NC 1:1 Learning Technology Initiative Update

Joint Legislative Education Oversight Committee
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Dr. Jeni Corn, Friday Institute for Educational Innovation, NC State University

Phil Emer, eLearning Commission

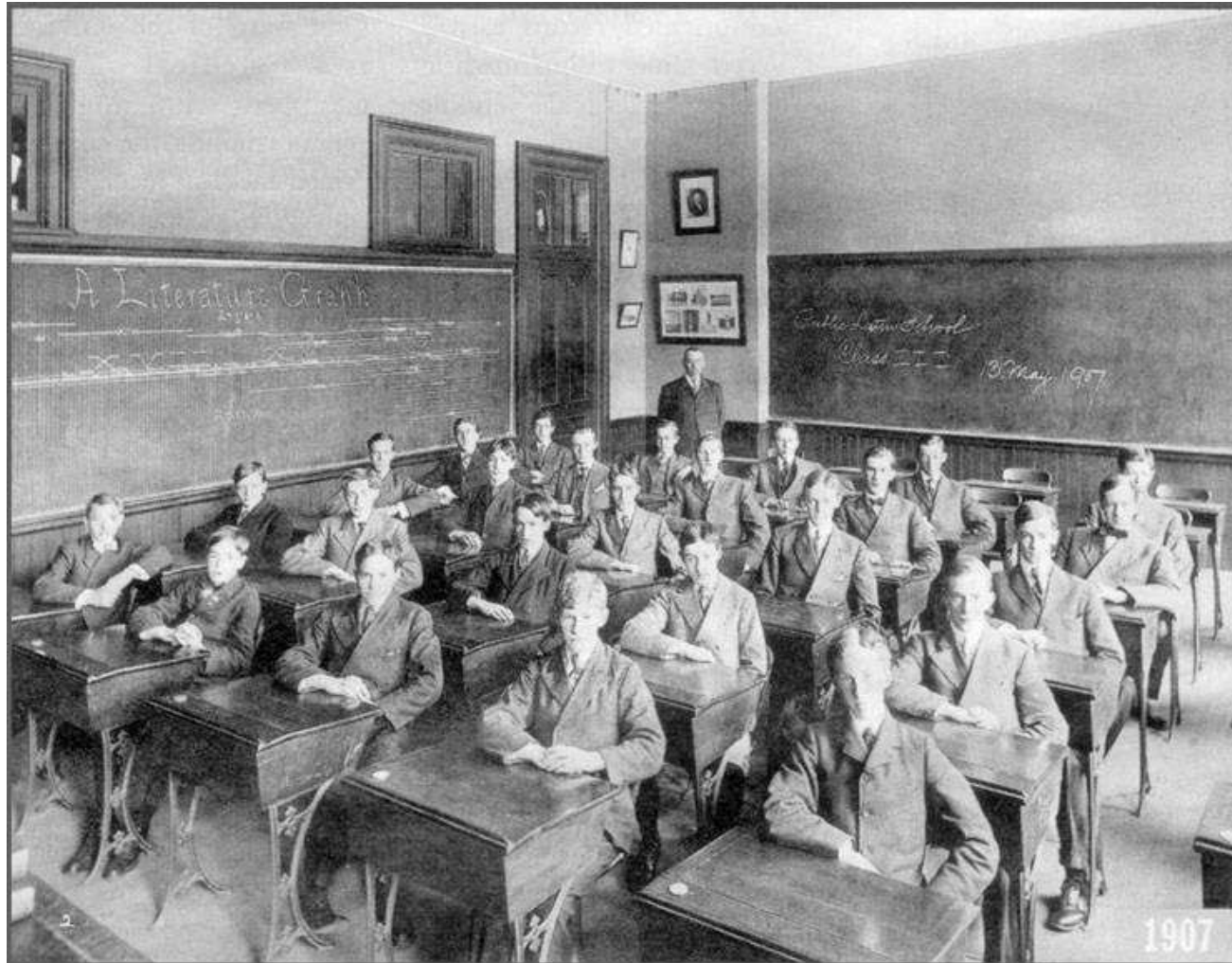# Overview

North Carolina Learning Technology Initiative

- **Purpose**

- **Participants**

- **Evaluation Findings**

- **Lessons learned**

- **Conclusions and next steps**

North Carolina Learning Technology Initiative

- A strategic approach to creating future-ready schools
- Goals of
  - Engagement
  - Equity
  - Economic development
- Creating a *new learning ecology* in our schools
- To prepare future-ready students, we must provide future-ready environments, tools, learning processes and content

A 1907 Learning Ecology

A 2002 Learning Ecology

A New Learning Ecology

A New Learning Ecology

Elements of NCLTI

1. Effective leadership and community support

2. Teachers prepared to use technology to enhance teaching and learning

3. Alignment of standards, curriculum, instruction, and assessment

4. 21st century skills and content integrated into the curriculum

5. Digital content and tools appropriate for students

6. Local instructional technology facilitators/coaches

7. A wireless, multimedia digital device for every student and teacher

8. Broadband connectivity and wireless access throughout the school

9. Supporting technology infrastructure and resources

10. Policies to support future-ready teaching and learning

11. Sustainable funding via public-private partnerships

Builds upon and extends other NC initiatives

- School Connectivity Initiative

- IMPACT Schools

- Accountability and Curriculum Reform Effort (ACRE)

- NC Virtual Public School/Learn and Earn Online

- New Schools Project Early College & Redesigned High Schools

- Center for 21st Century Skills

- LearnNC and eLearning for Educators Online Professional Development Programs

- NC Learning Objects Repository

NCLTI Evaluation Participants

Cohort	School	# Students	# Teachers	Laptops Distributed
1:1 Trad A	Hunt HS	1376	86	To teachers: March 2007 To students: September 2007
1:1 EC A	Davidson EC	113	5	To teachers: November 2007 To students: March 2008
1:1 EC A	Edgecombe EC	124	8	
1:1 EC A	Macon EC	107	4	
1:1 EC A	NRM EC	222	12.5	
1:1 EC A	Rutherford EC	145	6.5	
1:1 EC A	SandHoke EC	152	9	
1:1 EC A	Wayne EC	170	10	
1:1 Trad B	N. Edgecombe HS	1594	82	To teachers: February 2008 To students: September 2008
1:1 Trad B	SW Edgecombe HS	366	30	To teachers: September 2008 To students: January 2009
1:1 Trad B	Tarboro HS	957	63	
1:1 Trad B	Mooresville HS	746	49	
Total		**6072**	**365**	

NC 1:1 LTI Evaluation

Evaluation Questions	Data Sources
1. How have school infrastructures and support systems evolved to meet staff and students' 21st century needs?	*School Archival Data * 1:1 Online Survey * Focus Group/Interviews *Site Visit Checklist *Laptop Repair Checklist * 1:1 PD Inventory/Quality
2. How have staff attitudes and skills changed over time?	* Classroom Observations * 1:1 Online Survey * Focus Group/Interviews
3. How have teachers' instructional practices changed over time?	* Classroom Observations * 1:1 Online Survey * Exemplary Lesson Plans * Focus Group/Interviews
4a. How have students' 21st Century Skills changed over time? 4b. How have student learning and achievement in core academic subjects changed over time?	* Classroom Observations * 1:1 Online Survey * EOC Data * Attenance, Discipline, Graduation Rate, Dropout Rate

NCLTI Evaluation Findings

Instructional Practice

1. Teachers increased *use of technology* for both planning and instruction.

2. Teachers and students reported ready Internet access increased the frequency, reliability, and quality of *communication across the school.*

3. Teachers moved from assigning independent work to *collaborative, project-based lessons.*

4. Teachers shifted to *technology-enhanced modes of assessment.*

NCLTI Evaluation Findings

Student Performance

1. *Attendance* was above 92% in all 1:1 schools and remained virtually unchanged over the three-year period.

2. *Dropout rate* across the 1:1 schools decreased, on average, between 1% and 2%.

3. *Student engagement* increased in the 1:1 learning environment.

4. *Students' 21st century learning skills* increased in the 1:1 learning environment.

5. *Student standardized test scores* do <u>not</u> improve rapidly , but evidence from other states has found increases over longer implementation periods.

NCLTI Lessons Learned
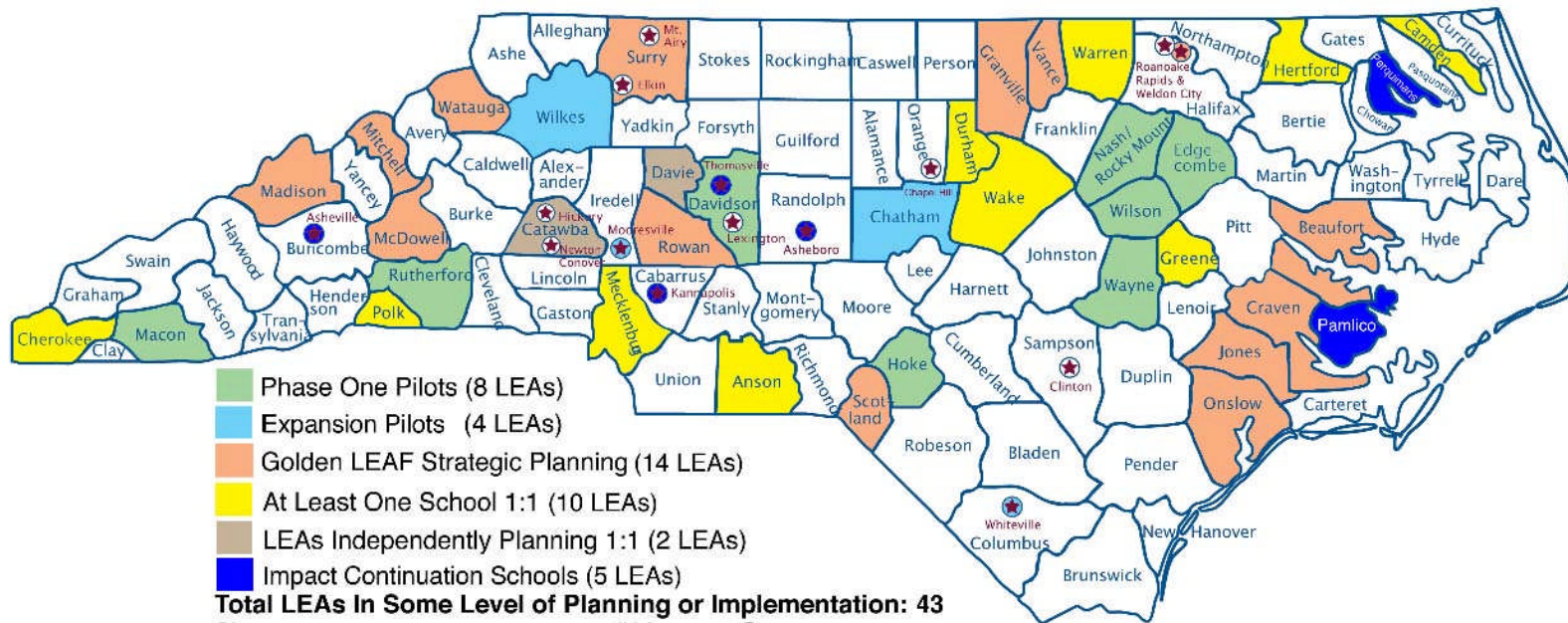
1. At least six months is required for planning and preparation.
2. Consistent, supportive, distributed leadership promotes adoption and buy-in from teachers and students for the 1:1 learning innovation.
3. Ongoing content-based professional development is imperative.
4. Technology Facilitators play a significant role.
5. Student safety and acceptable use must be addressed without limiting access in ways that interfere with educational uses.
6. Classroom management strategies and tools need improvement.
7. More effective approaches to technology infrastructure and support are needed.

Consistent with other 1:1 initiatives

- Programs in Maine, Texas, Pennsylvania, Michigan, Florida, Virginia, Australia, Alberta, etc.

- Student engagement
  - Increased engagement according to both student and teacher reports

- Classroom activities
  - More active, reflective, collaborative, and project based learning

- Student achievement *over time*
  - Substantial increases in writing scores
  - Increases in content areas related to teacher preparation and classroom uses of technology
  - Improved test scores for disadvantaged students

A Snapshot of 1:1 Related Activity

Phase One Pilots (8 LEAs)
Expansion Pilots (4 LEAs)
Golden LEAF Strategic Planning (14 LEAs)
At Least One School 1:1 (10 LEAs)
LEAs Independently Planning 1:1 (2 LEAs)
Impact Continuation Schools (5 LEAs)
Total LEAs In Some Level of Planning or Implementation: 43

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Public-Private Partnership

- Local education agencies and local school boards
- Golden Leaf Foundation
- SAS
- NC DPI
- NC New Schools Project
- Friday Institute
- MCNC
- Cisco, AT&T, Intel, Lowe's
- …and many more

NCLTI Follow-on Work

- **Golden Leaf Foundation strategic planning project**
- **School Redesign 2.0**
- **Children's Internet Protection Act (CIPA) guidance**
- **Race to the Top**
- **NC Education Cloud**

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