

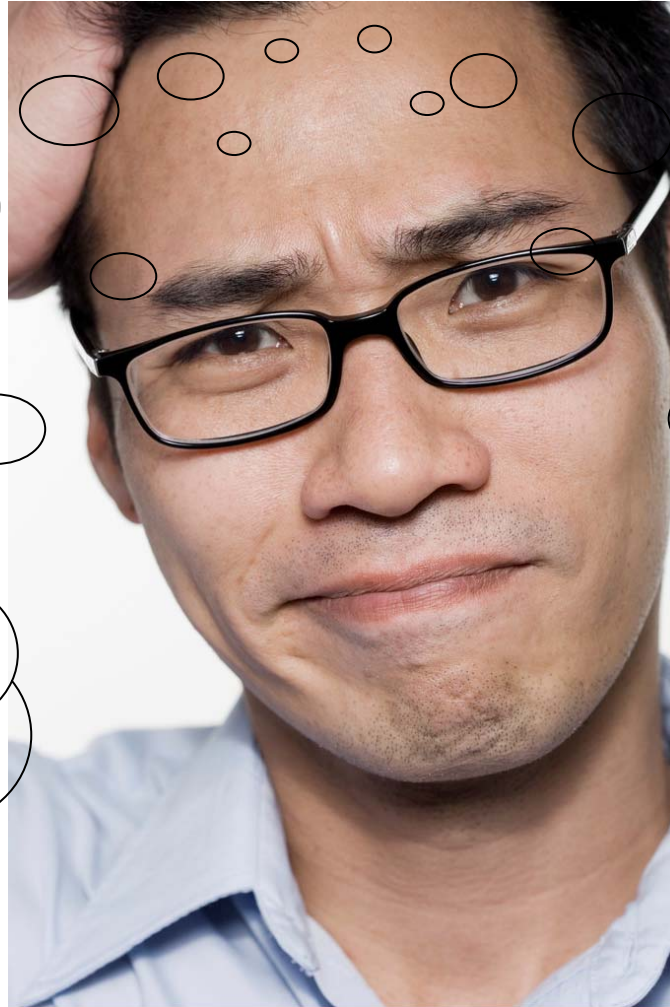
# Part II: Introduction to Blended e-Learning

Diane Ritter  
Director of Business Excellence  
The Quality Group

It's increasingly clear that current training models aren't working as well as they used to.



# You're faced with increased challenges in delivering [Lean Six Sigma] training.



# Tap into the *power* of blended e-learning



**Online**

**Assessment**



**Instructor-led**



**Collaboration**



**On-the-job**

**Practice**



**Coaching**

**Job Aids**

# 1. Why B. L.?



# 2. Transitioning



# 3. Results




# 1

Why

Blended

E-Learning?

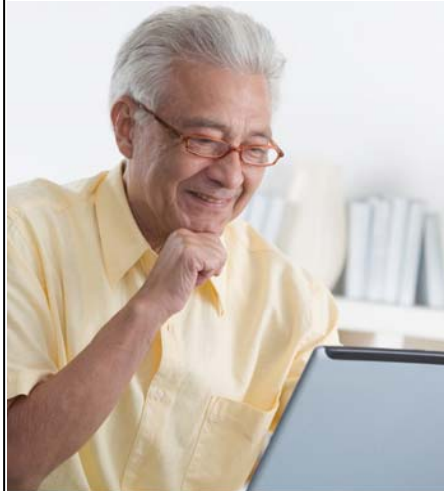
- 
- Your Challenges
  - What is Blended e-Learning
  - Advantages

# Challenges:

1. Budgets for learning are tighter!



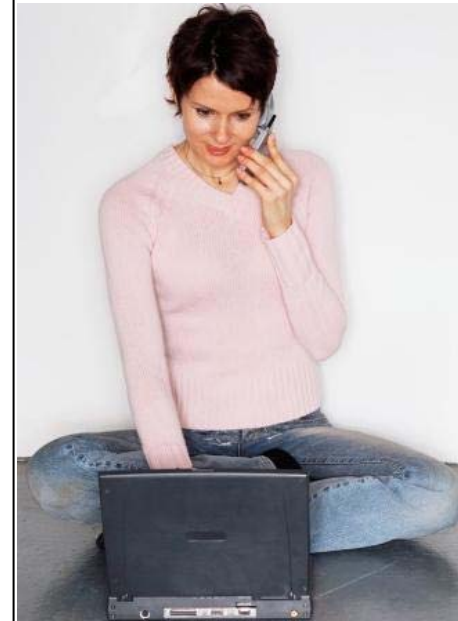
2. Capturing knowledge & experience of retiring people



3. Content is changing and growing rapidly



4. Learners are evolving dramatically



# Blended e-Learning Defined

*“The combination of different training media (technologies, activities, and types of events) to create an optimum training program for a specific audience.”*

*The Blended Learning Book*  
by Josh Bersin,  
published by John Wiley & Sons



# Blended e-Learning Key Advantages

## 1. Pre-class learning



## 2. Classroom learning



## 3. On-the-job support



## 4. Organization wide results



# Blended e-Learning Key Advantages



- Offers flexibility: learn anywhere, 24/7
- Accommodates different learning styles
- Learn at their own pace; go back and review
- Students come to class on the same learning level



- Hands-on, active learning
- Interface with a subject matter expert (SME)
- Reduced classroom training time



- Access to online learning, reference materials, & job aids
- Increased retention with better knowledge transfer to the workplace
- Mentoring & coaching from the SME



- Reduced costs
- Better control and consistency in delivery
- Better utilization of resources
- Alignment with business objectives

# Ex: Blended e-Learning in the U.S. Navy

**1-Class**



**2-Online**



**3-Study**



**4-Chair Fly**



**5-Simulator**



**6-Briefing**



**7-Flying**



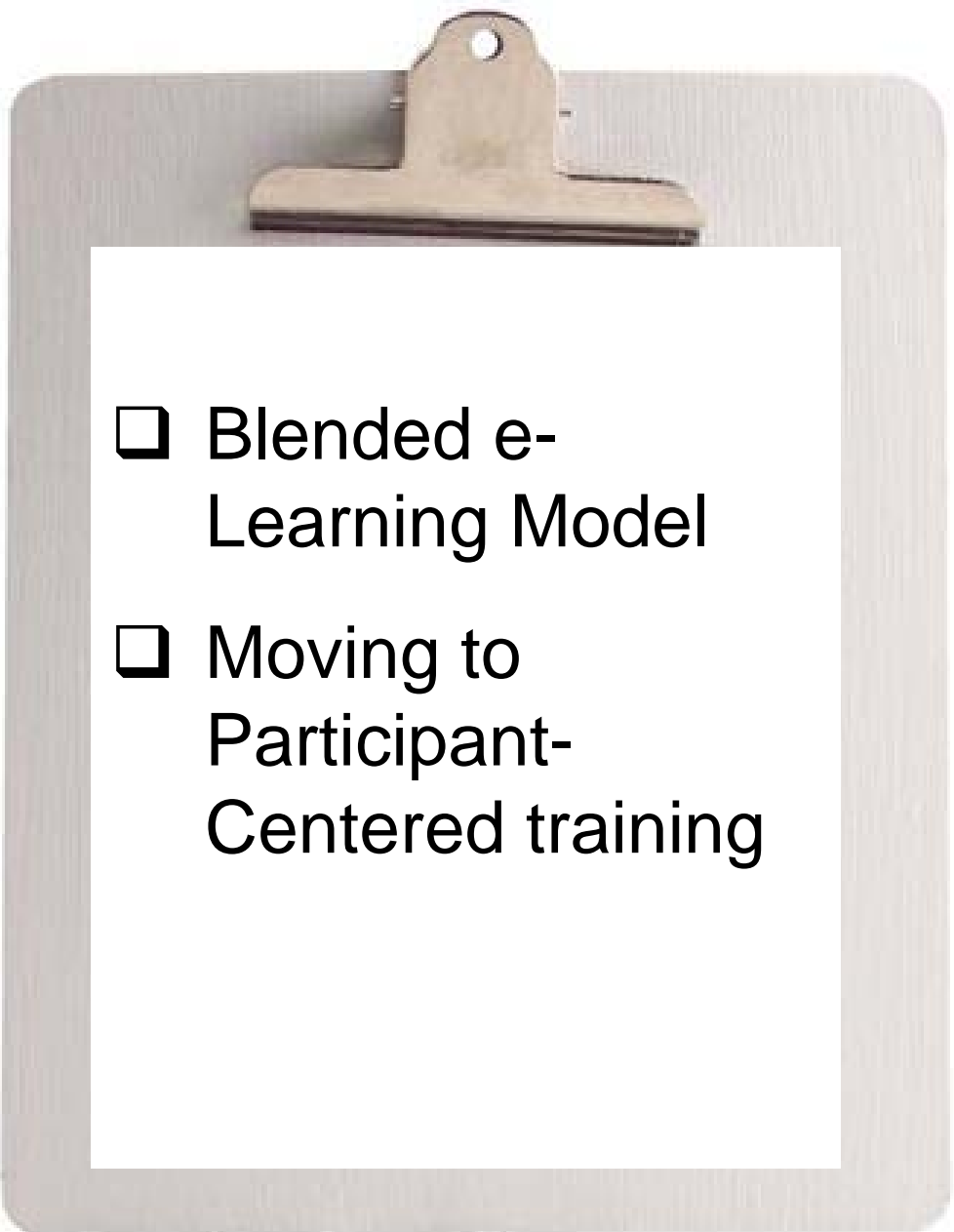
**8-Debrief**



**+ Social Network Learning**

# 2

## Transitioning Blended e-Learning

- 
- Blended e-Learning Model
  - Moving to Participant-Centered training

# What Might Go Into A Blend?

## Live Face-to-Face (formal)

- Instructor-led classroom
- Workshops
- Coaching, mentoring
- On-the-job



## Live Face-to-Face (informal)

- Collegial relationship
- Work teams
- Apprenticeships



## Virtual Collaboration/Synchronous

- Live e-learning classes
- E-coaching, e-mentoring
- Instant messaging, SMS



## Virtual Collaboration/Asynchronous

- Email
- Online communities & discussion boards
- Listservs
- Blogs, wikis, podcasts



## Self-paced learning (electronic, DC/DVD, print)

- Online modules
- Online resource links
- Simulations and games
- Assessments and self-assessments
- Workbooks, readings



## Performance Support

- Online help systems
- Print job aids
- Online knowledge databases
- Performance support tools



List from Rossett, Douglass, & Franee, 2003 July, AMA Special Report, [www.amanet.org](http://www.amanet.org)

# Transitioning to Blended e-Learning

- 1. Buy or Build** your basic content modules for online.
  - Purchase or develop complimentary student materials: workbook, online guides, learning aids, etc.
- 2. Publish the modules** for access by the students.
- 3. Develop classroom learning activities.**
  - The basics are taught on line. Don't re-teach it, but plan to "extract and enhance" that learning through questioning, group discussions and quizzes.
  - Provide practice exercises.
  - Where possible apply the learning to a real situation.
  - Plan activities that recall information already learned.
- 4. Prepare instructors** for the "new" instructional approach
  - Go from "push" to "pull" teaching
- 5. Conduct training.**
- 6. Mentor** between sessions.
- 7. Celebrate** conclusion of training.

# Learning through Technology

Create your own e-Learning modules with <Composer>

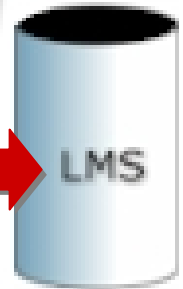
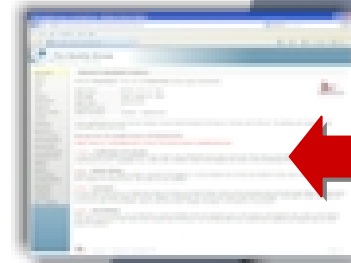
Purchase e-Learning modules library

Customize e-Learning modules

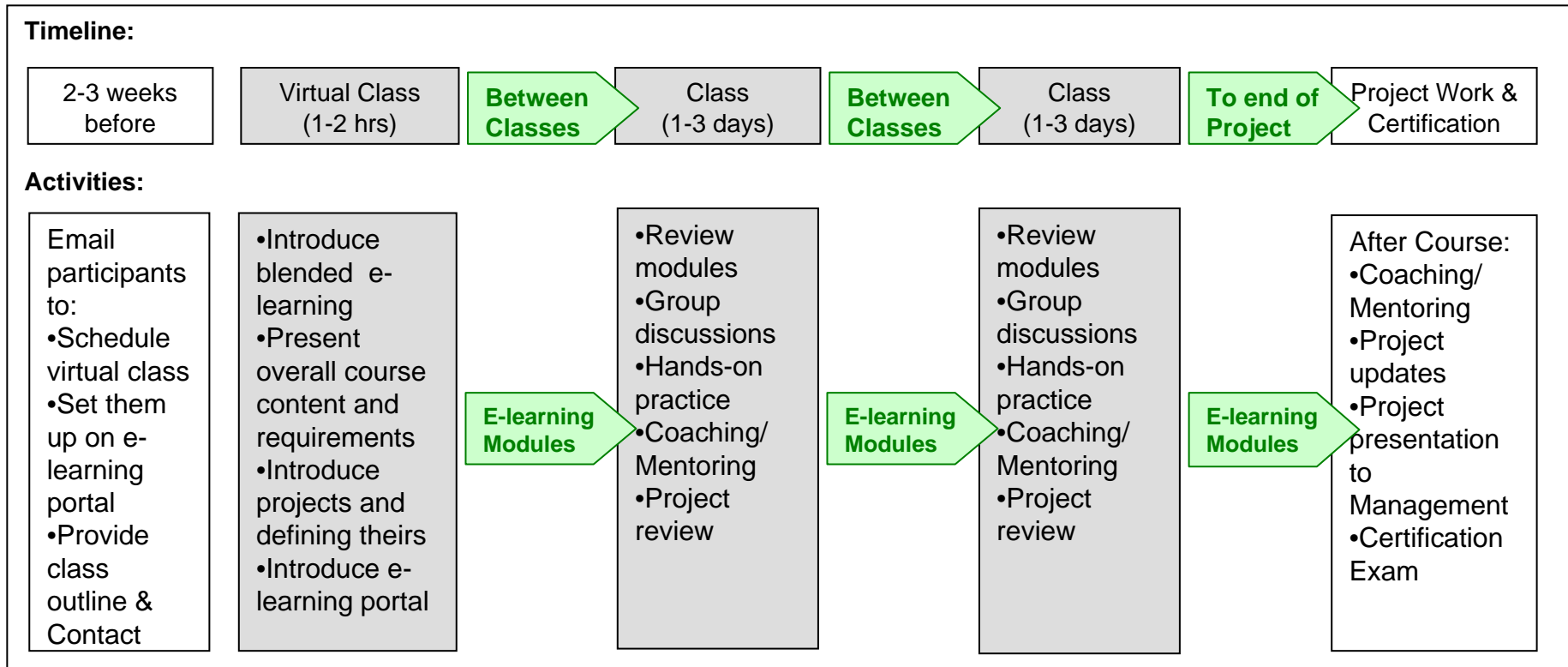
Portal Access & Online Learning. Deliver to students worldwide while easily managing student records and activity



Portal Admin <Conductor>



# Blended e-Learning Model




Supported with:

- Online student guides
- Instructor slides and instructor notes
- Practice and real applications of learning
- Fun activities to recall learning

# Challenge 4:

## Learners are evolving dramatically

Generation	Ages	Learning Styles
Boomers (Pre-Baby, Late)	62-77 52-61 43-51	<ul style="list-style-type: none"><li>• Like linear courses</li><li>• Struggle with simulations</li><li>• Accept objects</li></ul>
Gen X	31-42	<ul style="list-style-type: none"><li>• Appreciate technology</li><li>• Expect interactivity</li><li>• Prefer linear content, but want to be able to “test out”</li><li>• Want choices</li><li>• Don’t want training till they need it</li></ul>
Gen Y	18-30	<ul style="list-style-type: none"><li>• Love technology</li><li>• Love games and simulations</li><li>• Like to freeform it</li></ul>



# Instructor-Led vs. Participant Centered



- + Storytelling
- + Knowledgeable
- Fall asleep, boring
- Rigid
- Brain dump
- By the book
- Static
- Dry
- One-way
- Linear thinking

- + More flexible
- + Experiential
- + Engaging
- + More energetic
- + More creative
- + Fun
- + Collaborative
- + Knowledge thirsty
- + Facilitator
- + Open
- + Mobile
- + Good listener
- + Interested in others' learning

# Instructor-Led vs. Participant Centered



	Lecture-Centered Instruction	Participant-Centered Instruction
Exposure	Delivered 1 time only	Delivered up to 6 times
Retention	< 10%	> 90%

“Active learning is more effective than passive learning. But activity, in and of itself, doesn’t result in higher learning. Active learning occurs when students invest physical and mental energies in activities that help them make what they are learning meaningful.”

*Angelo, 1993, p.5*

# What are the advantages of student participation to YOU, the instructor?

- It's more interesting
- Less work for the trainer
- More effective learning
- More professional training
- More satisfying to the trainer
- Time flies by
- Easier to measure learning/training of students



# Then why do some instructors not get participation from their students or don't even try?

- It's easier to lecture
- It's the way we learned to train, or were taught
- They don't know how
- They fear loss of control
- It's "harder" to train this way
- There are lots of techniques to learn-we don't have time.

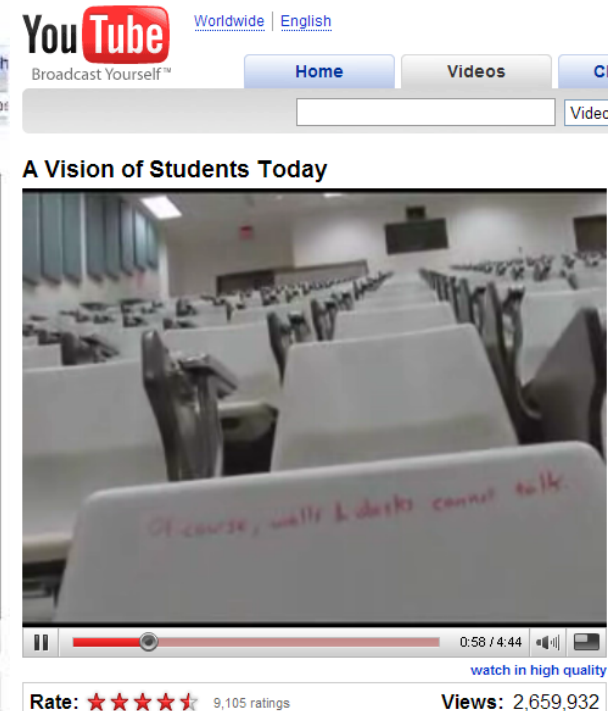


# Learning today should include...

- Google
- YouTube
- Wikis
- Blogs
- MySpace
- FaceBook
- Social Networks  
(LearningTown!  
LinkedIn)



[http://www.youtube.com/watch?v=Fnh9q\\_cQcUE](http://www.youtube.com/watch?v=Fnh9q_cQcUE)



<http://www.youtube.com/watch?v=dGCJ46vyR9o&feature=related>

# Leverage drill-down analytics: by course, class, test question, student

**e-Learning Portal**

<b>LIST CLASSES</b>	<b>NEW CLASS</b>	<b>INSTRUCTORS</b>	<b>UPDATE</b>	<b>COURSES</b>	<b>ATTACH STUDENTS</b>	<b>ATTACH KEYS</b>
<b>STUDENT LIST</b>	<b>IMPACT</b>	<b>SNAPSHOT</b>				

**Class Impact**

Click any course to view the students detail.

Course Title	Regist'd	Started	Complete	Percent Complete	Average Time	Average Pre Test	Average Post Test
<a href="#">Six Sigma Introduction</a>	19	18	18	100%	1h 51m	82%	91%
<a href="#">Pareto Analysis</a>	19	18	17	94%	37m	72%	94%
<a href="#">Introduction to Process Mapping</a>	19	18	18	100%	26m	73%	96%
<a href="#">Calculating Process Based Costs</a>	19	18	18	100%	31m	68%	92%
<a href="#">Validating the Measurement System</a>	19	18	18	100%	42m	81%	94%
<a href="#">Cause and Effect Diagrams</a>	19	18	18	100%	23m	73%	96%
<a href="#">Failure Mode and Effects Analysis</a>	19	19	19	100%	32m	78%	94%
<a href="#">Introduction to Process Capability</a>	19	18	18	100%	36m	91%	95%
<a href="#">Process Capability Assessments</a>	19	18	18	100%	1h 20m	62%	88%
<a href="#">Scatter Diagrams</a>	19	18	18	100%	25m	77%	93%
<a href="#">Maximizing ROI</a>	19	18	18	100%	1h 18m	81%	96%
<a href="#">Sustaining ROI</a>	19	18	18	100%	1h 00m	69%	92%
<a href="#">Types of Control Charts</a>	19	18	18	100%	1h 07m	58%	95%
<a href="#">Extending ROI</a>	19	18	18	100%	20m	82%	97%
<a href="#">What is Statistics?</a>	19	18	18	100%	29m	72%	93%
<a href="#">Organization of Data</a>	19	18	18	100%	55m	53%	93%
<a href="#">Measures of Central Tendency</a>	19	18	18	100%	49m	55%	90%
<a href="#">Measures of Dispersion</a>	19	18	18	100%	1h 13m	0%	90%
<a href="#">Descriptive Statistics: Self Assessment</a>	19	18	18	100%	12m	0%	88%
<a href="#">Introduction to Lean Principles</a>	19	18	18	100%	2h 04m	67%	89%
<a href="#">Lean Tools I</a>	19	18	18	100%	1h 37m	56%	86%
<a href="#">Lean Tools II</a>	19	18	18	100%	1h 16m	58%	90%
<a href="#">Lean Tools III</a>	19	18	18	100%	32m	53%	90%

<b>HOME PAGE</b>
<b>AGENTS</b>
<b>MENUS</b>
<b>KEYS</b>
<b>MODULES</b>
<b>CURRICULUM</b>
<b>STUDENTS</b>
<b>STUDENT MENUS</b>
<b>CLASSES</b>
<b>MATERIALS</b>
<b>QUESTIONS</b>
<b>CERTIFICATION</b>
<b>BATCH REGISTER</b>
<b>URL REGISTER</b>
<b>LIMIT PURCHASES</b>
<b>REQUIRED DATA</b>
<b>SURVEYS</b>
<b>REPORTS</b>
<b>DOWNLOADS</b>
<b>ANNOUNCEMENTS</b>
<b>FUNCTIONS</b>
<b>COMPOSER</b>
<b>EXIT / LOGOUT</b>

# Leverage drill-down analytics: by course, class, test question, student

e-Learning Portal																				
<a href="#">HOME PAGE</a> <a href="#">AGENTS</a> <a href="#">MENUS</a> <a href="#">KEYS</a> <a href="#">MODULES</a> <a href="#">CURRICULUM</a> <a href="#">STUDENTS</a> <a href="#">STUDENT MENUS</a> <b><a href="#">CLASSES</a></b> <a href="#">MATERIALS</a> <a href="#">QUESTIONS</a> <a href="#">CERTIFICATION</a> <a href="#">BATCH REGISTER</a> <a href="#">URL REGISTER</a> <a href="#">LIMIT PURCHASES</a> <a href="#">REQUIRED DATA</a> <a href="#">SURVEYS</a> <a href="#">REPORTS</a> <a href="#">DOWNLOADS</a> <a href="#">ANNOUNCEMENTS</a> <a href="#">FUNCTIONS</a> <a href="#">COMPOSER</a> <a href="#">EXIT / LOGOUT</a>	LIST CLASSES	NEW CLASS	INSTRUCTORS		UPDATE	COURSES	ATTACH STUDENTS	ATTACH KEYS												
	STUDENT LIST	IMPACT	SNAPSHOT																	
<b>Class Snapshot</b>																				
	<div style="border: 1px solid black; padding: 2px;">           PreTest Scores  <b>PreTest Scores</b>            Last PostTest Scores            Highest PostTest Scores            Started            Completed            Time Spent         </div>	Diane Ritter	Thomas Kay	Julie Dunnweber	Constance Jones	John Mazza	Steve Norman	Mauro Raucci	Cesar Esquide	Robert Thomas	John Knight	Patricia Weithofer	Michael Lambert	Lisa Hurst-Woodbury	AGNES ARKONCEL	Spiro Deligiannis	david jackson	Thomas Pecharich	Robin Sprague	Carrie Hegenderfer
Six Sigma Introduction			80	100				90	60					80	90	90	70			80
Pareto Analysis			90	100	30			70	40					40	100	80	100	80		70
Introduction to Process Mapping			80	80				100	20					10	100	80		100		90
Calculating Process Based Costs			90	90				90	30					0	90	70	80	80		60
Validating the Measurement System				100	100			100	30					60	90	100		70		80
Cause and Effect Diagrams		90	90	80	40	70	100	70	10	70	50	100	60	100	60	80	80	80	90	80
Failure Mode and Effects Analysis				100				70	30						90	90		80		90
Introduction to Process Capability				100					100	70					90	100		90		90
Process Capability Assessments				100					100	60					80	80	20	20		40
Scatter Diagrams				100					100	50					100	90		30		70
Maximizing ROI		80	70	90	60	90	90	90	60	60	70	100	100	90	80	60	80	80	90	100
Sustaining ROI		40	70	70	60	50	80	70	50	80	80	80	80	60	90	70	100	70		50
Types of Control Charts		50	40	100	40	80	40	40	40	60	40	100	60	60	50	60	70	60		60
Extending ROI		70	100	90	80	90	70	100	40	90	80	100	90	90	80	60	100	80		70
What is Statistics?				100	80	100	80		80	0				60	60	80		60		100
Organization of Data				40	40			40	40	40	0				100	100				80
Measures of Central Tendency		40	20	60	40	60	20	40		80	60	80	80	40	60	20	60	80		100
Measures of Dispersion																				
Descriptive Statistics: Self Assessment																				

# Results from Blended e-Learning

- Increased student satisfaction using a mix of medias; students have more control over their learning.
  - Happier when they have choices
  - Persevere longer
- Increased student retention with better knowledge transfer to the workplace.
  - Multiple ways of learning content enhances retention
  - Repetition up to six times
  - Practice, practice, practice

## 2007 Brandon Hall Research Study:


- 70%+ reported better outcomes than face-to-face training alone.
- 90% reported better outcomes than e-learning alone.
- Preferred by learners and instructors when compared to face-to-face instruction or e-learning alone.

## Repetition Works!

- Exposed to one time lecture delivery, less than 10% is retained after one month.
- Exposed up to six times delivery, more than 90% is retained after one month.

# 3

## Results With Blended e-Learning

- 
- Business Drivers
  - United Airline
  - Benefits

# Business Drivers for Blended e-Learning

- Very competitive business environment.
- Market shifting to fixed costs systems that deliver greater reach. (Bersin & Associates)
- Learning system for better leverage, consistency and control for a “global” reach.
- Better leverage of internal resources.
- Looking to reduce costs and streamline training; improve training ROI.
- Classroom learning getting more expensive; disruptive to daily work.

# An Airline Carrier

## *An Airline...*

- 50,000+ employees nation-wide
- 5 major hubs in the U. S.
- 119 destinations in 26 countries

## *Wanted to train their workforce...*

- In improvement methodologies
- Wanted standardization...every one learning the same thing and speaking the same language

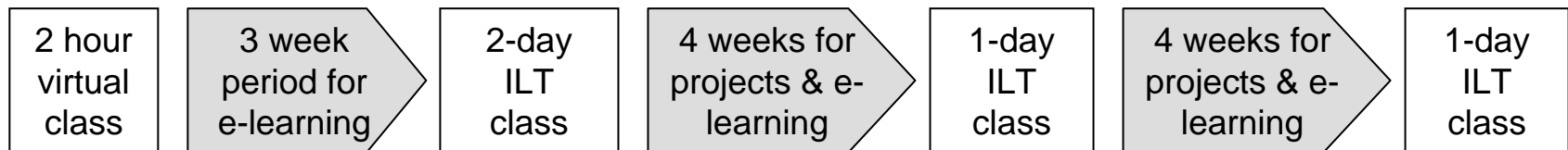
## *In order to...*

- Revitalize the workforce
- Optimize revenue and successfully control costs



# Our Solution

- Tap into our Academic Partner Network for training locations to match their needed locations
- Provided a comprehensive online Lean Six Sigma training curriculum
- Used a blended learning model for delivery:



- Set an ROI for each project at \$25,000
- Piloted a class for 18 students, encompassing 10 projects.

# Their Results



Project	Improvement	Savings
Onboard Crew Operations Call Handling	Reduced abandoned calls	\$183,600
Travel Reimbursements	Standardized and streamlined reimbursement system	60,000
Flight Attendant Operations Manual Distrib. Process	Decreased overage quantity	\$17,300
In-flight Food Sales	Increased paperwork completion	\$117,799
New Hire Orientation	Reduced unsatisfied employees	\$0.00
Professional & Technical Candidate Hiring	Reduced interview lead time	\$270,960
Family & Medical Leave Act Lead Time	Reduced request for time off	\$373,383
Flight Attendant Visa Requirements	Streamlined and reduced needed visas	\$71,000
Improving Budgeting Reporting & Analysis	Decreased manual entries	\$32,401
Internal HR Candidate Verification	Reduced volume, process & lead time	\$27,404

**\$1,153,847**

# *Benefits:*

- ◆ **Reduced training costs** – fewer individual classroom sessions
- ◆ **Reduced time in classroom** – utilizing E-Learning
- ◆ **More effective learning / improved knowledge retention** – more classroom time devoted to exercises and problem-solving
- ◆ **More consistent learning** – common modules, instructor guides
- ◆ **Flexible delivery / distance delivery** – Web-Ex or CD-based courses can be included
- ◆ **Recognition of prior learning** – courses build on each other

It's hard to find the right model to  
deliver the right training for  
everyone...



Tap into blended e-learning and envision a more engaging future with successful training outcomes!



*Thank you!*

*Earn Your Lean Six Sigma White  
Belt Certification and Learn  
about Blended e-Learning*

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