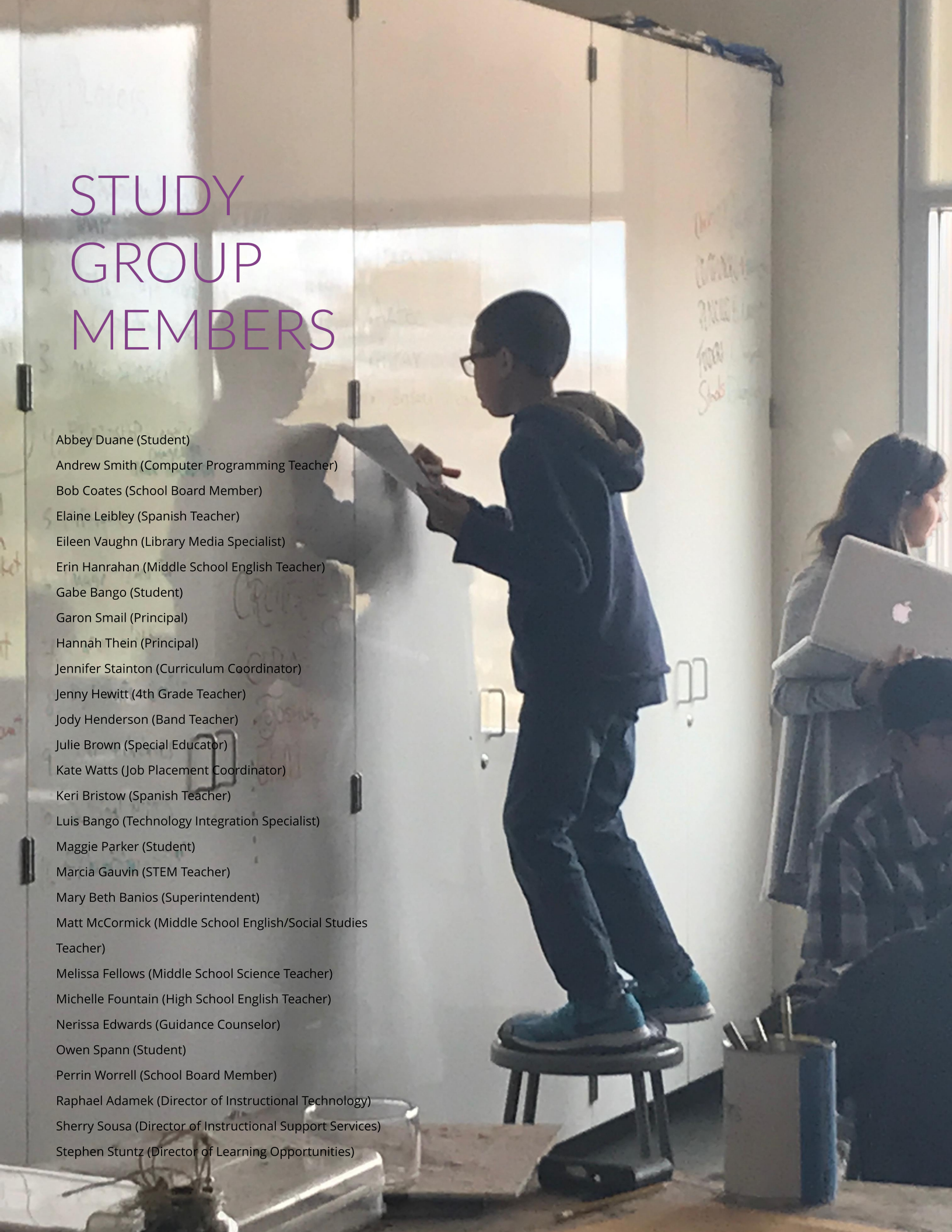
Windsor Central Supervisory Union

Innovation in Learning

STUDY GROUP MEMBERS



Abbey Duane (Student)
Andrew Smith (Computer Programming Teacher)
Bob Coates (School Board Member)
Elaine Leibley (Spanish Teacher)
Eileen Vaughn (Library Media Specialist)
Erin Hanrahan (Middle School English Teacher)
Gabe Bango (Student)
Garon Smail (Principal)
Hannah Thein (Principal)
Jennifer Stainton (Curriculum Coordinator)
Jenny Hewitt (4th Grade Teacher)
Jody Henderson (Band Teacher)
Julie Brown (Special Educator)
Kate Watts (Job Placement Coordinator)
Keri Bristow (Spanish Teacher)
Luis Bango (Technology Integration Specialist)
Maggie Parker (Student)
Marcia Gauvin (STEM Teacher)
Mary Beth Banios (Superintendent)
Matt McCormick (Middle School English/Social Studies Teacher)
Melissa Fellows (Middle School Science Teacher)
Michelle Fountain (High School English Teacher)
Nerissa Edwards (Guidance Counselor)
Owen Spann (Student)
Perrin Worrell (School Board Member)
Raphael Adamek (Director of Instructional Technology)
Sherry Sousa (Director of Instructional Support Services)
Stephen Stuntz (Director of Learning Opportunities)

WHY AN INNOVATION IN LEARNING STUDY GROUP?

The vast majority of us now work in environments where the ability to learn is more critical than what we know and where the most valuable currency is influence, not power.

-Liz Wiseman, Leadership Consultant

By Mary Beth Banios, WCSU Superintendent

After an incredible amount of hard work and dedication from its educators, Board members, community, and students, Windsor Central Supervisory Union is at a critical juncture.

We have good programs throughout our schools but we have not yet made a bold commitment to creating learning environments that clearly reflect the demands of the 21st century. With this as a foundation, Windsor Central is striving to be a leader in reimagining learning in a global, digital, and rapidly changing environment.

This year the Windsor Central Supervisory Union invested a significant amount of its federal grant funding towards studying models of effective 21st century learning environments and innovative programs with the goal of sharing the findings with district stake holders. This team visited sites with attention to how these environments might inform the Master Planning project for the WUHSMS campus. This Innovation and Learning Study group will offer its reflections and recommendations to the newly merged board for their consideration around how the insights gleaned from this study might contribute to a new set of strategic priorities for our member towns.

A classroom at Olin College

Curation of student work at High Tech High

Particle Space at the String Theory School

Lobby of the Dearborn STEM Academy

ELEMENTS OF INNOVATION

The Innovation in Learning group explored environments that put a heavy emphasis on 21st century learning and doing something with what you know.

Two teams of educators, Board members and students visited schools on the West and East Coasts. High Tech High and Design 39 were the focus of the visits for the West Coast Team. Schools in Boston and Philadelphia were visited by the East Cost Team including the Meadowbrook School, Olin College and the String Theory School. All of the schools offered instructional practices and classroom environments that engage students in new thinking.

AUTHENTIC WORK

Authentic work is what takes place in the real-world. In the classroom, authentic work involves real-world problems and replicates the work of professionals. Activities encourage open-ended inquiry, thinking skills, discussion with others, and deeper learning.

IMPACT OF THE PHYSICAL ENVIRONMENT ON LEARNING

Classrooms for the 21st century are places where students are involved in directing their learning and collaborating with others. These spaces are constructed to allow for greater flexibility of use and to encourage active participation in learning. Classrooms enhance opportunities for the sharing of work and respond to the needs of the students and teacher.

STUDENT CHOICE AND LEADERSHIP

Quality work that matters is a key phrase in the importance of student choice. Students design learning opportunities that reflect their passions and interests in meaningful ways. Whether creating a larger project that incorporates key components of the curriculum or making smaller choices in a skills-based lesson, student voice is valued in these learning environments.

FOSTERING EMPATHY

Incorporating empathy into the classroom curriculum provides opportunities for building a positive classroom culture. Students are asked to understand each other, their differing backgrounds and cultures, and the global community. Deeper relationships breed deeper understanding and compassion for those they share a classroom with and those outside of their school. Empathy in education also prepares students to be leaders in their communities and in the workplace.

THE DESIGN PROCESS AND FAILURE

According to one of the earliest educational reformers, John Dewey, “Failure is instructive. The person who really thinks learns quite as much from his failures as from his successes.” Failure should be seen as an opportunity to provide feedback on the strengths and possible flaws in an individual’s thinking. Design Thinking is an approach to learning that incorporates identifying challenges, gathering information, offering potential solutions, refining ideas, and testing possibilities. Both of these practices are elements of instruction that have life-long applications.

RETHINKING SCHOOL STRUCTURES

Educators and experts agree that the current schedule and organization of schools restrict opportunities for educational innovation. Whether it is the physical structure of a classroom, the content that changes hour by hour, or the limited time for teachers to work together to create new learning, school structures need to have greater flexibility to meet the goal of preparing students for the future. Innovative practices include extending the school day to allow for student internships, on-line learning, or working with a local business.

COLLABORATION

When students collaborate in their learning, they are gaining a deeper understanding of the content and of others' ideas through dialogue and questioning of their views. Collaboration is a competency that needs to be taught and one that colleges and employers expect students to have. Learning by doing in a structured and teacher-facilitated environment allows for the acquisition of this skill.

COMMUNITY RELATIONSHIPS

The view of the classroom and school need to move beyond the brick and mortar of the building. To create the best learning opportunities for our students, community and business partnerships must be fostered to take advantage of varied expertise and to provide a work culture. These relationships offer more meaningful conversations between the community and schools, and expand options for students.

Reflections on the Innovation Team Experience

"Not only are students highly engaged, but they garner life-long skills through this type of learning. The ability to problem-solve and persevere are attributes that are valuable in the workplace, family life, and daily existence."

"Student voice is vital. I am confident we can find a Woodstock way of blending choice and resource allocation in a way to be a premier 21st century learning school."

"Teacher leadership is something we need to think about, and leverage, differently than we are right now."

"The strong community connections, community outreach and social justice focus made empathy an integral part of some of the classes."

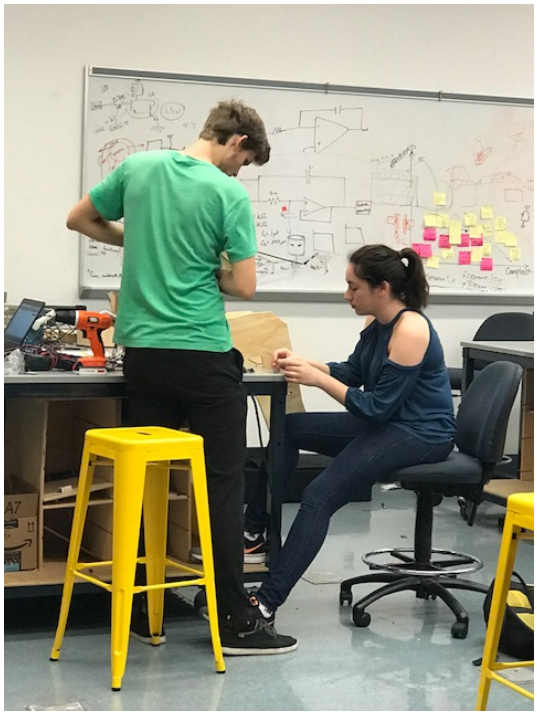
"The school community, teachers, staff and board will need to be courageous to create "time" in the school day to allow for authentic teacher collaboration. It will require creativity and choices."

Authentic Work

"Many teachers on this trip were already pursuing this goal, but independently. The trips helped us collaborate together and gather ideas, as there were many inspiring examples of authentic and project-based learning at many of the schools we visited. This experience reinforced my commitment to authentic assessments and project-based learning, and inspired me to immediately set about forging community connections to build new opportunities for my students."

"I think that Project-Based Learning is very engaging for the students, and makes them feel that their work is meaningful and connected to a larger purpose. I saw this again and again at HTH and HTe. Students were excited to learn, felt like creative individuals, and were deeply engaged in sharing their work. It seemed to eliminate major discipline issues, or problems of boredom while fostering empathy. The kids had choice and direction, and they responded as active learners."

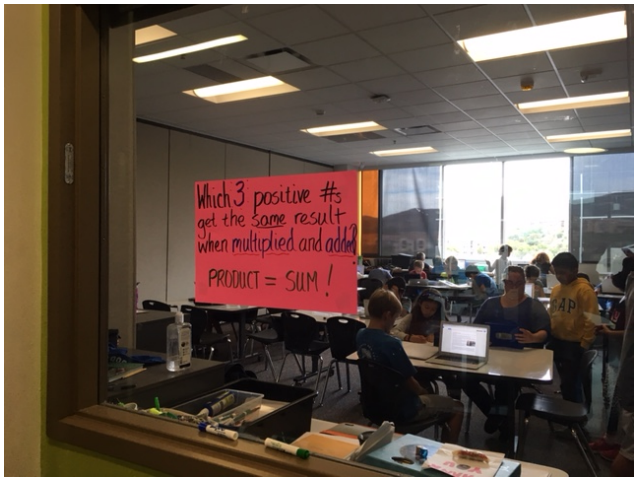
"The reality is, the work world has changed and is changing and the skills and abilities needed in a 21st century society require new methodologies like PBL. Application and practice of learning is paramount."



"Project-Based Learning is an extremely powerful tool for teaching and assessment. The students that we observed were highly engaged and productive in large part because they knew that there was an audience beyond the teacher. The actual teacher instruction and support was similar to what our best teachers are doing but the projects were longer term, more complex and always had a community connection component."

Impact of Physical Environment

"I wanted to step into every classroom I saw and spend time learning! Our current physical environment of cinder blocks evokes a 1950s feel, not a 21st century... therefore filtering down to our classrooms in ways visible and invisible."



"I realized how our school is designed ON PURPOSE to separate teachers, students, classes, and administrators from each other. And it does so very effectively! There are just a few renovations we could make that would help facilitate some of the openness that we saw on our trip - windows into classes, access to the woodworking and music rooms by moving them into a central location, and opening up the hallways to include common areas."

"I went into this trip never really having thought about the impact of the physical environment on the learning. Now I'm convinced we need to be able to curate student work and instill pride in finished products in our building."

“Outdoor Learning Spaces successfully support the active, inquiry-based learning essential to the twenty-first century learner, by providing flexible settings for student-directed, hands-on work. Creative and collaborative exploration in natural environments breeds empathy among peers and a deeper personal connection with the natural world that supports environmental stewardship later in life. "

"I was struck by a sign on the wall at the Harvard Innovation Lab that said: “Communal spaces take communal effort.” The sign was located in open meeting and working space and was hinting at the idea that everyone needed to clean up after themselves. I took the sign to heart and chose to think of our school as a communal space. How can we take the spark for student-driven exploration, authentic learning experiences, and desire to nurture student passion and come together as a community to fan the flames into something much bigger?"

"The displays of exemplary student work was extremely important to showing students, teachers and visitors what the expected level of scholarship and work was at these schools. The schools had a more "open" feel which seemed to give the students more agency and they therefore seemed more responsible for their own learning than in some other schools. The grade level clustering of students made collaboration (among teachers and students) much easier as well as enabling support personnel to focus on students in one grade level."

Student Choice and Leadership

I spent some time at Olin speaking with a fourth year student about her experiences in middle and high school as well as in college. I asked her how her time at Olin had shaped her view of her earlier educational experiences. I asked her if she could take one element of her learning from Olin and apply it to those earlier years, what it would be. Without hesitation, she replied, "Trust." She explained that professors and staff at Olin trusted her implicitly from the moment she walked through the doors as a first year student. Whereas many of her friends at other institutions still considered themselves "just students," she quickly stepped into the role of engineer because of this trust bestowed upon her. Pointing to student-created projects that lined the halls, she remarked that students at Olin are expected to solve real problems while working collaboratively with their peers as well as professors. She told me that she wished her middle and high school teachers had trusted her to"build things, make mistakes and learn from those mistakes."

"It must be fostered by the teacher, but letting students choose the direction of their learning within the confines of the discipline and skill acquired is a powerful way to expand knowledge and creativity."

"Each project is designed to have different entry points. Students are not sitting and receiving instruction - they are driving the learning. So, student choice and leadership is integrated with effective PBL. I like this model - schools do not need to have 50 different classes to offer. Within each project is choice."

"Why is it that students have to take certain art classes before they can take photography? Why don't we have a schedule that allows Mr. McCormick to offer a 4-8 week 35-40 minute class of designing and building your own skateboard and a second one for hurricane victims to share? Why shouldn't we offer specialized instruction (ex: "Crash Course in Study Strategies" or "Mini-Class in Speed Reading") that is open to special education and regular education students?"

Fostering Empathy

"To me, this was the most important element that we saw at HTH and HTe. It seemed like every project, every lesson, everywhere you looked, the guiding question and emphasis was, "How can we make our school, our community, our world a better place?" It emphasized environmental stewardship, kindness, and community building. The whole place was infused with a sense that kids and adults can and should make a difference - that kids and adults can make the world a better place. It was truly inspirational."

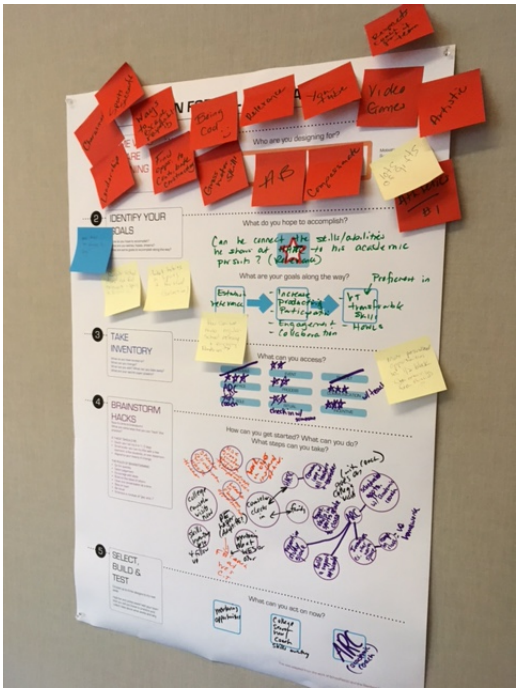
"For me, this is part of the instruction being authentic. Empathy might be for those affected by natural disasters, hardships, climate, or other situational events or circumstances."

"The projects we saw are not completed in isolation. Each one was designed to serve the community. For example, the entrepreneurship students who run a cafe and also became tax advisors so they could help people in their community file their taxes! Our students are already empathetic young people. To hitch their learning to serving the community and reaching out in meaningful ways would enhance their experience here at school and drive engagement. It would also get our phenomenal students visible in the community - which may foster further support for our amazing school."

"Values-based education should be an important part of the school setting. Woodstock embraces this and I am certain there are ways to improve upon improving the culture."

The Design Process and Failure

"It is absolutely likely that failure will occur. Students need space to develop grit to persevere and seek success."

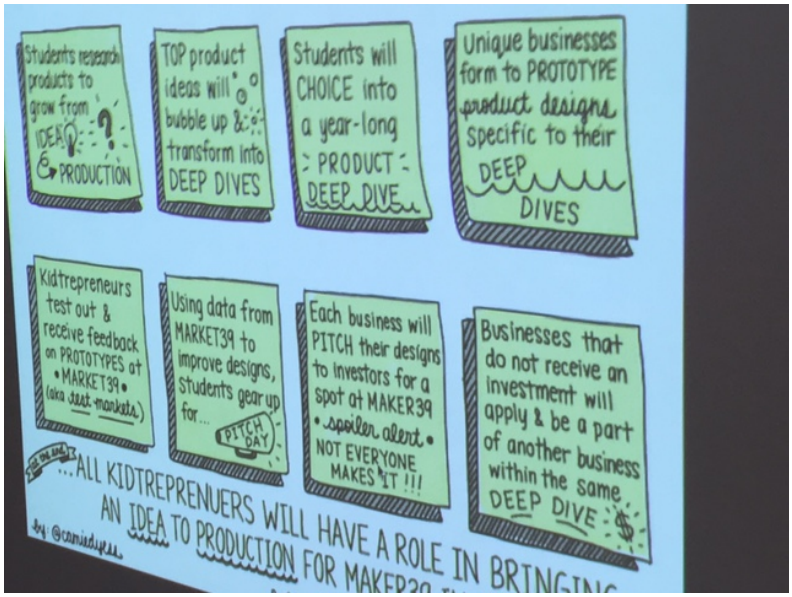


"This was an integral part of the process. Teaching students that multiple iterations are a part of any design process and that failure is OK as long as lessons are learned and applied in the next iteration. The specific teaching of the entrepreneurial process was very interesting."

"Olin College instituted "Failure Panels." These were panel discussions led by faculty members who described instances of significant failure in their own lives. They aimed to show students that failure is an essential part of the learning process."

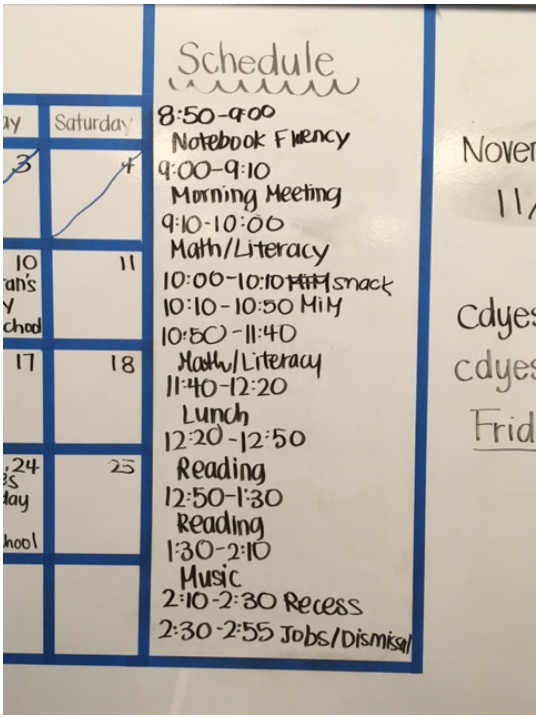
"There were places where design thinking and failure were key to the student experience, and there were places where the schools looked very traditional. Iteration and failure, when accepted in an institution, changes the culture dramatically. Even if it wasn't in every classroom, it was a part of the culture."

"The STEAM lab is a catalyst for bringing design thinking into school culture and learning. We should encourage this influence and look at more deliberate ways to bring design thinking into the classroom."



Rethinking School Structures

"Kids would learn in a more authentic manner if all of their subjects were more integrated. That seems like a clear and necessary mandate for educators striving to teach in a more innovative and project-based manner. Co-curricular learning clearly is more authentic for students. The real world isn't broken into separate subjects and thematic bits. The real world is a completely integrated compilation of different subjects, different disciplines, different technologies, working together to create a whole. This should be the case in our students' learning environments as well."

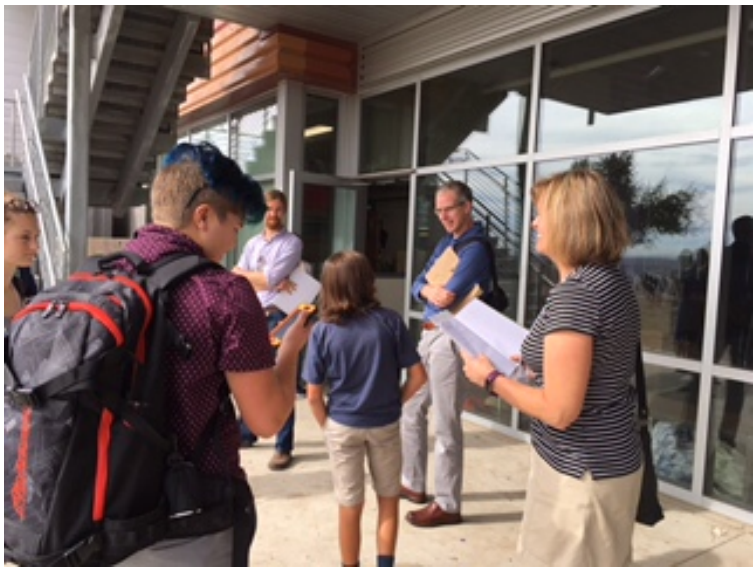


"They had a clearly defined mission and focus - and built their schedule around that. Their time was spent working towards achieving their vision. I couldn't help but lament that our schedule of courses really locks us in to separate classes, discrete learning goals, and disconnected learning. I have thought of a thousand different solutions - but we have to start from scratch, I think, after answering the big question first: what is important to our students and community?"

"Change is hard. It's important to look at some structures that are no longer valuable and/or effective. For example, the traditional 45 minute class block doesn't support design thinking and place based education or project based learning. Another example is not providing time for inter-disciplinary planning."

Collaboration

"Collaboration takes a lot of hard work on the part of teachers, however, meeting to meld our ideas into a greater and integrated whole. Planning for this kind of learning takes time. Regardless, a strong case can be made for more comprehensive subject integration and taking the time needed to make that happen. I certainly have more room to grow in this area, but I strive to make cross-curricular subject integration a high priority in our STEM curriculum, and attempt to incorporate at least two other separate disciplines in every lesson."

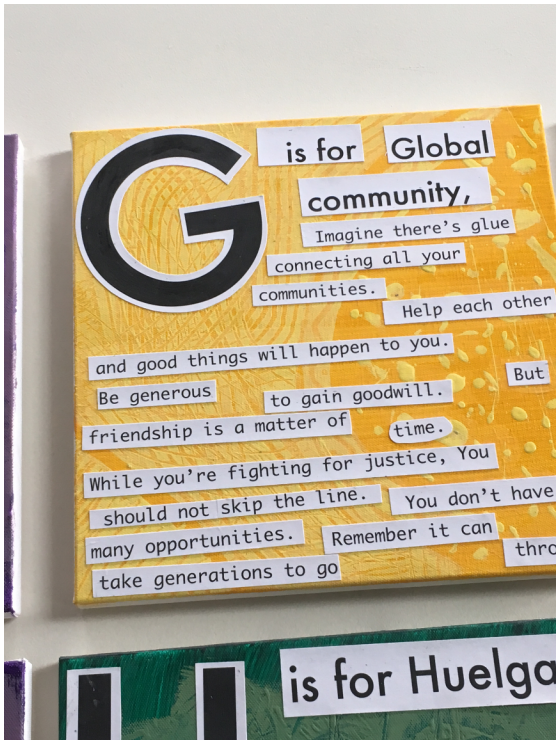


"This is a huge one - in our small elementary schools, our specialists are only in the building on a part time basis. While there, they are meeting with 7 classes and performing duties. This makes finding time for planning that isn't on the fly, very difficult. We have not wanted to do any student release time in the past as a convenience to parents and to provide as much academic time as possible for our students - is the trade off of powerful collaboration worth it?"

"Again, because the schools had a shared mission, their collaborative time was used to achieve that. At String Theory School, one professional day at the end of the school year was spent sending teachers out into the community visiting potential areas of outreach. They came back with suggestions for meaningful PBL opportunities for their colleagues for the upcoming year."

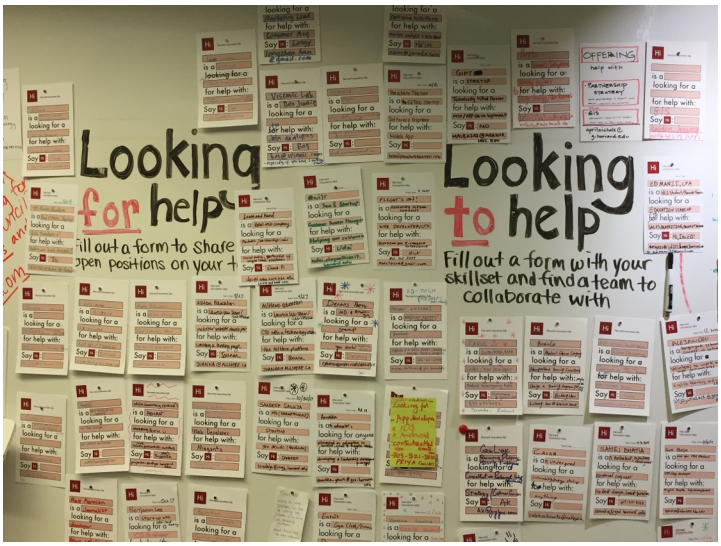
Community Relationships

"Community has always been important. Now, more than ever, we need to showcase the success of our schools. Our numbers are dwindling - we need to let the community know what our students can do. On the flip side, we need these relationships to make the learning authentic."



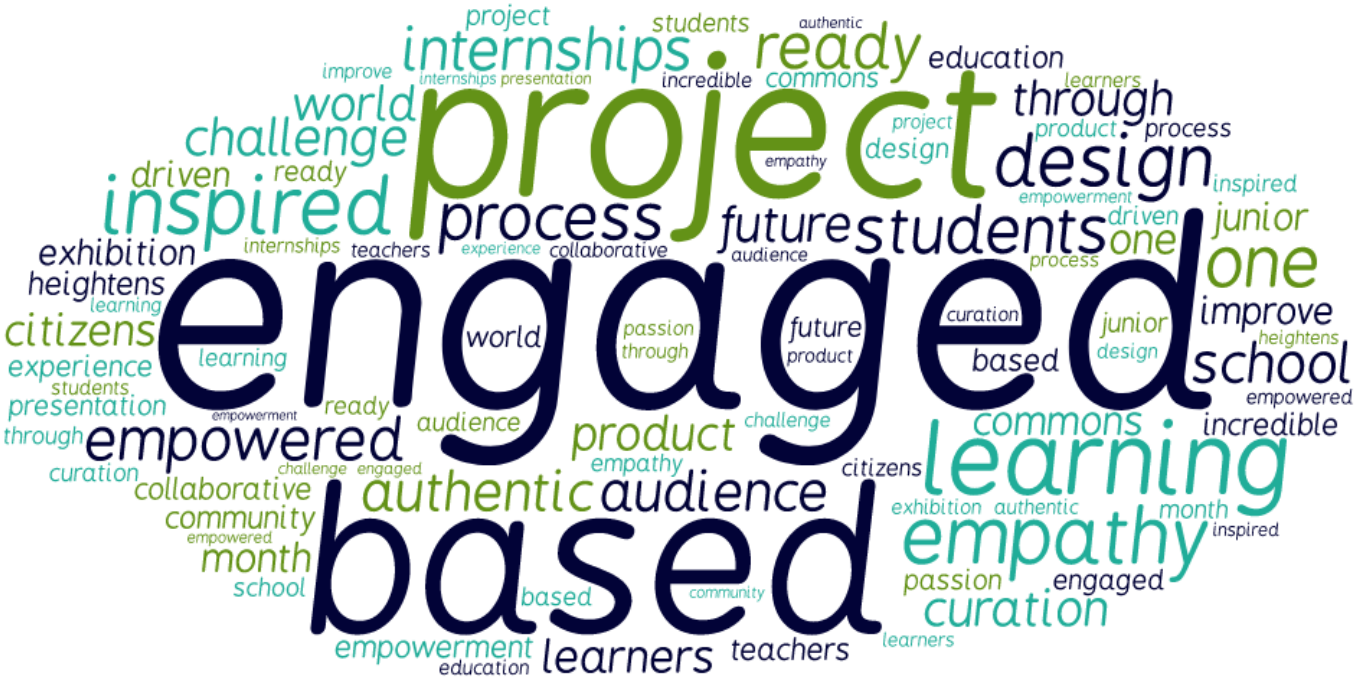
"I am actively looking for ways to connect our learning to our community. One of my classes will spend the third quarter interviewing and writing a book about veterans from the American Legion in town. This after reading the book Unbroken and George Bush's Portraits of Courage and reflecting on the importance of simply remembering."

"In the week after we returned from the Innovation Team trip, I reached out to the local bookstore to facilitate one student project, and contacted a parent to coordinate another at Dartmouth College. Neither of these endeavors was particularly noteworthy on its own, but they are a small signal of how membership on the Innovation Team galvanized my commitment to community partnerships overall."



"It is important to let kids be active members engaged as agents of change in their community. Community service should be a component of our school lessons whenever possible. This lets kids feel daily that they are agents of change, so when larger opportunities arise, our students are primed and empowered to engage at a deep and meaningful level."

"Accessing community partners for internships, support and appreciation for what we do is a vital component for getting students out of the classroom and into the world."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