New York School of One

Summary

School of One is a New York City Department of Education project that aims to provide highly personalized tuition through giving each student his or her own learning playlist, and through that approach to improve learning. Technology is used to manage this process leaving teachers more time to focus on quality of education. A pilot summer school of the School of One in 2009 and in September 2010, the School of One team opened full-year programs focusing on middle school mathematics in the three New York schools in Manhattan, Brooklyn, and the Bronx.

Location

New York City, U.S.

Aims

The School of One mission is “to provide students with personalized, effective, and dynamic classroom instruction so that teachers have more time to focus on the quality of their instruction.”

A further intention is that of “innovating instructional practices to help schools better prepare students for careers in the 21st century."

To achieve this mission, School of One revises traditional classroom teaching approaches. Instead of one teacher managing 25-30 students in a classroom, each student participates in his or her own daily program of learning which can include a combination of teacher-led instruction, one-on-one tutoring, independent learning, and work with virtual tutors.

The current focus of the School of One project is mathematics.

Description

New York City Department of Education is responsible for more than 1600 schools, 1.1 million students, and an annual budget of $21 billion. Learning is supported by 80,000 teachers and there have been 335 new schools since 2002.

School of One is the brainchild of New York City Public Schools Chancellor Joel Klein and Chief Executive for Human Capital Joel Rose and has been supported through a U.S. Department of Education i3 development grant and Cisco.

Rather than teaching students in traditional classroom cohorts, School of One provides each student with their own program of learning or “playlist” at the beginning of each day, based on their personal academic strengths and needs. As a result learning is not standardized in the traditional way, but students in the same school or classroom may have profoundly different learning experiences and instruction tailored to the skills they require and the ways in which they prefer to learn. Technology has been designed to play a central supporting role in planning and learning, leaving teachers more time to focus on quality and their teaching role. In these ways learning should be improved and students’ preparation for high school and beyond should be enhanced.

School of One has the following key components:

- It builds a learning progression through a discrete set of skills designed by pedagogical experts.
- It gathers all available data about each student and, based on that information, creates a unique set of skills from the learning progression for each student called a playlist.
- It sources instructional content from a multitude of sources across nine instructional modalities.
- A state-of-the-art learning algorithm analyses the data from each lesson and creates a unique daily schedule for each student and teacher.
- Students take individualized daily assessments—the playlist update—to assess the mastery of the skill they have studied.

Stages in development of the project have been described as follows:

- Year 1 of the grant will focus on the development of the technology platform to increase automation in the process and build capacity to support more schools.
- In years 2-3, School of One will be implemented in four new schools for students in sixth through eighth grade mathematics providing the professional development and site support needed to effectively implement the model. It is estimated that 3000 students will be served by the project each year.
- Finally, the proposed project will include a rigorous evaluation which will provide feedback to enhance operations and will determine the effect School of One has had on students' mastery of mathematics as measured by regular periodic assessments and standardized mathematics tests.

School of One has gained significant attention, for example, being named by Time magazine as one of the top 50 inventions of 2009. Others have spoken with enthusiasm about its potential.

Joel Rose, the founder of School of One, said, “The world has changed dramatically over the past century, and using technology to expand learning opportunities for students is both necessary and promising. Our hope is to provide teachers with a powerful tool that enables them to meet the needs of each student and allows them more time to focus on the quality of instruction.”

Phyllis Tam, principal of Middle School 131, said, “The potential for School of One is enormous. My teachers are always looking for better ways to personalize their instruction, especially given all of the student data we now have available. School of One not only makes that possible, but it allows teachers to spend more time focusing what they do best—creating and delivering great lessons for kids. School of One has challenged my thinking on how technology can enhance the role of teachers by extending learning beyond the four walls of a traditional classroom.”

Organization of learning at the School of One has been described in a New York Times article as follows:

“Once the students arrive at school, they receive their individual playlists identifying the lessons they have to complete for the day, which could involve virtual tutoring online, computer worksheets, or small-group lessons with a classroom teacher. Their schedules are also displayed on large television screens, akin to flight schedule displays in airports.

“In a room a few steps away, several administrators spend their day looking over more than a dozen computer screens displaying the students’ playlists, how quickly those students are progressing through their tasks and what the students are looking at on their own screens.”

Arthur E. Levine, President of Woodrow Wilson National Fellowship Foundation, writing in the Huffington post on 16 September 2009 described School of One and its methodology in greater detail. He said, “Student learning becomes the focus—the driver—of schooling.”

Specifically, the School of One translates fifth through seventh grade math into 77 skill and knowledge areas. Students are assessed on their mastery of each area, and the program is geared to each student's areas of strength and weakness. The goal is for each student to master all 77 skills and body of knowledge.

By tying instruction to each student's most effective learning style, the School of One individualizes student learning. A learning profile is generated for each student based upon prior academic performance, student and parent surveys, and ongoing assessment in the program. Based on the profile, students are assigned to particular methods of instruction—small and large group instruction, peer tutoring, individual tutoring, asynchronous instruction, and independent study. To date, a bank of 1100 lessons in different modalities have been developed.

After 100 years with "time" as the dominant factor in education, the School of One eliminates it as the constant in education. Instead, time becomes variable and students advance by mastery.

Educators benefit, too. They effectively get rid of high-stakes tests for assessments, instead introducing "just-in-time" assessments in each skill and knowledge area. They also do away with the need for students to repeat a grade or entire course, including subject matter they have already mastered.”

Staffing

The School of One team worked closely with each school's leadership to select teachers for the pilot programs. In addition the team identified two teacher–residents from local universities and three high school interns with a strong record of mathematics achievement. The group participated in a two-day professional development and planning session as preparation for the launch.

Cost/Price

The program cost roughly $1 million to develop for the summer 2009 program, with two-thirds of the money coming from private donations. In a grant proposal aimed at donors, administrators predict that the cost will grow to $9.1 million in 2010 and $13.3 million in 2012, when the program is expected to be used in 20 schools.

Joel Rose said the cost of running schools using this model would be about the same as that of operating traditional schools.

Leading Practice

One element of leading practice is associated with School of One's shift from the traditional focus of time as the determinant of progression to personal understanding and development of skills.

The use of technology and development of sophisticated progress of tracking within mathematics enables new levels of personalization and individual playlists that are updated on a daily basis.

Impact

The project started with a summer school in 2009 and development into year-long courses in 2010. A full evaluation is planned, but currently it is perhaps too early to report clear evidence of impact on learner performance.

Similar and Related Products

Re-inventing Schools Coalition Performance-based Learning:
www.reinventingschools.org/resources/the-risc-approach-to-schooling/

Lumiar Schools Individual Programs of Learning: www.lumiar.org.br/2009/home.php

Read the Education Best Practices Whitepaper and other case studies at:
www.cisco.com/web/strategy/docs/education/CiscoEdBestPracticesWhitePaper-D2_V1.pdf

Sources

www.idealist.org/if/i/en/av/Org/204731-191

http://schools.nyc.gov/NR/rdonlyres/9435AD08-90F3-42AA-838C-6372C3B5D2E6/0/SchoolofOneBrochure_FINAL.pdf

http://data.ed.gov/grants/investing-in-innovation/applicant/14919

www.nytimes.com/2009/07/22/education/22school.html

www.huffingtonpost.com/arthur-e-levine/the-school-of-one-the-sch_b_288695.html

www.edutopia.org/blog/personalized-learning-school-of-one

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.