Lessons from Five High Schools

EXECUTIVE SUMMARY

Time for Deeper Learning
Fostering skills critical to college readiness and lifelong success, Codman Academy uses a substantially longer school day and year, as Executive Director Meg Campbell says, “to instill the habits of learning into as much of our students’ lives as we possibly can.”
EXECUTIVE SUMMARY

“More time for teacher planning allows for deeper engagement. If you give teachers more time, you get better results, so we give teachers more time.”

SCOTT DEFRESE, DIRECTOR, NEW TECH HIGH AT ARSENAL TECH

Time for Deeper Learning

Lessons from five high schools on educating students to succeed in a changing world

All of us want our children to achieve the American dream. We hope that the combination of a strong education and a willingness to work hard will make that dream possible. Although we can only imagine how the complex global economy will be shaped and reshaped by the forces of change in the coming years, we do know that our young people’s success will be determined by their ability to compete—for their acceptance to college, for their first job, and throughout their lives. Indeed, the plans and aims we have for the rising generation reach beyond economic success. We want our children to grow up to be inspired leaders, who will solve society’s pressing issues; civic contributors, who will build their communities; and secure family members, who will nurture the generations that follow. Amidst the considerable challenges facing youth today, our aspirations for them remain high. What skills and knowledge will young people need to meet our goals for them and their goals for themselves? How can the education we offer them best prepare our youth to succeed and thrive in the 21st-century world?
To answer these questions, a growing number of educators and policymakers are now focused on ensuring that schools engage students in an approach to education that is called **deeper learning**. As defined by the William and Flora Hewlett Foundation, deeper learning incorporates the following five key skills, which work synergistically, each as independent elements and also in concert:

- **Mastering Core Academic Content**—Students develop a baseline set of disciplinary knowledge. This academic knowledge encompasses facts and theories in a variety of domains—along with the language and skills needed to acquire and understand this content.

- **Thinking Critically and Solving Complex Problems**—Students know how and when to apply core knowledge by using statistical reasoning and scientific inquiry to formulate accurate hypotheses, offer coherent explanations, and make well-reasoned arguments. Being creative in analyzing and solving problems also becomes a crucial component in knowledge application.

- **Working Collaboratively**—Students cooperate to identify or create solutions to societal, vocational, and personal challenges. This cooperation includes the ability to organize people, knowledge, and resources toward a goal and to appreciate and accept multiple points of view.

- **Communicating Effectively**—Students understand and transfer knowledge, meaning, and intention. Such effective communication highlights the ability to express important concepts, present data and conclusions in writing and to an audience, and listen attentively.

- **Learning How to Learn**—Students know how to monitor and direct their own work and learning. As self-directed learners, students can assess what they do and don’t know and how to seek out the information they need to complete a project, solve a problem, answer a question, or understand a particular topic more deeply.  

These five **deeper learning skills** are similar to skill sets that have been identified by various education reform stakeholders as essential, yet are often lacking in public education. Frequently, the similar sets are known as 21st-century skills, complex skills, or higher-order thinking skills.

Ensuring that students have deeper learning skills will require substantial shifts in education policy and practice, with implications for standards, assessments, curriculum and instruction, professional development, and learning environments. In particular, successful schools must find ways to deploy learning time so that their students build deeper learning skills while also mastering grade-level content and standards. Already, a diverse array of innovative schools—including both charters and mainstream public schools—are organizing student and teacher time differently to offer students meaningful opportunities for hands-on and project-based learning, alongside workplace experiences through internships, collaborative undertakings, and other activities that foster deeper learning skills.

Now, the Hewlett Foundation has identified a group of schools that stand at the leading edge for both deeper learning and academic performance. Through grant-making, dissemination of effective practices, research, and policy development, Hewlett aims to expand the best practices of these schools to the education mainstream. Understanding how these pioneering schools allocate student and teacher time to support deeper learning is a crucial step on the path toward the widespread adoption and adaptation of their innovations.

For this report, **Time for Deeper Learning: Lessons from Five High Schools**, the Hewlett Foundation provided support to the National Center on Time & Learning (NCTL) to explore the role of time and examine educators’ decisions regarding time use at five schools where deeper learning skills are taught. Rather than focusing solely on expanded-time schools, the study’s purpose is to examine how schools that prioritize deeper learning are using whatever time they have available—whether an expanded day/year or a regular schedule—to fulfill their educational missions. NCTL conducted on-site research at four high schools and one school comprising grades 7-12, with a focus on its upper grades. Each of the schools belongs to a particular network that has received support from the Hewlett Foundation. The five featured schools are:

- **Avalon School** in Saint Paul, Minnesota (a 7th-12th grade charter school in the EdVisions network)
- **Codman Academy Charter Public School** in Dorchester, Massachusetts (a 9th-12th grade charter school in the Expeditionary Learning network)
- **High Tech High Media Arts** in San Diego, California (a 9th-12th grade charter school in the High Tech High network)
researchers found the following five deeper learning priorities that drive and shape learning time:

1. Building a positive learning environment
2. Using an interdisciplinary, project-based approach
3. Engaging in “authentic” formative and summative assessments of learning and skill development
4. Connecting students to the “real world”
5. Encouraging teachers to work collaboratively and, as deep learners themselves, in pursuit of excellence

As reflected in the chart below, these deeper learning priorities are highly connected to decisions about how time is used in each of the featured schools.

**IMPLICATIONS FOR TEACHING AND LEARNING**

The NCTL study reveals that the five schools’ strategies for allocating student and teacher time lend support to their overall focus on deeper learning skills, in practical and philosophical ways. Thriving deeper learning environments feel different from conventional schools, to students and teachers alike. Concretely, these schools are different, because of the innovative ways that they structure and utilize learning time. *Time for Deeper Learning* documents these innovations, and their accompanying significant practice implications, as they are implemented at each of these deeper learning schools:

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### Key Findings

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<th>Priorities Driving Time Design</th>
<th>Activities Focusing Time Use</th>
<th>Deeper Learning Skills Emphasized</th>
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| Building a positive learning community that fosters deep relationships among students and teachers | • Adult-facilitated peer groups  
• Long instructional blocks  
• Peer mentoring activities  
• Opportunities for teachers to collaboratively examine and improve instructional practices | All deeper learning skills, with particular time and attention dedicated to communication, collaboration, and self-initiated learning |
| Interdisciplinary, project-based learning | • Long instructional blocks  
• Collaborative work  
• Students’ self-managed time | All deeper learning skills |
| “Authentic” assessments | • Peer critiques  
• Guided self-reflection about learning  
• Student presentations | Deeper learning skills of critical thinking, problem solving, communication, and self-initiated learning |
| “Real-world” connections | • On-site projects that are closely connected with the external community  
• Off-site work and internship experiences | All deeper learning skills, with particular time and attention dedicated to self-initiated learning |
| Teachers as deep learners | • Collaborative inquiry and professional development  
• Collaborative preparation  
• Long instructional blocks  
• Team teaching  
• Opportunities for informal sharing and discussion | All deeper learning skills |
Carving out time for building a positive learning community is vital to students’ acquisition of deeper learning skills. At each of the schools profiled in the study, NCTL found positive relationships and a strong community of learners at the core of successful efforts to teach the deeper learning skill set. These deeper learning schools intentionally schedule time for building and maintaining such a community-wide foundation, through activities such as community meetings, advisories, adult-facilitated peer groups, and peer mentoring activities. Additionally, using schedules that put small groups of students and teachers together over long periods of time, these schools also help forge deep connections and greater mutual respect and understanding among students and faculty.

Scheduling long instructional blocks that establish a strong foundation for project-based learning, critical thinking, problem solving, and collaborative skills development. The five schools featured in the report organize the majority of their academic time as expanded instructional blocks, ranging between 1.0 and 2.5 hours in length. Often, these blocks are interdisciplinary and co-taught. By reducing the number of transitions into and out of different classes, the long blocks maximize instructional time. And the blocks support a project-based learning approach by giving teachers and students the time in class to deeply engage with the material. Teachers can break up a block with a mix of pedagogical strategies— including direct instruction, group project work, and independent student work time. In addition, the long blocks also provide time for implementing formative assessments—a key pedagogical approach for instilling deeper learning skills.

Providing students with time and opportunities to publicly present their work becomes a key strategy for teaching and advancing strong communication skills. All five of the profiled schools schedule time for students to publicly present their work to peers, teachers, family, and community members, on multiple occasions, over the course of their high school education. Arranging for this time usually involves changing the schedule for the entire school on the presentation day. These changes often include suspending regular classes and having early-release days for students who are not presenting that day, and/or scheduling presentations on alternating days, in coordination with student internships or off-site experiences.

Scheduling extensive time for teachers to work together is crucial for promoting collaborative inquiry and allowing teachers to co-plan lessons and participate in professional development. Teachers in these deeper learning schools have shared time together when they can learn from one another, as well as ample time to observe their colleagues’ classrooms, engage in joint inquiry concerning how to improve specific teaching approaches, and participate in professional development. School leaders carve out this time by bringing in external partners to conduct enrichment and academic activities while teachers meet; by building early-release or late-arrival days into students’ schedules; and/or by creating team-taught classes, freeing-up teachers to have common planning time when they are not teaching.

Giving students some control over their individual in-school time encourages them to take responsibility for their own learning. Educators at the profiled deeper learning schools frequently facilitate opportunities for student-directed work blocks, where students learn to manage their time without teacher-led instruction. Often, these work blocks happen within a long instructional period and also have the added benefit of giving teachers further discretionary time to work with particular students within the same classroom, one-on-one or in small groups.

Sending students out into the community for significant amounts of time enhances their engagement and deepens their understanding of how they connect and contribute to the outside world. Through internships and service-learning experiences, these deeper learning schools set aside school time for students to have opportunities in the surrounding community, bringing in external partners so that connections are made within different disciplines and throughout the year. School leaders often arrange this time between semesters or trimesters: For example, High Tech High Media Arts (HTHMA), in San Diego, schedules its 3.5-week junior internship during January, between winter and spring terms, and its 3.5-week senior internship at the end of the school year, while International Community High School (ICHS), in the Bronx, creates a class devoted to internships as part of its regular schedule for juniors, and then reserves 10 days throughout the year when the students will be off-site the entire day. Such efforts are labor intensive, as these schools must allocate a significant amount of their own staff time to building and maintaining the partnerships with external organizations that make such real-world connections possible.

**CHALLENGES**

Despite their considerable successes, the five schools highlighted in *Time for Deeper Learning* encounter a number of challenges as they organize their time to focus on student acquisition of deeper learning skills. Across the schools, the following challenges are in evidence:

Ensuring students develop academic proficiency and deeper learning skills: Principal Thabiti Brown, of Codman Academy Charter Public School, in Dorchester,
CASE STUDY HIGHLIGHT
Codman Academy Charter Public School
DORCHESTER, MA

When Meg Campbell, who is the executive director of Codman Academy Charter Public School, describes her philosophy on school time as “spongy,” she means that time in school should absorb many hours each day for her students. With weekends that can start at 7:00 AM for physical education and extend until 6:00 PM for after-school tutoring, school years that are 15 days longer than the state-mandated 180-day calendar, 3-hour classes on most Saturdays, and required summer programs, Codman is, in fact, very “spongy” on time. There is a goal behind the enormously rigorous and time-consuming student schedule that Codman requires. As Campbell puts it, “We want to instill the habits of learning into as much of our students’ lives as we possibly can.”

This approach has produced marked results. All of Codman’s graduates over the past 11 years have been accepted to college. The school’s 145 students—including 98 percent of students of color; 69 percent who are low-income; 22 percent with a first language other than English; and 23 percent receiving special education services—produce consistently solid performances on state standardized tests. In 2012, these students’ performance placed in the top 2 percent of high schools statewide in English language arts (ELA) and in the top 1 percent in math, as measured by the Massachusetts “Student Growth Percentile,” which compares students’ test performance with that of other students with similar testing histories.

These academic results are only part of the overall picture. Codman is a member of the Expeditionary Learning (EL) schools network, which strives to produce students who have “skills critical to college readiness and lifelong success—literacy, numeracy, problem solving, critical thinking, collaboration, creativity, persistence toward excellence, and active citizenship—as well as mastery of subject-area knowledge.” Among other goals, it is a priority at Codman that all students master core academic content in ELA and history, develop the skills and self-assurance they need to present themselves well in a variety of contexts, and “find their own voice” through this process. For this reason, Campbell, who is also the school’s founder, reached out in 2001 to Boston’s Huntington Theatre Company seeking a partnership.

For Codman, the value of this theatrical partnership continues to be palpable. One cold, wet April morning in Dorchester’s Great Hall, small groups of Codman Academy tenth graders were ascending the stage in turn to rehearse short scenes from A Raisin in the Sun for their year-end showcase. In the weeks prior to their performance preparation, the students had read the full script, completed in-depth studies of the characters, participated in writing exercises, and held lengthy discussions about the play’s message and impact, guided by Huntington Theatre staff.

Meg O’Brien, the Huntington’s manager of education operations, turned a director’s eye to a group of students as they finished their scene. “What does this group need to do?” she asked the students at large. “Memorize their lines!” came one suggestion, while another student noted that the group needed to speak more loudly and turn toward the audience. As the next group began to rehearse a different scene, which portrayed a family argument, O’Brien stopped the students. She talked about how the dialogue contained references to slavery, gender discrimination, and complicated family dynamics, suggesting how this deeper understanding could inform the students’ portrayal of their characters. “Now let’s start from the beginning,” O’Brien said. “We’re onstage in just over a month!”

Massachusetts, asks, “What is the balance between spending time helping kids develop skills which they are supposed to have before they get here...and working on the skills we want them to have when they leave?” The educators at each of the five schools in the report try to integrate skills support into their project-based pedagogy, while also maintaining time in their schedules for more traditional academic instruction that is geared toward content measured by state standardized tests. Truly integrating the two approaches to teaching and learning remains an ongoing challenge at each of these high schools. Those that enroll a high percentage of low-income students find that many of them have academic skills and knowledge below grade level when they enter ninth grade. More time for learning becomes an indispensable component of the solution to this problem for schools that have the resources and flexibility to expand the school day and year. Indeed, for students that score below grade level in math and reading, the investment of time required for deeper learning may not be feasible without more time in...
Executive Summary: Time for Deeper Learning

Finding time to address external barriers to student achievement: Like more conventional schools, the deeper learning schools in the NCTL study struggle to find the time to adequately address the non-academic barriers to student achievement. School practices that build a positive learning community—such as grouping students, teachers, and other staff into small teams and designing a schedule that puts them together for long blocks of time—offer opportunities for educators to get to know their students better and to understand some of the issues they may be facing. Providing sufficient time in educators’ and staff members’ schedules so they can reach out to families and help students access needed services is also important.

Improving the effectiveness of adult collaborative time and teacher practice: All of the schools profiled in Time for Deeper Learning are working on enhancing the effectiveness of teacher time to strengthen instruction and share best practices. As Robert Kuhl, Director of High Tech High Media Arts notes: “We are working on better using the adult collegial time. Just as with students, teachers all have different needs to develop as learners…. We must try to meet all those needs at once.” Educators at these deeper learning schools have designed schedules that give teachers more time for collaboration, including adequate formal meeting and professional development time; joint prep time, especially when teachers are co-teaching interdisciplinary courses; and plenty of informal collegial time. As they strive to ensure that academic time is not consumed by logistical tasks, educators at the schools consistently reserve and dedicate valuable time for their own deep analyses of instructional practice, student work, and demonstrations of student learning.

PROMISING TRENDS IN POLICY AND PRACTICE

For the deeper learning movement to grow and be embraced by diverse school districts around the country, significant shifts in state and federal education policy drivers—such as accountability and assessments, graduation requirements, teacher preparation and professional development, and the use of instructional time—are needed. There is growing evidence that such shifts

Using Technology and Digital Media to Support Deeper Learning

At each of the five schools featured in Time for Deeper Learning, students and teachers are using technology in diverse ways to support the following deeper learning goals:

- Independent, internet-based research requires students to develop critical-thinking skills as they evaluate the reliability of the sources they find.
- Computer-simulated science experiments save time that can sometimes be wasted on mechanical difficulties arising in lab work and allow teachers and students to focus more on complex problems and higher-order thinking.
- Project management software helps students manage their work and build their skills as self-initiated learners.
- Digital portfolios enable students to understand the progression of their learning over time, sparking their motivation to grow as learners.
- Class web pages, with syllabi, homework, and other information, encourage anytime-anywhere learning and connect students, parents, teachers, and community-based partners.
- A computer-based tool facilitates real-time tracking of student contributions to, and infractions of, a deeper learning school’s behavior norms, helping build students’ sense of responsibility and accountability to the school community.
- State-of-the-art digital tools enable students to produce visual and multimedia components of interdisciplinary projects, fostering their creativity, engagement, and connections to the broader world.
- The use of Khan Academy and other personalized web-based tutorials gives students the capacity to work at their own pace, while making it possible for teachers to spend more time helping individual students.

Differentiating instruction within a project-based approach to teaching: Teachers at the five schools speak about the difficulty of effectively differentiating curricula for students who demonstrate a range of skills and various proficiency levels. To meet students’ diverse needs, teachers have developed an array of strategies, including giving students access to a span of complexity in background resource materials, using some of the time during long instructional blocks to provide individualized and small-group instruction, and designing projects that can be completed with varying levels of depth and complexity.

school overall. Leaders at Codman Academy, whose majority low-income student body boasts high-proiciency rates in math and English language arts (ELA), say the school’s expanded school day and year are fundamental to their students’ success in mastering academic content, as measured by standardized tests and the acquisition of deeper learning skills.

The use of Khan Academy and other personalized web-based tutorials gives students the capacity to work at their own pace, while making it possible for teachers to spend more time helping individual students.
may already be underway, based on the following noteworthy recent developments:

**Common Core and Next Generation Science Standards**: As districts in most states adopt curricula mapped to the Common Core and the Next Generation Science Standards (NGSS) in the coming years, the process may provide an opportunity for educators to re-examine how they allocate school time overall and also how they can better design their schedules to support student acquisition of deeper learning skills. The development of summative assessments of the Common Core and NGSS that measure acquisition of deeper learning skills and that are also scalable will be a key focus for deeper learning proponents.

**Personalized Learning**: The first Race to the Top—District competition, in 2012, emphasized personalized learning as a platform intended to “allow students to: understand their individual learning...
goals and needs: access deep learning experiences that include individual and group tasks; and develop such skills and traits as goal setting, teamwork, perseverance, critical thinking, communications, creativity, and problem solving across multiple academic domains.” The group of skills highlighted in Race to the Top—District is very consistent with the skills emphasized in deeper learning schools.

**Competency-based Education:** Now taking root in several states, including Maine, New Hampshire, Ohio, and Oregon, and in a growing number of districts and schools, competency-based education allows students to progress once they have mastered subject matter. This approach also emphasizes the importance of formative assessments to track student progress toward mastery in differentiated learning environments, and it enables students to build their own sense of self-efficacy and cognitive confidence over time. Many deeper learning schools strongly emphasize and make a commitment to these goals as well.

**Open Badges:** The Open Badge Project and the Digital Media + Learning Competitions are creating competitions that recognize learners for the development of deeper learning skills—such as critical thinking, communication, and/or collaboration across learning contexts—and reward them with digital badges. Jointly sponsored by the Bill and Melinda Gates Foundation, the John D. and Catherine T. MacArthur Foundation, the Mozilla Foundation, and the Humanities, Arts, Science, and Technology Advanced Collaboratory, these competitions are helping to identify, recognize, and inspire innovative approaches to learning.

**Expanded Learning Time:** According to Mapping the Field: A Report on Expanded-Time Schools in America, an NCTL study published in December 2012, there has been a significant increase over the last three years in the number of public schools that have expanded learning time. With a longer school day and/or year, many of these schools have raised student achievement, begun to offer a broader educational experience, and empowered teachers by enhancing collaboration and professional learning opportunities. A key additional benefit of an expanded school schedule is the particular opportunity it provides educators to plan for and incorporate projects and curricula focused on building deeper learning skills into the school schedule.4

Each of these promising educational endeavors is aligned with, and could support, greater emphasis and focus on deeper learning skills in schools across the country.

**CONCLUSION**

With the advent of the Common Core and the Next Generation Science Standards, along with the new federal flexibility made available through the Elementary and Secondary Education Act waiver authority, the next few years will mark a critical turning point in education reform. The education sector is poised to implement policies that aim to give students the opportunity to become strong communicators, collaborators, critical thinkers, problem solvers, and motivated learners, while they continue to master core academic skills.

As the five schools profiled in *Time for Deeper Learning* demonstrate, to be successful in reaching these broad goals, educators will need to rethink how time is used for student learning in school and in community settings, and also to reconsider how teachers use time to build new skills and take on new responsibilities. Education leaders who are committed to deeper learning also will need to consider whether the conventional school schedule offers sufficient time to support all students in acquiring the full range of basic and deeper learning skills. With more than 20,000 schools across the country serving high numbers (75 percent or more) of children in poverty, many of whom are significantly behind their academic grade level, it indeed seems unrealistic that deeper learning approaches can be implemented, in addition to targeted interventions to raise proficiency levels in the core subjects, without the expansion of learning time.

We hope that this report, produced by the National Center on Time & Learning with support from the William and Flora Hewlett Foundation, provides early insights, raises pertinent questions, and provokes further research and conversation about how to encourage more schools to set aside sufficient time—and to use that time well—so that students everywhere have ample opportunities to become *deeper learners.*

**ENDNOTES**


The education sector is poised to implement policies that aim to give students the opportunity to become deeper learners while also mastering core academic content. For these reforms to be successful, educators will need to rethink how both teachers and students focus their time in school.