HIGHER STUDENT OUTCOMES TODAY IN THE UCPS CLASSROOMS OF TOMORROW

Brad Breedlove
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.
- 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)

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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

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<th>August 2014</th>
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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
    - Hixon and Buckenmeyer (2009)
    - Davies (2011)
Review of Literature (Continued)

- 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.
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.
The Classrooms of Tomorrow Strategic Planning Team (Continued)

- 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

- 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**
  - Qualtix 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
References

References (Continued)


References (Continued)

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

- Questions