

# Improving Teaching Using Technology for Formative Assessment

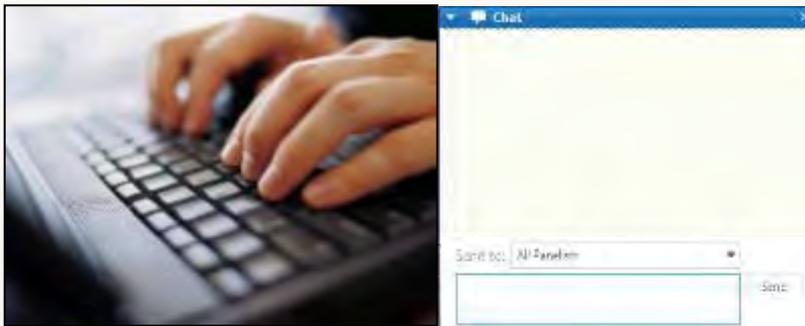
This training was supported under the LINCS Regional Professional Development Center for Adult Education, PR/Award Number V191B1100002, administered by the Office of Adult Career, Technical, and Adult Education, U. S. Department of Education. However, the contents do not necessarily represent the positions of policies of the Office of Career, Technical, and Adult Education or the U.S. Department of Education, and you should not assume endorsement by the Federal Government.

# ■ Presenters

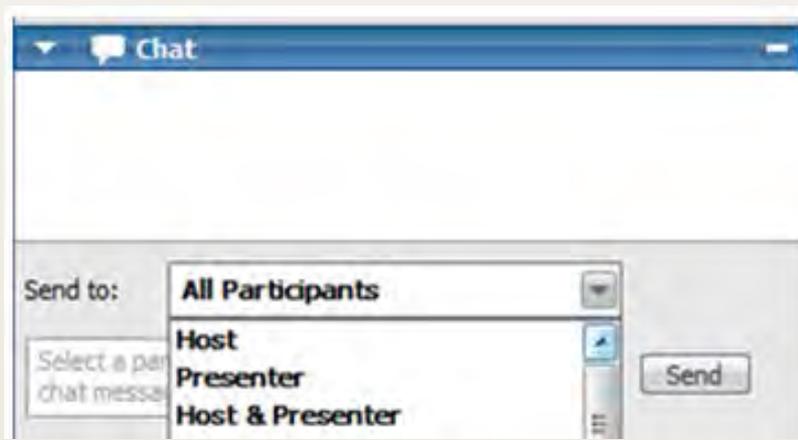
- Ben Bruno – Media Specialist
- Steve Quann – Educational Technologist
- Susan Finn Miller - LINCS Moderator
- David Rosen - LINCS Moderator
- Chris Bourret - ESOL Instructor
- Ed Latham - Educational Consultant

# WebEx Interface Overview

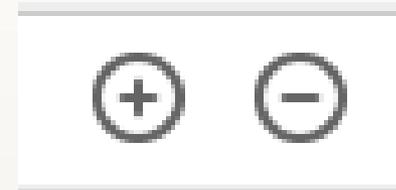
## Use chat box for discussion



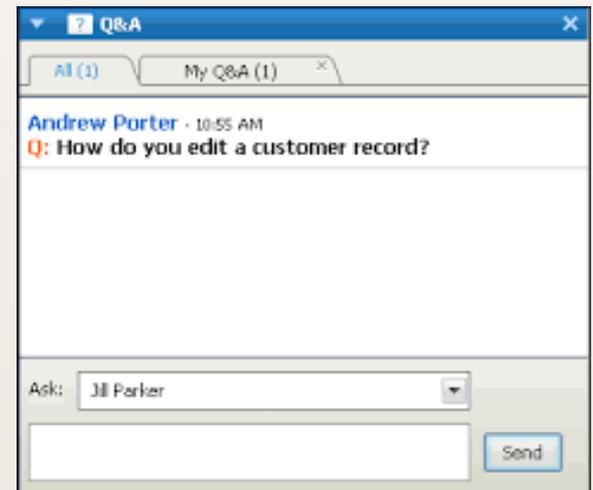
## Send chats to “all participants”



## Adjust Screen



## Q & A window



## ■ Why Should You Visit LINCS Regularly?

LINCS provides you with the information, resources, activities, and network you need to enhance your practice in order to provide your students with high-quality learning opportunities.

The logo for LINCS, featuring the letters "LINCS" in a bold, blue, sans-serif font. A red and white swoosh underline is positioned beneath the letters.

Literacy Information and Communication System

<http://lincs.ed.gov/>

LINCS is funded by the U.S. Department of Education - Office of Career, Technical, and Adult Education. It is comprised of the Resource Collection, managed by Kratos Learning, the Regional Professional Development Centers, and the Technical Contractor, Quotient, Inc.

## ■ LINC'S Makes a Difference

- A **Resource Collection** containing high-quality, evidence-based materials in 16 topic areas critical to the field
- An online **Community of Practice** where you can share knowledge and collaborate with your peers
- A **Learning Portal** where you can engage in self-paced and facilitated professional development courses
- Four **Regional Professional Development Centers** (RPDCs) that deploy evidenced-based PD trainings to states

# ■ Don't Miss a Beat; Create A LINCS Account

- Participate in the **Community**:  
<https://community.lincs.ed.gov>
- Access the **Learning Portal**:  
<http://lincs.ed.gov/courses>
- Search the **Resource Collection**:  
<http://lincs.ed.gov/collections>
- Follow the latest updates: @LINCS\_ED
- Join our professional group: LINCS\_ED
- Watch webinar archives and more: LincsEd



# Follow Us for LINCS Updates



Resource  
Collection



Community



Learning  
Portal

## LINCS

Learning Information and Communication System

### LINCS

@LINCS\_ED

A U.S. Dept. of Education initiative to advance adult education through high-quality teacher professional development. Retweets/follows don't imply endorsement.

Washington, DC

[lincs.ed.gov](http://lincs.ed.gov)

Joined May 2012

6 Photos and videos



TWEETS 786 FOLLOWING 184 FOLLOWERS 561 FAVORITES 26

Follow

Tweets Tweets & replies Photos & videos

LINCS @LINCS\_ED · 8h  
Americans are increasingly using mobile devices for activities previously done on computers. Read more: [1.usa.gov/10OvVIH](http://1.usa.gov/10OvVIH) #adulted

LINCS @LINCS\_ED · Nov 5  
Joint @usedgov @DeptofDefense & @DeptVetAffairs program extends reach for 8 Keys to Veterans' Success [1.usa.gov/1x87LTA](http://1.usa.gov/1x87LTA) #Transitions

LINCS @LINCS\_ED · Nov 4  
PIAAC Gateway: new infographic on skills of U.S. young adults & reflections via @usedgov's Johan Uvin: [bit.ly/10hWKnF](http://bit.ly/10hWKnF) @Education\_AIR

LINCS @LINCS\_ED · Nov 3  
In 1 hr, come together, give thanks, share results & reflect – What went well & what we learned [bit.ly/1vRnIQ7](http://bit.ly/1vRnIQ7) #HT @edconnect #ce14

Don't miss any updates from LINCS

Full name

Email

Password

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Worldwide Trends · Change

#Gala10GH15

#Something@IgAtMidnight

#FabSocialMedia@izmeti

#EMABiggestFans10

#TheHeartWantsWhatItWants

Naismith

The Force Awakens

Carter Ashton

Broke With Expensive Taste

America is a Constitutional Republic



@LINCS\_ED



Join our  
group:

LINCS\_ED

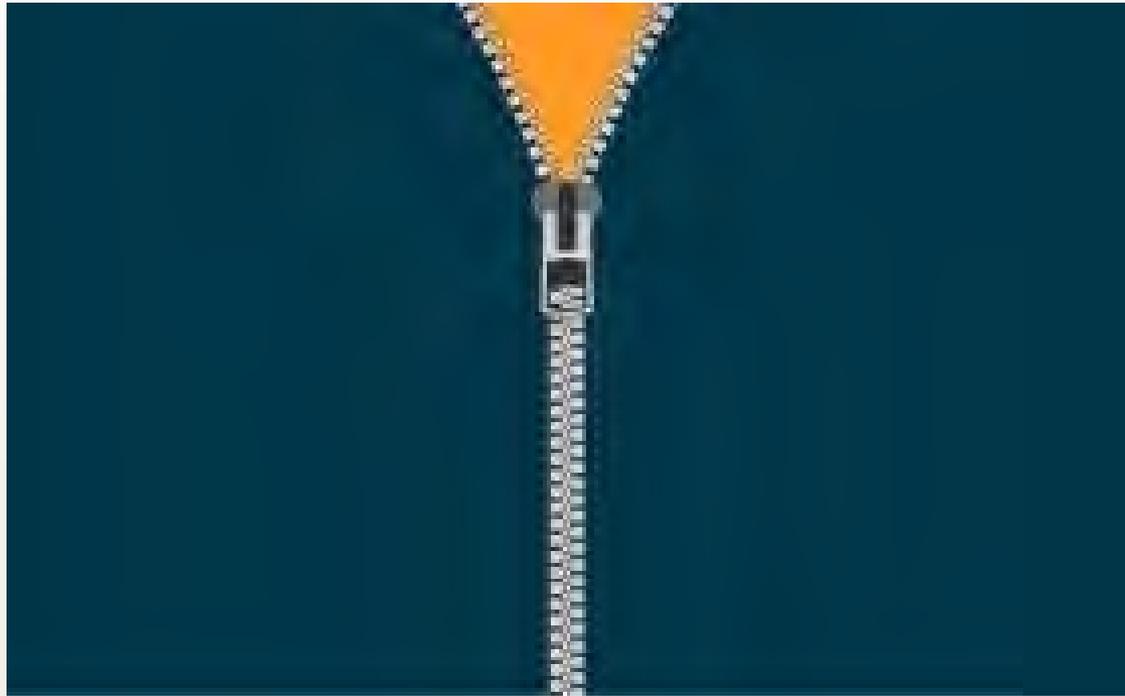
# Formative Assessment: The Zipper Between Teaching and Learning

**Susan Finn Miller**

LINCS Moderator for LINCS Communities of Practice:  
Assessment, College and Career Standards,  
Adult English Language Learners



# “Assessment is the zipper between teaching and learning”



Source: Cross, K. P. & Harris Steadman, M. (1996). *Classroom research: Implementing the scholarship of teaching*. San Francisco: Jossey-Bass.

# Match the assessment terms & descriptions

\_\_\_ 1.  
Formal/Standardized

\_\_\_ 2. Summative

\_\_\_ 3. Formative



A. involves gathering ongoing information to determine what students know and can do and provides descriptive feedback to improve learning; it also includes learner self-assessment.

B. is comprehensive in nature and checks learning at the end of a unit of study.

C. is any empirically developed examination with established reliability and validity.

# Check Your Answers

C 1. Formal/Standardized

B 2. Summative

A 3. Formative



A. involves gathering ongoing information to determine what students know and can do and provides descriptive feedback to improve learning; it also includes learner self-assessment.

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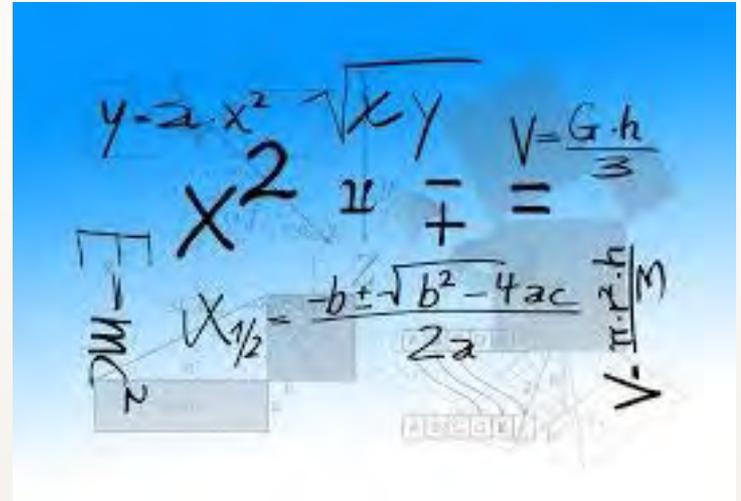
## In other words, formative assessment is ...

- **teachers' ongoing and close observation of student work leading to next steps in teaching**
- **teachers providing timely and descriptive feedback with details about what learners have done well and what they can do to improve**
- **learners' active participation in the process through self-assessment**



# Teachers use formative assessment all the time!

- **Teacher observation**
- **Quizzes**
- **Questioning**
- **Games**
- **Writing assignments**
- **Projects**
- **Learning logs & exit tickets**
- **Debates**
- **Other?**



# Writing Sample with Author's Questions in Margin

## How to Plan a Trip with a Friend

The purpose of this paper is to discuss about my trip with a friend. These are some steps that we have to plan a trip.

To begin with, (choosing an interesting place where we want to go to be important.) Because of this, it makes us fun for our trip. First, you can search it on the internet. There is a lot of interesting places which is attracted travelers such as: Viet Nam, Singapore, Australia, American, Europe, Africa etc. Next, we find out how the weather is, tradition foods, the culture etc. For example: if we like the hot and warm weather, (Vietnamese foods) etc, we can go to Viet Nam. Depend on our hobby, we can choose one of places around the world.

Second, (we should prepare clothes and something which are necessary for our trip.) For example: we should bring the clothes of summer because the weather is hot or sometimes it's cold on (the coming month) in New Year. We need to wear sneaker for walking and bring medicines when you get sickness.

Third, we also check the plan ticket and hotel. If we book the plan ticket and hotel before our travel, the price will be cheaper. It's advantage for us because of choosing what day we want to go. We can save a lot of money for a trip.

Finally, if we plan a trip with our friends, we should follow the steps described above. It will bring an enjoyable time, have fun, and save money.

**Comment [LC1]:** Is this a complete sentence?

**Comment [LC2]:** "Vietnamese foods" or "the Vietnamese foods"

**Comment [LC3]:** Is this a complete sentence?

**Comment [LC4]:** I mean the month is going to New Year, example: Nov and Dec. I use "the coming month", it is right?

# Beginning ESL – Spelling one's name

1. What is your name?
2. How do you spell it?



	Easy to understand?		Speed?		Total
	Easy to understand (2 points)	Mostly easy to understand (1 point)	Fast (2 points)	Not fast enough (1 point)	
Elena	✓		✓		4
Daniel					✓ 0
Farida		✓		✓	15 2

# Using Agreed-Upon Rubrics for Teacher, Peer & Self-Assessment

Presentation Rubric	4 Excellent	3 Good	2 Okay	1 Needs Improvement
Used visual support, e.g., computer, doc camera, poster, video, pictures, acting out, hands-on materials, etc.				
Used easy to understand language and explained new words				
Checked comprehension (e.g., What questions do you have? Who understands this word?)				
Responded to questions effectively				
Engaged the class (e.g., asked questions, included a partner activity, a game, a role play, etc.)				
Used a strong voice				
Looked at the audience				
Used understandable pronunciation				
Used understandable grammar				
Paced the presentation well (not too slow or fast)				
Kept to the time limit				
Showed self-confidence				
TOTAL				

# During independent study, useful formative assessment tools ...

- **Provide learners with information about what they have done well**
- Highlight the details about the errors that were made
- **Give learners the chance to review and try again**
- Offer learners the opportunity to track their progress



# “To teach is to provide feedback” (Fanselow, 1987)

**SCHOOLIES**

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# Digging Deeper into Formative Assessment

**David Rosen**

LINCS Moderator for LINCS Communities of Practice:

- Technology and Learning
- Program Management



## One Helpful Formative Assessment Definition:

**Assessment is feedback for both instructors and students**



**Assessment drives student learning.**

“Assessment for learning is any assessment for which the first priority in its design and practice is to serve the purpose of promoting students’ learning. It thus differs from assessment designed primarily to serve the purposes of accountability, or of ranking, or of certifying competence. An assessment activity can help learning if it provides information that teachers and their students can use as feedback in assessing themselves and one another and in modifying the teaching and learning activities in which they are engaged. Such assessment becomes ‘formative assessment’ when the evidence is actually used to adapt the teaching work to meet learning needs.” (Paul Black et al., 2004)

# ■ What the many definitions have in common

- Based on ongoing collection of learning evidence, such as specific student misconceptions and mistakes, or (lack of) learning progress against specific objectives
- Evidence provided to teachers and students about what students are learning while they're learning it
- Evidence helps students understand what they are trying to learn, whether or not they are learning it, and if not, what they may need to do differently
- Evidence used to adapt teaching to make decisions to improve students' learning progress, as well as the instruction

# Research

Research suggests that formative assessment, done well, can deepen student learning, that it is the heart of effective teaching. A widely cited 1998 review of 250 studies on formative-assessment strategies, by Paul Black and Dylan Wiliam, found significantly positive effect sizes.



# “shows conclusively that formative assessment does improve learning”

According to Dunn and Mulvenon in March, 2009: “In the formative assessment literature, Black and Wiliam’s (1998) seminal piece is frequently cited as evidence that formative assessment does improve student achievement. In fact, one citation index that denotes all scholarly references indicates that it has been cited more than one thousand times. The Social Science Index indicates that it has been referred to in scholarly journals 194 times. This is not surprising in light of the conclusion that Black and Wiliam (1998) drew from their review of more than 250 articles related to formative assessment.

They stated that the research they reviewed “shows conclusively that formative assessment does improve learning,” and that the gains in student achievement were “amongst the largest ever reported” (p. 61).

## However...



**However**, after their review of all the major formative assessment research as of 2009, including the most important studies Black and William cited, Dunn and Mulvenon concluded, “Thus, we do not argue that formative evaluation is unimportant, only that limited empirical evidence exists to support the “best practices” for formative evaluation. In particular, limited evidence investigates the group that may benefit the most from formative evaluation, low performing students.”

Dunn, Karee E and Mulvenon, Sean W. (2009). A Critical Review of Research on Formative Assessments: The Limited Scientific Evidence of the Impact of Formative Assessments in Education. *Practical Assessment Research & Evaluation*, 14(7). Available online: <http://pareonline.net/getvn.asp?v=14&n=7>

## ■ So, what do we know from research?

- Formative assessment is important to effective teaching and learning.
- We may not have enough evidence to say which practices make it most effective.
- We don't have enough evidence on low-performing students yet.

# Some Promising (if not “best”) Formative Assessment Practices

- Use Systematic ways of collecting and sharing learning progress information – not just in the teacher’s head, but available on paper or onscreen to the teacher and the learners
- Provide Information used by teachers and learners to make decisions about instruction or learning strategies, to improve learning
- Serve a range of feedback-related purposes for teachers and learners: diagnosis, prediction, and ongoing evaluation of student learning among them.

# ■ Questions, Comments



# Using Socratic for Formative Assessment

Chris Bourret - ESOL Instructor



# Using Socrative



Apps

Resources

Help

STUDENT LOGIN

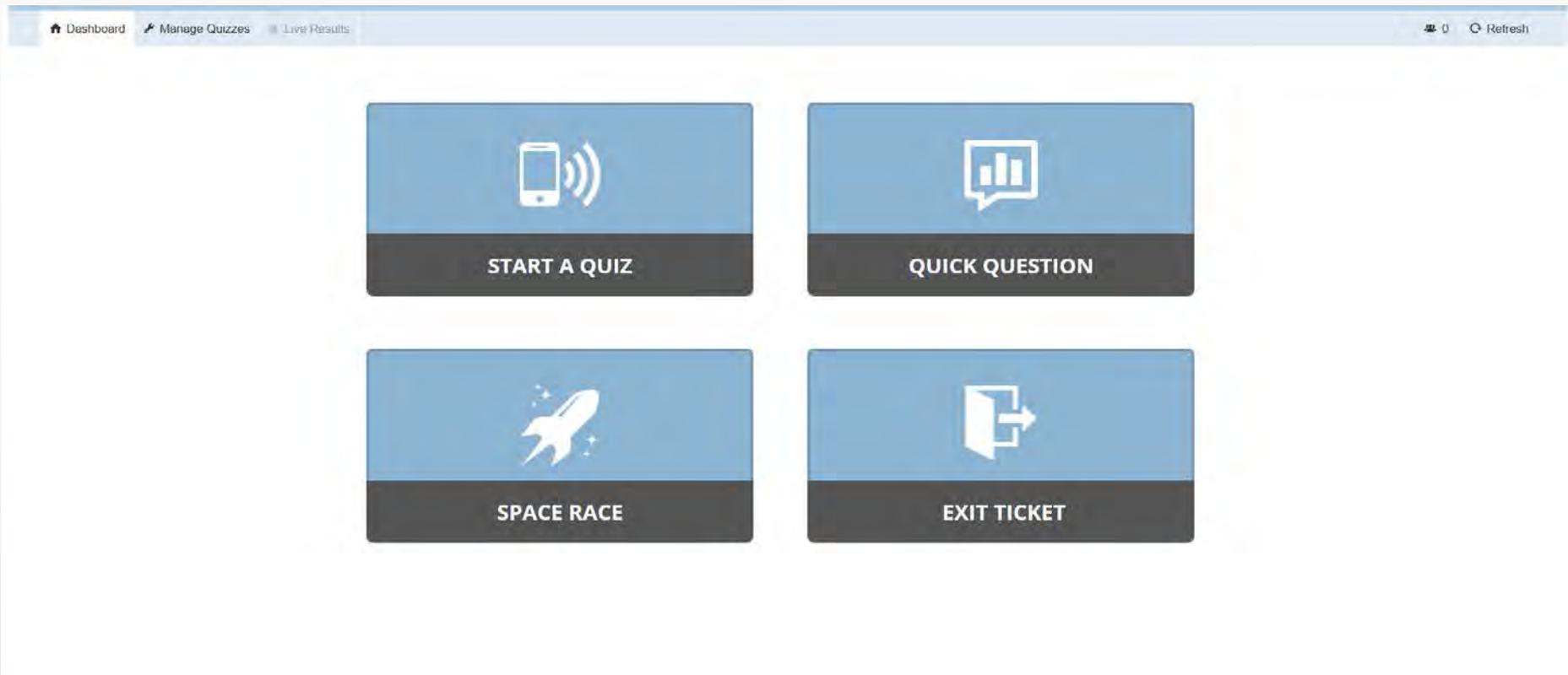
TEACHER LOGIN

Visualizing student  
understanding has never  
been clearer

GET A FREE ACCOUNT

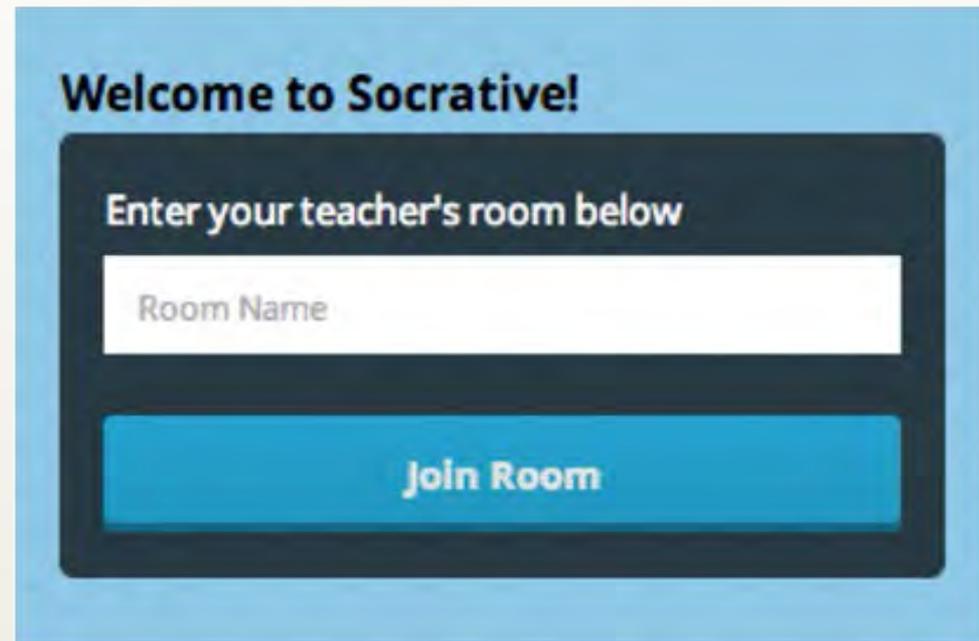


# Using Socrative



# Why Have Students Use Socrative?

- Doesn't require a lot of set up.
- Easy to use features.
- Utilize students' smartphones in class.
- Can be also used with tablets and laptops.



# Benefits of Using Socratic

## From the Teacher's Perspective:

- All students demonstrate, at the same time, active participation and cognitive engagement with the class content.
- It's Free! However, it is designed for in-class activities, not outside of class.
- Provides teachers and learners with ongoing *formative evidence* of student learning.

# How to Use Socrative In Class

1. As a Quick Preview Question to get students thinking.

## Quick Question

Reading Preview Question - Who are more successful in life, Night owls or early birds?

START VOTE

SHOW NAMES

0 answers

No answers yet

# How to Use Socrative In Class

## 2. For Quick Check of Main Ideas from a Text.

#1



Early Birds are usually more successful in life than Night Owls.

Correct Answer:

True

False

# How to Use Socrative In Class

## 3. For Quick Check of Specific Details.

#1

Dreams occur during \_\_\_\_\_.

ANSWER CHOICE

A

Stage One Sleep

B

Stage Two Sleep

C

Stage three Sleep

D

REM sleep.

#4

As we get older, people need more sleep.

Correct Answer:

True

False

# How to Use Socratic In Class

## 5. Vocabulary Practice.

#9



Animals that live in nature, not as pets, are called \_\_\_\_\_.

wildlife

# How to Use Socrative In Class

## 6. Grammar Practice

#3

Our flight was delayed. We had to wait at \_\_\_\_\_ Logan airport for three hours.

ANSWER CHOICE

A

the

B

a

C

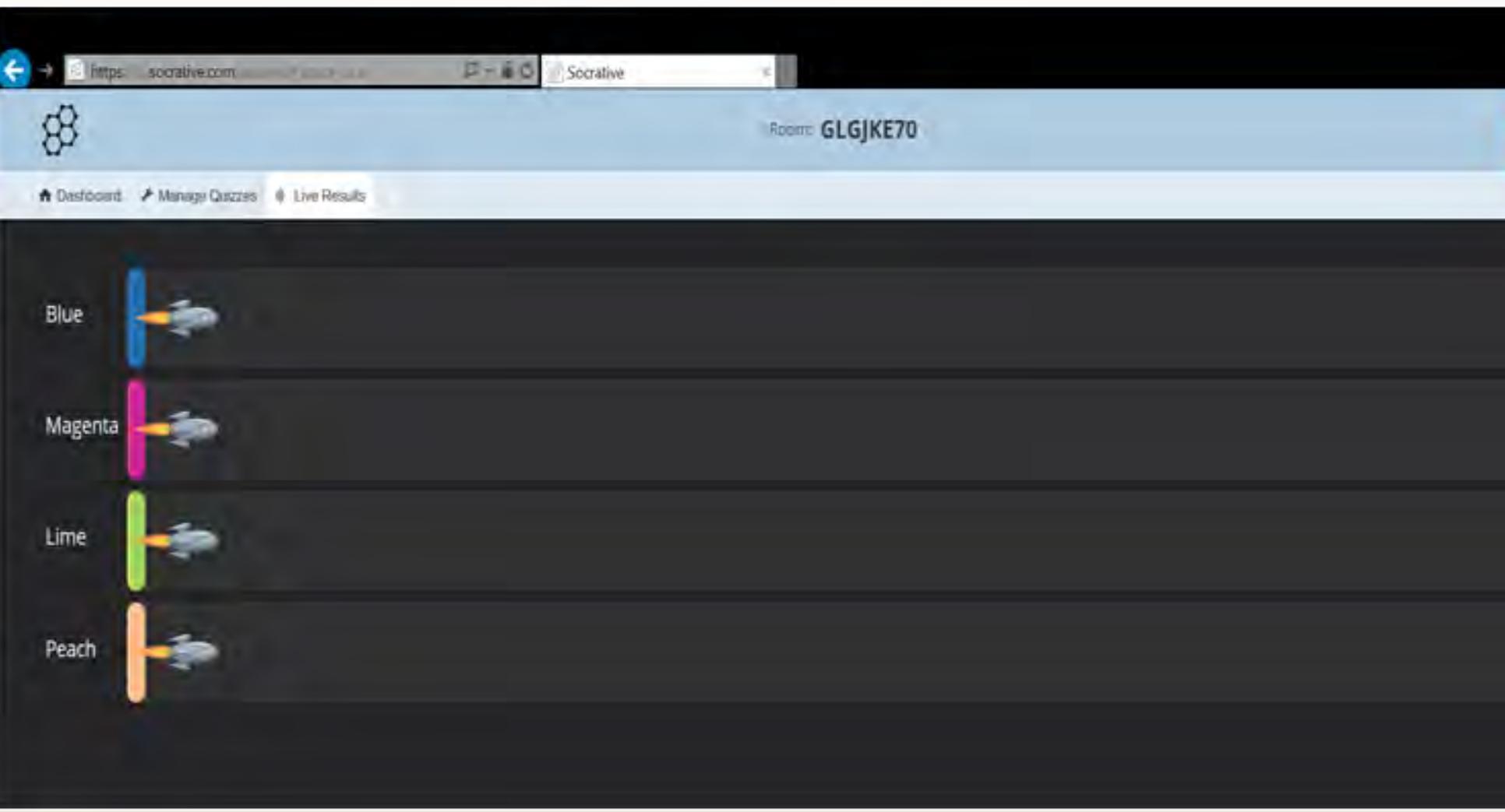
an

D

-

# How to Use Socrative In Class

## 7. Space Race



# How to Use Socrative In Class

## 8. Exit Ticket

#1 How well did you understand today's material?

HOW'D WE DO? 0/0 students answered

A Totally got it

B Pretty well

C Not very well

D Not at all

# How to Use Socrative In Class

**Socrative saves Student Achievement in Report Forms.  
Feedback is immediate.**

Name <input type="text" value="A-Z"/> <input type="text" value="Progress"/>	#1	#2	#3
Cj bourret 100% ✓	True	B	roger wi
<b>Class Total</b>	100%	100%	100%

Click on Question #s or Class Total %s for a detailed question view

# How to Use Socrative In Class

**Feedback for students can be provided in a few ways.**

WHAT TYPE OF QUIZ ARE YOU STARTING?

STUDENT PACED - IMMEDIATE FEEDBACK

STUDENT PACED - STUDENT NAVIGATION

TEACHER PACED

Student Paced = Students can go through each question at own pace and get answers right away. They can't go back to previous questions.

Student Navigation = Students go through at own pace and can go back to previous questions.

Teacher Paced = Students answer one question at a time, so teacher can go over question with class before preceding to next item.

# ■ Questions, Comments



# Using Google Tools for Formative Assessment

**Ed Latham**

**Educational Consultant**



# Using Google Tools for Formative Assessment

Interactive Participation for those with technology available

Shortcut link: [goo.gl/ZTt8SX](https://goo.gl/ZTt8SX)

Alternatively you can...

- Type in “[5squared.us](https://5squared.us)” (without the “ “) into browser
- Choose the *Educational Training* tab
- Click on link: *Formative Assessment Examples*

*Feel free to make some mistakes students might make*

# Using Google Tools for Formative Assessment

**Word Processing**



Google Drive

**Spreadsheets**

**Presentations**

**Blogging**

**Drawing and Photos**

**Web Page Design**

**Email, Chat, Video Communications**

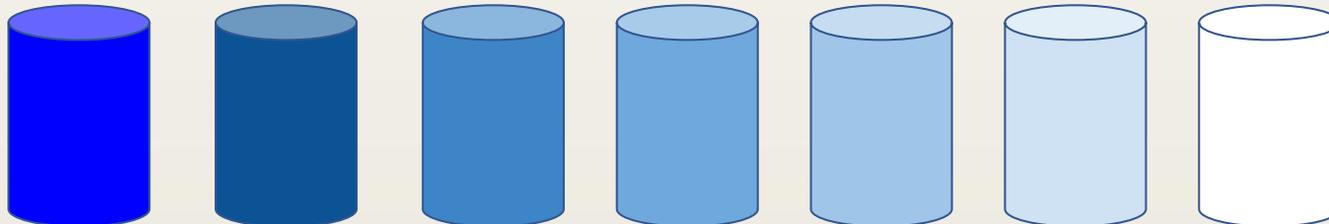
**Unparalleled levels of integration between tools to allow for the most powerful collaboration of tools and people**

# Using Google Tools for Formative Assessment

## Checking for conceptual understanding

- Questions that ask Why something works
- Questions that ask How can we be sure
- Predictions that ask What do you think should happen
- Describe how something changes in “What if ...” situations

What is the best way to measure how Blue a color might be? For instance, imagine we were trying to make all of the shades of blue pictured. What is the best way to measure how blue each paint color is?



# Using Google Tools for Formative Assessment

How blue is this?

What is the best way to measure how Blue a color might be? For instance, imagine we were trying to make all of the shades of blue pictured. What is the best way to measure how blue each paint color is?



How Blue? \*

Using the image above, offer your suggestion as to what is the best way to measure how blue something is.

Your answer:

3 batches of paint



Which is more blue? \*

Using the image above, indicate which mix of paint would turn out to have a darker shade of blue. Be prepared to support your choice.

- A
- B
- C

Just two questions to check on student understanding BEFORE we begin instruction.

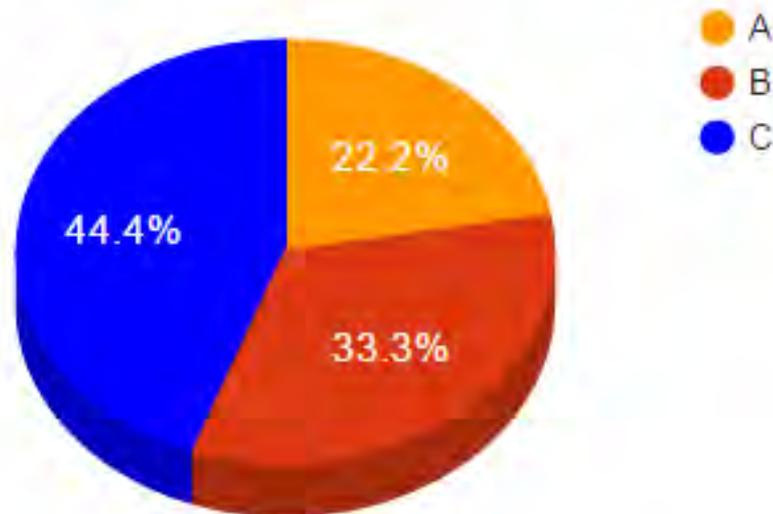
Have students make a conjecture in text format to initiate discussions

Have students make a conjecture in multiple choice to assess classroom knowledge of the concept

# Using Google Tools for Formative Assessment

Which paint is most blue?

Which paint combinations would give us the most blue mixture



3 batches of paint

A



B



C



# Using Google Tools for Formative Assessment

- Checking for procedural understanding
  - Given incorrect work mixed in with correct work, ask students to provide feedback
  - Ask questions that allow for descriptions of the flow of the process
  - Given part of a procedure have the student suggest next step
  - Many ways to present data from standardized type problems

# Using Google Tools for Formative Assessment

## LINCS Example 2

This form demonstrates two procedural examples

\* Required

Name \*

First Name Last Name (ex: Ed Latham)

Your answer:

Email \*

Please provide a working email that you have access to. Your results will be emailed to this address.

Your answer:

Question 1 \*

Simplify the following expression:  $9 - 3 * 2 + 4$

- 16
- 36
- 9
- 7

$8 - 6 \div 3 * 2 + 3$

Question 2 \*

Simplify the following expression above

- $4 \frac{1}{3}$
- 15
- 7
- 2
- $\frac{2}{9}$
- $3 \frac{1}{3}$

SUBMIT

Timestamp	Name	Email	Question 1	Question 2
11/27/2015 13:15:03	Answer Key	ohgeer@gmail.com	7	7
11/27/2015 13:16:00	Amanda Recokonwith	ohgeer@gmail.com	16	15
11/27/2015 13:17:04	Thomas Thetank	ohgeer@gmail.com	7	4 1/3
11/27/2015 13:17:53	Susie Que	ohgeer@gmail.com	-9	15
11/27/2015 13:20:52	Smartee Pants	ohgeer@gmail.com	7	7
11/27/2015 13:21:25	Sharon Stoned	ohgeer@gmail.com	7	15
11/27/2015 13:22:10	Mark Inwell	ohgeer@gmail.com	16	7
11/27/2015 13:35:07	Ineeda Break	ohgeer@gmail.com	7	2/9
11/27/2015 13:36:34	Al Mostover	ohgeer@gmail.com	16	15
11/27/2015 13:40:36	Thisisa Wronganswer	ohgeer@gmail.com	-9	3 1/3
11/27/2015 13:49:50	Whan Moretime	ohgeer@gmail.com	7	15
11/27/2015 13:59:31	Annutter Student	ohgeer@gmail.com	16	7

# Using Google Tools for Formative Assessment

Auto generated reports only tell part of the story...

Submission Time		Name	Total Points	Percent	Times Submitted	Emailed Grade?	Question 1	Question 2
11/27/2015 13:16		Amanda Recokonwith	0	0.00%	1	x	0	0
11/27/2015 13:17		Thomas Thetank	1	50.00%	1	x	1	0
11/27/2015 13:17		Susie Que	0	0.00%	1	x	0	0
11/27/2015 13:20		Smartee Pants	2	100.00%	1	x	1	1
11/27/2015 13:21		Sharon Stoned	1	50.00%	1	x	1	0
11/27/2015 13:22		Mark Inwell	1	50.00%	1	x	0	1
11/27/2015 13:35		Ineeda Break	1	50.00%	1		1	0
11/27/2015 13:36		Al Mostover	0	0.00%	1		0	0
11/27/2015 13:40		Thisisa Wronganswer	0	0.00%	1		0	0
11/27/2015 13:49		Whan Moretime	1	50.00%	1		1	0
11/27/2015 13:55		Annutter Student	1	50.00%	1		0	1
							45.45%	27.27%

<b>Summary:</b>	
Points Possible	2
Average Points	0.73
Counted Submissions	11
Number of Low Scoring Questions	2

# Using Google Tools for Formative Assessment

This email contains your grade for LINCS Example 2. Do not reply to this email.

**Your grade: 1 / 2 (50.00%)**

Below is a message from your instructor, sent to the entire class:

Here are your personal results. To see how the class did, you can click on this link: <https://sites.google.com/site/correctmenow/welcome/lincs-formative-assessment/lincs-answers> and look at the results for Example 2

← Note the link and teacher note

Summary of your submission:

Name	Mark Inwell
Email	<a href="mailto:ohgeer@gmail.com">ohgeer@gmail.com</a>
Submission Time	Fri Nov 27 2015 10:22:09 GMT-0800 (PST)

**Question 1**

**Incorrect**

0 point(s)

Your Answer: 16

**Question 2**

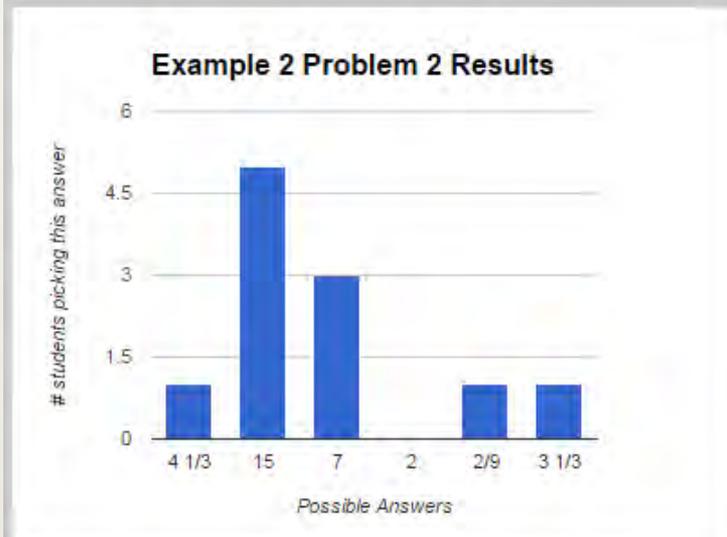
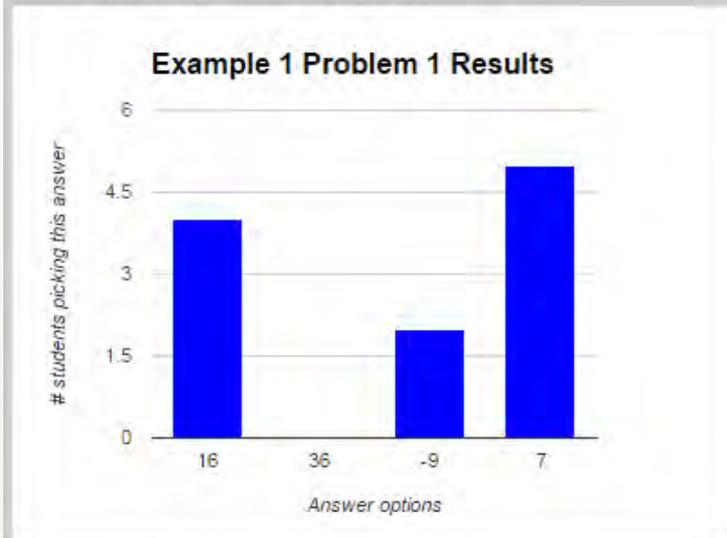
**Correct**

+1 point(s)

Your Answer: 7

# Using Google Tools for Formative Assessment

Results of Example 2: Simplifying Expressions



Bar Graphs showing how many students selected each problem can facilitate many discussions.

Offers quick evidence about how many students “get it”

When the majority are wrong, as in the bottom graph, wonderful discussions and justifications ensue

# Using Google Tools for Formative Assessment

- Checking for application understanding
  - Offer questions that get students reflecting on application
  - Ask 3 to 4 scenarios and scrambling orders and do matching
  - Provide application examples and have students highlight the concept or procedures involved

# ■ Questions, Comments



# Two Micro-groups Coming in January 2016

- Online Tools and Resources  
Ed Latham
- Online Formative Assessment Tools  
Marie Cora

# Online Tools & Resources

## Micro-group with Ed Latham

- Collaboratively create a common evaluation process and form for assessing online tools or resources for adult education teachers and tutors.
- Evaluate online tools and resources.
- Establish a means for the adult education teachers and tutors to easily access the published results of the microgroup: the assessment tool, a comprehensive list of online tools suitable for adult basic skills teaching and learning, and reviews of the tools.
- To learn more and sign up to be part of this valuable opportunity, go to <https://goo.gl/PZPhmR>

# Online Formative Assessment Tools

## Micro-group with Marie Cora

- Join a small group of colleagues to try out some online formative assessment tools with students in your teaching
- Discuss the tools with peers in a dedicated discussion board on LINCS
- Write up a review of the tools using an online review form
- The reviewed resources will be shared with the broader community
- The project will run from January through April, beginning with an orientation webinar on Thursday, January 7, 2016 at 1:00 pm EST.
- To learn more and sign up to be part of this valuable opportunity, go to <https://goo.gl/3hcGdk>

## 2 LINCS Micro-groups Coming in January 2016

Both micro-groups involve practitioners working together to evaluate online adult basic education tools (including those for basic literacy, ASE, ESOL/ESL)

### Online Formative Assessment Tools Micro-group with Marie Cora

1. Online tools used for formative assessment
- 2. Participants must be teachers or tutors working with students.**
3. Participants must be able to use the formative assessment tools with students.

### Online Tools & Resources Micro-group with Ed Latham

1. Any online tools including those used for administrative purposes
- 2. Participants may be teachers, tutors, administrators or others.**
3. Using the tools with students is not a requirement.

# ■ Questions, Comments



# Evaluation and Contact Information

- Ben Bruno – Media Specialist  
[Ben\\_Bruno@worlded.org](mailto:Ben_Bruno@worlded.org)
- Steve Quann – Educational Technologist  
[steve\\_quann@worlded.org](mailto:steve_quann@worlded.org)
- Susan Finn Miller - LINCS Moderator  
[susanfinn\\_miller@iu13.org](mailto:susanfinn_miller@iu13.org)
- David Rosen - LINCS Moderator  
[djrosen123@gmail.com](mailto:djrosen123@gmail.com)
- Chris Bourret - ESOL Instructor  
[cbourret@verizon.net](mailto:cbourret@verizon.net)
- Ed Latham - Educational Consultant  
[ohgeer@gmail.com](mailto:ohgeer@gmail.com)

**LINCS Website:** <http://lincs.ed.gov/>

**LINCS Help:** [info@lincs.ed.gov](mailto:info@lincs.ed.gov)