Learning with Technology

Preparing the Workforce for the Modern Workplace
What content, skills, & habits should all students master?
Hamilton County was recognized as a global leader in digital fabrication education...
What should we focus on to ensure our graduates are employable?
0 out of 100 industry leaders polled identified a particular **content area** as a focal point
Industry Wants Process Skills

<table>
<thead>
<tr>
<th>Innovation</th>
<th>Critical Thinking</th>
<th>Collaboration</th>
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## Scaffolding Process Skills

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<tbody>
<tr>
<td>12th</td>
<td>Invent</td>
<td>Expert Knowledge</td>
<td>Networking</td>
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<tr>
<td>11th</td>
<td>Desirability</td>
<td>Prototyping</td>
<td>Time Management</td>
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<td>10th</td>
<td>Failure Redefined</td>
<td>Evaluation</td>
<td>Peer Accountability</td>
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<td>9th</td>
<td>Originality</td>
<td>Personal Ownership</td>
<td>Diversity</td>
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Design Challenge

- Automated light show with original design
- Music synced light show
- Fun for all
- Appropriate Halloween music
- Without hazards
Digital Fabrication

Using computer-controlled tools to empower students to create functional solutions to authentic problems.

Empower students as adaptive problem solvers skilled in collaboration, critical thinking, creativity, and communication.
Identify a Model
Articulate the Core Values
Develop a Framework
Contextualize the Strategy
Establish a Network
2014
300 STUDENTS
STEM School FabLab

2018
12,500 STUDENTS
16 Volkswagen eLabs

2022
44,000 STUDENTS
District-Wide Dig Fab
Let Me Try It!
Enhancing maker education through digital fabrication

FREE eBook

Dr. Tony Donen  Joshua Sneideman  Michael Stone

Michael Stone
Public Education Foundation
Director of Innovative Learning
Twitter: @CoachStone12
mstone@pefchattanooga.org

www.letmetryitbook.com
Innovation ≠ Imitation

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<th>Typical Strategy</th>
<th>Pitfalls</th>
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<tr>
<td>• Identify best practices</td>
<td>• Overemphasizes mechanics</td>
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<tr>
<td>• Deliver PD that standardizes and distributes best practices</td>
<td>• A disconnect grows as procedures are taught without context</td>
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<tr>
<td>• Develop metrics and evaluation mechanisms</td>
<td>• Often focuses on procedures instead of effectiveness</td>
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<tr>
<td>• Incentivize (or mandate) adoption of innovative strategies</td>
<td>• Fosters compliance or false buy-in instead of genuine ownership</td>
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DIGITAL FABRICATION ECOSYSTEM
K14 DIGITAL FABRICATION ECOSYSTEM

Elementary STEAM Labs
Students explore tools and strategies used in the modern workforce through hands-on experiences

Middle & High School Fab Labs
Students engage in the creation of functional solutions to industry-aligned problems

Global Center for Digital Innovation
Students are empowered to fill emerging workforce needs & create new pathways for success