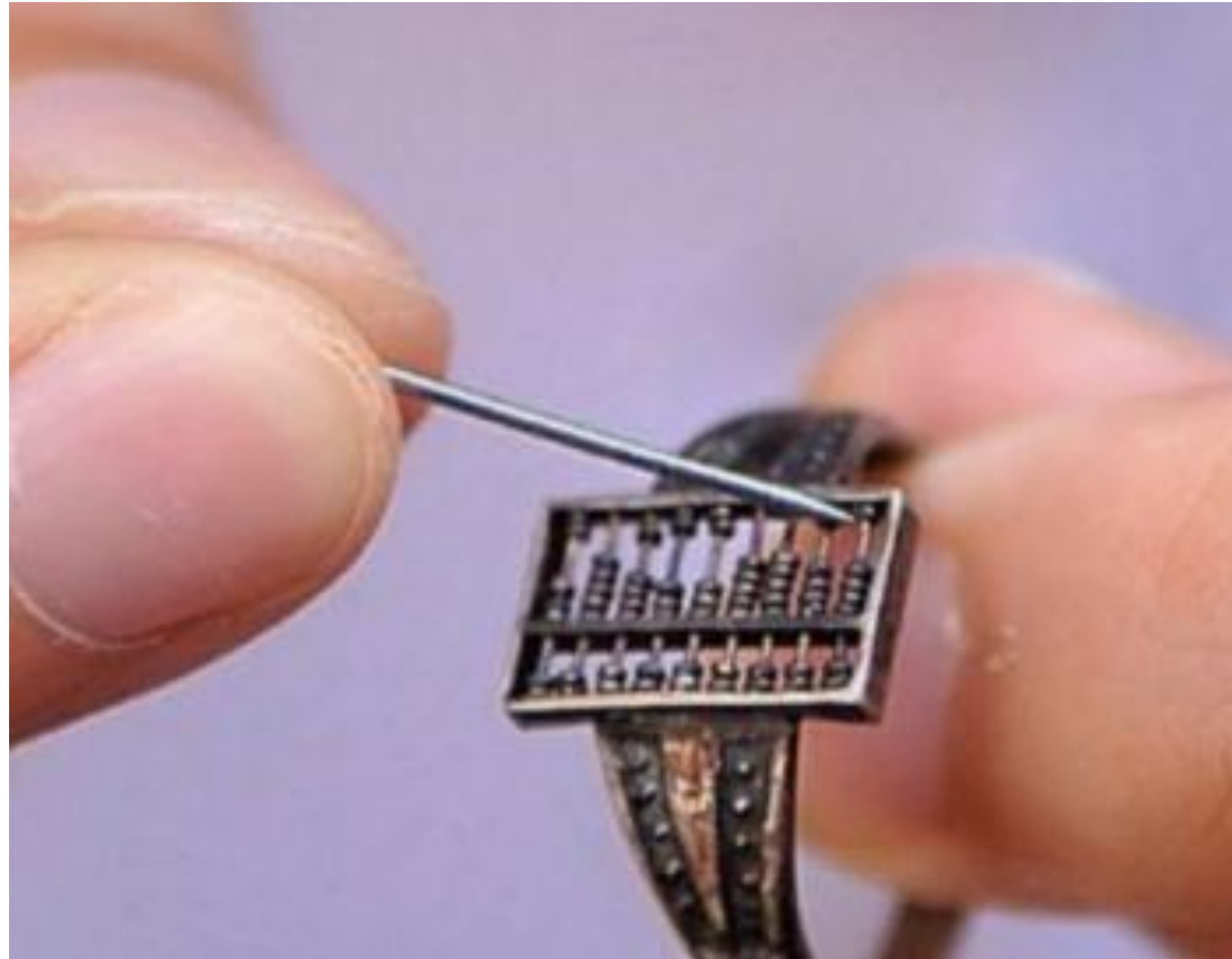


# #4

## Fitbit for the Brain

# Fitbit for the Brain

## Wearable Personalized Devices





# Fitbit for the Brain

## Wearable Biometric Sensors



Quell®

Wearable Pain Relief  
Technology™

# Fitbit for the Brain

## Wearable Biometric Sensors





# Fitbit for the Brain

## Wearable Biometric Sensors



**#5**

# **Distributed Learning and Distributed Practice**



# Distributed Learning and Distributed Practice

## Hermann Ebbinghaus – The Forgetting Curve



**Information is ubiquitous.  
Knowledge is a commodity.**

**Will education dematerialize?**

**Is knowing obsolete?  
or**

**Is implicit learning the only truly successful method?**





# Prescribed Learning Methods of the 23<sup>rd</sup> Century?





**How learning should be...**





**Have you learned something new today?**

# Your call to action!

Develop/deliver or search for learning/training:

Personalized

Microlearning

Informal

Curation

Asynchronous

Advanced Recommendations

Flipped

Biometric

Adaptive

Distributed



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