



Model 21st Century School Initiative Overview

(11 September 2013)

Name: LVenture

Tagline: develop everyday leaders to shape a sustainable future

Vision: We envision an advanced learning environment that empowers every individual to contribute to a new level of leadership, prosperity, and sustainability in our communities.

Mission: Our mission is to provide a student-driven education through real-world applications to enhance academic competency along with the critical skills, leadership, and integrity that empower learners to achieve their fullest potential and be prepared for high value occupations in a global economy.

Short-term Goal: Open a demonstration middle and high school in the Allentown area by Sept 2014 in partnership with the Lehigh Valley business community and area schools using a magnet or charter school vehicle to flesh out and validate the new model

Longer-term Goal: Package and share the new model with public education and facilitate widespread adoption

Core Learning: Think, Team, Trust

1. Belief and understanding in self (confidence with humbleness)
2. Independent thinking to creatively solve problems
3. Collaboration to co-create better solutions
4. Ownership (responsible for self and role in society)
5. Value of trust (integrity to self, associates, and society)
6. How to learn (develop knowledge and skills as needed)
7. Love of learning (make learning fun)

Guiding Tenants of the New Learning Environment

Learn While Doing: Give students an ever more challenging series of situations where they learn on their own initiative while addressing real problems, so they gain confidence, competence, and leadership experience along the way

1. Students in charge (student driven)
2. Teacher as facilitator (just enough scaffolding to guide students)
3. Students learn from each other (collaborative learning)
4. People support what they help to create (student choice)
5. Resources and mentors from the community and the world (Internet)
6. Rows and desks replaced by caves and commons
7. Blackboards filled by teachers replaced by Storyboards developed by students
8. Bells and grade divisions replaced by organic schedule
9. Culture with many rock stars
10. Traditional grades replaced with rubrics, portfolios, self assessment, and just-in-time narrative feedback
11. Safe, respectful, nurturing environment for learning (love)
12. Impact education by serving as a hub to share learning with universities and other schools
13. Impact the community by serving as a hub where innovators gather, connect, and address issues



Basis for Learning Approach

- I. In today's globally interconnected economy, the demands on public education are much greater than any earlier time. In particular, education must:
 1. Instruct toward mastery of core academics, *plus*
 2. Incorporate understanding of additional practical topics
 - a. financial literacy
 - b. responsibilities in a democratic society
 - c. sustainable free market principals
 - d. career awareness
 - e. effective use of technology
 3. Teach all students leadership and living skills including how to question and think, collaborate, solve problems, overcome adversity, learn from failure, and innovate
 4. Instill confidence, drive, integrity, and passion in students whose living (social) situation breeds low or unrealistic expectations and unhealthy choices
- II. This wide range of demands cannot be achieved by adding to the existing curriculum but requires a new paradigm for learning.
- III. Authentic, hands-on learning provides the core of a new approach that is more effective, more engaging, and inherently differentiated.

The new paradigm being developed affects all of the following:

- Teaching approach (entirely based on hands-on, student-driven projects)
- Schedule (flexible class times based on activity)
- Staffing, internal organization, and working culture (educators shape the curriculum and facilitate learning)
- Use of technology (used extensively to convey information including remediation)
- Facility layout and furniture (accommodates collaboration and project activities)
- Assessment (authentic feedback on real projects)
- Relationship with the community (community as key resource for learning)

In a sense, the only thing that **does not change** is the content of the academic portion of the curriculum because the academic standards dictated by the state must be incorporated.

The **key to the learning model** is how all the changes come together in self reinforcing fashion to create a new paradigm for learning.

CPI Proposed 21st Century Learning Approach

Organic schedule largely shaped by the students

- Students gather briefly in home room at beginning of day to deal with logistics
- 1 or 2 periods set aside for more traditional courses and individual enrichment
- Rest of day provides a few large blocks of time for different activities working on projects
- During the project blocks student teams choose where they work and what they do
- Teachers circulate among the student teams to keep in touch with their progress, providing individual guidance and nudging as needed
- Provision to work in the community when that adds value

Integrated learning mostly in project-based learning teams

- Grade level (cohort) teachers **working together** prepare a series of **open-ended projects integrated across multiple subjects** that require mastering the appropriate standards to complete
- For each project students are given a driving question, discussion about know/don't know, objectives, timeline, and rubrics for evaluation up front, and the student teams direct the learning and solution development from there
- Students practice 21st Century skills (leadership, communications, initiative, innovation, etc.) while they are learning
- Self evaluation rubrics guide students to master the applicable curriculum standards, 21st Century skills, and life skills/habits
- Sum of all projects covers all the curriculum standards for that year
- Teachers select projects and teams as much as possible to reinforce student passions and interests while covering the needed standards
- Teams include students with a mix of talents, capabilities, and backgrounds to facilitate learning from each other

Note: Key role of the teacher in project-based learning is to **frame projects** that guide students to learn the needed skills and content **on their own** and to apply what they have learned in a manner that leverages their talents and passions (learn while doing).

Student directed learning

- Students organize themselves to research and complete each project
- Students determine what to do next on their projects based on their own decisions, with guidance from scaffolding provided by the teachers
- Students regroup and adapt or pivot when they encounter failure or dead ends
- Students access original resources on the Internet or within the community for background content and expertise
- Students access online mini-lessons whenever they want directed instruction on any skill or process they need for the projects
- Students are encouraged to help each other when having trouble with a skill or topic as a first step before asking for teacher assistance
- Teacher regularly checks with each group and provides guidance/facilitation, but leaves work to students [can make individualized suggestions and ask good questions when students are too far off track]

- Teachers take time for brief snippets of directed teaching or hints on a given topic (mini-lessons) when many teams are having the same issues (happens much more in lower grades as students are maturing)
- Projects are open-ended enough that students can carry different aspects of the project work beyond the basic objectives as a form of self-selected honors activity
- Students track their own progress using the rubrics provided; the completed rubrics are regularly reviewed by the teachers to help judge student progress and issues

Incorporation of innovative projects, particularly in later grades

- Different from the academic project-based learning in that there are no right or wrong answers and no effective existing solutions for students to research
- Students select significant, unresolved issues from the school or community where they have a better way
- Students form and manage their own teams to work on the projects
- Students develop and implement novel solutions
- Teachers guide students through the innovation process but leave decisions to the students
 - Identifying issues and understanding the real problem
 - Reaching out to resources to understand the context
 - Moving forward in face of ambiguity and learning from failure
- Rubrics and guidelines provide a broad framework for the projects
- Students use problem solving/innovation rubrics to track their own progress

Incorporation of "executive" skills that drive success (grit, self-control, zest, social intelligence, gratitude, optimism, and curiosity)

- Students evaluate their own performance based on provided rubrics
- Regular reinforcement and recognition becomes a major driver of the learning culture of the school
- Possibly track how well the class and school are doing on hallway charts
- Perhaps describe as "life skills/habits," where "habits" sets the stage for positive change

Flexible building space and furniture

- Combination of commons-type project rooms, specialized facilities (shops or AV production), and more private study areas intermixed throughout the school
- Furnished with individual chairs and tables that can easily be rearranged for different settings
- Entire facility designed to constantly showcase student work
- Layout facilitates dedicated spaces for each grade cohort versus each teacher
- Each cohort of teachers is located in a collaborative teacher workspace
- Extremely fast Internet connection (100 Mb+) and internal wireless network support heavy online interaction for all students and faculty

Teacher collaboration and joint responsibility for learning (community of practice)

- Teachers for a particular grade level (cohort) work together to integrate the curriculum and make sure all students are progressing
- Teachers review data from the on-going formative assessments and use it to focus their time on specific students who need extra help around specific topics
- Teachers prepare general plans for key stages over the project timeline, but adjust and react along the way depending on the actual progress of the student teams (constantly adapting)
- Teachers assign project teams for diversity and so the team process can help different students with their unique learning needs
- Team of teachers continues with a cohort of students as they advance through grades so strong relationships are built (looping)

Primary resources are authentic sources found by the students from the Internet or the community

- Online mini-lessons are cataloged and available for students on all the basic topics required for the projects that students can access at school or at home any time they are needed
- Fulltime access to computers and Internet allows students to search for relevant original documents, media, contacts, and other resources
- Community leaders with appropriate backgrounds come to the school while relevant projects are underway
- Community organizations sponsor projects where students address a real issue for a specific organization
- Pool of community leaders with a wide range of experience and expertise agree to respond to student requests for assistance and information on call
- Students venture into the community to directly experience environments and issues that they want to understand and improve
- Teachers guide students needing remedial assistance to appropriate online mini-lessons and supporting material from the online catalog and/or the open Internet

Learning facilitated by interactive computer tools

- Students each have fulltime access to a laptop or equivalent for both research and project work
- Students use computers to research information for assignments, collaborate with others all over the world, and access tutorials as needed for skills training
- Assignments are completed and shared mostly in digital form
- Students have their own website space to publically share their past work (portfolios)
- Students also create teaching materials and examples for others
- Learning software links all work and resources, and makes it accessible on a wide range of personal devices (BYOD)
- Make full use of new online learning tools such as Khan Academy and SquareKnot

Students regularly assess their own progress on every key learning aspect of the projects using the rubrics provided (formative)

- Teachers track the student-completed rubrics and add their comments for reinforcement
- Teachers provide detailed and timely narrative feedback relating to progress along the way (what has been done well and specifically how to improve on the next version)
- Students make a public presentation of their results at the end of each project
- Quality student effort and accomplishments of all kinds are celebrated so all students can be "rock stars" in some way if they work hard
- Teachers sign off on a final rubric at the end of the project on the content, presentations, initiative, etc.
- Key project outcomes are saved in a student portfolio along with the completed rubrics for later reference; students select representative work across disciplines and use this to show their progress and accomplishments
- While deadlines are observed as targets, students continue working until the objectives are reached
- Completed rubrics and projects provide real-time data-based tracking of student performance to guide interventions by school staff
- Grades are used only for external purposes; they are derived in consultation with the students based on the completed rubrics at the end of each term
- Students take the mandated standardized exams
- Students take selected other assessments as external benchmarks (use for learning)

Teachers collaborate as part of a learning organization to constantly improve

- Teachers have offices and working space together with other teachers in their grade cohort
- Teachers have designated time every day to meet where they review progress of each team and student, plan new projects, and shape the curriculum as needed
- Teachers work together with administration to plan professional development days and activities that meet their current needs
- Teachers participate in and often lead decisions and professional development in their school that impact them as professionals

Explicit effort for students to find their passions and strengths early in their tenure

- The first week or two for each new cohort of students is dedicated to individual and group exercises that help students determine their strengths, passions, and purpose
- As much as possible, teachers steer the projects to develop the strengths, passions, and purposes of their students

Student-directed learning culture is created by the combined aspects of the learning environment and constantly reinforced

- Student involvement and choice in selection and implementation of projects
- Authentic learning while addressing real issues in context
- Focus on try and improve versus earn a grade
- Parallel focus on life skills/habits as well as academics
- Students evaluate themselves
- Recognition and celebration for all kinds of student achievement so all can benefit
- Minimum of rules reflects respect for students and students taking responsibility