A REVOLUTION OF SHIFTING PERSPECTIVES

Re-imagining the 21st Century American Public High School

Bloomfield Hills High School
2016 James D. MacConnell Award Submission
Executive Summary

Defining 21st century education is currently one of the prime conversations in America and the world. Today, Learning Communities, Learning Commons and STEM Labs are being defined and created in “innovative” new projects and renovations in the U.S. but quite often the teaching and learning that happens in them is still 20th century and teacher-centric. This is at odds with the fact that personal technology is available to students 24/7; they can access a global network and even participate in worldwide collaborative projects like Minecraft from their phones and tablets. Public schools that truly shift to student-centered learning are rare, particularly at the upper grade levels.

This is the story of an American high school’s journey to create an innovative facility, and lead a revolution and paradigm shift of perspective in public school education.

For American education to truly become innovative, we must shift perspectives – schools need to evolve from a teacher-centric model to one that’s student-centered.

“89 percent of high school students have access to smart phones.”

The New Digital Playbook: Understanding the Spectrum of Students’ Activities and Aspirations,” issued by Project Tomorrow.
The Initial Challenge

How do you consolidate two high schools - when they are decades-old rivals?

As one of the top performing districts in the country, Bloomfield Hills Schools recognized more than a decade ago the need to redesign its facilities and re-imagine its programming to support the changing educational needs of 21st century students, preparing them for success in college and the workplace. The district’s 10 Guiding Principles of Teaching and Learning set the course for this work.

Talk of merging the district’s two existing high schools – Andover and Lahser – into a single, new facility on the Andover site first began in 2003, but was met with significant community debate on whether to maintain two smaller high schools or consolidate the schools into one facility.

After many years without a consensus, the district hired an education facilities planner to develop a master plan for the future of their high schools. Extensive community engagement led to the development of a concept that consolidated the high schools into one state-of-the-art facility on the Andover site featuring nine learning communities. The learning community concept satisfied the community’s desire to maintain a small school feel and the district’s desire for an innovative facility, and ultimately, the bond approving the funding for the project was passed in May 2012.

Completed in 2015, this facility is the first comprehensive high school in the United States with dedicated space for learning communities, each of which integrates core classes in a collaborative, technology-rich environment.
The resulting 350,000-square-foot building opened in August 2015 and includes 233,000 square feet of new construction and 117,000 square feet of renovations made to the former Andover High School. With its Learning Community plan, ample windows and innovative design, the new consolidated high school has little trace of its predecessors' traditional elements.

As the district began to align instructional approaches to its 10 Guiding Principles, the design team was able to tailor the architecture to instructional needs, focusing on creating spaces that would foster both social and academic interactions, emulate collegiate and workplace environments, and foster hands-on learning.

The central design concept lies within nine learning communities, each of which integrate core classes in a collaborative, technology-rich learning environment to encourage collaboration, student directed learning, project-based learning and interdisciplinary instruction.

Campus Features:

• 372,000 Square Feet of Space
• Capacity of Approximately 1,800
• Current Enrollment of 1,650
• 9 Learning Communities
• 800 Seat Auditorium
• 12 Lane Pool with Seating for 400
• 1,700 Bleacher Seats in the Gym
• 3 Large Music Rooms
• High Efficiency Condensing Boilers
• 97% Efficient Water Heaters
• Maker Spaces & Labs
• Radio Station
• Professional-level art studio
One Vision, Multiple Perspectives

Rob Glass
Superintendent, Bloomfield Hills Schools

“This state of the art facility is designed around learning communities to help personalize learning for all students in a collaborative environment.”

Rachel Matz
English Teacher, BHHS

“I find myself turning over ownership of the learning to the students in a new way.”

Mycah Butler
Student, BHHS

“Bloomfield Hills High School is awesome; I could almost describe it as a college campus, with the variety of classes available and all of the different places to learn.”

Jen Teal
English Teacher, BHHS

“What I didn’t expect was that we would get to a place where we move fluidly between spaces....”

Matt MacLeod
Social Studies Teacher, BHHS

“Now I work with a group of interdisciplinary colleagues and this has greatly improved my practice.”

Brandon Till
Student, BHHS

“We don't just read from a book: we study independently, have group projects, class discussions...”
Achieving Consensus Through Multiple Approaches

Over the course of three months, from November 2010 through January 2011, the district and team members from the education planning and design firm facilitated meetings big and small - from community meetings of 200 at the district offices, to more intimate meetings at community centers and smaller focus groups with seniors at the senior center. Afterward, the team presented its preliminary findings from the Discovery Process, collected further input in the form of community surveys, and hosted a series of “Fireside Chats” held at the Nature Center.

In the early phase, it quickly became evident that there were two major factions - one that wanted the two schools to be renovated, and the other that wanted a consolidated high school.

This led to five possible options for moving the project forward.

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<tr>
<th>COMPARISON OF DEVELOPMENT OPTIONS</th>
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<td>Operating Costs</td>
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Five Options for a Master Plan

The two schools vs. one issue was really more about the quality of the educational experience on the one hand and the cost issue on the other. The team also realized that it was not a simple “school community” vs. “rest of the community” debate as was first believed. For example, there were people who wanted two schools because they firmly believed that two small schools are better than one larger school, yet others wanted two schools because they thought it would be less expensive than having one consolidated campus. And then there were people who simply did not accept the Board’s annual $2.5 million estimate as the increased operational costs of maintaining two small schools vs. one school.

“Hybrid Options” refer to selective demolition, leaving part of the old building and adding extensive new build portions. It satisfies the need for lower cost and for a better educational experience.
Development Options Survey
To make the decision of how to move forward more objective, the Education Planning and Facility team developed a matrix for scoring the five options presented against criteria that rose to the top from the many conversations had during engagement with the community. Members of the community and District Leadership team were assembled into a committee to vet the priorities and apply appropriate “weights” or priority levels to the criteria.

The C: Hybrid Option and D: New Build Option were clear winners. The Hybrid Option had the edge, since it had the reuse element that many community members insisted on.
Design Bedrock: 10 Guiding Principles

1. The curriculum clears space for depth with a ‘less is more’ approach.
2. Content knowledge shifts from the ‘end game’ to a vehicle of support for higher levels of thinking (application, analysis, synthesis, evaluation, creation.)
4. Strong, caring relationships and very high levels of collaboration among and between staff and students.
5. A culture that embraces risk-taking in the learning process believing that sometimes more is learned from failure than success.
6. Project-based/Inquiry-based learning boosts critical thinking by allowing students to frame problems and construct their own solutions.
7. Learners are connected to the world outside the school.
8. Engagement in meaningful work that increases learner passion and motivation.
9. Technology tools are ubiquitous and support personalization.
10. Staff share a commitment to a small set of clearly understood annually identified, non-negotiable instructional goals.

My Perspective: Rob Glass
Superintendent of Bloomfield Hills Schools

“New technologies and challenged economies now cause society to question ‘schooling’ as we know it. At the same time we’re reaching the limits of change that can be made to the system of schooling we’ve inherited. If we continue to accept as a given a system built upon today’s paradigm, we won’t have a system agile enough to prepare ALL our students for THEIR ‘tomorrow.’ We must not subjugate the future to the present—It must be the other way around. Our successful journey toward these stated ideals can only be undertaken through a strong network of collegiality and support, including personalized professional development that is powerfully resourced to support the guidelines. No one should feel isolated, and top-down directives will not be the norm. By working together and by being committed to a clearly understood set of shared goals, we will create a school district that TRULY, “…enables our learners to be architects of their own futures.”
Designing the “Hybrid Option”

Deciding which parts of Andover to keep was the next challenge. The building’s physical condition and site issues were not the only criteria for consideration. How to create nine learning communities, and the impact of space on teaching and learning became the true focus. The school community realized early on that making an extreme shift in their education perspective would require as much work as the facility design process.

The planning firm’s education consultants worked in tandem with the design team and school community to continue to keep this new education model as a guiding principal of the design process.

The team used Webex online meetings throughout the design process. Constant Collaboration between the education consultants, design team and school leadership was the key to success.
Ample room on the site enabled the team to explore many options for the design. Great consideration was given to creating a new “heart” of the school, a large flexible commons area near the entrance to link the learning communities together.
Floor 1 Final Plan
Floor 2 Final Plan
Learning Community Plan Example
Shifting the Education Perspective

This timeline shows the education change-agency benchmarks that happened at the same time the design evolved. The education planning process included a visit to Hillsdale High School, in San Mateo, CA. In addition, more than half of the faculty were involved in three committees responsible for designing the new high school - School Governance, Climate and Culture, and Design of Learning Communities. Teachers on the Design Team and a sub-committee also authored the school's 4 Cornerstones - Relationships, Authentic Learning, Innovation, and Responsibility and Ownership.

The planner’s Education Consultants not only worked with administrators and teachers from 2012-2016, they will continue their program with yearly check-ins into the future.

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<td>BHS accepts revision.</td>
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<td>August, 2012</td>
<td>Supt. Rob Glass writes 10 Guiding Principles for Teaching and Learning- Bloomfield Hills Schools</td>
<td>PDF shared throughout district K-12</td>
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<td>October 26, 2012</td>
<td>PD webex for Supt. and LST with Catalina Foothills, leading US 21st century district</td>
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<td>RFP developed</td>
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<td>Findings and Recommendations from Planner-BHHS Assessment Visit, November 6-7, 2013. Key Recs: Fragmentation; 400 Wing LC doesn’t have shared student cohort; Teacher Collaboration Pilot Projects highly successful.</td>
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<td>November, 2013</td>
<td>BHHS Cohort PD 35 teachers participate in year-long PD cohort.</td>
<td>Attendees: Charlie Hollerith, Principal, Laurie McCarty &amp; Heidi Kattula, LST, Ed Planners</td>
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<td>February 2, 2014</td>
<td>Principal Charlie Hollerith’s presentation to BHHS Faculty.</td>
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<td>Spring, 2014</td>
<td>BHHS Learning Communities Infographic and BHHS Ten Features of Learning Communities Developed by BHHS teacher leaders.</td>
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<td>June, 2014</td>
<td>BHHS design Team develops 4 Cornerstones - Relationships, Innovation, Responsibility and Ownership, Authentic Learning Inspired by Hillsdale visit. Foundational principles for BHHS.</td>
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<td>August, 2014</td>
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<td>August 26, 2014</td>
<td>BHHS Staff PD Day</td>
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<tr>
<td>September, 2014</td>
<td>9th and 10th grades organized into Learning Communities</td>
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Recently students asked without a hint of mischief and with the true intent of spreading out across the learning community to engage in analytical literary discussions about our current novel study in seating arrangements that worked best for their learning styles. Now, on a daily basis, after I finish my instructions or address any content that needs to be done with the entire class, my students seek their favorite spot in the community, and usually rush to ensure they can get their preferred spot, even going so far as to naming their literary circle groups based on their ideal meeting place.

In turn, I find myself turning over ownership of the learning to the students in a new way. I can hold workshops in the classroom to review content or move ahead for those who are ready while students work individually or in groups at their own pace. I see more engagement and passion from my students than ever before, and I am thrilled to be in a space that supports that engagement to its fullest extent.
Learning Communities

Each learning community includes a wide variety of learning spaces – from small group rooms to larger break out spaces, to rooms for individual work – all of which are designed to meet the needs of different kinds of learners and different kinds of activities.

Specific spaces within each learning community include: three learning studios of various sizes, a project room, a teacher collaboration room, a bump out room, a common area, a lab, and a shared distributed dining area.

For larger group work or hands on activities, each learning community includes a project room featuring large tables, hard floors, sinks, storage, a multitude of writable surfaces, and two walls of floor to ceiling windows, promoting creativity, collaboration and hands on learning.

The surfaces and furnishings create an atmosphere in the school that is flexible, sophisticated and collegiate.
Flexibility Both in Space and in Practice

Learning studios act as the closest iteration of a traditional classroom, but incorporate flexibility and mobility to allow teachers to experiment with different types of pedagogy and give students the opportunity to move around. Ranging in capacity from 22 to 32, the three learning studios in each learning community are designed to support any kind of core curriculum, course study or class.

Movable walls allow teachers to opt for a traditional four-wall set up, open the learning studios into the common area or combine the two larger learning studios into one space, based on the activity. In addition, re-configurable furniture makes for easy transition from individual work to small collaborative groups of two to four students.

Each learning community is led by a team of teachers, none of whom are assigned to a specific home room. All teachers share a teacher collaboration room, also housed within the learning community.

My Perspective: Matt MacLeod
Social Studies Teacher, Bloomfield Hills High School

“The new building has fundamentally changed the structure with which I teach. Before, in the old set up, it was very difficult to change my room to meet different learning situations. I had four walls and stationary desks and was greatly limited in the different learning experiences I could provide to my students.

Now, combined class activities are able to occur. Additionally, the flexibility of the furniture allows me to much more efficiently switch between lecture to discussion, to other classroom set ups, without any significant loss of instructional time.

The teacher collaborative spaces, have been a real blessing. This was something that we never had at the old school. Now I work with a group of interdisciplinary colleagues and this has greatly improved my practice.”
Specialty Learning Spaces

**STEM Lab**
Each learning community also includes a lab space for science or other projects. In one learning community, a STEM Lab takes the place of the traditional lab, featuring a technology-rich design lab attached to a production studio where students use state-of-the-art tools to design and build projects.

**Art and Design Studio**
This two-story studio is bathed in natural light, and contains all the tools and materials of a professional art studio. Surfaces are durable and easily cleaned. The space can easily be re-configured for large group projects or individual projects, and is connected directly to the outdoor courtyard.

**Student Radio Station**
The 2015 Michigan High School Radio Station of the Year and back-to-back 2014 & 2015 Best High School Radio Station in the Nation named by the John Drury High School Radio Awards, this school asset has launched many local students into careers as podcasters, broadcasters and news anchors.
My Perspective: Mycah Butler
Student, Bloomfield Hills High School

“It’s like a college campus, with the variety of classes available and all of the different places to eat and learn. The Small Group Rooms are my favorite places to study. They are quiet with windows where I can focus and get more work done. I really like the Learning Communities too; they make it easier to work with others on group projects.”
True Cross-Disciplinary Learning in Action

To engage students today, schools need to create learning that echoes the challenging problems of a global society. Learning across disciplines is impossible without flexible spaces and team teaching, and replacing silos of singular content with curriculum that embraces a variety learning modalities and content.

Combining several subjects and methods into one reflects the rigors of understanding the complex problems of our world today.

My Perspective: Brandon Till
Student, Bloomfield Hills High School

“Global Studies & Social Action Through Literature is a great class - we don’t just read from a book: we study independently, have group projects, class discussions... it’s fun to be so invested in a class.”
PHYSICAL ENVIRONMENT
Heart of the School: The Central Commons

Located at the heart of the building, the main commons provides spaces for student gathering, the Knowledge Market and the media center.

This grand multi-purpose space is deeply embedded in the ideals that learning happens everywhere. A fireplace welcomes students and visitors into the space, folding together key programmatic elements of the main entrance and media center, while also doubling as a pre-function space to the new 769-seat auditorium. Instead of enclosing each of these programs behind walls, they flow naturally together and are knitted with student social spaces – like the gathering stair case; a stepped, social hang out connecting the second floor of the media center with the main common area.

The social gathering space of the school is a place to eat, chat and learn.
Central Commons Details

**Fireplace**
This feature of the Welcoming Entry creates a prime hangout spot with soft seating encircling a round table. The cool local climate ensures it’s operating throughout the school year. Fireplaces are one feature northern school communities ask for most. A Welcoming Entry invites students in and creates a warm area to wait for auditorium events in the evening.

**Gathering Stair**
Used daily for casual meetings and group study, the gathering stair is an important seating area for larger, all-school assemblies. It connects the two floors that form the Heart of the school, and it provides a visual link between the two, and clear way-finding to the upper floor.

**Knowledge Market**
Rooted in the same ideology as a media center, but applied to the 21st century, the Knowledge Market takes into account the changing dynamic of the learning environment and the need for students to develop 21st century skill. With technology at its core, this active, energetic space provides opportunities for peer-to-peer and group activities, fostering student relationships and encouraging them to learn and create.
Creating a Safe & Secure Environment

Fewer corridors, transparency and mobility are physical components that make BHHS a secure environment. The Learning Community Model, which creates smaller, more intimate groups within a large comprehensive high school is the strongest component, creating a sense of identity and inclusiveness that prevents bullying and fosters a caring environment.

The school also features a BluePoint Alert security system, which district officials say is a first of its kind in Michigan. The system features blue boxes emblazoned with “POLICE” located throughout the school that operate similar to a fire alarm system. If there’s any kind of trouble in the school, anyone can pull the lever – an act that triggers blue strobe lights and audio system alerts. It also triggers a notification to local law enforcement.

Belonging to a smaller learning community group within a large school gives students a sense of safety and belonging.
Across the United States there are 26,407 public secondary schools, most of them not configured for 21st century education best practices. BHHS represents the opportunity for education designers and planners to change the perspectives of the American education system toward individualized, student-centered learning.
My Perspective: Jen Teal  
English Teacher, Bloomfield Hills High School

“When the designs for the new building were shared with our staff several years ago, I saw an architectural plan on paper that was exciting but which raised a lot of questions. I had no way to know then exactly how transformative the learning community spaces would be for every aspect of who we are and how we function as an educational community. I remember noticing that there was a lot of glass, and I thought it would be nice to have so much natural light after years in a classroom with a slim, angular window in the back.

I wondered whether students would still be able to see the screen where I projected material. What I didn’t realize was that it would mean I am regularly inspired by watching my colleagues teach in new and creative ways with interesting activities and engaging content that I can sometimes connect to in the moment in a way that would not be possible without so much visibility - that I would be able to be in two spaces at once and still monitor all of my students so that we all have room to think and work and collaborate - that students would use the glass as writable brainstorming space even when they weren’t asked to - and that the physical relief that open space gives to students makes them so much more ready to learn.

And I vividly remember seeing the different classroom spaces and wondering how the scheduling would work, where I would hang my posters, and how we would agree on who taught where. What I didn’t expect was that we would get to a place where we move fluidly between spaces, that I could have students working on my course content during their time with another teacher because we share space, that we could help one another create quiet work space for one group of students and small group work space for another group of students across multiple classrooms, and that we would be so flexible in sharing our spaces and opening our doors and walls to one another. It is hard to put into words the difference between those 3-D designs and the living spaces themselves.

We have been exhausted in many ways this year, but so much of it has been from re-imagining what we can do with our students in these new spaces that we hadn’t even dreamed of before. And we know the discovery is only just beginning.”