

EXPERIENCE BASED LEARNING

Presenters Introduction

Lindsay Crawford

Senior Associate, Bassetti Architects, Seattle, Washington

Kristian Kicinski

Senior Associate, Bassetti Architects, Seattle, Washington

Skye McEowen

Student, Raisbeck Aviation High School Alumni (via video)

Rebecca Baibak

Principal, Integrus Architecture, Seattle, Washington

Kim Herzog

Teacher, Sammamish High School, Bellevue, Washington

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Session's Agenda

A Look at the Evolution of Experiential Learning Environments

- Evolution of vocational and CTE programs
 - Case study: Shorewood High School
- Significance of thematic learning programs
 - Case study: Raisbeck Aviation High School
- Professional Expectations of the Next Generation
- Opportunities for Learning Environments
 - Case study: Sammamish High School

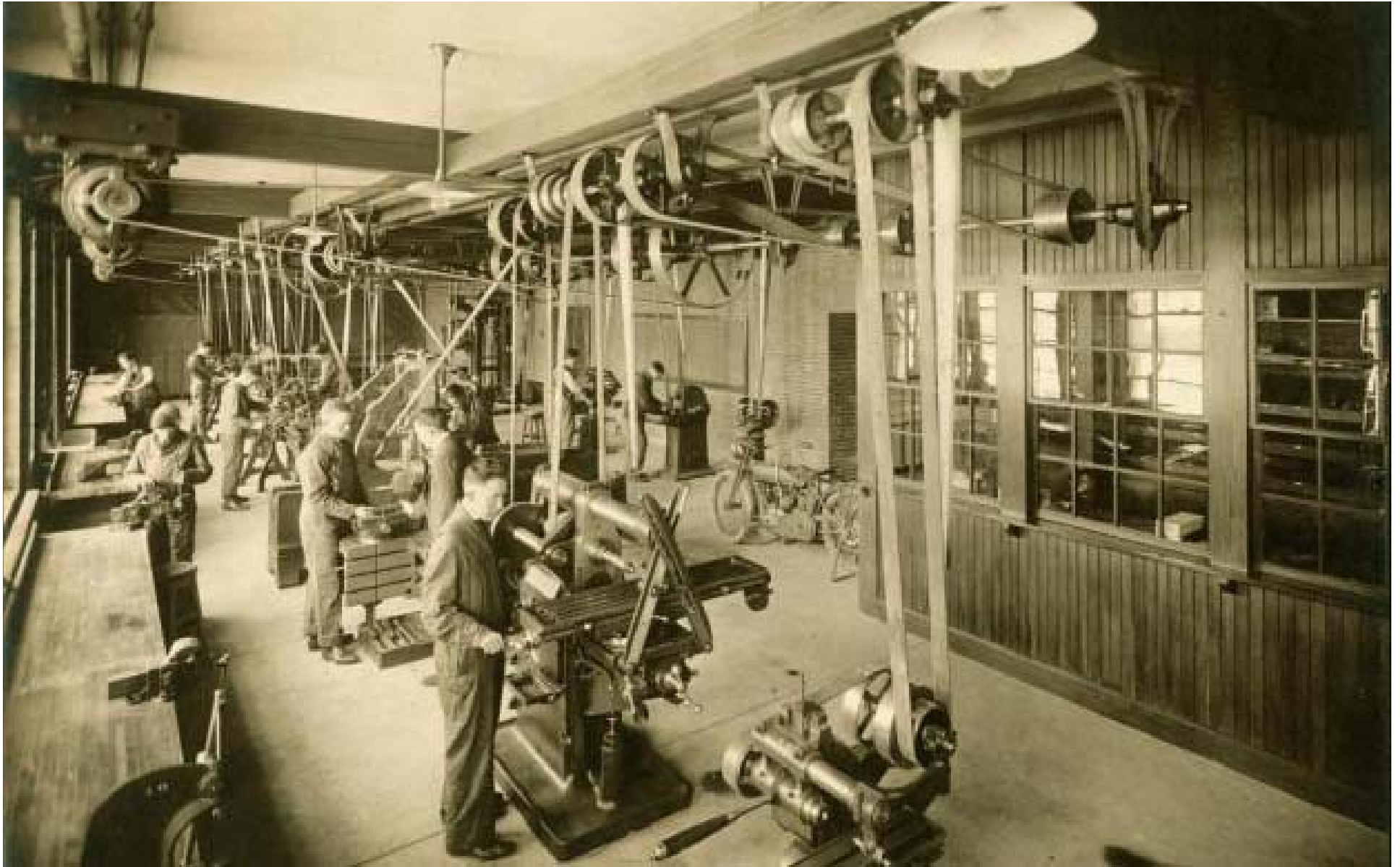
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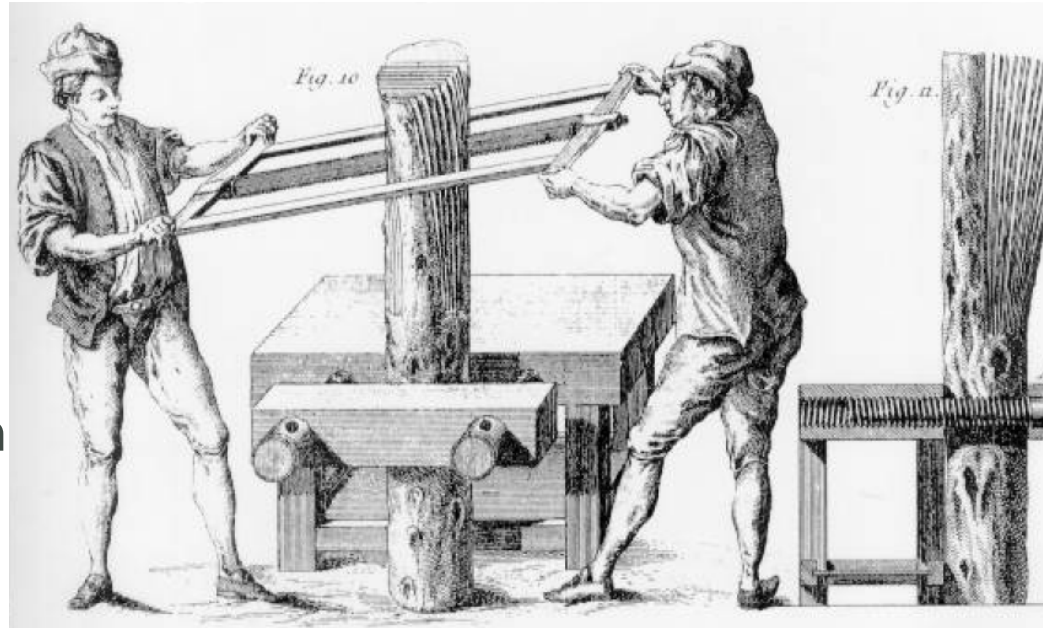


Evolution of Vocational Training

Early Apprenticeships

(Prehistory to 19th Century)

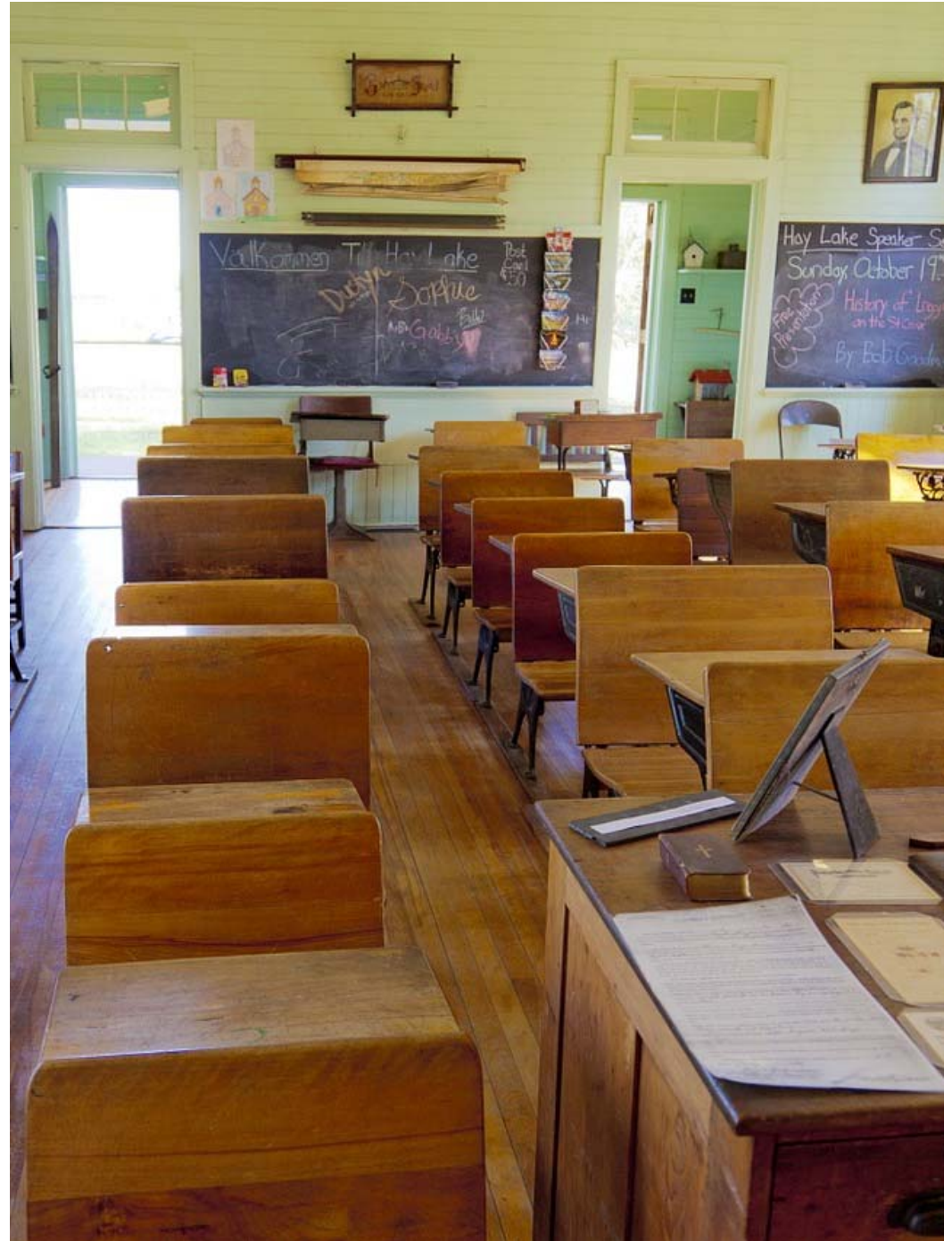
- Master to Apprentice Instruction
- Decline during the Industrial Revolution
- Manufactured goods replaced hand made goods
- First Private Vocational schools



Early US Education

(19th Century)

- Multiple competing academic philosophies
- National Educational Association - Standardization
- Committee of Ten (1892)
- US High School Curriculum
 - 12 years of school
- Core subjects



Vocational Education Roots:

(20th Century)

- Holmes Beckwith PhD
 - German industrial education model
- Continuation schools
 - Apprenticeship model
 - Personalized Learning pace

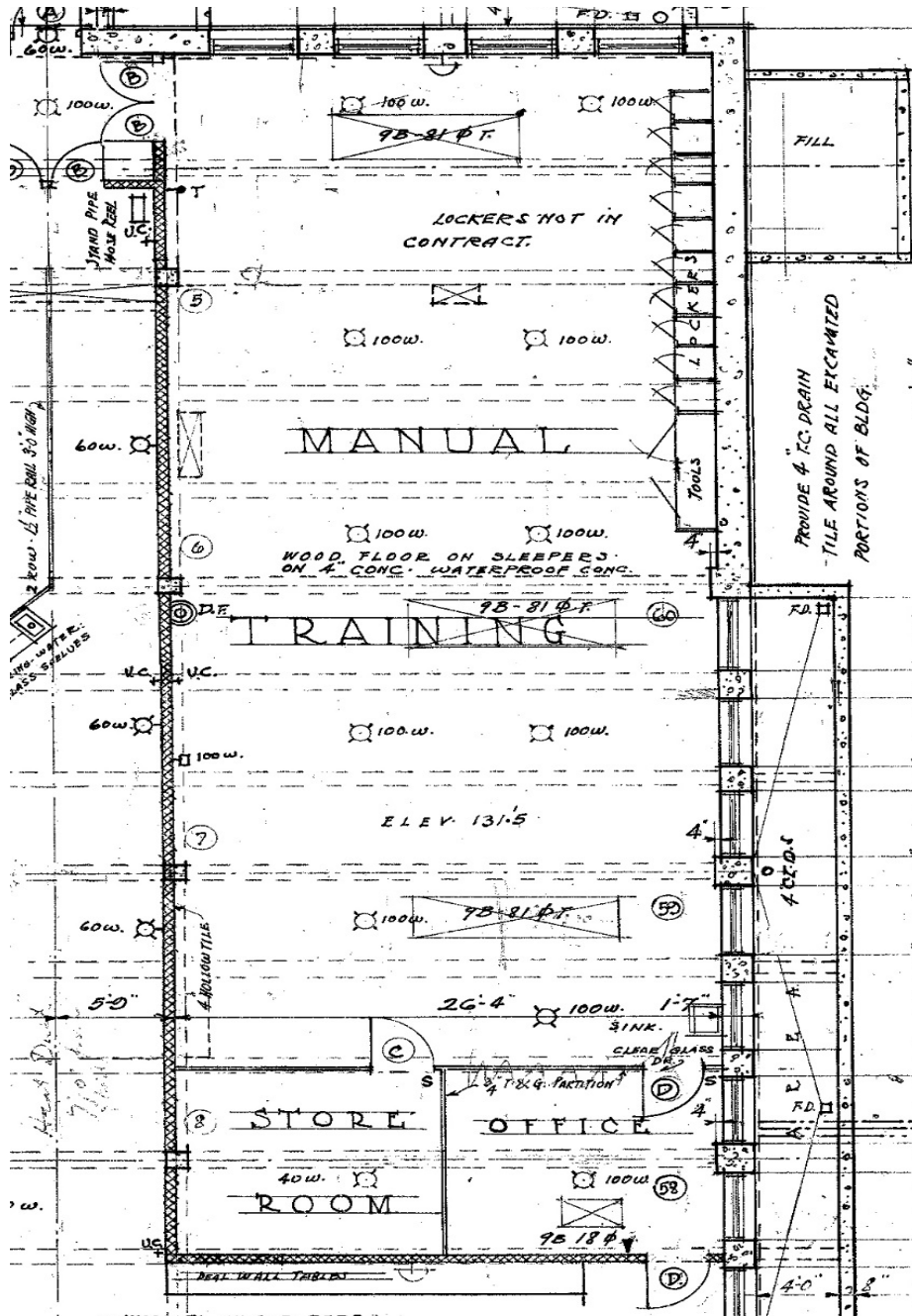


Smith Hughes Act

(1917)

- First federal vocational legislation
- Recognized subjects:
 - Home Economics
 - Industrial / Manual arts
 - Agricultural education
- Federal Goals:
 - Reduce reliance on foreign trade schools
 - Reduce unemployment
 - Improve wage earning potential

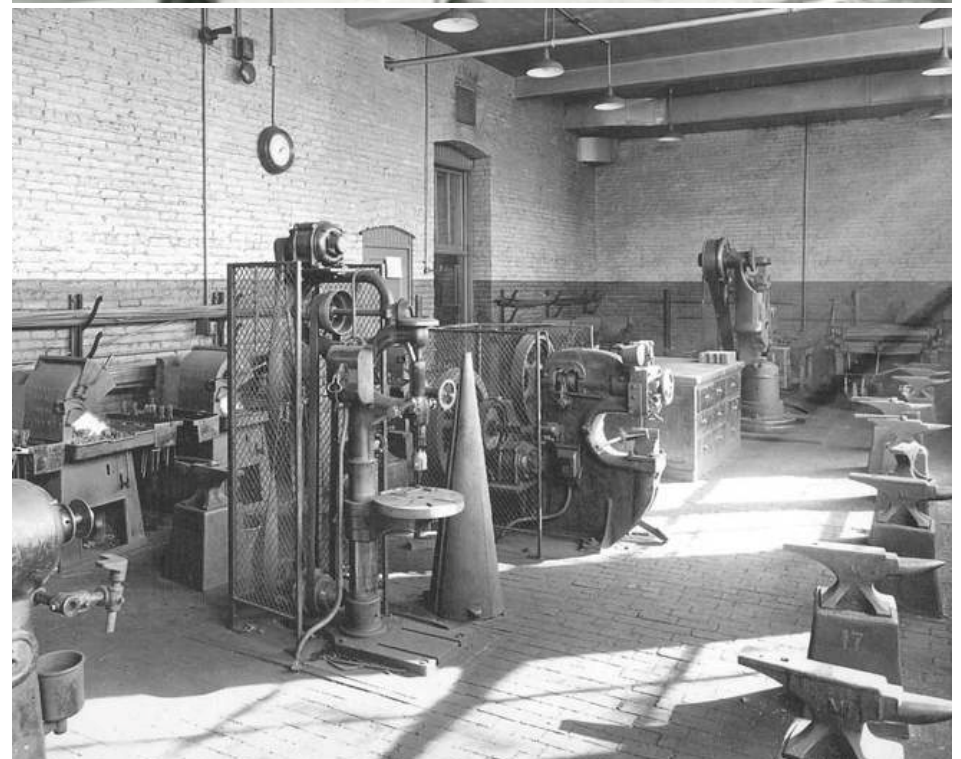


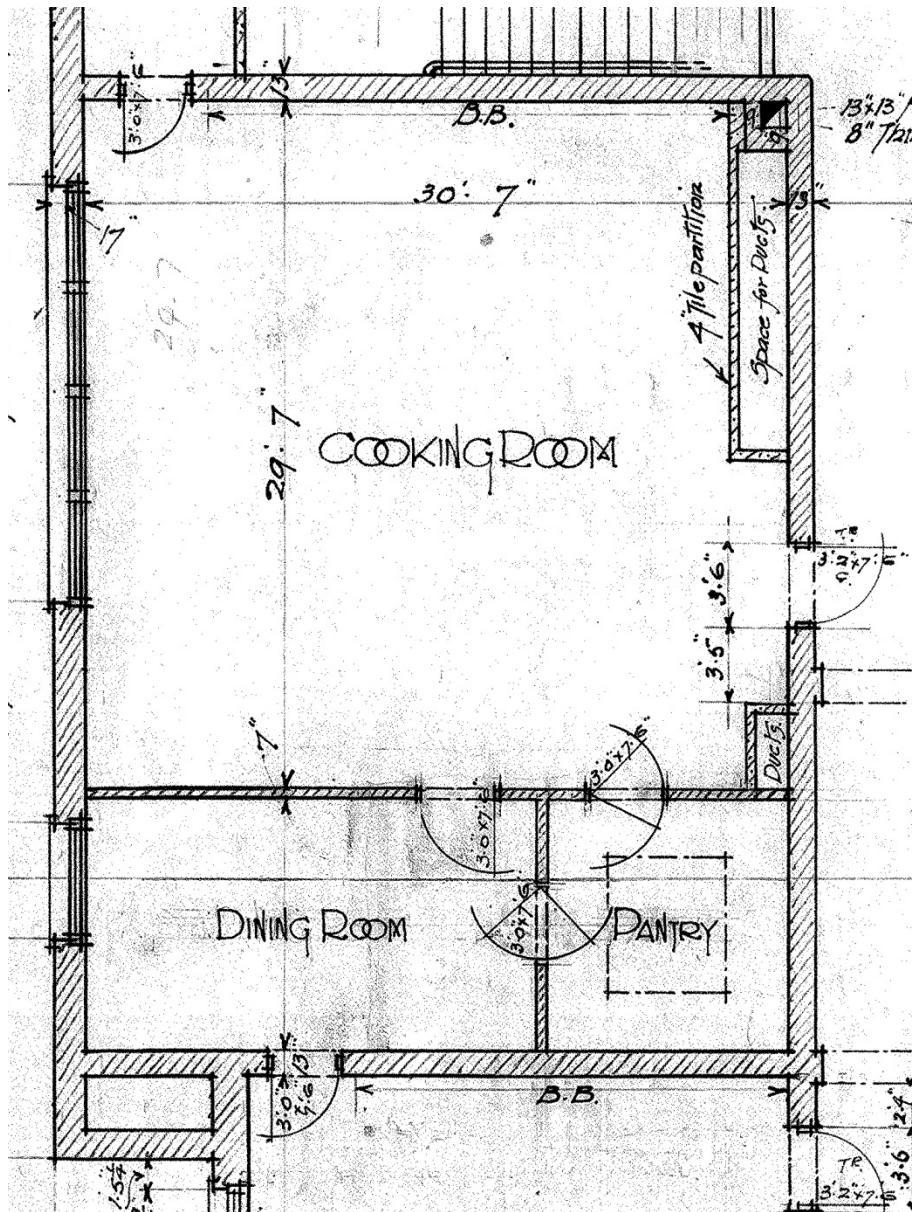


Roosevelt High School, Portland OR

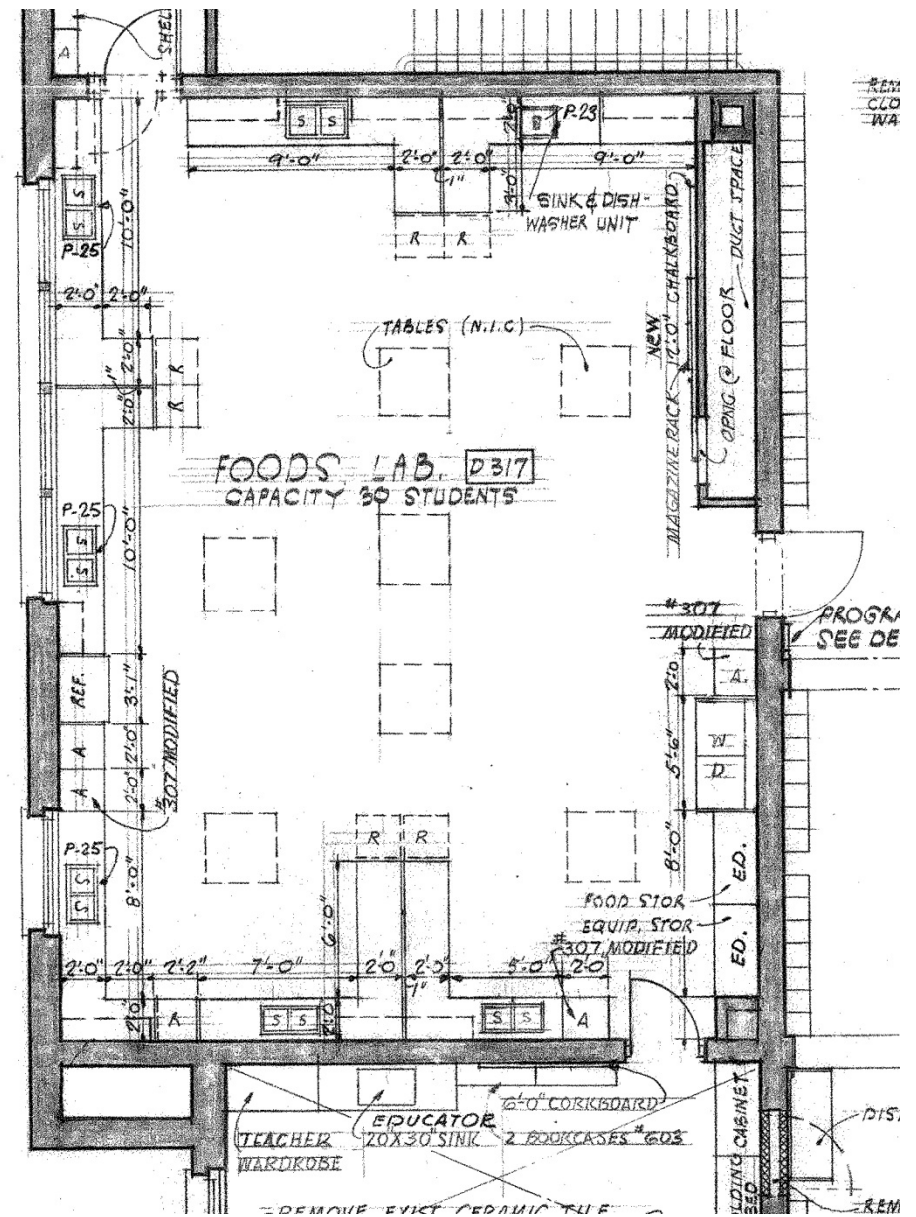
George Barden Act (1946)

- Building on Smith Hughes
- Focus remained:
 - Home Economics
 - Industrial / Manual arts
 - Agricultural education
- Additional programs:
 - Marketing/Business programs
- Increases in:
 - Training
 - Equipment
 - Research





Franklin HS Before



Franklin HS After

National Defense Act (1958)

- Cold War
- Focused on items related to defense
- Focus areas:
 - Science
 - Math
 - Foreign language
 - Research and data processing classes



Vocational Education Act

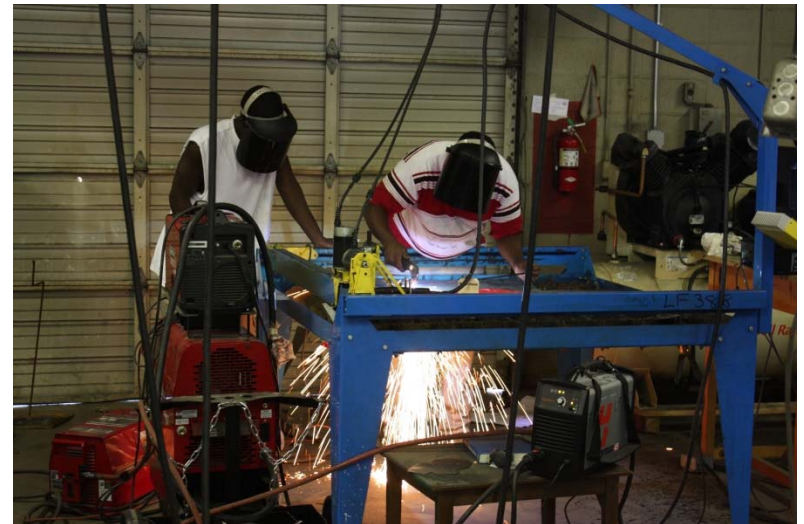
(1963)

- Replaced prior legislation
- Reduced federal control
- Expanded Vocational Education
- Research and experimental programs
- Addressed gender equality and reduced gender stereotyping for occupational guidance



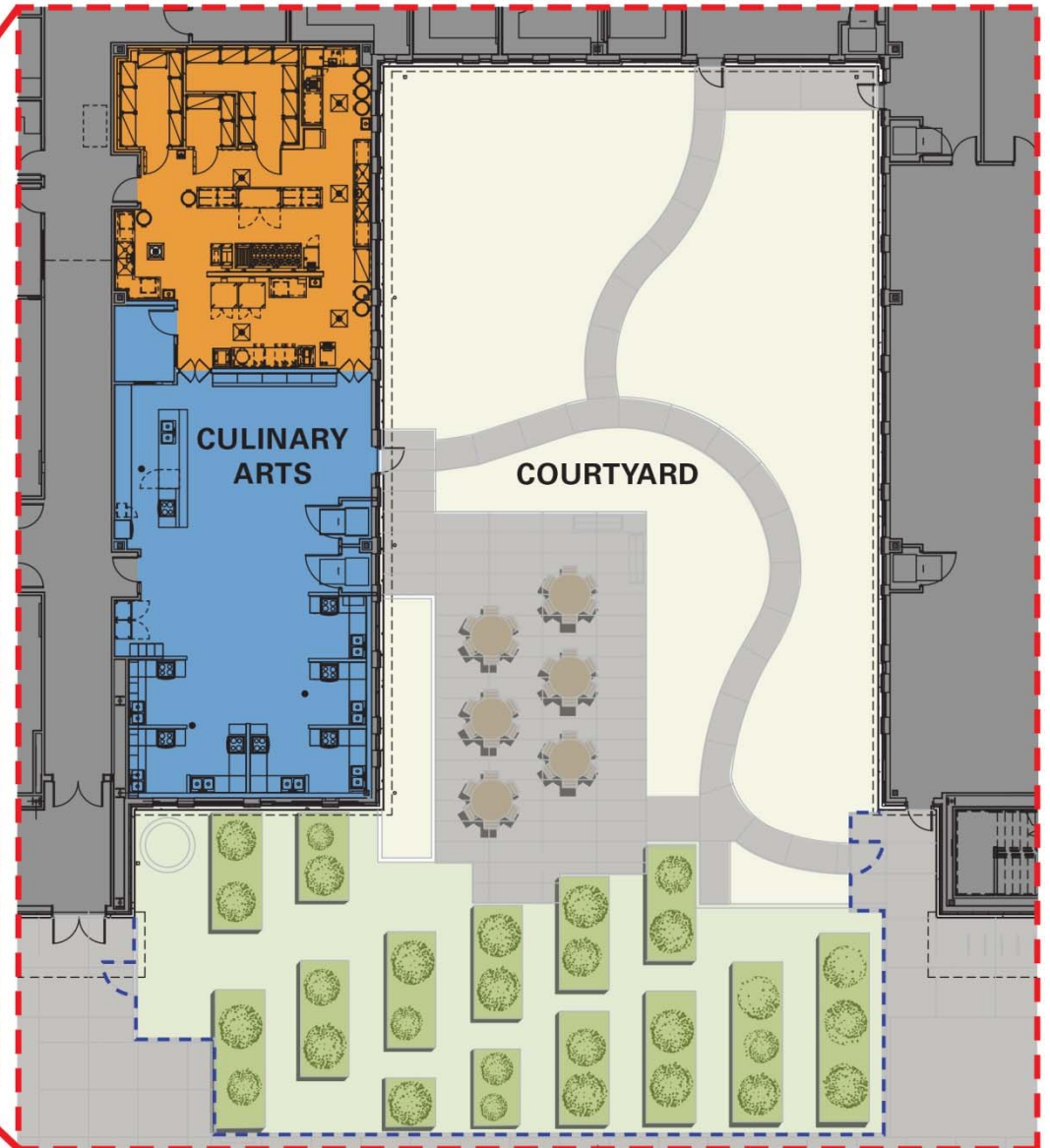
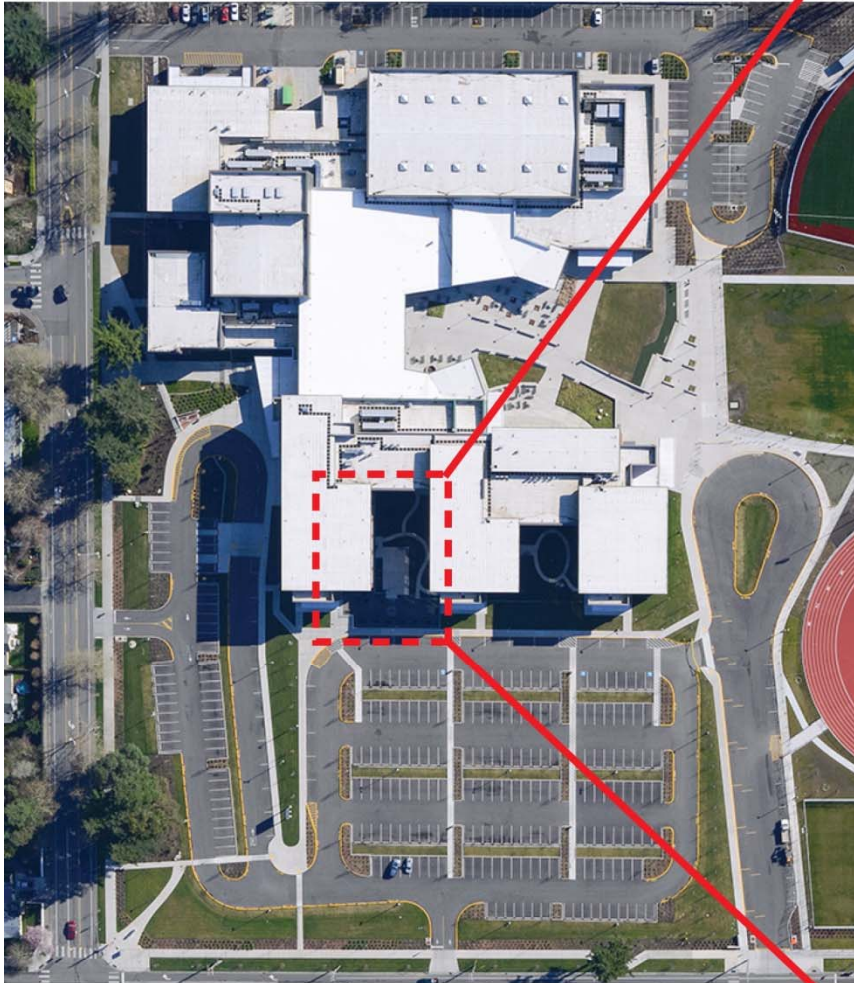
Perkins 1/2/3/4

- Spanned from 1984-2006
- Goals:
 - Improve Labor Force
 - Prepare students for job opportunities
- Focus on diverse populations
 - Disadvantaged
 - At Risk
 - Low Income
- Large monetary commitment
- Expanded options



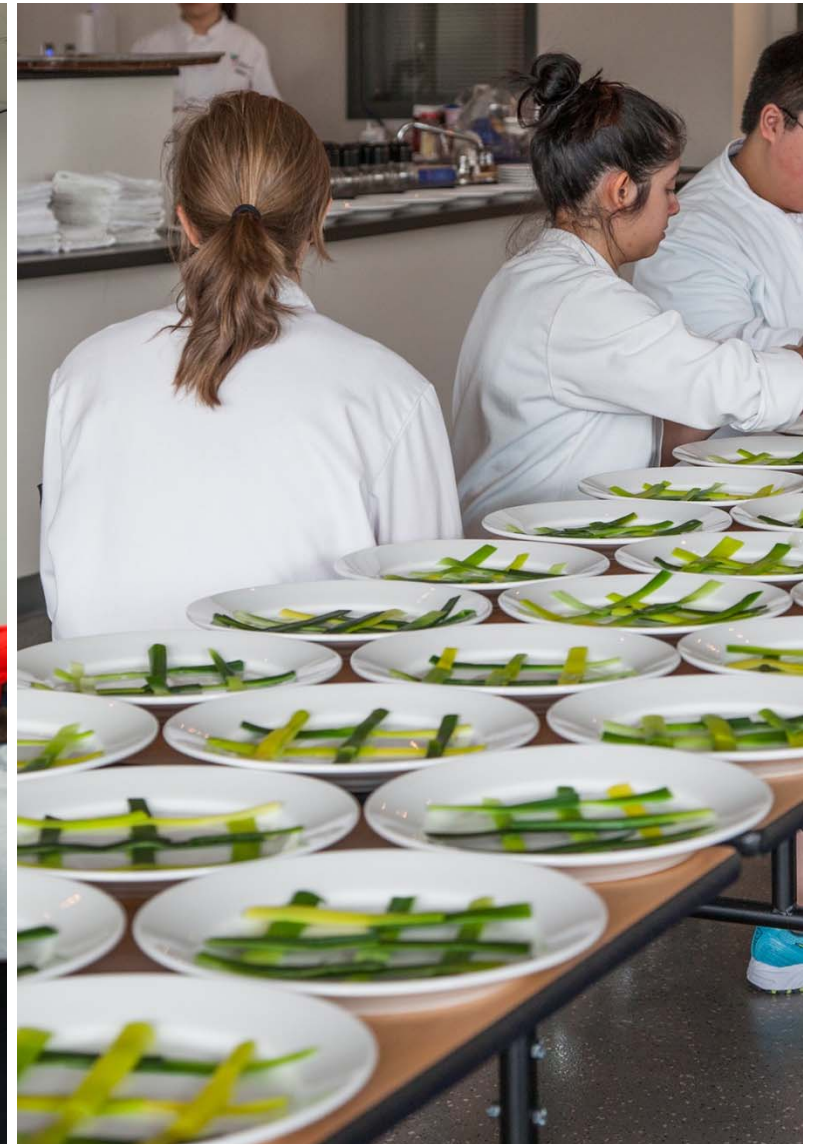
Case Study: Shorewood High School

Culinary Arts: Career Technical Education



Case Study: Shorewood High School

Deep Learning of fine culinary skills



Case Study: Shorewood High School

Professional Kitchen Lab



Case Study: Shorewood High School

Outdoor Venue for Catered Events and Kitchen Garden



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Thematic Education

What is Thematic Education?



Aviation High School – Long Island, NY

What is Thematic Education?



1936



Aviation High School – Long Island, NY

What is Thematic Education?



1936



1995



Aviation High School – Long Island, NY

What is Thematic Education?

- Clear thematic
- Integration to curriculum
- Small Schools – Community engagement

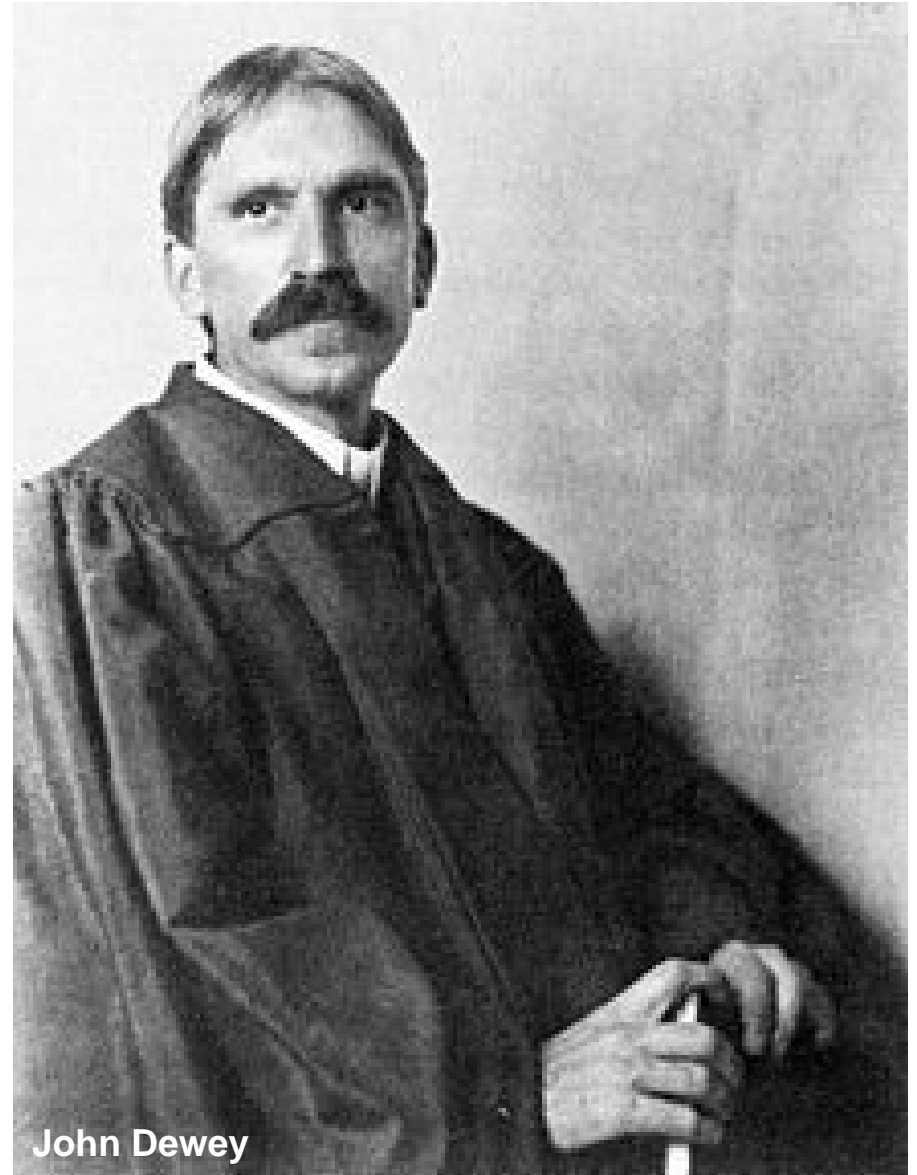


Marine Science High School of Southeastern Connecticut

Significance of Thematic Education

“Education through occupations combine within itself more of the factors conducive to learning than any other method”

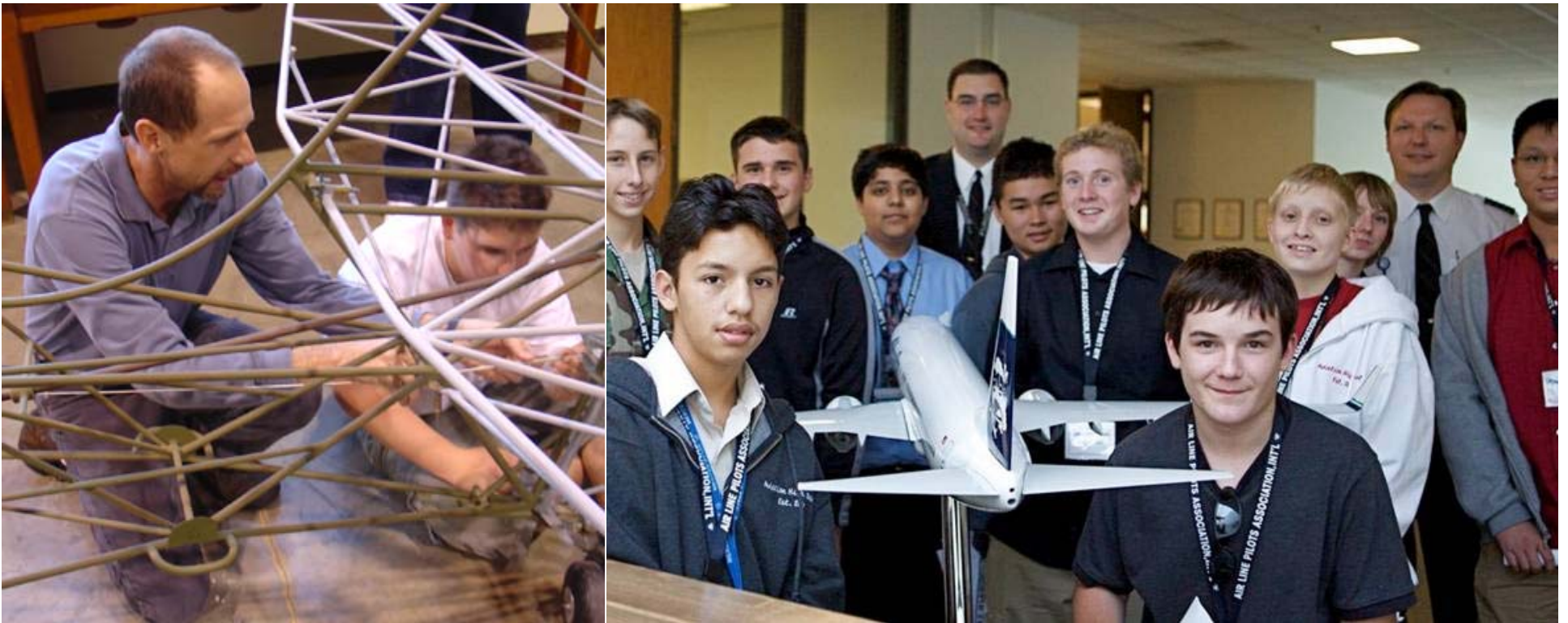
-John Dewey



John Dewey

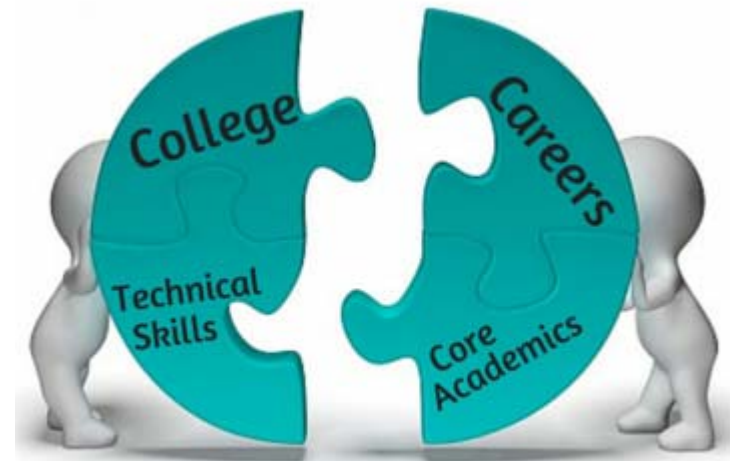
Significance of Thematic Education

- Focuses on constructing meaning
- Emphasizes problem-solving approaches
- Themes act as critical thinking binder
- Integrates real-life experiences



Significance of Thematic Education

- California 'Linked Learning' proponent
- Optimistic study findings
- Bridging the divide



Students gain career and life skills (percentage point differences)



Case Study: Raisbeck Aviation High School

- Clear thematic



Case Study: Raisbeck Aviation High School

- Theme integrated into curriculum

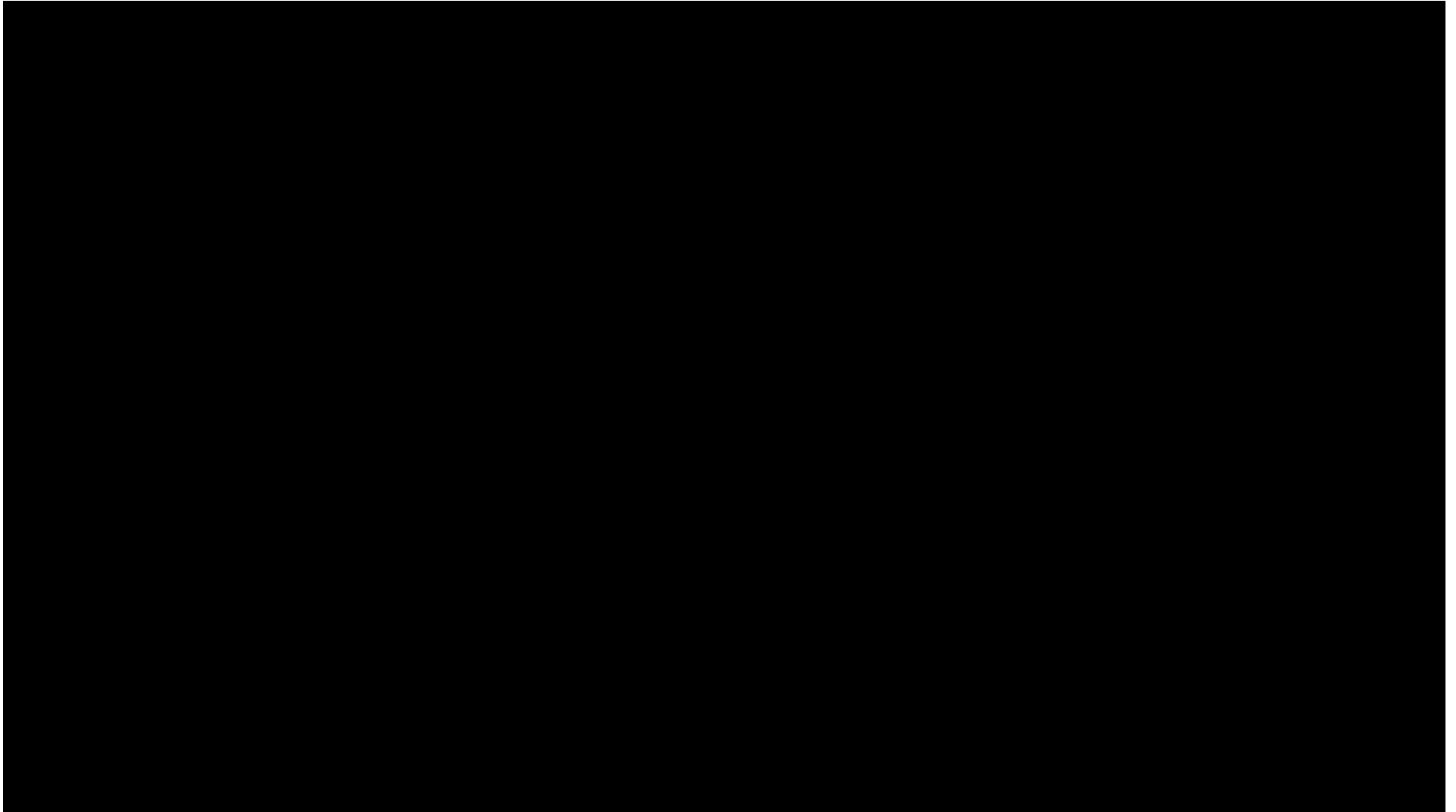


Case Study: Raisbeck Aviation High School

- Community engagement



Case Study: Raisbeck Aviation High School



SKYE MCEOWEN – RAHS ALUMNI

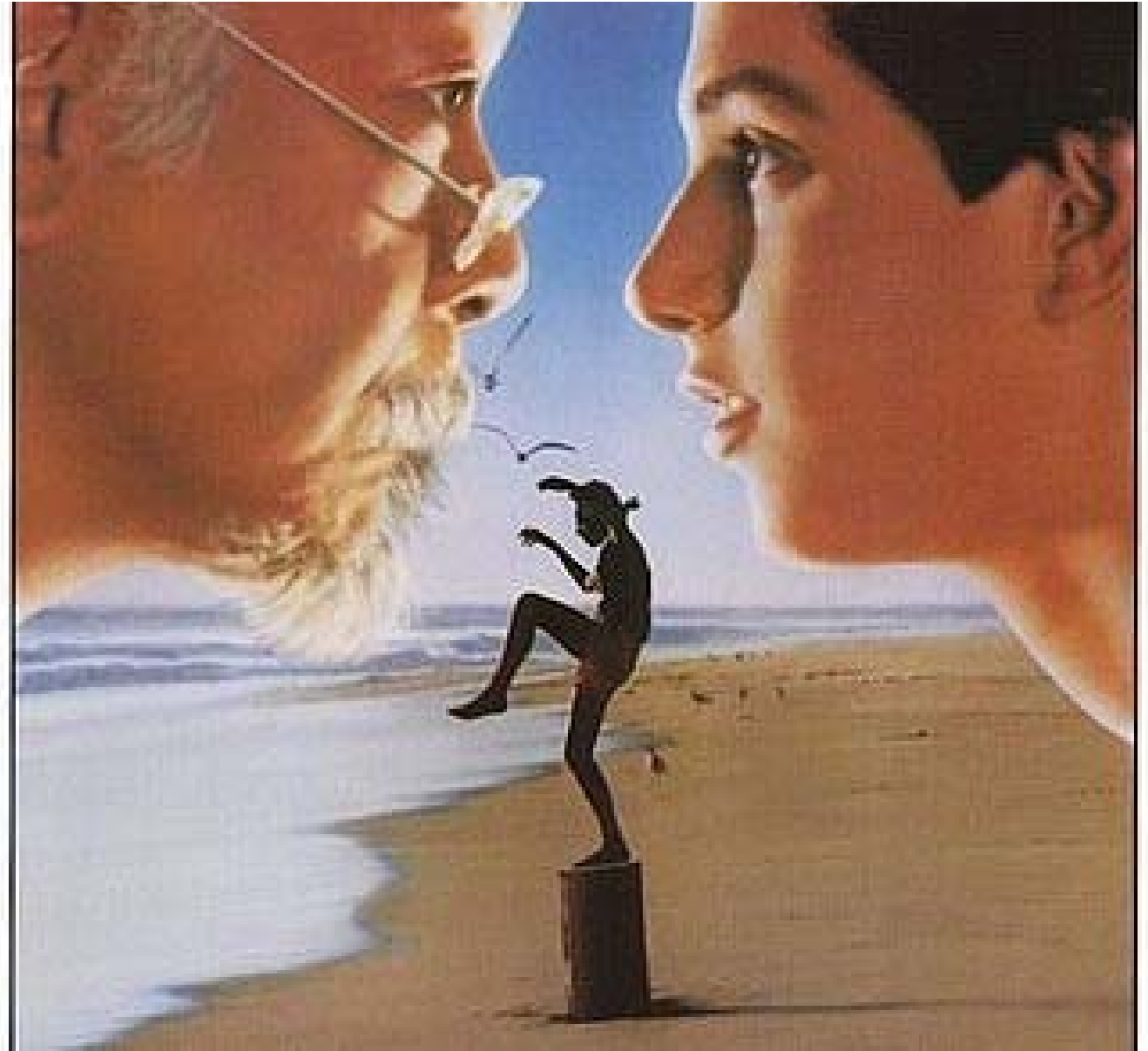
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The Karate Kid



Understanding the Generational Mix

Boomers _ Born 1946-1964

Generation X _ Born 1961-1981

Millennials / Generation Y _ Born 1981-2000

iGen / Gen Z

Born 1995-2009/12

Gen Alpha?



Facebook's New Office



Professional Expectations

Metropolis: Workplace of the Future



Tech Dependent



Hybrid Office by Edward Ogcosta Arch.



Organic Grid: Sean Cassidy & Joe Wilson



Rietveld Arch.- The End of Sitting







What DOES it look like when we...

Chat

Converse

Co-create

Divide &
Conquer

Huddle

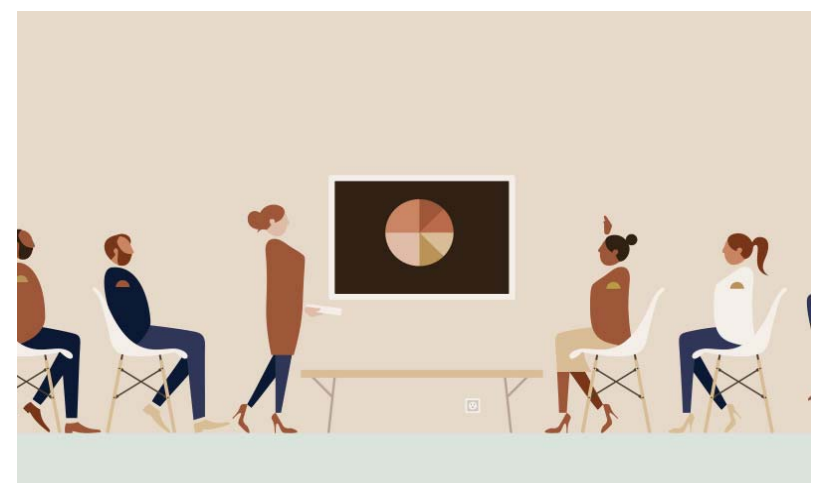
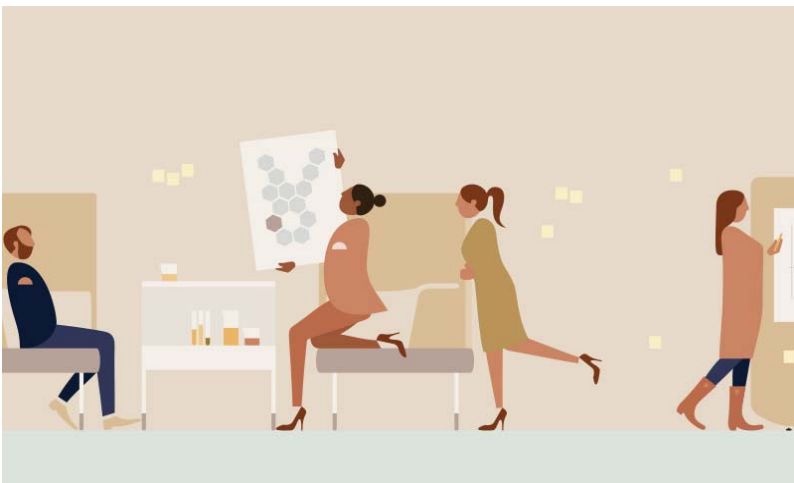
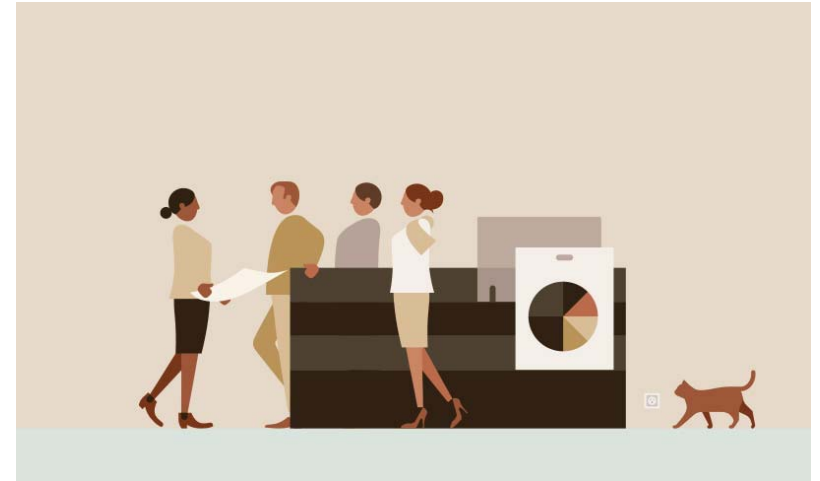
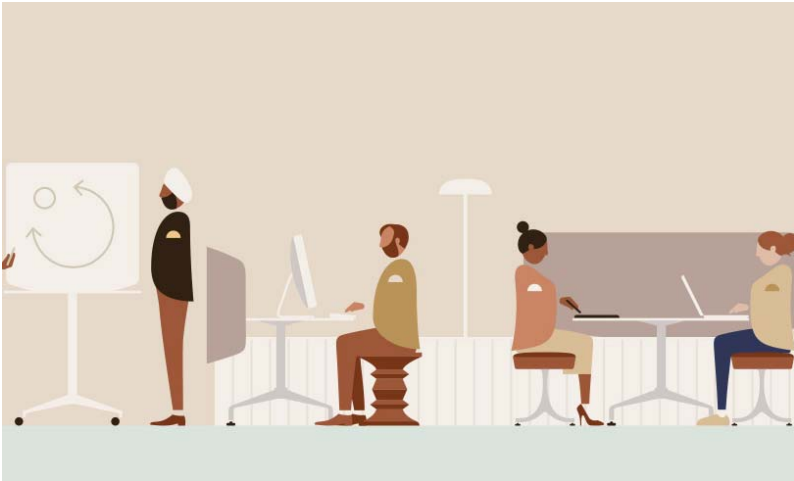
Warm Up, Cool
Down

Show & Tell

Process &
Respond

Create

Contemplate

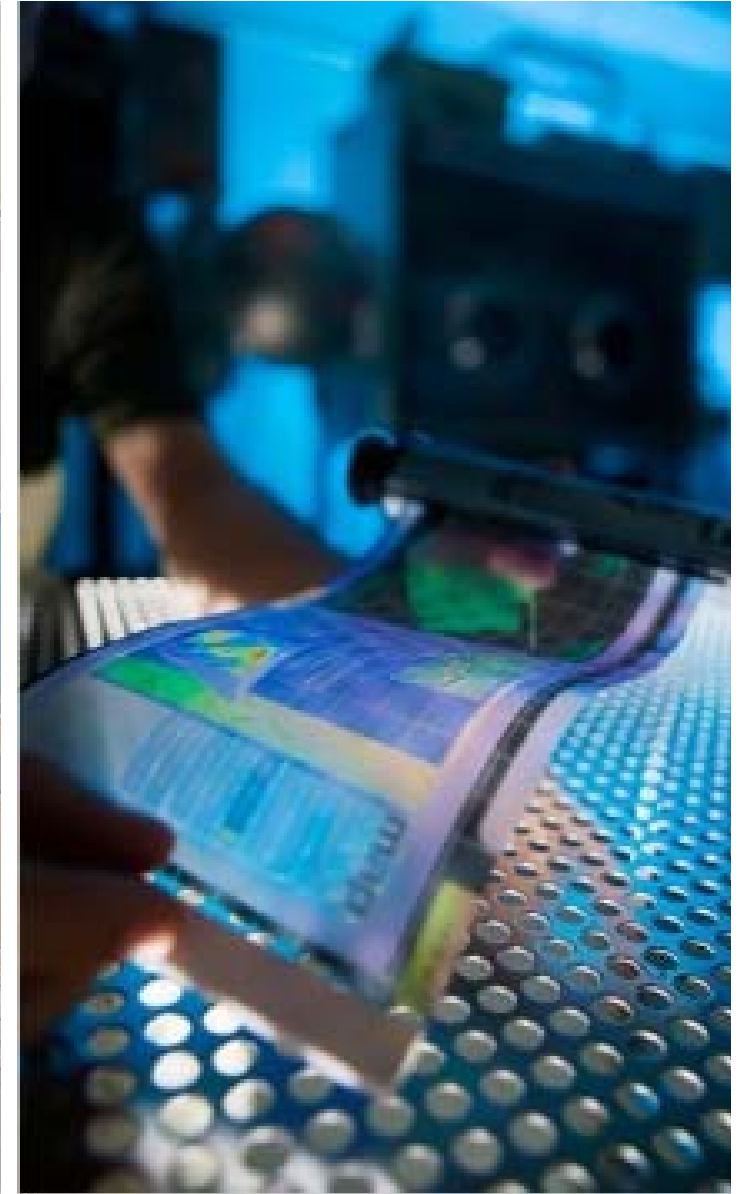


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- Reimagining Learning Environments
 - Case Study: Sammamish High School

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Reimagining Learning Environments

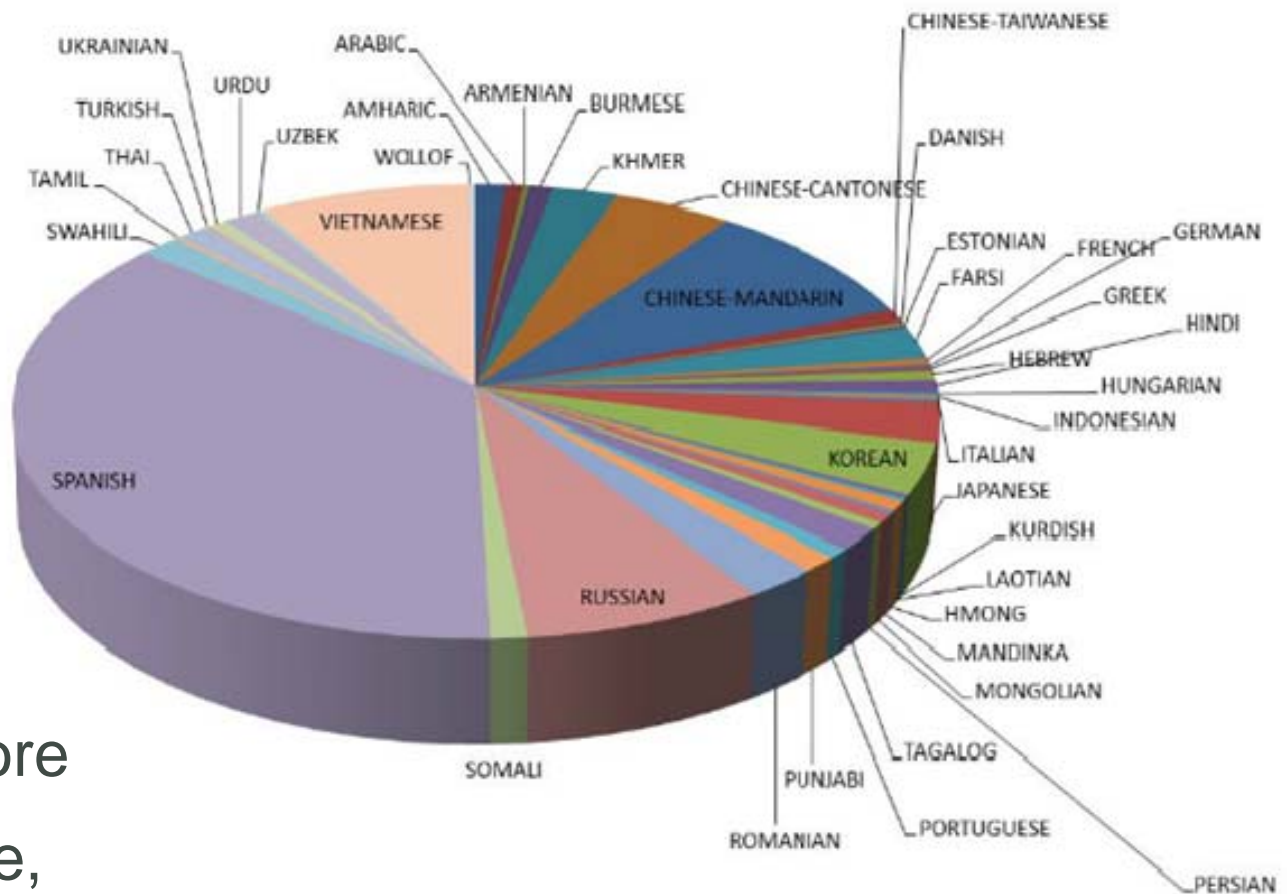
Case Study: Sammamish High School



- Neighborhood Comprehensive School, Grades 9-12, 950 Students
- 40% will be first in their family to earn a two year degree or higher
- 43% qualify for free or reduced lunch



Linguistic diversity: SHS's L1 breakdown (English removed)



- 40% speak more than 1 language,
- 43 languages, 53 countries

Renewal Process at Sammamish

2008 - School-based team identified local needs and achievement gaps focusing on students from traditionally underrepresented groups.



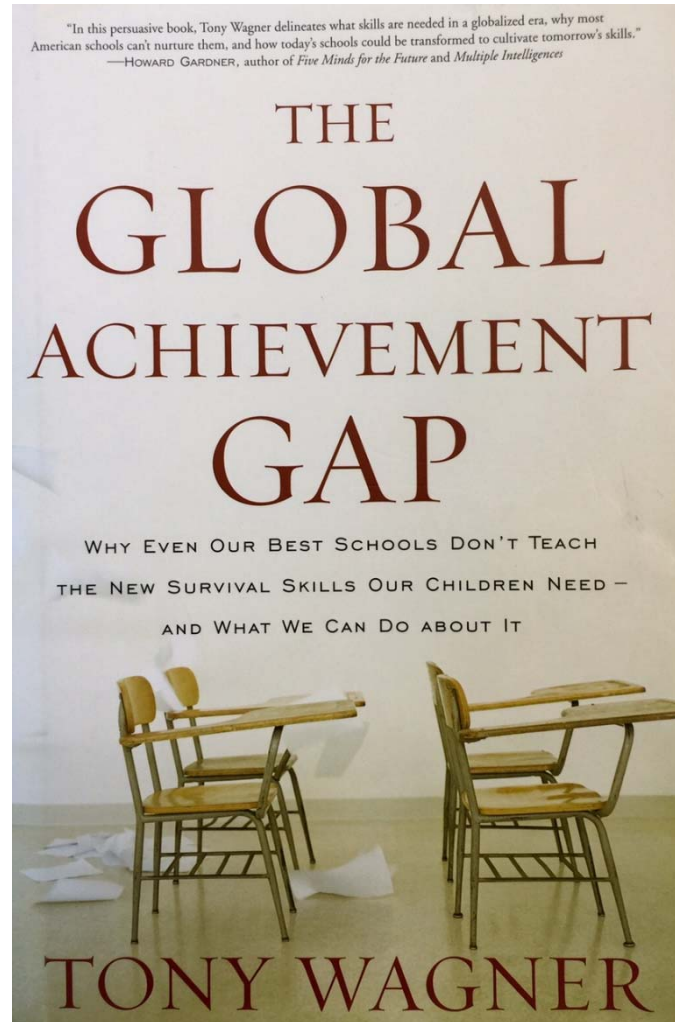
Renewal Process - Research and Planning

Surveyed current research and literature related to college and career readiness to:

- Identify skills that will be in demand
- Best practices in instruction
- Develop locally-owned priorities and vision



How DO we better prepare our students?



i3 Grant: Re-imagining Career and College Readiness: STEM, Rigor, and Equity at a Comprehensive High School

Providing dedicated, paid time during the day for almost half of the teachers working at SHS during this five-year period to re-design course curriculum for problem based learning.



Renewal and Leadership Distribution

- Teacher Leaders working half-time in the classroom – to ground the work of leadership in the realities of day-to-day instruction.
- Frequent leadership meetings
- Including teachers in designing and leading professional development anchored to the vision of a Sammamish classroom



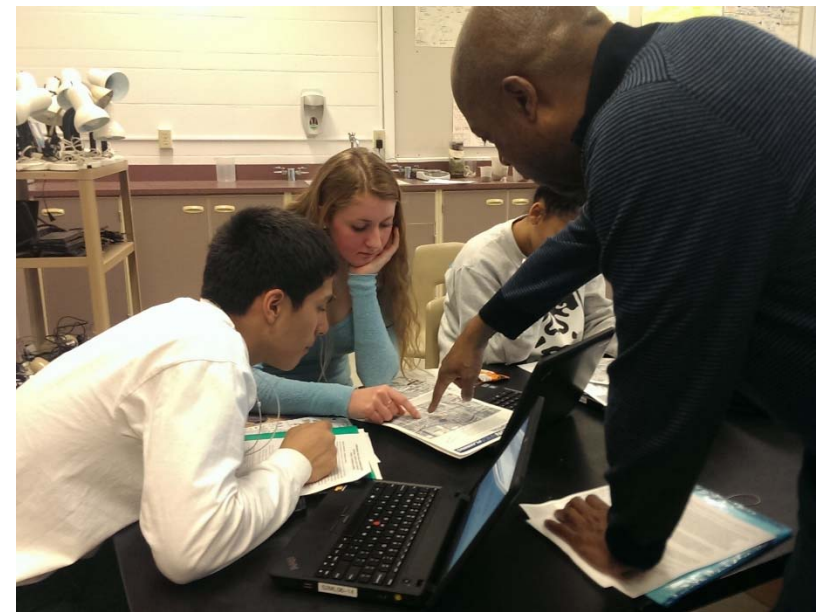
Partnerships

Seeking out intentional partnerships with university, government, and business organizations to add resources of money, time, and knowledge towards increased student college and career readiness.



Problem Based Learning (PBL) Because...

- Teaching 21st Century Skills
- Challenging and engaging all students at all levels
- Best Practice – researched, validated
- Equitable Practice – closes achievement gaps
- Leverages Underused Resources – experts in the community and higher education




Instructional Strategies –

Content knowledge and skills are applied

- **Problem-based Learning**
 - ex. Sammamish High School
- **Project-based Learning**
 - ex. Edutopia, Buck Institute
- **Experiential Learning**
 - ex. Montessori schools, CTE
- **Deeper Learning**
 - ex. Hewlett Foundation, Envision Schools
- **Thematic Learning**
 - ex. Raisbeck Aviation High School

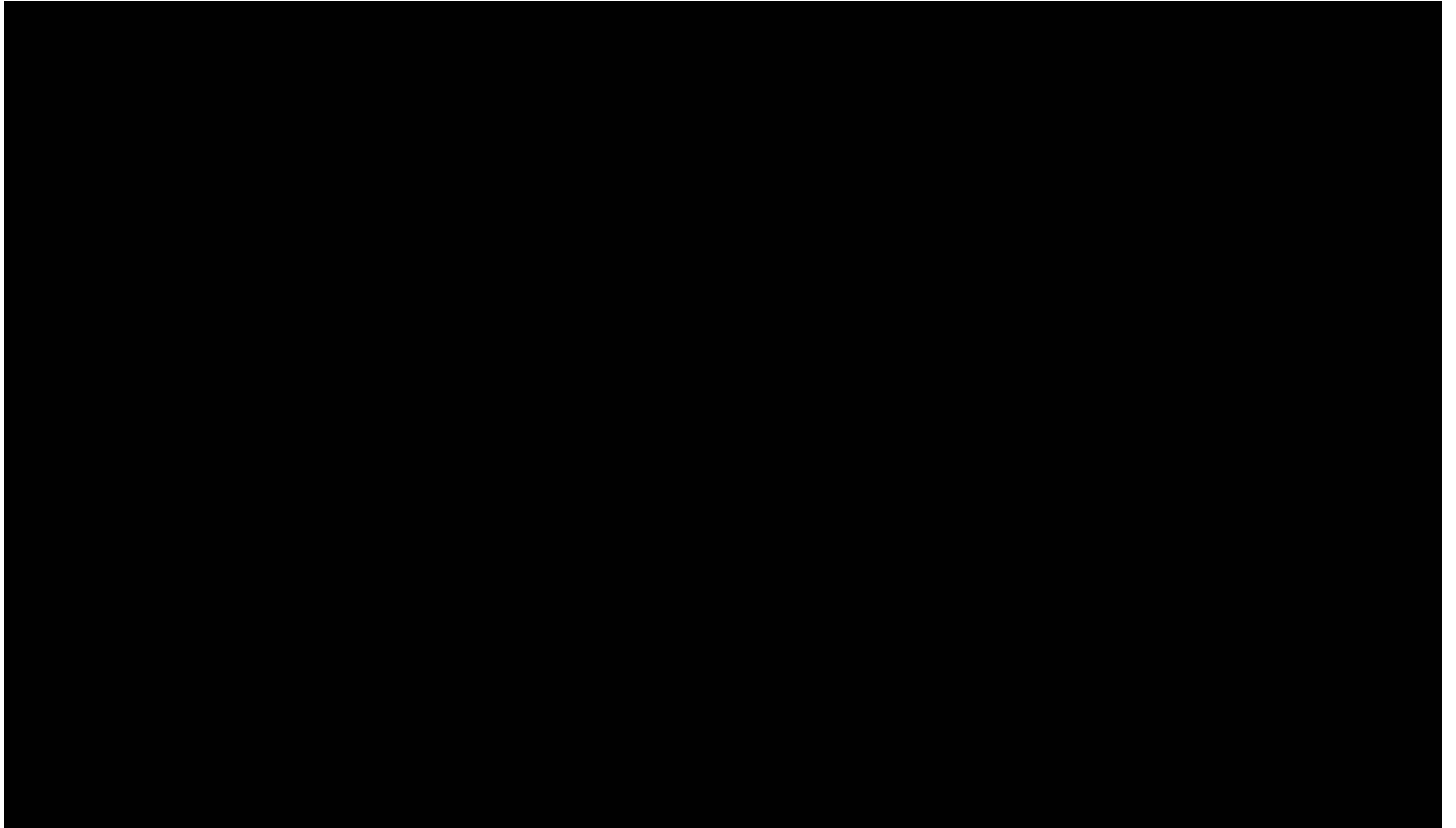
Outcomes

- **92%** passed at least one math end of course exam by 10th grade in 2014, up from **77%** in 2011 (20% score increases for low-income and English Language Learners)
 - Students completing an advanced level math course (pre-calculus or equivalent) before graduation increased by **10%** between 2011 and 2013.
 - **78%** of 10th graders passed the Biology End of Course Exam in 2014, compared with **60%** in 2013
 - **91%** of the class of 2013 graduated with credit in at least one Advanced Placement class, compared with **81%** of the class of 2010.
 - Students with disabilities and English Language Learners enrolled in at least one AP STEM course increased from **20** in 2010 to **61** in 2014.
 - AP exam pass rate increased from **36%** in 2010 to 50% in 2013.
- 

1:1 Technology Integration...



<https://www.youtube.com/watch?v=avzLzflbYNc>



Student Led Teaching Environments







Sammamish High School, Bellevue Washington



Further Information

Sammamish website: <http://www.bsd405.org/sammamish/>

Sammamish Facebook page:
<https://www.facebook.com/sammamishHS>

Microsoft in Education video – *Empowering Education Through Problem-based Learning*:
<https://www.youtube.com/watch?v=QgKBgSYqFh8&feature=youtu.be&app=desktop>

Edutopia video #1 – *Building the Foundation to Transform a Public High School to PBL*: <http://www.edutopia.org/sammamish-problem-based-learning-video>

Edutopia video #2- *High School Teachers Meet the Challenge of PBL Implementation*:
<https://www.youtube.com/watch?v=nMCCLB9gOag#t=28>



Thank You!



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