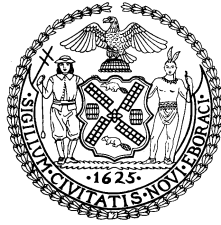


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The City of New York
Community Board 8 Manhattan
Youth, Education & Libraries Committee
Subject: Technology in the 21st Century Classroom
The Chapin School
Monday, February 25, 2019

Minutes

CB8 Committee Attendees: Dori Newman (Session Co-Leader), Cece King (Session Co-Leader), Sophia James (Session Co-Leader), Debbie Teitelbaum (Committee Co-Chair), Peter Patch (Committee Co-Chair), Michael Hoffman

Guest Speakers:

- **Phyllis Dugan**, Middle School Technology Integrator at Riverdale Country School
- **Renae Williams**, Computer Science for All, Division of Teaching & Learning, NYC DOE
- **Kyle Liao**, Instructional Technology Coach + Director of Community Growth at Educate

Call to order – By Sophia James, Cece King & Dori Newman at 6:50pm.

Principal Discussion Points:

- (1) Profile of the NYC School System:
 - a. million students – largest school system in US
 - b. 19% Students with disabilities
 - c. 74% disadvantaged
- (2) Project RED conducted a survey of technology in the classroom. Among the key findings:
 - a. Technology can improve student achievement, and
 - b. Technology can be cost effective when properly implemented.
 - c. The bottom line: There are significant opportunities to improve education returns through the use of technology – to transform teaching and learning
- (3) Project RED: The purpose of Project RED was to create a “Revolution in Education.” The 7 key findings of Project RED are as follows:
 - (1) Implementation of classroom technology is the key to success. There are nine key implementation factors that are linked most strongly to education.
 - (2) Properly implemented, classroom technology can save money.
 - (3) 1:1 Schools – where there is one device for each student – which addresses “key implementation factors” outperform all schools and all other 1:1 schools.
 - (4) The principal’s ability to lead change is critical. Change must be modeled and championed at the principal level.
 - (5) Technology-transformed intervention improves learning.
 - (6) Online collaboration increases learning productivity and student engagement.
 - (7) Daily use of technology delivers the best return on investment (ROI).
 - (8) These findings are presented in more detail in the appendix.

- (4) How should technology be properly implemented? Does the role of technology differ by academic discipline?
 - a. Technology can make for a more dynamic and engaging classroom experience.
 - b. Technology can also help save time for teachers, and generate feedback between the teacher and the student.
 - c. Technology can be applied across all disciplines.
 - d. Effective use of technology requires a clear sense of the purposeful role for the technology. This should not be taken for granted.

- (5) Defining the 'Instructional Vision'
 - a. Planning for the implementation of technology should begin with a conversation about the instructional vision. This will depend on the educational philosophy of the school, and the intended outcomes of teaching and learning.
 - b. The conversation for each teacher should begin with a conversation focused on their teaching philosophy, and how the technology can support that philosophy.

- (6) Good pedagogy is the starting point for teaching and learning.
 - a. If the teacher does not have a good pedagogy, the students will not have a productive learning experience. If you don't have a good pedagogy – your students will not learn.
 - b. A technology device can help a student solve a well-defined problem, using an 'inquiry-based mindset.'

- (7) How technology is currently being used in the classroom:
 - a. Some schools have a computer lab, or computers made available from a computer cart.
 - b. Preferably, all students will have access to a device, to ensure 'equity' in the classroom.
 - c. Depending on the school and grade, the student may return the computer at the end of a session, or a day. In other cases, the student may be able to take the device home at night.
 - d. The parents may be concerned about how their child is using the computer at home, and/or their ability to control how their child is using the device.
 - e. The teacher should partner with the parents, to create positive expectations about how the computer will be used at home, in relation to homework and/or school projects.
 - f. One way to reverse the parent-child relationship is for the student to teach the parent what they are learning at school, and how they are using the computer in a particular exercise.

- (8) Technology can be used to encourage students to collaborate, to promote life skills, such as group-based learning and time management for longer term projects.

- (9) Technology, especially cell phones, can be a distraction in the classroom. Some students can learn discipline in the use of technology, and other students will need to learn these skills. Parents can play an important role in having a conversation about the proper role and use of technology with their child.
 - a. The teacher may ask the student 'What is an effective use of technology?' The student may have some good insights into how to use a device.
 - b. Learning how to use a device to solve a particular problem may be an iterative process.
 - c. The teacher need not assume that they always need to have the answer on how to use the technology. As an alternative, the teacher may guide the student to think about how to apply the technology for a given problem.
 - d. Each student will have a different skill set. The teacher can defer to the student on how to figure out the way to solve a particular problem – encouraging the student to learn how to navigate the technology themselves.

- (10) Administrators have an important role and responsibility in supporting the effective deployment and use of technology. This includes providing enough time for the teacher and student to learn how to navigate and use a particular device. Scheduling must be sufficient to allow this process to work.
- (11) Live tutoring online is one approach to using technology. The 'learning management platform' may allow the teacher to see what questions the students are asking.
 - a. The Google Chrome webstore is one site teachers can use. There is a Google Chrome extension, for example, that takes all ads off the website, and can make the text easier to read – by putting it on a single line.
- (12) If the computer is being used to create an online classroom, facility with the learning management platform, and the design of the learning experience will be essential to have a satisfying and productive learning experience.

Old Business: Testing and Admission to Specialized High Schools.

- (1) A committee member raised the question of whether the Committee wants to take a position on the Mayor's Plan to revise the entrance process for Specialized High Schools. This includes both the role of the Entrance Exam, and the summer Discovery Program to support students near the cutoff point on the admission test, in order to gain admission to one of the specialized high schools.
- (2) The Chancellor is reportedly considering getting rid of the Gifted and Talented Program. He may also decide to get rid of the 'Screen Schools,' where the school can see whether the student ranked that school at the top of their list of preferred schools.
- (3) There is also the question of what plan each school is going to create and adopt to promote diversity.
- (4) The Committee recognizes these are challenging and complex issues. They plan to address them at a later committee meeting in the spring

Appendix 1

Technology in the 21st Century Classroom

Information Sheet

1. 6 Pros & Cons of Technology in the Classroom in 2019:

Technology in education is the biggest change in teaching we will ever see. For years, policy makers, teachers, parents and students alike have been weighing the potential benefits of technology in education against its risks and consequences. But now the debate is more pressing than ever, as curricula increasingly incorporate technology and professors experiment with new teaching methods. What does it really mean to use technology in the classroom?

<https://tophat.com/blog/6-pros-cons-technology-classroom/>

2. Top 5 Benefits of Technology in the Classroom:

Is this advancement to the detriment of your students, or does it benefit their learning? According to the Pew Research Center, 92% of teachers said that the internet has a major impact on their ability to access content, resources, and materials.

<https://www.waldenu.edu/programs/education/resource/top-five-benefits-of-technology-in-the-classroom>

3. Benefits of Technology in the Classroom:

Educators, too, have seen firsthand the benefits of technology in the classroom. According to a study by IT Trade Association CompTIA, around 75 percent of educators think that technology has a positive impact in the education process. Educators also recognize the importance of developing these technological skills in students so they will be prepared to enter the workforce once they complete their schooling. The impact that technology has had on today's schools has been quite significant.

<https://www.teachhub.com/benefits-technology-classroom>

4. Project RED:

In 2010, Project RED conducted the first large-scale national study to identify and prioritize the factors that make some U.S. K-12 technology implementations perform dramatically better than others.

Appendix 2

THE RED STUDY – ‘REVOLUTION IN EDUCATION’

Key Findings

Finding 1: Nine key implementation factors are linked most strongly to education success.

Although educational technology best practices have a significant positive impact, they are not widely and consistently practiced. Effective technology implementation in schools is complex, with hundreds of interrelated factors playing a part. A failure of just one factor can seriously impact the success of the project.

Project RED has identified the nine key implementation factors (KIFs) that are linked most strongly to the education success measures.

Key Implementation Factors

1. Intervention classes: Technology is integrated into every intervention class period.
2. Change management leadership by principal: Leaders provide time for teacher professional learning and collaboration at least monthly.
3. Online collaboration: Students use technology daily for online collaboration (games/simulations and social media).
4. Core subjects: Technology is integrated into core curriculum weekly or more frequently.
5. Online formative assessments: Assessments are done at least weekly.
6. Student-computer ratio: Lower ratios improve outcomes.
7. Virtual field trips: With more frequent use, virtual trips are more powerful. The best schools do these at least monthly.
8. Search engines: Students use daily.
9. Principal training: Principals are trained in teacher buy-in, best practices, and technology-transformed learning.

Finding 2: Properly implemented technology saves money.

Substantial evidence shows that technology has a positive financial impact, but for best results, schools need to invest in the re-engineering of schools, not just technology itself. Properly implemented educational technology can be revenue-positive at all levels—federal, state, and local. Project RED respondents report that technology contributes to cost reductions and productivity improvements—the richer the technology implementation, the more positive the impact.

Finding 3: 1:1 Schools employing key implementation factors outperform all schools and all other 1:1 schools.

A 1:1 student-computer ratio has a higher impact on student outcomes and financial benefits than other ratios, and the key implementation factors (KIFs) increase both benefits.

Continuous access to a computing device for every student leads to increased academic achievement and financial benefits, especially when technology is properly implemented.

In general, respondents say that schools with a 1:1 student-computer ratio outperform non-1:1 schools on both academic and financial benefits.

Finding 4: The principal's ability to lead change is critical. Change must be modeled and championed at the principal level.

The impact of a good principal has been widely documented. Good principals also contribute to distributive leadership, in which team members surrounding the principal play an important role. As shown in earlier studies, strong district leadership is also essential for successful schools. All levels of leadership are important, individually and collectively, including school boards, superintendents, and assistant superintendents for curriculum, instruction, technology, finance, and operations.

Finding 5: Technology-transformed intervention improves learning.

Technology-transformed intervention classes are an important component in improving student outcomes. Project RED defines technology-transformed intervention classes as those where technology plays an integral role in the class. Generally, every student has a computer, and the curriculum is delivered electronically. Students move at their own pace. The teacher is heavily involved but spends most of his or her time in one-on-one or small- group mode rather than lecture mode.

Project RED found that technology-transformed interventions in ELL, Title I, special education, and reading intervention are the top-model predictor of improved high-stakes test scores, dropout rate reduction, course completion, and improved discipline. No other independent variable is the top-model predictor for more than one education success measure.

This finding also illustrates the power of the student-centric approach enabled by technology, where students typically work at their own pace. Each student can take the time required to complete the course with demonstrated achievement. A few students will take longer than the traditional semester length, but not many.

Finding 6: Online collaboration increases learning productivity and student engagement.

Online collaboration contributes to improved graduation rates and other academic improvements. Collaboration and interaction among students have long been viewed as important factors in improving student achievement, and participation in study groups is a good predictor of success in college.

Finding 7: Daily use of technology delivers the best return on investment (ROI).

Schools must incorporate technology into daily teaching to realize the benefits. The daily use of technology in core classes correlates highly to the desirable education success measures (ESMs). Daily technology use is a top-five indicator of better discipline, better attendance, and increased college attendance.

More detail on Project RED can be found at the following website: <https://one-to-oneinstitute.org/research-overview>.

Peter Patch and Debra Teitelbaum, Co-Chairs