EXPERIENCE BASED LEARNING
Presenters Introduction

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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
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
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?
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- Clear thematic
- Integration to curriculum
- Small Schools – Community engagement
Significance of Thematic Education

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

-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
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
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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
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
• 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...
Student Led Teaching Environments
Sammamish High School, Bellevue Washington
Further Information


Sammamish Facebook page: [https://www.facebook.com/sammamishHS](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](https://www.youtube.com/watch?v=QgKBgSYqFh8&feature=youtu.be&app=desktop)


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