

HIGHER STUDENT OUTCOMES TODAY IN THE UCPS CLASSROOMS OF TOMORROW

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Dissertation in Professional Practice
Proposal Presentation
May 2, 2017



What is a Classroom of Tomorrow?

Modular Furniture

Wraparound Markerwall

Interactive Display Panels



Soft Seating

Audio System

21st Century Skill Building (4cs)

PBL

Union County Public Schools – Yesterday, Today, and Classrooms of Tomorrow

- 1993 - UCPS formed
- 2000 - UCPS builds its first new traditional high school in 40 years.
- 2003 to 2013 - UCPS went from 25,680 students to 41,000 students.
- 2000 to 2009 - UCPS built 23 new schools.
- 2005-2006 - Demographics (71.8%W, 15.13%B, 9.8%H, and 3.26%O).
- 2015-2016 – Demographics (64.42%W, 12.86%B, 16.59%H, and 6.12%O)

School District Name	EOG Reading Grade 3 (CCR)	EOG Reading Grade 3 (GLP)	EOG Reading Grade 4 (CCR)	EOG Reading Grade 4 (GLP)	EOG Reading Grade 5 (CCR)	EOG Reading Grade 5 (GLP)
Cabarrus County Schools	49.5	59.1	50.3	61.8	48.3	60.6
Cumberland County Schools	46.5	57.0	48.7	63.2	42.4	57.9
Durham Public Schools	36.9	45.7	34.1	44.9	33.6	44.0
Forsyth County Schools	42.8	51.9	42.0	51.8	38.6	50.1
Gaston County Schools	41.3	52.5	38.5	51.3	35.9	48.3
Guilford County Schools	44.0	53.9	40.0	51.3	38.3	48.7
Johnston County Schools	48.6	60.3	45.3	58.8	43.3	56.3
Charlotte-Mecklenburg Schools	49.6	58.5	46.6	57.9	44.3	55.5
Union County Public Schools	58.3	68.0	56.2	68.2	55.5	67.5
Wake County Schools	59.8	68.4	57.5	67.8	53.7	64.8

School District Name	EOG Math Grade 6 (CCR)	EOG Math Grade 6 (GLP)	EOG Math Grade 7 (CCR)	EOG Math Grade 7 (GLP)	EOG Math Grade 8 (CCR)	EOG Math Grade 8 (GLP)
Cabarrus County Schools	46.8	55.1	43.6	50.5	42.9	49.4
Cumberland County Schools	34.7	43.3	36.0	43.5	29.8	36.9
Durham Public Schools	29.2	34.9	26.9	31.8	26.5	31.7
Forsyth County Schools	38.9	45.6	36.9	42.9	31.9	37.1
Gaston County Schools	41.1	47.7	36.7	43.5	33.2	39.9
Guilford County Schools	44.2	50.6	39.8	46.3	36.8	42.2
Johnston County Schools	39.5	48.1	40.7	48.0	39.0	45.5
Charlotte-Mecklenburg Schools	49.0	55.4	47.3	53.4	44.2	49.5
Union County Public Schools	62.7	70.3	61.9	67.7	53.9	60.3
Wake County Schools	58.8	65.4	54.2	60.6	48.6	54.2

Union County Public Schools – Yesterday, Today, and Classrooms of Tomorrow (Continued)

- Innovation is in our DNA
- GIG
 - 2007 – Complete overhaul of technology hardware infrastructure
 - Spring 2010 - 1:1 pilot
 - 2010-2012 - 6-8 1:1 Netbooks
- My Size Fits Me
 - Fall 2013 – 24,000 Chromebooks
 - Fall 2014 – 12 Classrooms of Tomorrow
- What is my school's brand?
 - School of Technology
 - Leadership
 - STEM



Introduction of Problem

- UCPS began installing Classrooms of Tomorrow in 2014 as an innovative pilot program.
 - Innovative initiative to engage students, increase student achievement, improve the quality of teaching and learning, and improve teacher retention rates.
- As of February 2017, UCPS has installed 99 Classrooms of Tomorrow (CoT)
 - \$29,300 per classroom
 - \$3,183,519 as of January 2017
- Outside of anecdotal evidence, no key evidence of proof that the investment in the CoT is increasing student outcomes, improving the quality of teaching and learning, and improving teacher retention rates.
- In the age of accountability for public schools, where what gets measured matters, UCPS has chosen the CoT initiative without measurable indicators to be able to publicize the impact and results as well as direct the future investment in this program.

UCPS Classrooms of Tomorrow Progression

August 2014	August 2015	January 2016	July/August 2016	April 2017
East Elementary	East Elementary	New Town Elementary (7)	Walter Bickett Elementary (16)	Walter Bickett Elementary (22)
Marshville Elementary	Marshville Elementary	Sun Valley Elementary	East Elementary (6)	■
Piedmont Middle	Piedmont Middle	Waxhaw Elementary (4)	Porter Ridge High CTE	■
Porter Ridge Middle	Porter Ridge Middle	Marvin Ridge Middle	Cuthbertson High CTE (4)	■
Monroe High	Monroe High	East Union Middle (4)	Antioch Elementary	■
Porter Ridge High	Porter Ridge High	Piedmont High (4)		■

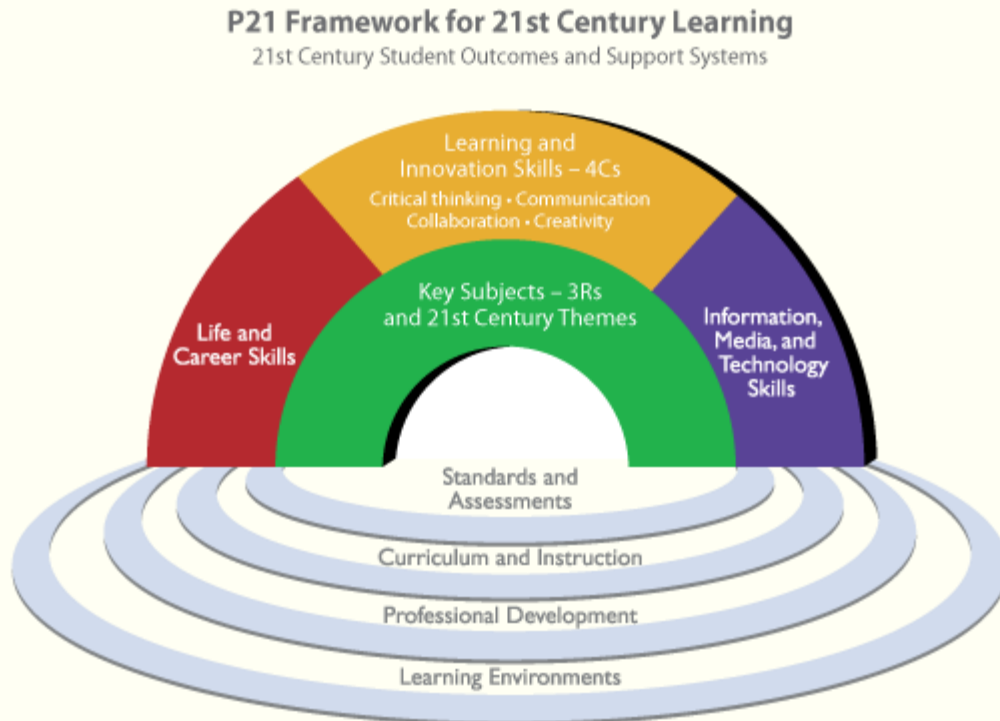
Review of Literature – Classrooms of Tomorrow is the Gap

- Apple Classrooms of Tomorrow – 1985 – Computers
- ACOT II – 2008
 - Understanding 21st Century Skills and Outcomes
 - Relevant and Applied Curriculum
 - Culture of Innovation and Creativity
 - Ubiquitous Access to Technology
- Use of Technology in the Classroom
 - Historical Analysis – Purdue University
 - Glennan and Melmed (1996)
 - Hixon and Buckenmeyer (2009)
- The ConnectED Initiative (2013)
 - 1 gig internet connectivity by 2018
 - PD
 - Mishra and Koehler (2006)
 - Hixon and Buckenmeyer (2009)
 - Davies (2011)



Nell, 2013

Review of Literature (Continued)



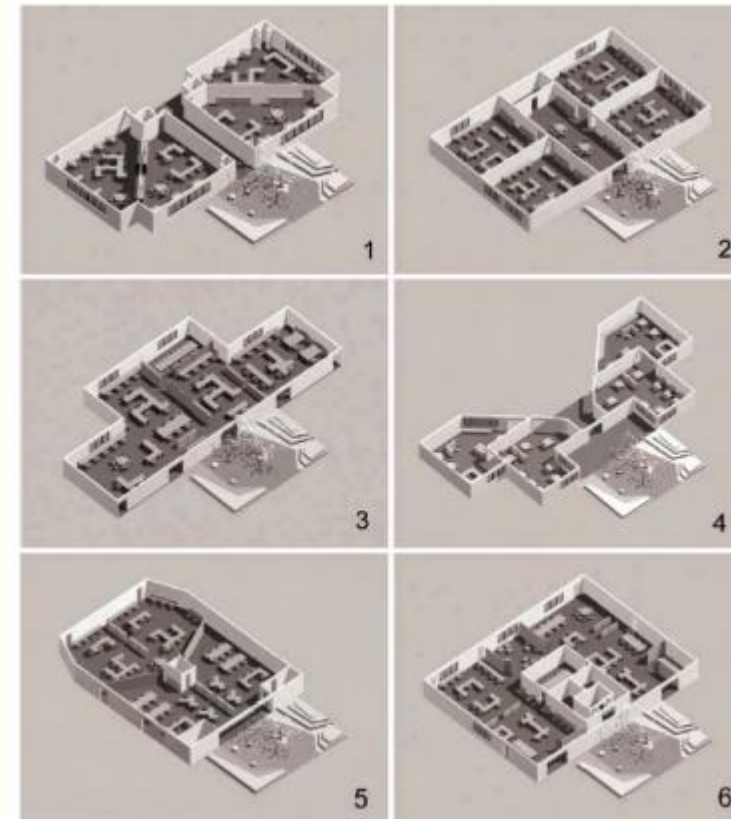
© 2007 Partnership for 21st Century Learning (P21)
www.P21.org/Framework

■ Educational Reform

- National Commission on Excellence in Education (1983)
 - Allen (2008)
- High Stakes Testing
- MERA 1993
 - Massachusetts Comprehensive Assessment System
- Diane Ravitch: *Left Back: A Century of Failed Reforms*
- NCLB 2001
 - Part D – Enhancing Education Through Technology
 - Wayne et al. (2008)
- AACTE and the Partnership for 21st-Century Skills

Review of Literature (Continued) – Educational Theory and Classroom Environmental Design

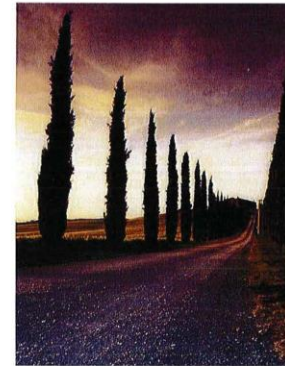
- **Constructivist Theory**
 - Kumari (2014)
 - Learning through interactions and personal interpretations of new ideas and occurrences.
 - Molenda (2009)
 - Bozkaya, Aydin, and Kuntepe (2012)
- **Howard Gardner (Multiple Intelligences)**
 - Jackson et al. (2009)
- **Blooms Taxonomy Revised**
 - Remembering, Understanding, Applying, Analyzing, Evaluating, Creating
 - Hinrichs and Wankel (2011)
- **Classroom Environment**
 - Fisher (2005)
- **Khe Foon and Brush (2006)**
 - Barriers to integration of technology – Institutional leadership and practices, attitudes of teachers, high-stakes testing, and culture.
 - Hew and Brush (2006) – Overcoming barriers through shared vision, technology plan, overcoming shortage of resources, PD.



Fisher (2005)

The Classrooms of Tomorrow Strategic Planning Team

- New Superintendent
- Consultant Hired to Conduct Assessment of Technology and Innovation within UCPS (including our Classrooms of Tomorrow)
 - Issues
 - CoT were started without measures of success in place
 - No implementation strategy
 - CoT were expanded without justification
 - Curriculum and Instruction Department was never a part of the planning, design, implementation, and operations of CoT
 - Recommendations
 - No further expansion without results.
 - Cross functional team to be built to determine the plan for CoT.



TECHNOLOGY ASSESSMENT

UNION
COUNTY
PUBLIC
SCHOOLS

October 4, 2016

The Classrooms of Tomorrow Strategic Planning Team (Continued)



Growing Possibilities...

- Strategic Planning Team Members
 - Deputy Superintendent of Teaching and Learning
 - Interim Deputy Superintendent of Instructional Technology and Operations
 - Director of Elementary Education
 - Director of Middle Schools
 - Director of High Schools (Researcher and CoT SPT Leader)
 - Lead Instructional Technology Facilitator
 - Secondary Education Administrative Secretary
- Marching orders
 - Determine the future of the UCPS Classrooms of Tomorrow.
 - All changes must be in place by the start of the 2017-2018 school year.

The Classrooms of Tomorrow Strategic Planning Team (Continued)

- Accomplishments

- Conducted a SWOT analysis
- Developed a future plan for the UCPS CoT that included the goals of UCPS while using equity as a guiding principle.
- Reassigned several CoT from our highest performing schools to our lowest performing schools.
- Developed a UCPS Classrooms of Tomorrow Strategic Plan
 - Problem Statement/Business Case
 - Reason for Change
 - Vision
 - Business Goals
 - Current Situation and Opportunities
 - Project Scope (In scope and out-of-scope)
 - Measures of Success



Methodology



Growing Possibilities...

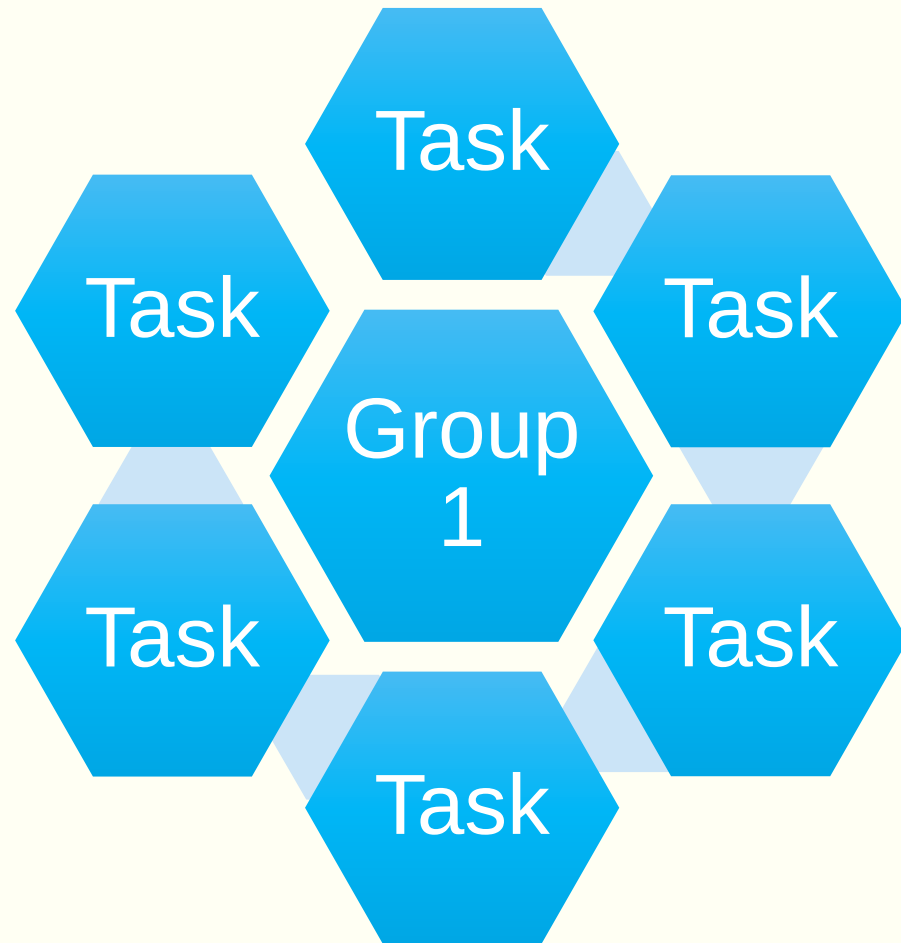
- Measure of Success from CoT Strategic Plan – High Quality PD
 - Milestone – Implement and create PD focused on meaningfulness, competence, impact, and choice
- The UCPS Instructional Division will create sixteen hours of PD for teachers and administrators who are expected to teach in the Classrooms of Tomorrow.
- The Question that will drive the research will be:
 - Has the initial 16 hour professional development opportunity been perceived as engaging and relevant by the teachers (and principals) teaching in the UCPS Classrooms of Tomorrow?

Methodology (Continued)

- Proposed Design of the UCPS CoT Study
 - Garet, et al. (2001)
 - UCPS professional development effectiveness survey (estimated 50 participants)
 - Two standardized professional development effectiveness focus group interviews.
 - 6-10 veteran CoT teachers
 - 6-10 first-year CoT teachers
 - Individual professional development effectiveness interview with three Monroe elementary cluster school principals.



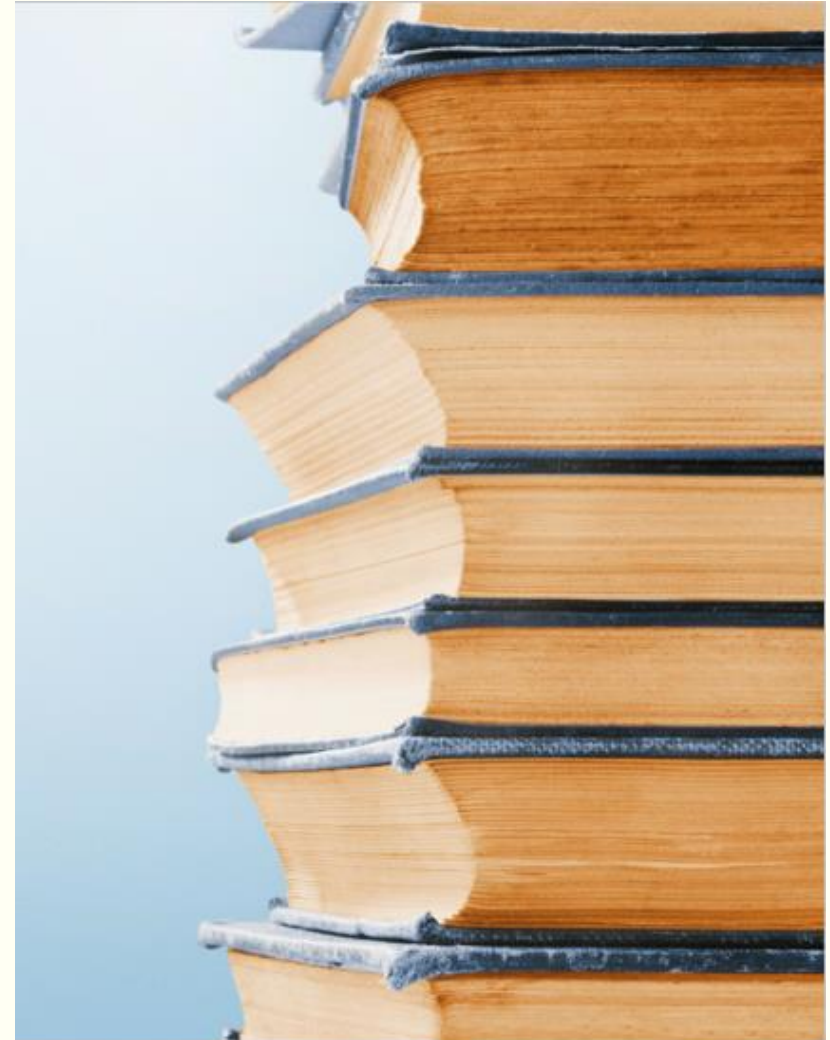
Methodology (Continued)



- Instruments of Proposed Study
 - Qualtrix Professional Development Survey (15min)
 - Appendix M of the Dissertation in Professional Practice
 - Four questions that require the participant to select one response from a drop down menu (Warm-Up)
 - Fifteen Likert style questions (1-5)
 - Five open-ended responses questions.
 - Focus Groups (45 min)
 - Appendix N of the Dissertation in Professional Practice
 - Individual Interview (30 min)

Methodology (Continued)

- Survey
 - T-Test analysis of individual survey questions
 - Mean averages of three or better for deterring PD Effectiveness
 - Standard deviation/Standard error
- Focus Groups and Principal Interviews
 - Look to use coding software such as (LIWK – Linguistics Inquiry and Word Count) or unbiased coders to determine whether or not themes emerge that either support or do not support the data analyzed from the survey.
 - Questions that project into the future will be analyzed as standalone questions and used to inform UCPS of future professional development opportunities



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Request for Approval of Conducting Professional Development Effectiveness study on behalf of Union County Public Schools

- Questions



Union County Weekly, August 2015

