## ADVANCED DISTRIBUTED LEARNING

# Implementing a Training Intervention

to Increase Learning and Reduce Attrition

## Traci Sitzmann, Katherine Ely, and Danny Fowler

Research and Evaluation Team
ADL Co-Lab Hub
08/19/2009



maintaining the data needed, and c including suggestions for reducing	lection of information is estimated to ompleting and reviewing the collect this burden, to Washington Headqu uld be aware that notwithstanding an DMB control number.	ion of information. Send comments arters Services, Directorate for Info	s regarding this burden estimate ormation Operations and Reports	or any other aspect of the state of the stat	his collection of information, Highway, Suite 1204, Arlington
1. REPORT DATE 19 AUG 2009		2. REPORT TYPE		3. DATES COVERED <b>00-00-2009</b> to <b>00-00-2009</b>	
4. TITLE AND SUBTITLE				5a. CONTRACT NUMBER	
Implementing a Training Intervention to Increase Learning and Reduce Attrition				5b. GRANT NUMBER	
Authon				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  Advanced Decision Learning (ADL),ADL Co-Lab Hub,1901 N.  Beauregard Street Suite 600,Alexandria,VA,22311				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAIL Approved for publ	LABILITY STATEMENT ic release; distributi	ion unlimited			
13. SUPPLEMENTARY NO ImplementationFe	otes st2009, 18-20 Aug 20	009			
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFIC		17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON	
a. REPORT unclassified	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE unclassified	Same as Report (SAR)	24	

**Report Documentation Page** 

Form Approved OMB No. 0704-0188

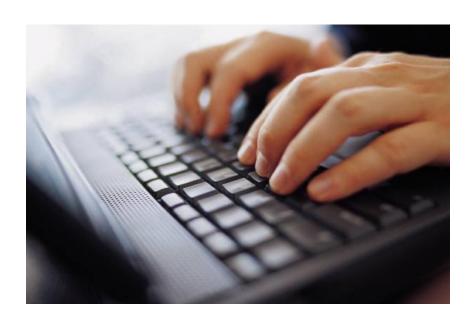


SOMETIMES WE JUST NEED REMINDERS



#### **Self-Regulation**

- Process that enables individuals to guide their goaldirected activities over time and across changing circumstances
- Iterative process with a gradual effect on learning over time





Research has shown that asking yourself questions about whether you are concentrating on learning the training material will increase how much you learn during training. The training program will periodically ask you questions about where you are directing your mental resources and whether you are making progress towards learning the training material. Honestly respond to these questions and use your responses to direct your learning during training.

#### Will I concentrate on learning the training material?

- Not at all
- Slight possibility
- Maybe
- Probably
- Definitely





#### Do I understand all of the key points of the training material?

- Not at all
- Slight possibility
- Maybe
- Probably
- Definitely





#### Are the study strategies I'm using helping me learn the training material?

- Not at all
- Slight possibility
- Maybe
- Probably
- Definitely





#### Have I spent enough time reviewing to remember the information after I finish the course?

- Not at all
- Slight possibility
- O Maybe
- Probably
- Definitely





#### **Self-Regulation Conditions**

- Continuous self-regulation
  - Prompt self-regulation throughout the entire course
- Delayed self-regulation
  - Prompt self-regulation in the latter half of the course
- Control
  - Do not prompt self-regulation



#### **Multiple Studies**

#### Study 1

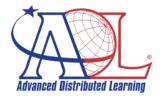
- Online training course on Blackboard LMS
- 93 trainees; Average age = 44 years

#### Study 2

- PC-based radar-tracking simulation
- 171 undergraduates; Average age = 19 years

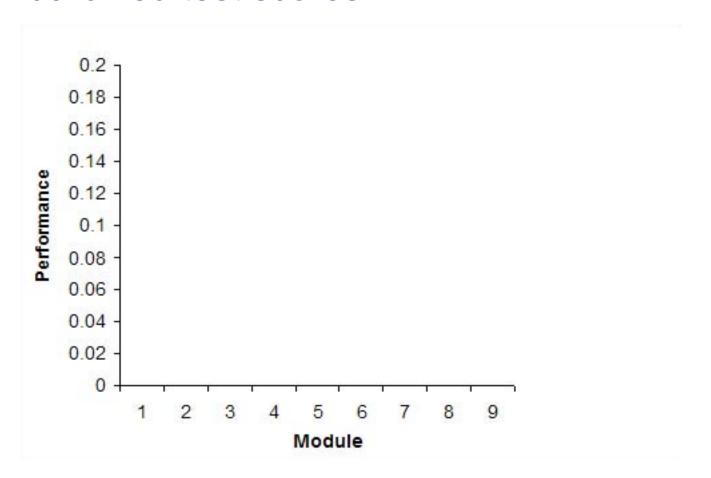
#### Study 3

- Online training course on Microsoft Excel
- 479 trainees; Average age = 42 years



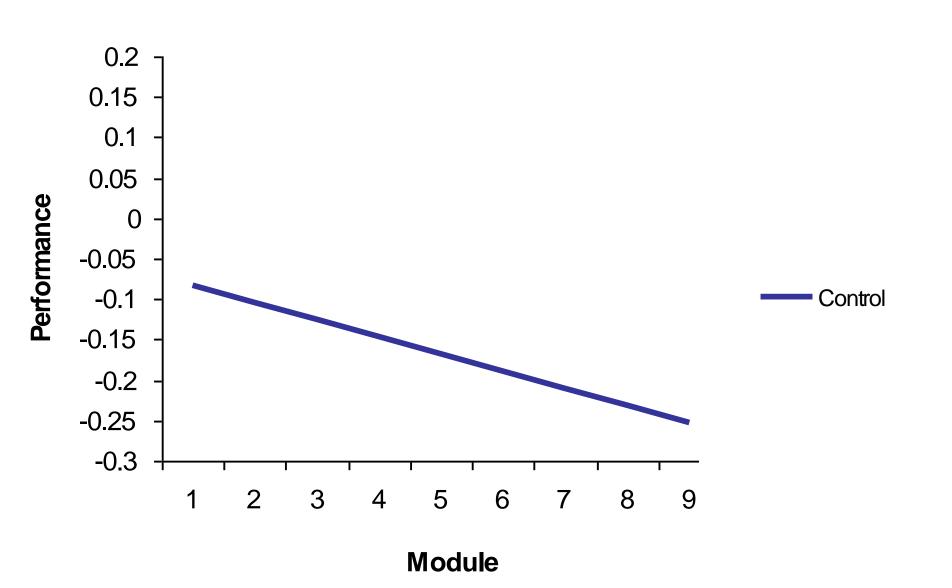
#### **Method**

- Examine changes in performance over time
- Standardized test scores



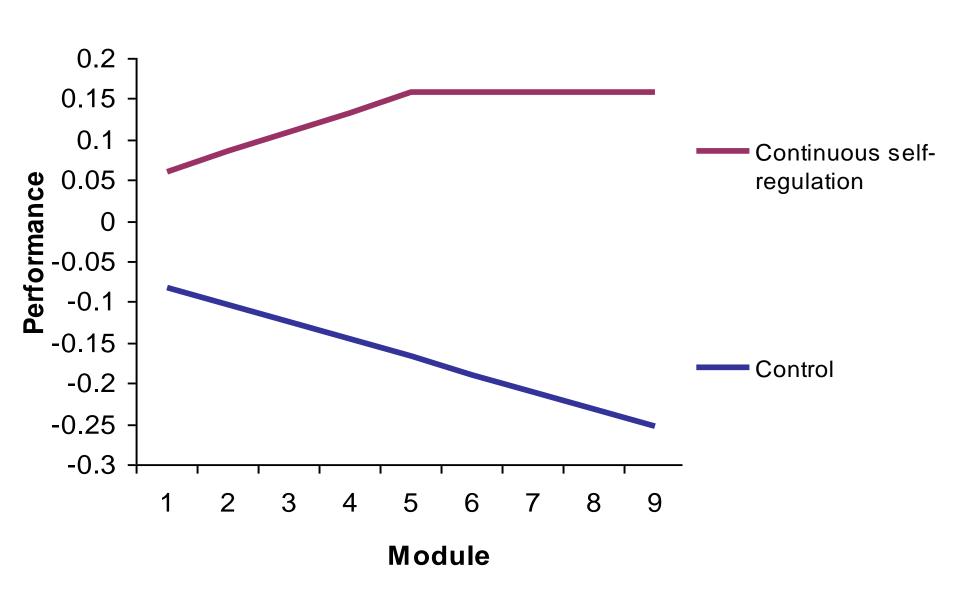


### **Learning Results**



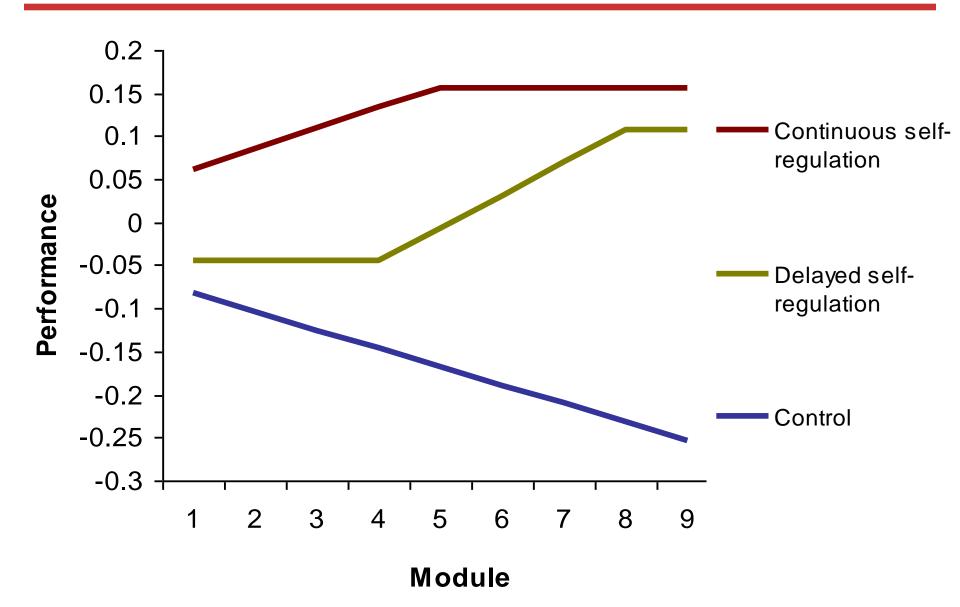


### **Learning Results**





#### **Learning Results**



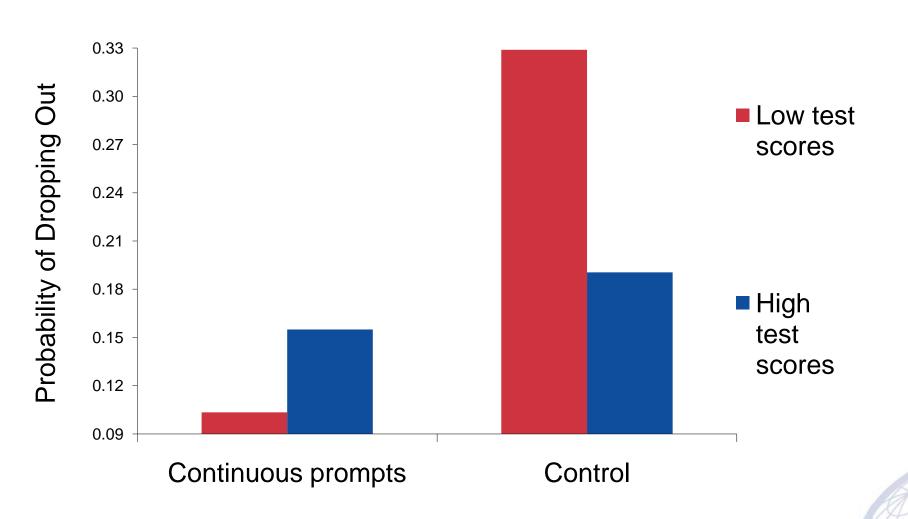


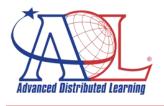
#### **Predicting Attrition**

- Tested in study 3—voluntary online Microsoft Excel training
- Prompting self-regulation throughout training resulted in a 17 percentage point reduction in attrition
- Prompting self-regulation in the second half of the course did not reduce attrition
- Trainees were less likely to drop out following poor performance when they were prompted to self-regulate



#### **Predicting Attrition**





#### **Conclusions**

 Adults are capable of managing their own learning when they receive reminders to self-regulate

 Prompting self-regulation is a no-cost intervention that enhances learning and reduces attrition



Prompts can be incorporated in any Web-based training course



### **Discussion Questions**





# For which courses are prompts most appropriate?

 The prompts are appropriate for any selfpaced course where trainees could benefit from periodically reflecting on their learning strategies





# When and how often should I prompt in the course?

- Implemented the prompts continuously and at regular intervals throughout the course
- In these studies, trainees were prompted approximately every 15-20 minutes
- Find natural breaking points in training (i.e. between SCOs) to regularly prompt trainees





# Do trainees need to respond to the prompts questions?

- The studies testing the prompts required trainees to respond to the prompts questions
- Trainees' actual responses do not matter what is important is that the prompts encourage trainees to self-reflect and engage in self-regulatory thinking





## Am I allowed to modify the prompts questions?

 Yes—the prompts questions can be modified and should still be effective as long as they encourage trainees to reflect on their learning and regulate their learning progress





#### How can I access the prompts?

Prompts are available as SCOs:

http://www.adlnet.gov/Technologies/Evaluation/Library/Forms/DispForm.aspx?ID=105

 They can easily be incorporated in any SCORM-conformant course





#### References

- Sitzmann, T., Bell, B. S., Kraiger, K., & Kanar, A. (in press).
   A multi-level analysis of the effects of prompting self-regulation in technology-delivered instruction. *Personnel Psychology*.
- Sitzmann, T., & Ely, K. (2009). Sometimes you need a reminder: The effects of prompting self-regulation on regulatory processes, learning and attrition. Unpublished manuscript.

## ADVANCED DISTRIBUTED LEARNING

## **Questions or Comments?**

#### Traci Sitzmann

Research and Evaluation Team traci.sitzmann.ctr@adlnet.gov +1.703.575.2013