PROMISING PRACTICES IN BLENDED AND ONLINE LEARNING

# Blending Learning:
## The Evolution of Online and Face-to-Face Education from 2008–2015

**iNACOL**
International Association for K-12 Online Learning

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iNACOL
International Association for K-12 Online Learning

The mission of the International Association for K–12 Online Learning (iNACOL) is to ensure all students have access to a world-class education and quality blended and online learning opportunities that prepare them for a lifetime of success. iNACOL is a non-profit organization focused on research; developing policy for student-centered education to ensure equity and access; developing quality standards for emerging learning models using online, blended, and competency-based education; and supporting the ongoing professional development of classroom, school, district and state leaders for new learning models. **Learn more at www.inacol.org.**

# About Promising Practices in Blended and Online Learning

In 2008, iNACOL produced a series of papers documenting promising practices identified throughout the field of K–12 online learning. Since then, we have witnessed a tremendous acceleration of transformative policy and practice driving personalized learning in the K–12 education space. State, district, school, and classroom leaders recognize that the ultimate potential for blended and online learning lies in the opportunity to transform the education system and enable higher levels of learning through competency-based approaches.

iNACOL's core work adds significant value to the field by providing a powerful practitioner voice in policy advocacy, communications, and in the creation of resources and best practices to enable transformational change in K–12 education.

We worked with leaders throughout the field to update these resources for a new generation of pioneers working towards the creation of student-centered learning environments.

This refreshed series, *Promising Practices in Blended and Online Learning*, explores some of the approaches developed by practitioners and policymakers in response to key issues in K–12 education, including:

- Blended Learning: The Evolution of Online and Face-to-Face Education from 2008-2015;

- Using Blended and Online Learning for Credit Recovery and At-Risk Students;

- Oversight and Management of Blended and Online Programs: Ensuring Quality and Accountability; and

- Funding and Legislation for Blended and Online Education.

Personalized learning environments provide the very best educational opportunities and personalized pathways for all students, with highly qualified teachers delivering world-class instruction using innovative digital resources and content. Through this series of white papers, we are pleased to share the promising practices in K–12 blended, online, and competency education transforming teaching and learning today.

# Blending Learning: The Evolution of Online and Face-to-Face Education from 2008–2015

Online learning has evolved from web-based, distance learning programs and has come to represent the leading edge in rethinking course design and personalized instruction using digital content and innovative tools for instructional delivery. This is evidenced today by expanded access to courses, content, and innovative instructional practices. Online learning harnesses technology to transform what is possible in teaching and learning. These new learning models are designed to enable richer student-teacher communication and interaction, either synchronous or asynchronous, and optimize each student's learning experiences through robust personalized learning. Still, today, for many students across the country where courses are unavailable in their schools, online learning represents the only viable means of providing high-quality course options within their district or schools.

In recent years, teachers in traditional schools have adapted their classrooms to represent the connected world in which they and their students live. Web-based content and resources are increasingly supplementing textbooks. New tools enable efficient communication and timely feedback. Collaboration and learning extend beyond the four walls of the classroom. Driving the early stage of this evolution, a small number of tech-savvy teachers and technology coordinators sought new ways to provide enriching and engaging content, and to extend learning beyond the walls of the school building and the confines of the school day. Initial results garnered the attention of districts and charter management organizations that sought to make blended learning options available to students across the country. Previously siloed innovative practices grew into scalable new blended learning models designed by districts transforming toward student-centered learning—with the goal of offering every student a world-class education. This development of district-level programs that blend the best of online learning and face-to-face instruction has been spurred by the increased availability of high-quality digital resources, tools, and adaptive platforms. These new learning models can help teachers personalize instruction and meet each student's unique learning needs. Many teachers and schools are designing learning environments for students with a more personalized approach.

Blended learning models, developed from early experimentation, place the student at the center of the learning process, harnessing the power of technology to create more engaging, efficient, and success-oriented learning environments. In these models, educators quickly identify gaps in learning and differentiate instruction to ensure that failure is not an option. Strong student supports, bolstered by teachers employing technology to transform learning, create powerful next generation learning models that prepare students for success. Emerging models in other countries, such as Singapore and Australia, as well as in higher education, suggest that a large part of the future of education will involve blended learning instructional models offering content, resources, and data-driven teaching both digitally and face-to-face. Over the past decade, we have seen this trend take shape as more schools opt for a blended approach to harness what is possible, optimizing their instructional model for student success.

Blended learning models feature elements of student control over time, pace, path, and/or place, allowing for more student-centered learning experiences. Research shows that students with access to a combination of online and face-to-face instruction excel in relation to peers who have exposure to only one method of instruction.[1] Thus, it should not

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[1]    U.S. Department of Education. Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies. Retrieved August 31, 2014 from http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf.

be surprising that blended learning has emerged as a powerful way to scale personalized learning. New learning models will continue to emerge that adopt the best features of online learning and face-to-face instruction.

The advent of learning that combines online and face-to-face delivery is not merely a theory or construct—it is an instructional model shift being implemented by schools throughout the country and the world.

This paper discusses definitions of blended learning and explores ways in which blended learning is being developed by a number of schools in an effort to answer these and other questions:

- How does blended learning align with current conceptions of online learning?

- How does blended learning help engage students and support academic success?

- How are online learning and face-to-face instruction being combined effectively?

- Is blended learning meeting unique student needs that neither fully online nor face-to-face models can achieve?

- What digital content and curricula are being used in blended learning?

As with all of the papers in the *Promising Practices* series, the examples discussed below are not exhaustive. However, they illustrate some of the outstanding blended learning models found in these early stages of development and suggest opportunities for expanding its use and effectiveness.

*The advent of learning that combines online and face-to-face delivery is not merely a theory or construct—it is an instructional model shift being implemented by schools throughout the country and the world.*

# Defining Blended Learning

Blended learning, also referred to as hybrid learning, combines the best features of traditional schooling with the advantages of online learning to deliver personalized, differentiated instruction across a group of learners. Students in formal blended learning educational programs learn online part of the time, yet have the benefit of face-to-face instruction and supervision to maximize their learning and to best fit their own needs.

In their 2013 report, *Is K–12 Blended Learning Disruptive? An introduction of the theory of hybrids*, Christensen, Horn, and Staker described research derived from over 80 organizations and 100 teachers engaged in blended learning tactics. According to the authors, blended learning is defined as:

> "…a formal education program in which a student learns at least in part through online learning with some element of student control over time, place, path, and/or pace and at least in part at a supervised brick-and-mortar location away from home. The modalities along each student's learning path within a course or subject are connected to provide an integrated learning experience."[2]

This definition highlights online learning as contributing to an integrated learning experience through multiple pathways, designed around meeting each student's own needs. Small-group sessions, individual tutoring, projects, or

[2]    Christensen, C. M., Horn, M. B., & Staker, H. "Is K-12 Blended Learning Disruptive? An introduction of the theory of hybrids." 2013 San Francisco, CA. Retrieved from http://www.christenseninstitute.org/wp-content/uploads/2013/05/Is-K-12-Blended-Learning-Disruptive.pdf.

> *Blended learning, particularly models supported by adaptive learning programs and tools, enables teachers to match the right student with the right content at the right time.*

other classroom work is completed in accordance with data and evidence of students demonstrating mastery—and integrated with evidence of what the student has completed online to create a holistic, personalized learning experience.

Online teaching and learning is evolving as fast as the emerging technology that provides an engine for personalization. It is important to note the underlying benefits of converging online learning with face-to-face environments. Experts report the following benefits of blended learning:

> "[There are] three foundational changes influencing online education: a philosophical shift from objectivism towards constructivism; a theoretical shift from behaviorism towards socio-cognitive views of education; and a pedagogical shift from direct instruction to collaborative learning (2006)."[3]

> "Blended learning should be viewed as a pedagogical approach that combines the effectiveness and socialization opportunities of the classroom with the technologically enhanced active learning possibilities of the online environment, rather than a ratio of delivery modalities. In other words, blended learning should be approached not merely as a temporal construct, but rather as a fundamental redesign of the instructional model."[4]

Most importantly, blended learning represents a cultural shift in instruction and learning. Just as online learning represents a fundamental shift in the delivery and instructional model of distance learning, blended learning offers the possibility to dramatically change how teachers and administrators optimize and maximize student productivity in a face-to-face (F2F) setting. "The widespread adoption and availability of digital learning technologies has led to increased levels of integration of computer-mediated instructional elements into the traditional F2F learning experience," wrote Bonk and Graham in the *Handbook of Blended Learning*.[5]

Blended learning, particularly models supported by adaptive learning programs and tools, enables teachers to match the right student with the right content at the right time. It is a core component of a personalized learning model. Because of this, each blended classroom is unique to best fulfill the needs of both the learner and instructor.

## Blended Learning Models

Clayton Christensen's research on blended learning schools and programs found that the majority of blended programs fall into one of four models: Rotation, Flex, A La Carte, and/or Enriched Virtual.

1. **Rotation Model –** Any course or subject in which students rotate—either on a fixed schedule or at the teacher's discretion—among learning modalities, at least one of which is online learning. Often students rotate among online learning, small-group instruction, and pencil-and-paper assignments at their desks. Or they may rotate between online learning and some type of whole-group class discussion or project. The key is that the clock or the teacher announces that the time has arrived to rotate, and everyone shifts to their next assigned activity in the course. The Rotation model includes four sub-models: Station Rotation, Lab Rotation, Flipped Classroom, and Individual Rotation.

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[3]   Shea, P. (2006). In online environments. *Journal of Asynchronous Learning Network*, 10(1).

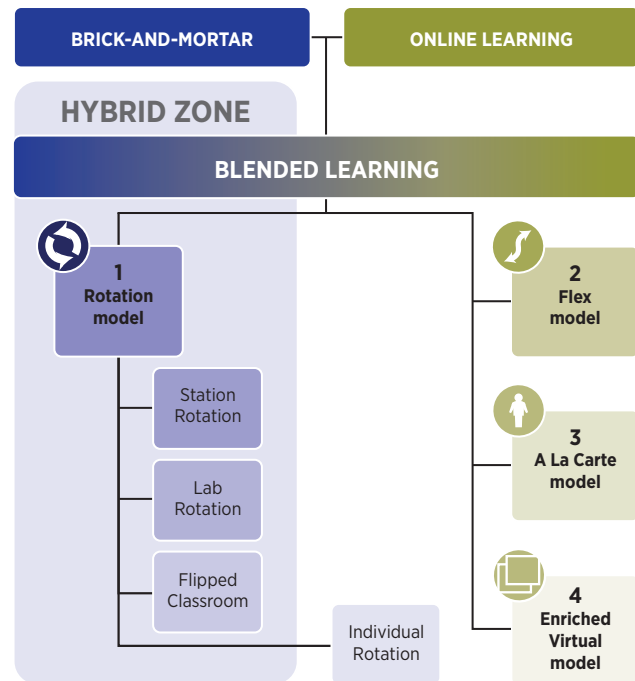[4]   Dziuban, C., Hartman, J., Moskal, P., "Blended Learning," EDUCAUSE Review, Volume 2004, Issue 7, 2004.

[5]   Bonk, C. J. & Graham, Handbook of Blended Learning: Global Perspectives, local designs. Copyright © 2004 by John Wiley & Sons, Inc.

a. **Station Rotation** – A course or subject in which students experience the Rotation Model within a contained classroom or group of classrooms. The Station Rotation Model differs from the Individual Rotation Model because students rotate through all of the stations, not only those on their custom schedules.

b. **Lab Rotation** – A course or subject in which students rotate to a computer lab for the online learning station.

c. **Flipped Classroom** – A course or subject in which students participate in online learning off-site, in place of traditional homework, and then attend the brick-and-mortar school for face-to-face, teacher-guided practice or projects. The primary delivery of content and instruction is online, which differentiates a Flipped Classroom from students who are merely doing homework practice online at night.



d. **Individual Rotation** – A course or subject in which each student has an individualized playlist and does not necessarily rotate to each available station or modality. An algorithm or teacher(s) sets individual student schedules.

2. **Flex Model** – A course or subject in which online learning is the backbone of student learning, even if it directs students to offline activities at times. The teacher of record is on-site, and students learn mostly on a brick-and-mortar campus, except for any homework. Students move through a Flex course according to their individual needs. Face-to-face teachers are on hand to offer help, and in many programs they initiate projects and discussions to enrich and deepen learning, although in other programs they are less involved.[6]

3. **A La Carte Model** – A course that a student takes entirely online to accompany other experiences that the student is having at a brick-and-mortar school or learning center. The teacher of record for the A La Carte course is the online teacher. Students may take the A La Carte course either on the brick-and-mortar campus or off-site. This differs from full-time online learning because it is not a whole-school experience. Students take some courses A La Carte and others face-to-face at a brick-and-mortar campus.

4. **Enriched Virtual Model** – A course or subject in which students have required face-to-face learning sessions with their teacher of record and then are free to complete their remaining coursework remotely from the face-to-face teacher. Many Enriched Virtual programs began as full-time online schools and then developed blended programs to provide students with brick-and-mortar school experiences. The Enriched Virtual Model differs from the Flipped Classroom Model because in Enriched Virtual programs, students seldom meet face-to-face with their teachers every weekday. It differs from a fully online course because face-to-face learning sessions are more than optional office hours or social events; they are required.[7]

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6    Horn and Staker. (2014). Blended: Using Disruptive Innovation to Improve Schools. Jossey-Bass.

7    Clayton Christensen Institute. Blended Learning Model Definitions. Retrieved from http://www.christenseninstitute.org/blended-learning-definitions-and-models/.

# Case Studies and Promising Programs

As more schools and programs implement blended learning options for students, there is a growing body of evidence of effective blended instructional strategies. The examples that follow demonstrate some of these successful practices.

## Blended Learning in Randolph Central School District

*A Rotation Model*

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*"We use blended learning for all students in several grades…decades of mediocrity provided the control group data. Our program has increased our test scores and improved the ranking of our elementary school among schools in western New York. The changes and improvements would not have been possible without implementing blended learning."*

*– Kimberly Moritz, Superintendent, Randolph Central School District*

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New York's Randolph Central School District superintendent, Kimberly Moritz, knew that change was needed to improve the academic performance of her district. Her first target was to improve math and English/language arts (ELA) scores on state assessments by implementing a blended learning program at the elementary school. She and her team decided that, beyond adding technology, the design and creation of the blended program would require numerous changes in the instructional model, administrative processes, and communication.

When the district examined how students were moving through the system at the beginning of the redesign process, it found that students were pushed on a "random path" irrespective of their talents and needs. Some were two or more years behind grade level, whereas others were on grade level or ahead. All were being taught in classrooms in which teachers had few tools or information to make data-informed decisions that took into account students' individual needs in order to tailor instruction to each student accordingly. In addition, teachers worked in isolation from one another, often with different instructional materials and curriculum.

District leaders inaugurated changes based on the goal of finding new approaches to teaching and evaluation. Math and ELA students in grades K–6 now take online formative assessments and participate in an extra block of academic intervention services as needed. Based on data from these frequent and ongoing assessments, teachers place students in "fluid ability groups" relative to their grade level. In addition to student groupings, teachers use individual student data to differentiate instruction and assign online content. Math and ELA students rotate at the teacher's discretion between online learning, small-group print materials, and teacher-led instruction, using i-Ready and IXL Learning for online content and assessments.

Additional key implementation elements included:

- *Collaborative leadership.* The district characterized its leadership as "open, honest, transparent, and approachable." District leaders created program guidelines, adjusted regularly based on teacher feedback. The process has been collaborative, consistent, and continual.

- *Constant communication.* Communication had to be constant and repetitive with "boorish redundancy." Communications reached a variety of stakeholders; the district informed the parents and invited them to participate in evening meetings.

- *Focus on data.* Teachers used student data to create fluid, flexible student-ability groupings. They used online content and tools to create and manage student data.

- *Professional development.* District leaders hired professional development support staff to assist teachers in gathering information and facilitating the sharing of findings and teaching experiences.

The blended program at the elementary school has been effective in improving math scores on state assessments. The district expects similar results from ELA, which is already showing signs of improvement. District leaders plan to implement a blended program for writing at the elementary school starting in the 2015–16 school year. They also plan to implement a blended program at the middle school and high school in the near future.[8]

## Spring City Elementary Hybrid Learning School

### A Station Rotation Model

*"The engagement of the student with the teacher is still the most important thing that we can provide to them instructionally."*

– Dr. Keith Floyd, Director of Curriculum and Instruction, Spring-Ford Area School District

Pennsylvania's Spring City Elementary Hybrid Learning School (SCEHLS) implemented its blended learning program in the fall of 2012. From the onset, school leaders involved all teachers and grade levels in the whole-school transformation. Teachers participated in nine full days of professional development to prepare themselves and their classrooms for the transition. Before the school began integrating technology, teachers redesigned the physical layouts of their classrooms to better fit the blended model. School and district leaders phased technology slowly into classrooms to emphasize that blended learning is an instructional delivery model, not a technology plan. Each classroom began with just a few tower computers for students to use during their individual rotations, and over time, the school added computers, tablets, and interactive whiteboards.

*School and district leaders phased technology slowly into classrooms to emphasize that blended learning is an instructional delivery model, not a technology plan.*

The school used the Station Rotation Model of blended learning for all core subjects. Students rotated between three learning stations—individual, collaborative, and direct instruction—every 20 minutes and then changed subjects after a full set of rotations. Students spent at least 80% of the school day learning in a blended model and had some control over their pacing when using online curriculum.

Since launching the blended program, school leaders have continued to evaluate the effectiveness of their online curriculum, and they change products as needed. The school is currently using Compass Learning, Achieve3000, ST Math, Reading Eggs, and Education City. Teachers use data from the online curriculum to target direct instruction and decide on collaborative learning activities and groupings. Collaborative learning often involves project-based activities that may span several days. Student groupings are fluid and change regularly.

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8    Evergreen Education Group and Clayton Christensen Institute (2015). Proof Points of Blended Learning Success in School Districts. Retrieved from http://www.kpk12.com/wp-content/uploads/2015/Randolph_Central_School_District.pdf.

The school's test scores on the Pennsylvania System of School Assessment (PSSA) have risen for all grades and subjects since the implementation of the blended learning program, as seen in Table 1, with the highest gains for students on Individualized Education Programs (IEPs). Between the 2012–13 and 2013–14 school year, the percentage of students scoring at "proficient" or "advanced" levels on PSSA reading scores rose 19 percentage points to 82.9%; math scores rose 24 percentage points to 85.4%; and science scores rose 27 percentage points to 90.0%. Students with IEPs showed an average increase in PSSA scores of 29%, which is three percentage points higher than the average increase for the total school population.

**Table 1: Spring City Elementary Hybrid Learning School's PSSA Results**

| Subjects | PERCENTAGE OF STUDENTS SCORING AT "PROFICIENT" OR "ADVANCED" | | |
| --- | --- | --- | --- |
| | Traditional System SY 2012–13 | Blended System SY 2013–14 | Percent Change |
| Reading | 63.9% | 82.9% | **+19%** |
| Math | 61.4% | 85.4% | **+24%** |
| Science | 63.0% | 90.0% | **+27%** |

The test scores of a student cohort who took the PSSA in 3rd grade in 2013 and in 4th grade in 2014 also showed increases, with greater improvements in math than in reading. In math, the number of students scoring at "basic" or "below basic" levels dropped by eight points, and the number of students scoring "proficient" increased by seven points. In reading, the major improvement was in the number of students moving from "proficient" to "advanced." The number of students scoring at "basic" or "below basic" levels dropped by one point; the number of students scoring at "proficient" dropped by five points; and the number of students scoring at "advanced" increased by five points.[9]

## Nolan Elementary-Middle School

### *An Individual Rotation Model*

Nolan Elementary-Middle School, operated by the Education Achievement Authority of Michigan (EAA), serves 507 K–8 students in Detroit, Michigan. In the 2012–13 school year, Nolan transformed their instructional focus and adopted a blended approach to better serve the needs of their students. Now, Nolan and the EAA embrace a student-centered approach to teaching, which incorporates blended and face-to-face instruction as a means to personalize and accelerate the learning process. At Nolan, students are grouped by readiness, not age. Students navigate their own learning pathways, work at their own pace, and are responsible not only for their own learning, but also for supporting the learning of their peers.

Nolan assesses students four times per year using the Performance Series test, and the data collected is used to assign students to ELA and math classes based on their instructional level rather than traditional grade level. Buzz, an online learning platform, houses a variety of digital resources that are both proprietary and open-source. Students are assigned a personalized learning path within Buzz which contains learning targets aligned to Michigan, Common Core, and ACT standards, all of which are used to measure college and career readiness.

Teachers have the flexibility to author content within Buzz based on the individualized learning needs of their students. In addition to Buzz, students have access to other supplemental digital resources such as ST Math, ALEKS, and Imagine Learning. All programs provide teachers, students, parents, and administration with real-time, continuous feedback about academic progress. The data collected from all resources, including the Performance Series

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9    Evergreen Education Group and Clayton Christensen Institute (2015). Proof Points of Blended Learning Success in School Districts. Retrieved from http://www.kpk12.com/wp-content/uploads/2015/Spring-City-Elementary-Hybrid-Learning-School.pdf.

assessment, is used to develop instructional strategies geared to move students up to or beyond grade level at an accelerated pace. With this flexibility, students are able to work at their own pace and have choice in which pathway they will choose to demonstrate mastery of their learning. Student choice results in increased engagement and a deeper level of understanding of content.

The instructional day for levels 1–12 (which relates to students in grades K–5) consists of students transitioning to a two-hour math and ELA block based on their instructional level, in which they spend a minimum of 30 minutes per resource daily on the supplemental digital and online instructional resources. Students receive science and social studies instruction from their assigned homeroom teacher. Students also have special classes (physical fitness, art, music, and technology) that will alternate based on the day of the week. Based upon Performance Series testing data, as well as the objective reports provided by teachers, paraprofessionals pull students from elective or homeroom classes in order to provide one-on-one assistance, and they push into the classroom to assist with small group instruction.

Middle school students are divided into three centralized "Hubs" with a homeroom teacher. The "Hub" serves as the students' homeroom and is set up as a cyber cafe using a 1:1 model. Students are assigned to one of three "Hubs" where the majority of their day is spent in virtual learning or creating evidence of student work that demonstrates each student's mastery of the learning objectives. The "seat time" waiver assigned to the middle school offers greater flexibility in regard to scheduling instruction for the following core academic subjects: ELA, mathematics, science, and social studies. For example, if a student is struggling with a concept in mathematics one week and wishes to spend a longer period of time with her math teacher instead of ELA teacher, she may do so while maintaining state compliance regulations in regard to meeting mandated, weekly instructional minutes.

At Nolan, even the teachers' learning is based on a blended approach to professional development. Outside of the school, Nolan's teachers engage in dialogue through virtual professional learning communities (PLCs) and online forums. Teachers also participate in a blended professional development course to learn about student-centered learning and blended learning. Weekly meetings provide teachers with PLCs to assess the effectiveness of their instructional practices. Pre- and post-assessment data is carefully reviewed for each student through the implementation of the Instructional Learning Cycle (ILC). Teachers modify their instruction based on results from the ILC process to ensure students meet short-term and long-term academic goals.

## Blended Learning at Innovations Early College High School

### *A Flex Model*

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*"Students had told us that they are leaving school because they are bored. Why are they bored? Because they are not engaged. The typical classroom and school is not what they want. We asked them what interests them, and they told us that they want more control, more flexibility, more access to teachers. So we created a school to give them these things. We don't have bells because there's no need for them. Scheduling bells are a system to tell students where to be. Our students decide for themselves where they need to be."*

– Kenneth Grover, Principal, Innovations Early College High School

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Since the Salt Lake City School District was collectively losing 10% of students from its traditional high schools annually, it sought to keep more students in school to ensure that they graduate and are college and career ready. School leaders recognized that these students often left because they felt disconnected, instruction was moving either too slow or too fast, or students felt that the usual approach to school "just doesn't work for me."

> *Teachers play an especially critical role because they establish a mentoring relationship with students, which is as important as their instructional role.*

To address these issues, Principal Kenneth Grover and the district created the Innovations Early College High School, which opened for the 2012–13 school year. The school aimed to engage students who would respond within a personalized learning environment, where the students would have far greater control over their courses, schedules, and learning path and pace.

The school uses the Flex Model of blended learning to provide this flexible learning environment. Students work with school counselors to create a personalized education plan by setting career goals and choosing online courses offered by Innovations or face-to-face courses offered at other district high schools, the district's Career and Technical Center, and a local community college. Students attend the Innovations school or classes at another school for six-and-a-half hours per day. The school is open between 7:00am and 5:00pm, and students are free to arrive and leave based on their preferences. Buses run between Innovations and other schools to allow students easy access to classes elsewhere, as well as to extracurricular activities that may not be offered at Innovations.

Students work on district-developed digital content with eight in-person teachers (six full-time and two part-time) who provide individual and small-group instruction. Students work on group projects, in teacher-led skill and study groups, and on their own within the online courses. Teachers play an especially critical role because they establish a mentoring relationship with students, which is as important as their instructional role. The school provides computers to many students, and other students bring their own devices, which allows the school to maintain a 1:1 student-to-computer ratio.

School administrators believe that most students work best when managing four or five courses at a time, but believe students should be allowed to complete courses at their own pace. Students can choose to complete a course with a "pass" or continue until they achieve an "A" or other specific letter grade. Once a student has completed a course, she can focus on finishing her other existing courses or add a new course to her schedule. Teachers and the school counselor follow students' rates of credit acquisition to ensure they are on track to graduate on time.

Based on calculations for the class of 2014, Innovations is raising district and state graduation rates; its current 89% graduation rate is substantially higher than the prior graduation rates of the district and the state as a whole. The school is growing and nearing capacity, particularly for junior- and senior-level classes, as more students across the district learn about Innovations. In addition, other high schools in the district are interested in adopting some of the blended learning elements that have made Innovations successful.[10]

## Spokane Public Schools

### An A La Carte Model

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*"Blended learning is a natural next step to help all students to be able to learn at their own pace and to get the assistance that they need, just in time, right when they are needing it."*

– Kristin Whiteaker, Director, Spokane Virtual and Blended Learning

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10    Evergreen Education Group and Clayton Christensen Institute (2015). Proof Points of Blended Learning Success in School Districts. Retrieved from http://www.kpk12.com/wp-content/uploads/2015/Innovations-Early-College-High-School.pdf.

Nearly six years ago, Spokane Public Schools' leaders examined the school district's low graduation rate and decided it was not sufficient for the district to graduate only two out of every three students. They set out to create new options to keep students in school, lower the dropout rate, and increase the number of students graduating college and career ready. Among the numerous new programs and community partnerships, several programs used blended learning. The district already had a successful online program called Spokane Virtual Learning (SVL) and was able to build on its existing online learning experiences and assets to help build blended learning solutions.

In the 2014–15 school year, Spokane had a total of 15 schools that were using blended learning in a variety of ways. Several blended programs have already had measurable impacts on increasing the district's on-time graduation rate. These include the ICAN program and On Track Academy, both of which serve a significantly higher percentage of at-risk students than the district as a whole.

ICAN provides online course recovery for students using SVL online courses, with pre-assessments that allow students to test through the standards they have already mastered and fill in the knowledge and skills for areas they need to recover. ICAN classrooms are located at each Spokane middle and high school, and students access the online and face-to-face teacher support they need to recover courses or specific standards at their school, usually before or after school.

On Track Academy creates an individualized learning plan that puts each student on a path toward a technical degree or a two- or four-year college degree. District leaders initially created On Track Academy as a temporary solution to increase the district's graduation rate, but the program has been so successful that it has become a permanent accredited high school in the district. Most students enrolling in On Track Academy are behind in credit accumulation or are lacking in competencies to pass state assessments, often as a result of multiple school transfers, homelessness, or family responsibilities that keep them from attending school regularly. On Track Academy is housed next to the NEWTECH Skill Center, with morning and afternoon schedule options, allowing students to access skill center programs as well as work with highly qualified teachers to meet their individual learning goals. The school has three different sub-academies that are differentiated to meet student needs: the STEM Academy focuses on math and science; the PATH Academy is for students interested in technical education; and the FLEX Academy is for students who are unable to attend the physical school regularly and rely more heavily on online courses than other students.

Each blended program has created positive results:

- In the 2013–14 school year, the high school ICAN program had 813 course enrollments with an 87% completion rate. The middle school ICAN program had 339 course interventions with an 83% completion rate.

- On Track Academy had 280 students attending in the 2014–15 school year and had a graduation rate of 90% in 2014.

Most importantly, these blended programs have been a key part of the overall district strategy to improve graduation rates and have helped Spokane Public Schools improve its graduation rate by 23% since 2008.[11]

## Commonwealth Connections Academy

### *An Enriched Virtual Model*

Commonwealth Connections Academy (CCA) is a K–12 Pennsylvania public virtual charter school. Using the innovative Connexus Learning Management System as the core delivery mode of educational services, CCA has supplemented virtual instruction from state certified teachers with face-to-face support by Success Coaches at drop-in centers for at-risk students. Some students struggle when transitioning to independent online learning environments.

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[11]     Evergreen Education Group and Clayton Christensen Institute (2015). Proof Points of Blended Learning Success in School Districts. Retrieved from http://www.kpk12.com/wp-content/uploads/2015/Spokane-Public-Schools.pdf.

Various indicators suggest that early identification of academic struggle, coupled with remedial in-person support from teachers, counselors, and administrators, has yielded great success. This model provides at-risk students with the support they need to become better independent, lifelong learners. It has also demonstrated the remarkable growth for students who, more often than not, begin their academic career at CCA well behind grade level.

In addition to the supplemental services and remedial support offered at their drop-in centers, CCA also plans Science, Technology, Engineering, and Mathematics (STEM) and Arts & Humanities Conservatory enrichment opportunities at the centers and throughout the state. These opportunities provide engaging workshops and exercises on a multi-grade level while connecting students to post-secondary institutions and workforce professionals. Enrichment opportunities include roller coaster engineering and design, video game prototype development, and forensic crime scene investigation, among others. CCA attributes their higher student retention and graduation rates to their new instructional models, placing them at the forefront of educational innovation.

> "We are a family service organization with an expertise in education, and CCA families are always thankful for the opportunities we make available to provide for student growth and enrichment," says Dr. Maurice "Reese" Flurie, CEO of CCA. "From individualized student assistance at drop-in centers or on our traveling mobile classroom, to our ability to connect students with college professors and industry leaders through our STEM and Arts & Humanities Conservatory pathways, we strive to meet the needs of each family who has enrolled their student at CCA. We will be relentless in our efforts to help every family plan their student's next steps after graduation. All of these initiatives are just singular pieces of the overall puzzle that ultimately connect to meet the needs of the individual student."

## The Nevada Learning Academy at Clark County School District

### *A School District Using All Four Models of Blended Learning*

The Nevada Learning Academy at Clark County School District (CCSD), formerly CCSD Virtual High School and the Academy for Individualized Study High School, operates multiple online and blended learning models. Unlike traditional magnet schools, any student in the district or state is eligible to attend either part- or full-time. During the 2013–14 school year, Nevada Learning Academy averaged 675 full-time students and 3,703 part-time students. At the middle school level, Nevada Learning Academy offers fully online courses for their part-time students and an enriched online model for full-time students. Full-time middle school students attend classes on campus twice weekly for a three-hour session to receive support in an advisory class with face-to-face instruction in math, ELA, science, and social studies. All courses at the middle school level are taught on a semester-based calendar.

At the high school level, Nevada Learning Academy offers Teacher-Led courses (TL), Independent Study (IS), and Credit-By-Exam (CBE) options for both full-time and part-time students. Teacher-Led courses are fully online, semester-based courses. Independent Study courses follow an open enrollment calendar (i.e. students can begin and end courses at their own pace). Students receive support and participate in proctored assessments during twice weekly face-to-face sessions, either on-site or at one of their nine partner site locations.

Their Innovative Learning Environments division is in the process of developing district-level courses for use at both the Nevada Learning Academy at CCSD and for schools to use for their own online and blended learning programs. Currently, Nevada Learning Academy has developed 13 courses, including English 9–12, Algebra I, Geometry, World History, Health (middle school and high school), PE 7 and 8, Computer Literacy, and Driver Education. They also partnered with CK–12 on the development of Open Education Resources (OER) for middle school math courses in the 2014–15 school year, and they are working on English 6–8 and middle school social studies.

Nevada Learning Academy experienced a specific challenge during the 2013–14 school year with their development process, resulting in a shift in their model for this coming year. In the previous year, subject matter experts (SMEs) created material to provide to content developers, who were also part-time instructors with the school. Because the

SMEs were teaching full-time and working outside of their regular day to develop content, the delivery of content proved challenging and staff were overwhelmed with other responsibilities. Additionally, because developers were instructing part-time, they found it difficult to balance the dual responsibilities. Thus, for this year, Nevada Learning Academy has shifted the model to have developers with subject matter knowledge develop the content and then obtain feedback and revisions from subject matter experts and their partners.

# Lessons Learned

*What are the key lessons these and other blended programs demonstrate?*

The program descriptions in this report provide evidence that there is no single type of blended education model. Over time, we can expect a range of models to become part of the blended learning continuum contributing to more personalized learning pathways. Michael Horn and Heather Staker, both of the Clayton Christensen Institute for Disruptive Innovation, have done excellent work to classify blended learning models; thus, we utilize their taxonomy. Primarily, we view the importance of blended learning models as a significant shift toward optimizing and personalizing learning for each student. Digital content is only one part of the equation, albeit an important one, and the focus should be on the *shift in instructional models toward student-centered learning*. Online curricula will evolve as a ubiquitous component of classroom instruction, and programs that are primarily distance-based are likely to incorporate face-to-face teaching as well. While the differences across blended models are many, the models presented in this report exhibit similarities in regards to their school culture and climate toward continuous improvement, defining blended learning goals and benefits, examining and updating their professional development needs, and addressing the system- and school-level barriers to implementation.

## 1 | School Climate

Scott Smith, Chief Technology Officer of North Carolina's Mooresville Graded School District (MGSD), stated that their blended learning program "is not a typical 'school' program. It is a district initiative about changing the teaching and learning environment."

The schools featured within this report primarily implement blended learning with a whole-school model. Pilot programs integrating blended learning in a few classrooms or grades have been used as successful springboards in initial years. Whether using a flex model, a rotation-based system, a la carte, or enrichment programs, school cultures have embraced the power of online learning to be an engine for implementing blended, personalized learning. These pilot programs balance the integration of technology and digital learning strategies with a foundational design centered on what we know about how students learn. An important lesson learned for blended learning programs is to start first with clear educational goals and to make sure that blended learning instructional models are incorporating research from youth development and what works best for student learning.

## Blended Learning Lessons Learned

**1 CREATE** a school culture and climate dedicated to continuous improvement.

**2 DEFINE** blended learning goals and benefits.

**3 EXAMINE** and update professional development needs.

**4 ADDRESS** both system- and school-level barriers to implementation.

## 2 | Blended Learning Goals and Benefits

Schools have adopted blended learning models for a variety of reasons; however, the schools highlighted here share a number of common goals to ensure students are college and career ready. Blended learning allows teachers to personalize education to increase student academic achievement and engagement. Online curricula allow students to participate in credit recovery courses and alternative electives, or to engage in Advanced Placement options. Districts seeking new models aim to improve graduation rates and close student achievement gaps. Schools that employ blended models help their students understand how to be self-directed learners through a student-centered curriculum. Personalization provides students with greater agency, voice and choice in how they learn, what they learn, when they learn, and where they learn—and blended learning delivery models enable these shifts.

## 3 | Professional Development Needs

In the same way that online teaching practice is recognized as different from face-to-face teaching, blended learning is also a unique paradigm and requires new methods of content development, instruction, and professional development. Kevin Sparks, Principal of Alpha: Blanca Alvarado Middle School, discovered that a balance is needed between teacher autonomy and a too heavily prescripted program. He stated, "We have found that freedom to develop unique classroom systems and to iterate and innovate empowers teachers, but a lack of clear expectations around how to leverage the full benefits of blended learning tends to discourage them."

Administrators from the schools featured here recommend using professional development opportunities to help staff understand the systemic differences of blended learning. Teachers must learn how to balance providing instruction online with traditional face-to-face activities. Many schools have utilized resources and data from organizations studying blended learning, such as iNACOL, as well as online professional development courses, to aid teachers in this transition. Experts have cited teacher-led professional development or in-house sharing of best practices as being beneficial. Professional development needs to quickly evolve to model best practices for blended learning, allowing teachers to experience blended, personalized learning themselves.

## 4 | Barriers to Implementation

The schools represented here also experienced similar barriers while implementing blended learning. Technological constraints, including access, infrastructure, and hardware and software issues stifled early initiatives. Finding quality content and software programs that integrate with a school's Learning Management System is a major issue, combined with the lack of translatable, universal data reports able to flow into teacher dashboards coherently. These issues continue to hamper leaders' development of blended learning programs. Identifying—or, in some cases, building—Learning Management Systems that support personalized pathways, competency-based grading and instruction, multiple forms of student evidence, and integrate with multiple content providers to seamless reporting, has been a major challenge. Financial limitations impacted some schools, both in establishing the required hardware and in maintaining technological support. Besides the technological barriers listed above, schools reported that communicating effectively on the mere *notion* of blended learning was a challenge. Community engagement and effective stakeholder communication are key. Both teachers and students alike need to learn how to develop new habits of mind, a growth mindset, and to understand what it takes to be successful in a student-centered, personalized learning environment in which their roles are evolving.

# Looking Ahead: Realizing the Promise of Blended Learning for Personalization and Deeper Learning

The examples of blended learning programs profiled in this paper portray that many states, districts, and schools are combining online and face-to-face education in the United States. We are, however, still in the early stages of adopting ubiquitous computing in classrooms across the country. Blended learning is not about the technology itself; it is about the shift in the instructional model to personalized, student-centered learning to ensure each student's success. However, it is difficult to navigate this shift and close achievement gaps without the effective implementation of technology to transform learning and support teachers in personalizing instruction. Early adopters demonstrated the value of online learning and technology in the classroom. Districts are taking on systemic changes toward personalizing learning, and we are witnessing a shift across numerous charter school management organizations to expand the implementation of blended learning to innovate within their models. However, there is a long way to go before every student in America has access to these innovative classroom and school models.

> *Blended learning is not about the technology itself; it is about the shift in the instructional model to personalized, student-centered learning to ensure each student's success.*

As the United States increasingly moves towards an economy based on information and services, more and more jobs—and indeed entire sectors of the economy—require that workers be able to acquire information, analyze data, and act on their newly created knowledge by applying it in novel situations with creative problem-solving. Too many schools are still attempting to prepare students for this modern world without teaching within the mode their students will find when they move on to post-secondary education or the modern, globally connected workforce. The Science Leadership Academy, a Philadelphia public high school founded in 2006, leads by example, using a project-based approach to achieve five core values: inquiry, research, collaboration, presentation, and reflection. Highly qualified teachers focus on 1:1 learning, using online curriculum and Web 2.0 technologies to create a new learning environment within a traditional brick-and-mortar facility. All students have laptops with access to a course management system and social networking software to foster collaboration. Students conduct research and make presentations of their projects both in the classroom and online.

The use of computers and online learning in education requires a much larger shift in thinking than simply adding a few computers or other devices to classrooms. True blended learning requires that teachers approach their roles differently—as coaches, concierges, guides, and mentors, instead of purveyors of information. Classrooms will be structured differently as flexible learning environments, in which students learn in a variety of ways while communicating and collaborating with others who are outside their school—and perhaps outside their country. Fostering student agency and responsibility is paramount for online and blended models to be successful. Nolan Elementary-Middle School achieved success by utilizing the technology and data available to them to create a personalized plan owned by every student. They recognized that learning should go beyond the traditional structure and confines of the school day.

Nolan Elementary-Middle School is not alone in their approach to personalized learning. Schools and districts are utilizing improvements in technology to adapt their learning models to fit the specific needs of each student. Personalized learning is tailoring learning for each student's strengths, needs, and interests, and providing flexibility and supports to ensure mastery of the highest standards possible.[12] Personalized learning environments can benefit from online curriculum to provide flexibility in student pacing, but these ideas are not the same. In more progressive models, personalization can

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[12]    Mean What You Say: Defining and Integrating Personalized, Blended and Competency Education, retrieved August 19, 2014 from http://www.inacol.org/wp-content/uploads/2015/02/mean-what-you-say.pdf.

> *Core to blended learning is the shift toward enabling teachers to personalize and co-design learning environments with students.*

enable students to pick and choose the content by lesson—sometimes the entire curriculum or course—that they find most engaging.

One key to the adoption of personalized learning is the utilization of data, formative assessments, and performance-based assessments to guide mastery-based learning by producing student evidence on every learning objective. Personalized learning is rooted in many of the earliest theories of progressive learning, and it is grounded in research on how students learn best. Now, with established blended learning models to serve as examples, and the improvements in technology to make it possible, we are beginning to see students receive differentiated instruction tailored specifically to their needs. Teachers are able to obtain instant data and feedback based on the progress of their students. As that data comes in, teachers can determine whether the student needs targeted instruction and support, additional work, or an alternative path to navigate further into the curriculum.

Personalized instruction requires more than placing a student in front of a computer and connecting them online. Self-paced digital curriculum may be a useful component of a larger instructional model, but it does not, in and of itself, create blended or proficiency-based pathways. Core to blended learning is the shift toward enabling teachers to personalize and co-design learning environments with students. This involves using differentiated content, individualized instruction, and personalized pathways—with immediate student supports. In order to be successful, teachers must understand not just the needs of the student, but their interests as well. Giving students ownership of their learning is far more successful when they are engaged and have agency using the content and tools at their disposal. Taking it a step further, competency-based progressions, where students must demonstrate what they know and can do at high levels of mastery, within blended learning environments can allow students the space—either online or face-to-face—to create and present their own content and evidence of learning through performance-based assessments.

For these changes to be successful, schools and districts must support existing teachers through professional development, and pre-service education programs must provide blended learning training for future teachers. The schools and districts featured here highlight the work being done on site, utilizing existing resources and providing a blended approach to teacher training.

The growth of single- and multi-district online programs has created the demand for teachers skilled in online instruction. Quality guidelines for online teaching (e.g. *iNACOL's National Standards for Quality Online Teaching*) provide quality standards to ensure these professional development programs are carried out with fidelity. In addition, iNACOL has identified that good teaching at its core shares the same quality standards for effective teaching, whether in a face-to-face, online, or blended teaching environment. Blended teaching does require additional skills, pedagogical approaches, and methods beyond the core of traditional high-quality teaching, however. Thus, iNACOL, in partnership with The Learning Accelerator, published the *iNACOL Blended Learning Teacher Competency Framework*, which outlines important skills and dispositions needed to make the transition to blended learning environments. These competencies describe the effective use of technology for blended learning and the creation and cultivation of a culture that supports ongoing learning and innovation over time.

Many educators realize that the roles of schools, classrooms, and teachers are already changing. "You're talking about a new paradigm for both teachers and students, no longer defined by the four walls," said Chris Lehmann, Principal and Co-founder of the Science Leadership Academy. "A school's use of technologies must transform learning."[13]

Or, as Nicholas Negroponte, Founder and Chairman of the One Laptop per Child non-profit association, said, "The age of true personalization is now upon us."[14]

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[13]    EdTech Magazine. (March/April 2006). Best Practices: Understanding and Using Data.

[14]    Nicholas Negroponte, Being Digital, Alfred Knopf, 1995.

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# iNACOL

International Association for K-12 Online Learning