Intrusive Coaching

Increasing Your Belts'
Capability, Confidence, and Control

ISSSP Focused Session
December 3, 2009

MoreSteam.com Background

- Founded 2001

- Over 175,000 Six Sigma professionals trained

- Over 1,200 corporate customers (including 20% of the Fortune 500)

- First firm to offer the complete Black Belt curriculum online

- Courses reviewed and approved by ASQ

- First firm to offer integrated 3G blended learning solutions

Selected Customers:

Quest Diagnostics

IBM

Honeywell

Fidelity INVESTMENTS

ROLLS ROYCE

CardinalHealth

TEXTRON

XEROX

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2

Intrusive Coaching

Providing personal support to increase capability, confidence, and control to new students

- Proactive
- Individualized
- Timely, consistent
- On-going monitoring
- Active trouble-shooting
- Accountable

Intrusive Coaching is Critical to LSS Deployments

Blended Learning places an emphasis on Coaching
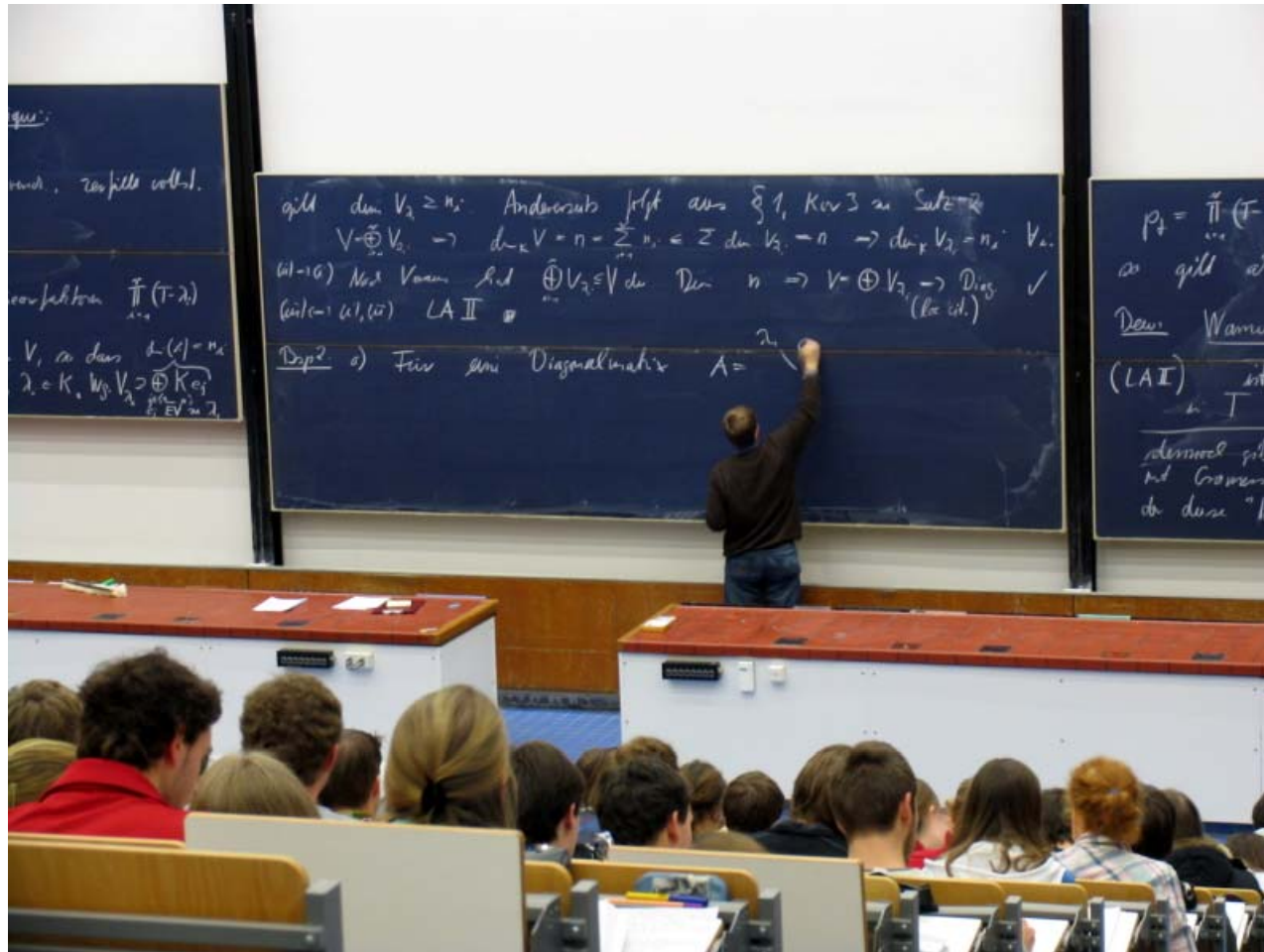
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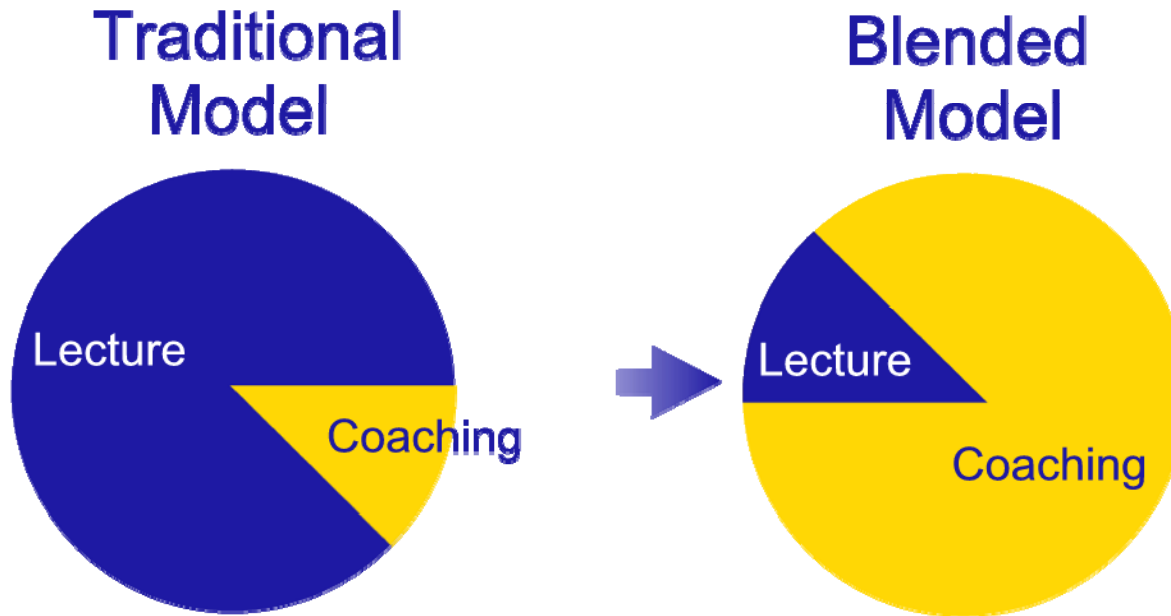
University of Wisconsin at Milwaukee

- Large, public research university
- Approx. 30,000 students
- Many are first generation college students & most work
- More students requiring remediation than any other UW institution
- Urban campus
- Two of every three Wisconsin jobs are located in the metro Milwaukee area

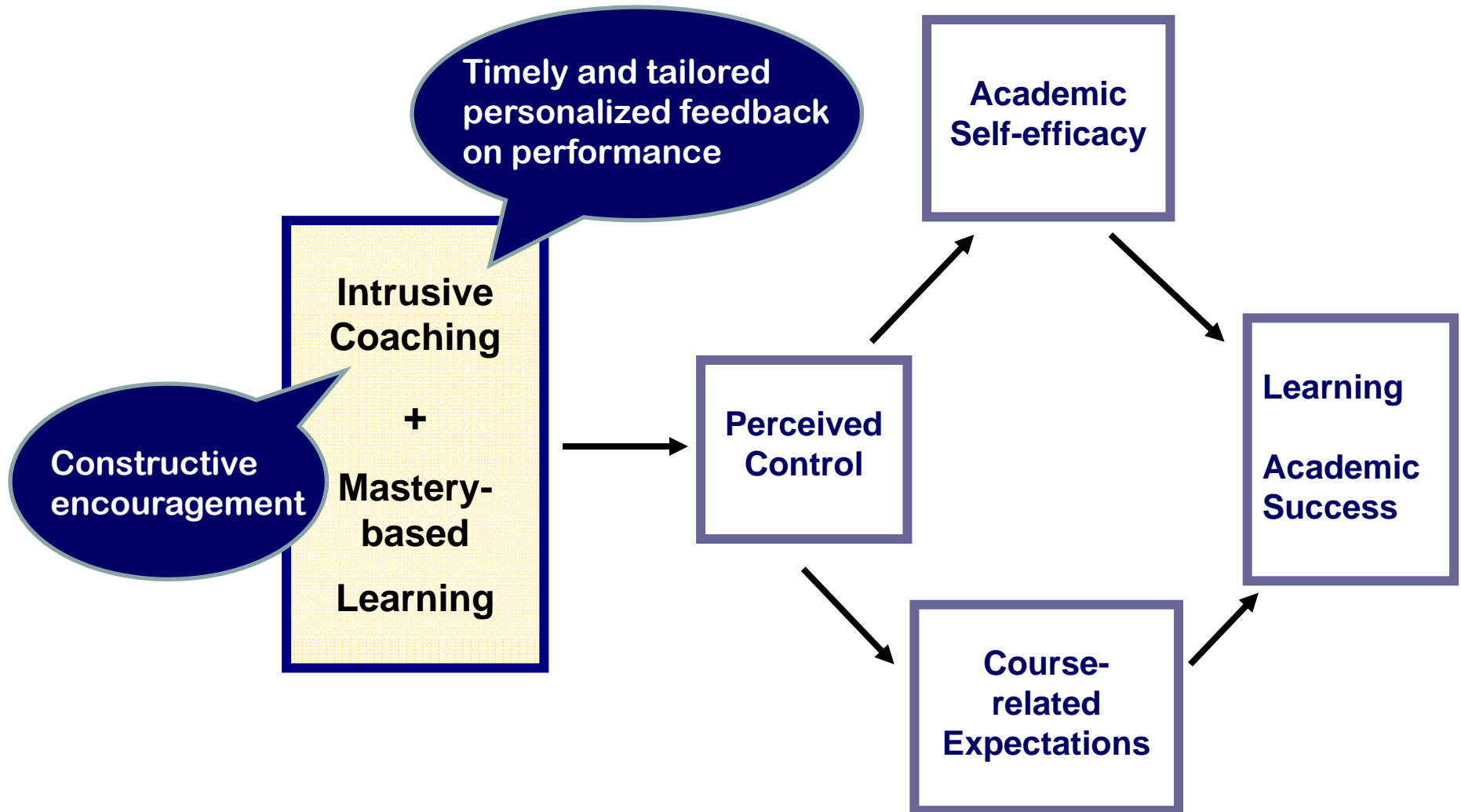# *The Traditional Instructional Model*
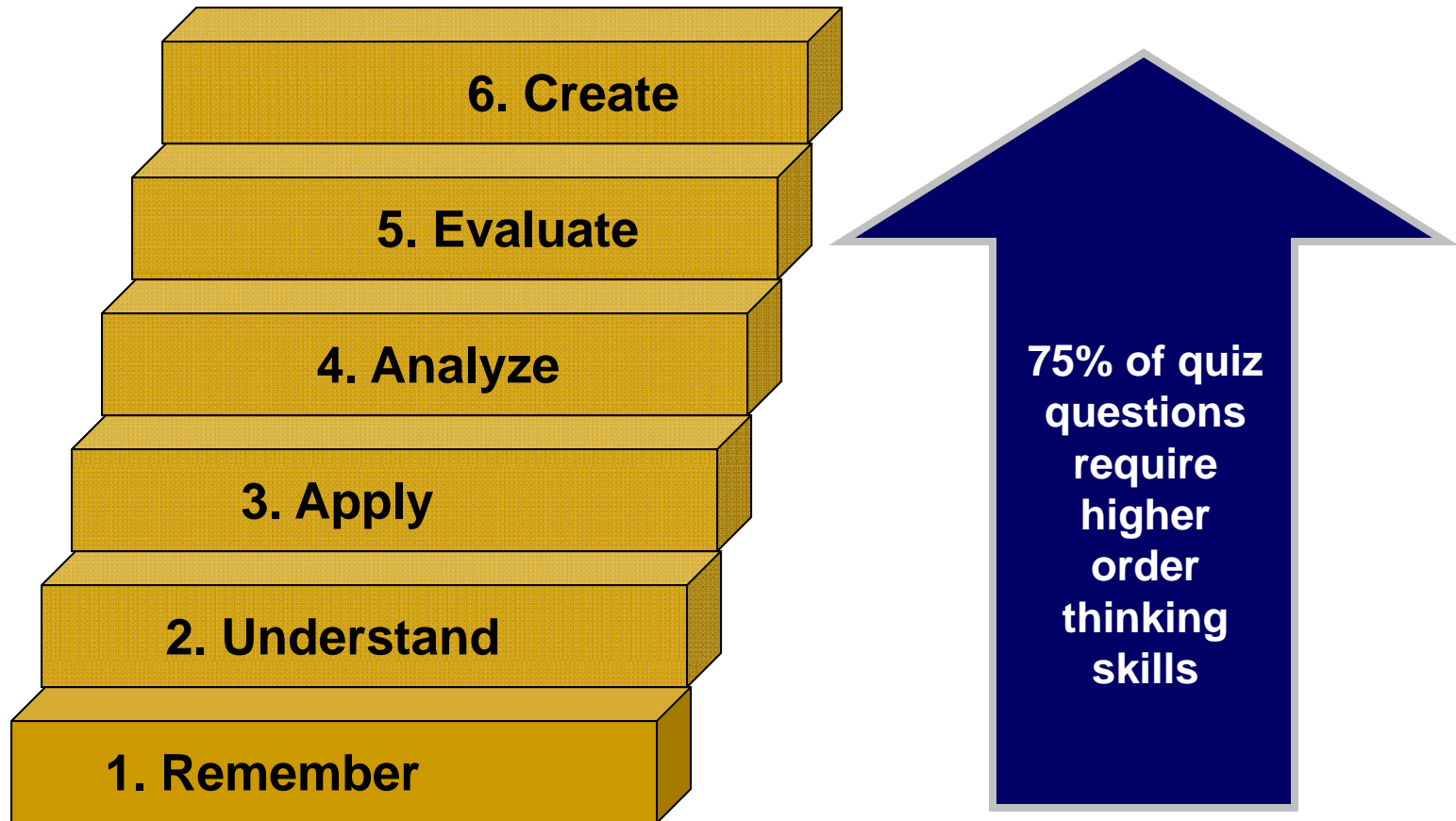
A New Instructional Model: U-Pace

Instructor (n=1)

↓

Teaching Assistants (n=6)

↓

Students (n>400)

Ratio (1:70+)

U-Pace:

- Self-paced, mastery-based learning with intrusive coaching

- Web-based with a multi-media format

Conceptual Model of U-Pace

Bloom's Revised Taxonomy

6. Create

5. Evaluate

4. Analyze

3. Apply

2. Understand

1. Remember

75% of quiz questions require higher order thinking skills

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E-Learning = Increased Instructor Flexibility

Time is freed up with e-Learning to provide intrusive coaching.

> • Intrusive coaches use phone calls and frequent, individualized email messages tailored from examples in the instructor's manual.

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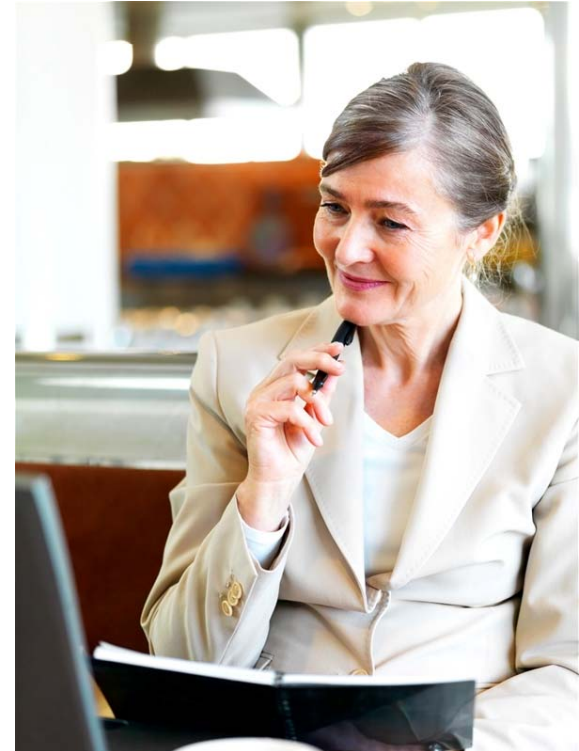
E-Learning = Increased Instructor Flexibility

The instructor can devote more time to struggling students
<u>without adversely affecting the best students</u>.

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Skills and Focus Shift in New Instructional Model

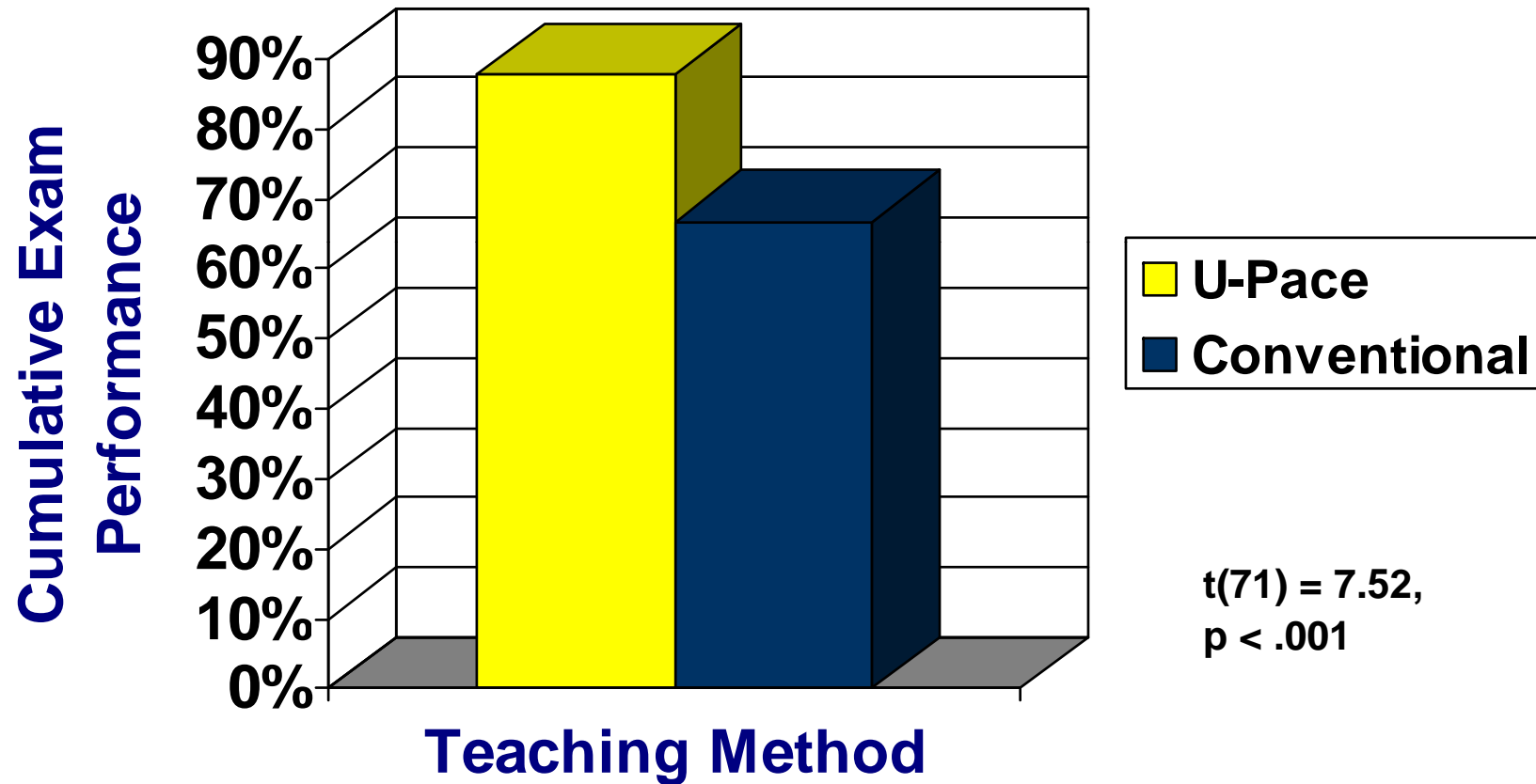| Classroom Instructor/TA	U-Pace Instructor/TA
• Instructor Centered	• Student Centered
• Focus: Getting through the material	• Focus: Facilitating mastery
• Group presentation skills	• Individual coaching skills
• Highly scripted content delivery	• Adaptive problem solving

e-Learning = Increased Student Flexibility

Most Classes Scheduled During These Times
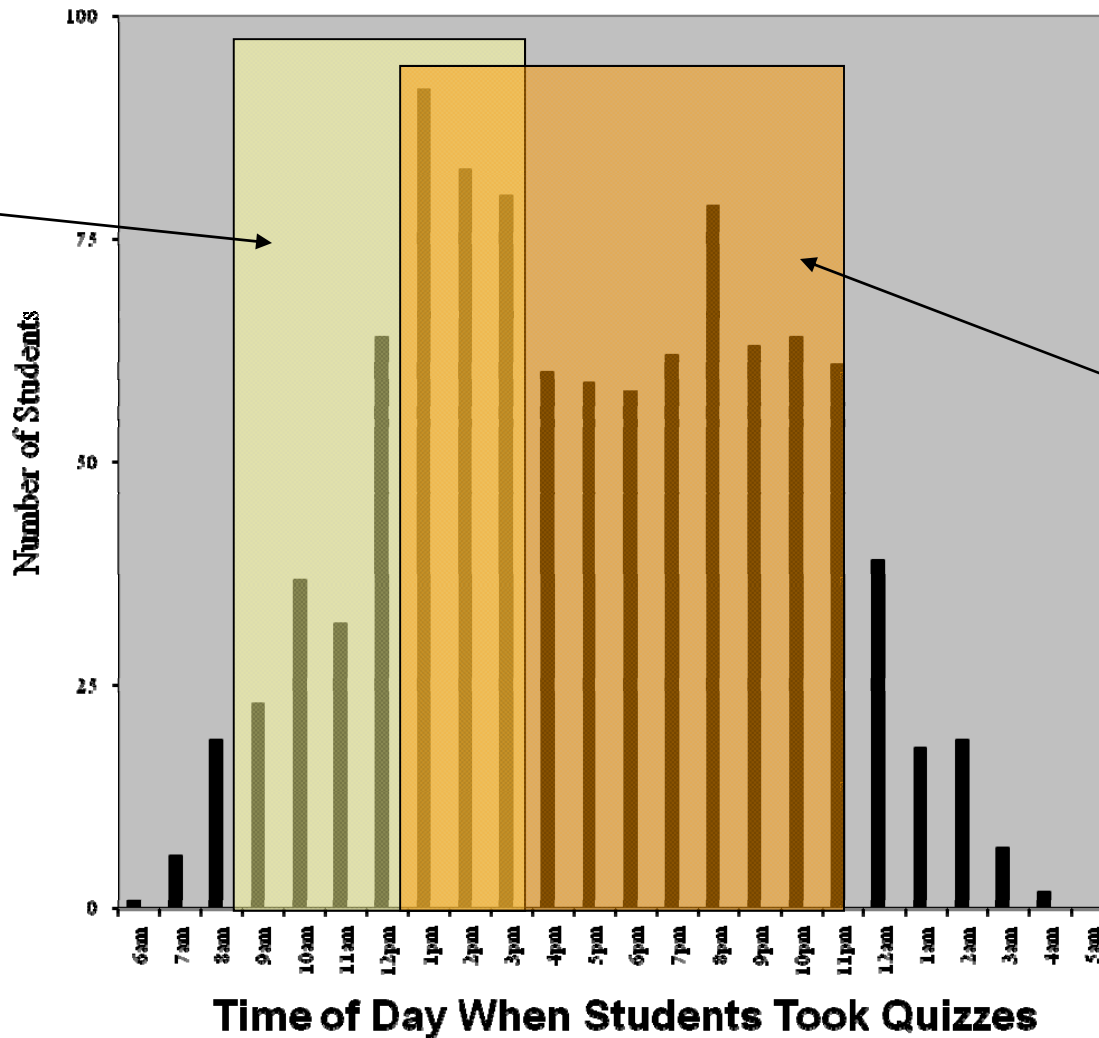
Most U-Pace Students Took Their Quizzes During These Times

Number of Students

Time of Day When Students Took Quizzes

Impact of U-Pace on Student Learning

Cumulative Exam Performance vs. Teaching Method

Legend:
- U-Pace
- Conventional

t(71) = 7.52, p < .001

Comparative Characteristics of Student Groups

Sample Characteristics
(cumulative exam-takers)

	U-Pace	Conventional	
Mean ACT	21.32	22.83	p=.09
Mean Cumulative GPA	2.83	3.06	p=.13

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Impact of U-Pace on Student Academic Success

U-Pace Instruction vs. Conventional Instruction
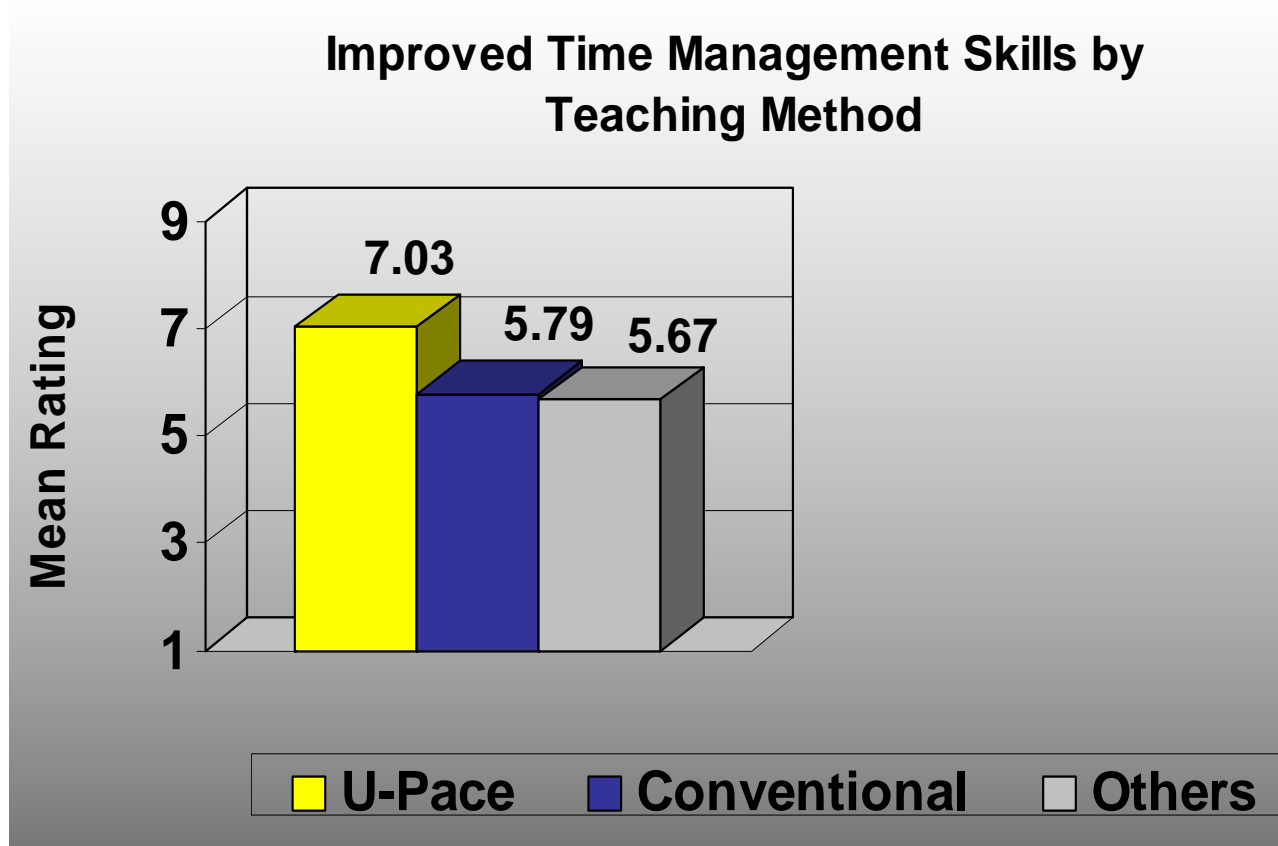
Compared final course grades for more than 5,000 students
- Same course content
- Same assessment questions
- Grading was completely objective

Percent of *U-Pace* and Conventionally Taught Psych 101 Students Earning As and Bs by Disadvantaged Status
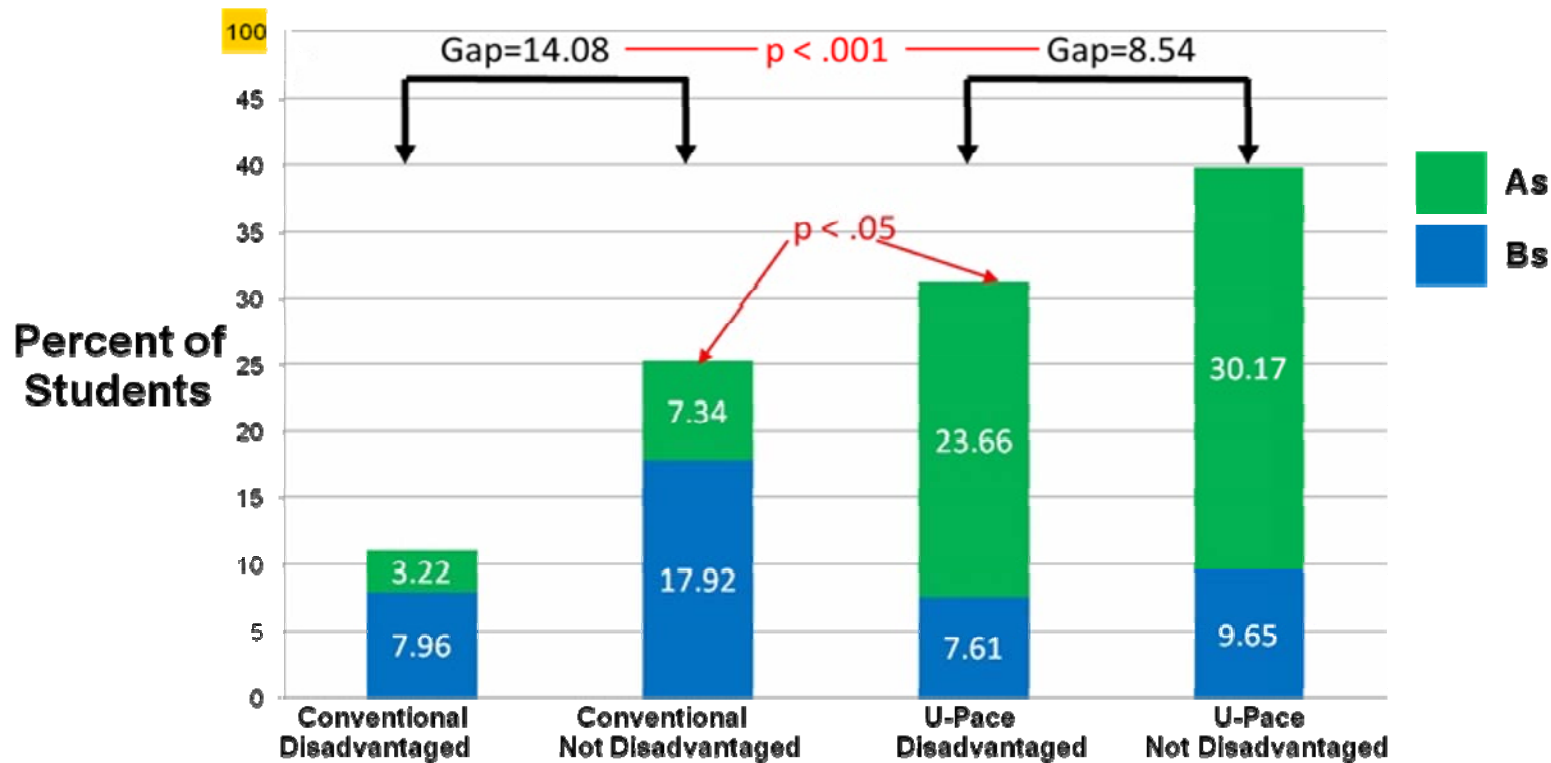
Improved Student Time Management Skills

Improved Time Management Skills by Teaching Method

F(2,163) = 7.24, p=.001;

U-Pace > Conventional = Others

Improved Student Test-taking Skills

Improved Test-taking Skills by Teaching Method
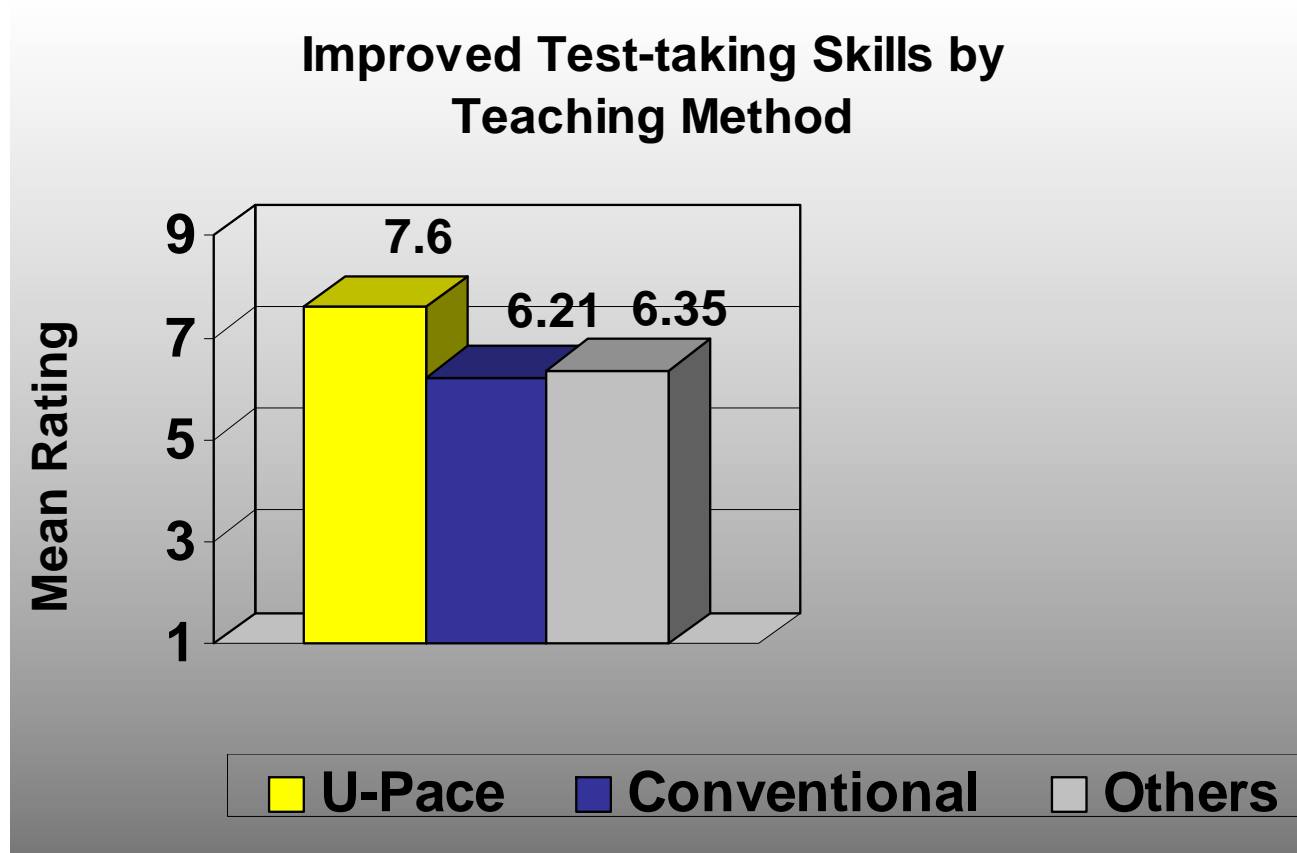
$F_{(2,163)} = 5.60$, $\underline{p}=.004$;

U-Pace > Conventional = Others

Enhanced Sense of Student Control

Enhanced Sense of Control by Teaching Method
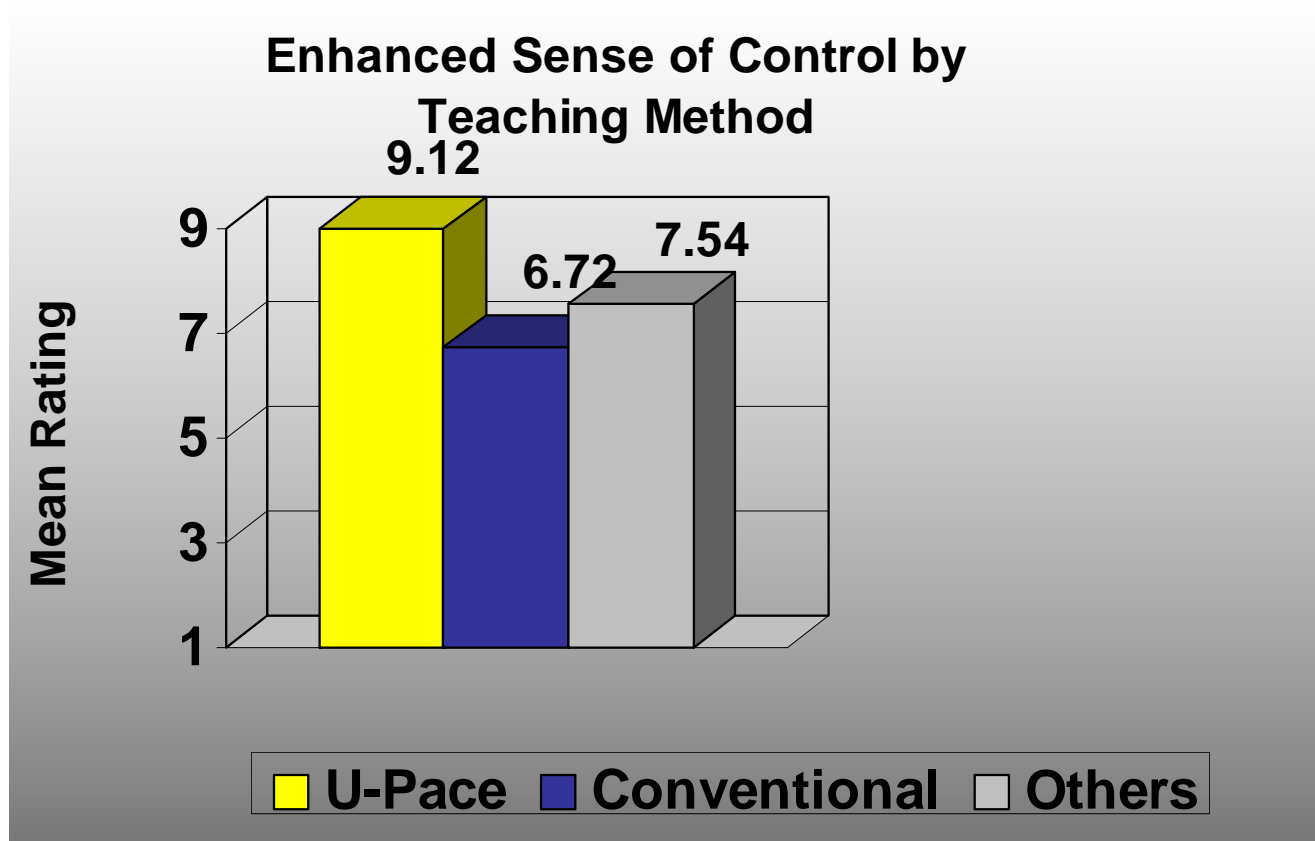
F(2,163) = 14.52, p<.001;

U-Pace > Conventional = Others

Enhanced Sense of Student Achievement

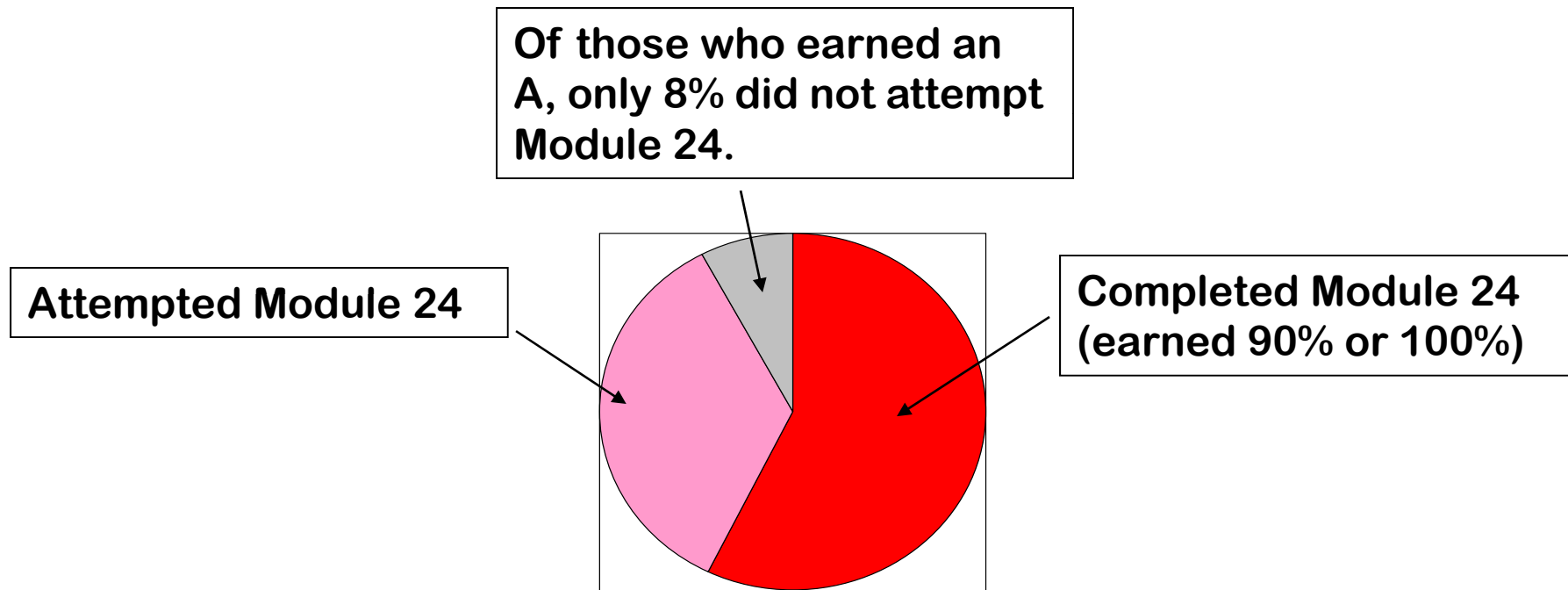**Enhanced Sense of Achievement by Teaching Method**
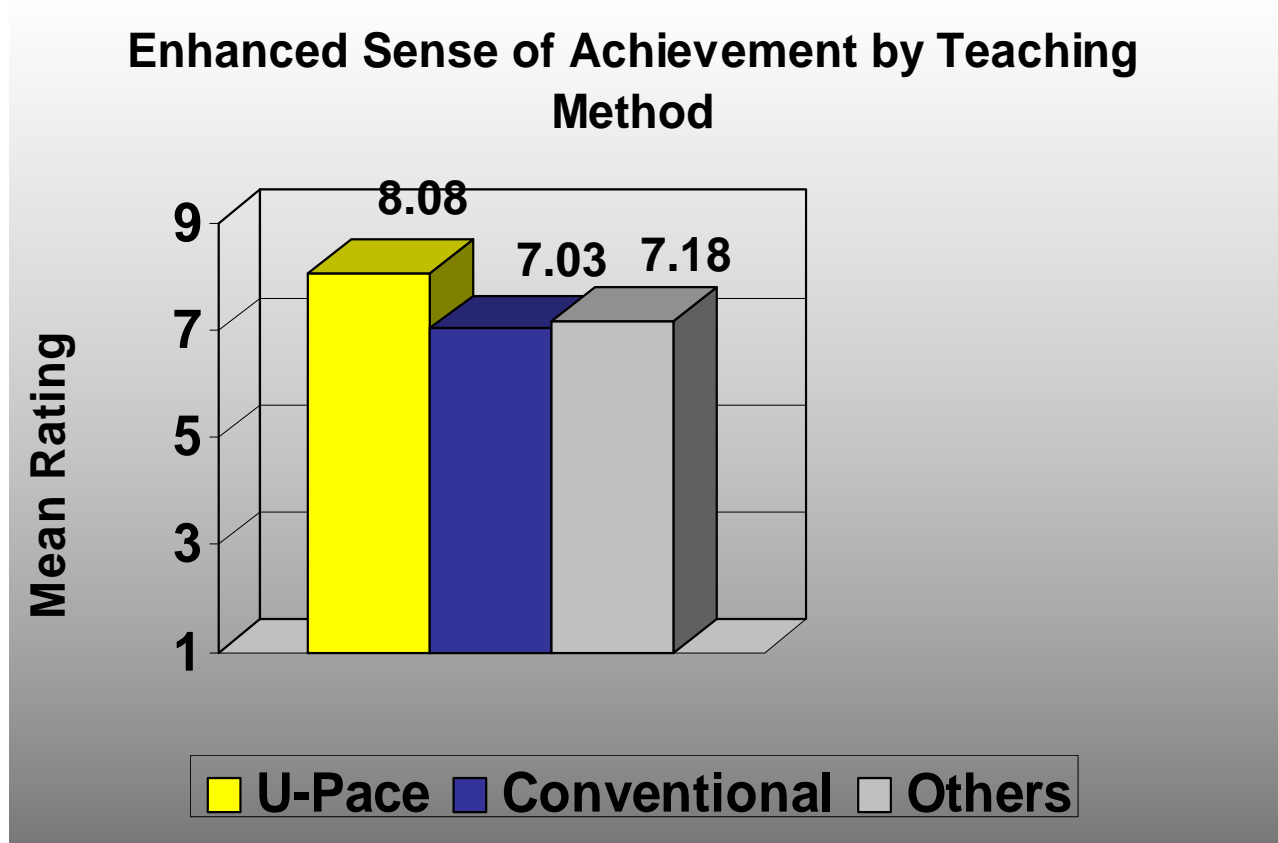
F(2,163) = 3.56, p=.031;

U-Pace > Conventional = Others

Students Stretch Their Learning with U-Pace

The U-Pace Instructional Model Engenders Intrinsic Motivation

Of those who earned an A, only 8% did not attempt Module 24.

Attempted Module 24

Completed Module 24 (earned 90% or 100%)

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Student Perceptions of U-Pace

Great feeling of accomplishment

At first I was skeptical …very much surprised about the amount of material that I can recall and actually integrate into my everyday life

Allowed me to take the free time that I do have and put it to good use

TA's were absolutely awesome in providing help and encouragement

The one hour wait between quiz retakes was very frustrating

Very self-fulfilling

Lesson Learned at UW-M

Technology *can't replace* the power of a coach,

but it *can help* coach.

Applying Lessons Learned Outside of UW-M

The U-Pace Instructional Model can be applied to corporate training environments to achieve:

- ☒ Greater student learning

- ☒ Important psychological outcomes

- ☒ Greater student-instructor interaction

- ☒ More personalized learning

- ☒ Increased student motivation

Successful coaching is not a passive exercise!

Adding a structure with active coaching improves performance.

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Lenovo Company Background

- In 2005, Lenovo bought and merged with IBM Personal Computing.

- The global challenge
  - 24,000 Employees
  - Business evenly distributed throughout the world:
    - ~ 50% of sales in China & Asia
    - America and Europe each have ~ 25% of sales

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Lenovo Lean Six Sigma Background

- **2006:** Partnered with traditional classroom training firms

- **Current:** Variety of approaches taken

	Classroom	e-Learning	Intrusive Mentoring
Black Belt	Blended		✓
Green Belt	Blended		✓
		✓	✓
	✓		✓
Yellow Belt	✓		Very limited coaching

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Significant Results Achieved

Blended Learning + Intrusive Mentoring = Strong Lean Six Sigma culture

- Trained candidates that got **certified** improved from **15%** to **92%.**

  - 100% for the subset that used Blended Learning with Intrusive Mentoring

- Certified belts identifying and working projects independently went from very few to almost all.

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Comparison of Instructional Methods

BEFORE Classroom only	AFTER Blended Learning + Intrusive Mentoring
• Project required prior to training	• Project required prior to training
• All training done via traditional instructor lead training	• BB and GB materials on-line
• No contact with instructor after training	• Mentor works with belt candidate weekly on project and training
• 15% certification rate	• 92% certification rate
• Certified belts rarely found follow-on projects	• Certified belts often finding follow-on projects
	• LSS culture improving

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The Current Model

GB/BB candidates register with project	Mentor is assigned	Orientation for Blended Learning Students	Candidates supported thru course & project completion

Orientation for Blended Learning Students:
- Welcome Letter
- Course Layout
- 1-on-1 Call Schedule
- Project Template
- Cheat Sheets

Candidates supported thru course & project completion:
- e-Learning ADMIN tracking tools
- Weekly phone calls, study halls
- Weekly progress Reports

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Outline of Blended Lean Six Sigma Black Belt Program

	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	Wk 16	Wk 17
Group	Kick Off Mtg		Study Hall		Study Hall		Study Hall		Study Hall	Study Hall		Study Hall		Study Hall		Study Hall	
Student		Mod 1	Mod 2	Mod 3	Mod 4	Mod 5	Mod 6	Mod 7	Mod 8	Mod 8	Mod 9	Mod 9	Mod 9	Mod 10	Mods 11 & 12		
Student	Project Approval		**Define**			**Measure**				**Analyze**					**Improve & Control**		
				Select Proj	**Define**			**Measure**			**Analyze**			**Improve & Control**			
1-on-1	1 on 1	1 on 1	"D" Toll Gate		1 on 1		1 on 1	"M" Toll Gate	1 on 1		1 on 1			1 on 1	"A" Toll Gate	1 on 1	"IC" Toll Gate	Final Rvw with LSS & Mgmt ⭐

Student completes 2 DMAIC Projects →

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Outline of Blended Lean Six Sigma Green Belt Program

	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	Wk 16
Group	Kick Off Mtg		Study Hall		Study Hall		Study Hall		Study Hall		Study Hall		Study Hall		Study Hall	
Student	Mod 1	Mod 2	Mod 3	Mod 4	Mod 5	Mod 6	Mod 7	Mod 8	Mod 8	Mod 9	Mod 9	Mod 9	Mod 10	Mods 11 & 12		
	Project Approval	Define	Define	Measure	Measure	Measure	Measure	Analyze	Analyze	Analyze	Analyze	Analyze	Analyze	Improve & Control	Improve & Control	Improve & Control
1-on-1	1 on 1	1 on 1	"D" Toll Gate	1 on 1		1 on 1	"M" Toll Gate	1 on 1		1 on 1		1 on 1	"A" Toll Gate	1 on 1	"IC" Toll Gate	Final Rvw with LSS & Mgmt

Student completes 1st DMAIC Project →

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33

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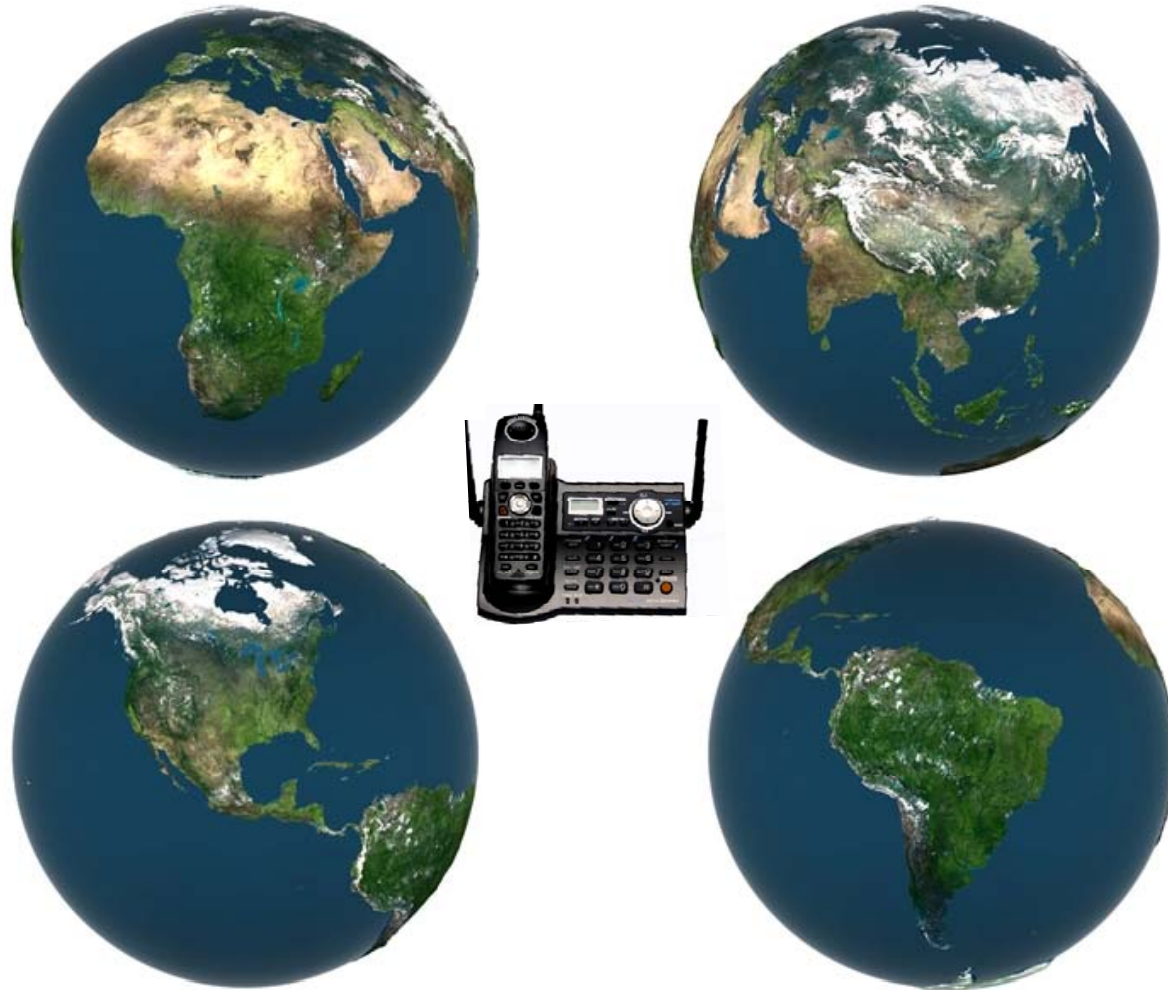
Highlights & Lowlights

- **Highlights:**
  - **Student 1:** *project complete/certified*
  - **Student 2:** *project complete/certified*
  - **Student 3:** *e-Learning complete*
  - **Student 4:** *completed Measure phase*
  - **Almost everyone is on-track for certification!**

- **Lowlights:**
  - **None**

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Page 3

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Bi-weekly Report: Part 2 - Attendees Progress Report Card

Name	Project Phase	Expected Phase Completion Date	Quiz Grades	Current View Status by Session & Lesson	% of Course Material Viewed	Last Date Logged onto the System	Overall Status
Student 1	A	Sep 25	95%	S9L3	76%	9/15	◉
Student 2	A	Sep 25	92%	S9L1	74%	9/11	◉
Student 3	A	Sep 25	88%	COMPLETED!	100%	N/A	◉
Student 4	M	Sep 25	94%	S7L1	58%	9/11	◉
Student 5	C	Sep 25	95%	COMPLETED!	100%	N/A	◉
Student 6	COMPLETED!	Sep 25	91%	COMPLETED!	100%	N/A	◉
Student 7	C	Sep 25	98%	COMPLETED!	100%	N/A	◉
Student 8	COMPLETED!	N/A	87%	COMPLETED!	100%	N/A	◉
EXPECTED STATUS	C	Oct 2	All > 80% G All > 70% Y Any < 70% R	COMPLETED	100%	Within the Last Week	

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GB Candidate	Week of Aug 24 Moresteam session	Project Phase	Week of Aug 31 Moresteam session	Project Phase	Week of Sep 7 Moresteam session	Project Phase	Week of Sep 14 Moresteam session	Project Phase	Week of Sep 21 Moresteam session	Project Phase	Week of Sep 28 Moresteam session	Project Phase	Biggest Risk
7	D		M		M	9	A	10	A	11	IC	Project completion
5	A	6	A	7	I	9	I	10	C	11	C	Project completion
9	D	10	M	11	M		A		A		IC	Project completion
7	D	9	D	10	M	11	M		A		IC	Project completion
10	D	11	D		M		M		A		IC	Project completion
10	C	11	C		C		C		C		C	
	M		A		A		I		I		C	Project completion
4	M	5	M	6	A	7	A	9	I	10 & 11	IC	Project & Training completion
5	DMA	6	I	7	I	9	C	10	C	11	C	Project & Training completion
7	D	8	M	9	A	10	A	11	I	12	C	Project & Training completion
	D		M		A		I		C		C	Project completion
	A		I		I		C					
	D		M		A		I		C		C	Project completion
	D		D		M		M		A		IC	Project completion
	DMA		I		I		C		C		C	Project completion

Moresteam session is the session you should complete that week. (blank if you have completed class by then)
Project Phase is the phase (in D-M-A-I-C) that you should work on that week. (blank if you have completed project by then)
Biggest Risk is where to concentrate to ensure you complete project & training to get certified in September.

37

Lessons Learned

- The key to success has been the Belt candidates embracing Lean Six Sigma

- Blended learning with intrusive coaching

  - helps drive cultural change based on relationships

  - ingrains LSS into the work week

  - allows immediate project initialization

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Lessons Learned

- **Admin tools** help
  - Can drive study halls & discussions based on quiz results
  - Accountability for Belts can install drive & pride

- **Different skills sets** are important for an intrusive mentor as opposed to a classroom trainer.

- Lenovo **adjusted course requirements** for certain organizations based on their needs
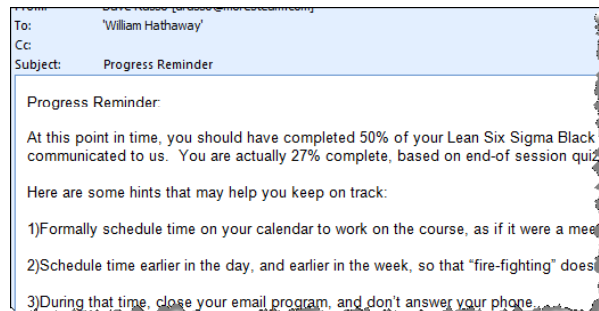
Tools to Support Intrusive Coaching

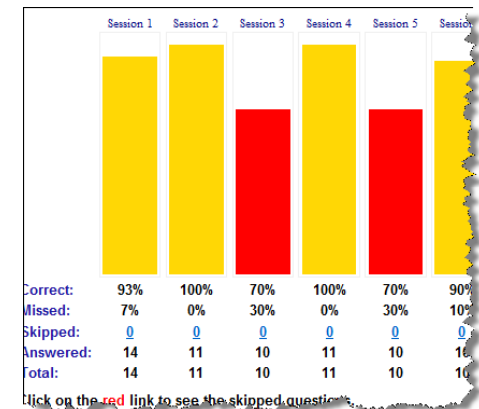## ⚙ Wave Management System

- Customized Reporting

MoreReports Wizard

Select Fields

| Report Format | – | Select Fields | – | Arrange Columns | – | Sorting | – | Filters | – | Print S |

What fields would you like to see in your report?

☐ User ID	☑ First Name	☑ Last Name	☐ Email
☑ Username	☑ Wave	☐ Enroll Date	☑ Location
☐ Course ID	☑ Percent Correct	☑ Percent Complete	☐ Status

- Automated Alerts

From: Dave Russo [drusso@moresteam.com]
To: 'William Hathaway'
Cc:
Subject: Progress Reminder

Progress Reminder:

At this point in time, you should have completed 50% of your Lean Six Sigma Black communicated to us. You are actually 27% complete, based on end-of session quiz

Here are some hints that may help you keep on track:

1) Formally schedule time on your calendar to work on the course, as if it were a mee

2) Schedule time earlier in the day, and earlier in the week, so that "fire-fighting" does

3) During that time, close your email program, and don't answer your phone.

- Detailed Analysis

	Session 1	Session 2	Session 3	Session 4	Session 5	Sessio
Correct:	93%	100%	70%	100%	70%	90%
Missed:	7%	0%	30%	0%	30%	10%
Skipped:	0	0	0	0	0	0
Answered:	14	11	10	11	10	1
Total:	14	11	10	11	10	1

lick on the red link to see the skipped question

40

Questions?

<div style="text-align:center">

Thank you for joining

**"Intrusive Coaching: Building Your Belts'
Capability, Confidence, and Control"**

</div>

 Bill Hathaway, MoreSteam.com

 Diane M. Reddy, UW-M

 Keith Schellenberger, Lean Six Sigma Services

Contact Us

A copy of this presentation is available at www.moresteam.com/coaching

- To learn more about Blended Learning, call or email

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  – Chris Paret: 814.238.0002, cparet@moresteam.com

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