



Deepening Project-Based Learning: Lessons from Powerful New Research and Practice

May 20, 2021





Welcome

- Introduce yourself in the chat box
- We welcome your questions, answers, and comments
- Share your learning on Twitter (we are @Aurora_Inst)
- We are recording and archiving the webinar
 - The slides and video will be available on aurora-institute.org

Presenters



Kristin De Vivo, Executive Director, Lucas Education Research

Devin Krugman, Director, Professional Growth and Development, San Francisco Unified SD

Deborah Peek-Brown, Education Specialist, Create for STEM Institute, MSU Detroit Center

Natasha Thompson, Director of School and District Leadership, PBLWorks

Nathan Warner, Regional Director, EL Education

Justin Wells, Executive Director, Envision Learning Partners

Project-Based Learning and Competency-Based Education

1. Deep student agency
2. Relevant, actionable assessment
3. Differentiated supports
4. Progression upon demonstrated mastery
5. Varied pacing and pathways
6. Equity strategies embedded in schools and systems
7. Rigorous common expectations for transferable knowledge, skills, and dispositions



CompetencyWorks
AN INITIATIVE OF THE AURORA INSTITUTE

What Is Competency-Based Education?

An Updated Definition

WRITTEN BY:
Eliot Levine
Susan Patrick



Agenda

Overview of the Four Project-Based Learning Studies

Practical Applications of the Research

Breakout Rooms

- **Deeper Dive Into the PBL Studies**
- **Getting Started with PBL in Schools and Districts**
- **Advanced Implementation of PBL in Schools and Districts**

Wrap-up: What We Heard and What Remains



OUR VISION

We believe authentic, challenging, active, and relevant learning experiences optimize opportunities for all students to productively participate and lead in an increasingly diverse and dynamic society.



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The learning sciences reveal that active approaches to learning work better than traditional methods for students from all types of backgrounds. But this evidence-base is incomplete, poorly understood, and has not been widely translated into classroom practice.

Our theory of action is that by:

- (1) creating high-quality PBL curricula and teacher supports
- (2) researching schools and teachers using these approaches, and
- (3) creating proof points of PBL practice

We will strengthen the PBL evidence-base while providing educators with resources and support for PBL.

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What is Rigorous Project-Based Learning?

- Inquiry-based with a challenging question rooted in core subject-matter content
- Centered on real-world and meaningful problems
- Students learn *through* projects, engaging regularly in active and generative tasks, with agency and voice



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AP ENVIRONMENTAL SCIENCE

How can we rethink
our use of the world's
resources?

THE 7 PROJECTS

Course Introduction

What does sustainability mean?



Course
Introduction

Ecological Footprint

How can my family reduce our
ecological footprint?



Ecological
Footprint

My Community Ecology

How can our community develop more
sustainably?



My Community
Ecology

Food Systems

How can we meet the needs of our
growing human population while
sustaining ecosystems and the quality of



Food Systems

PROJECT 1:

ECOLOGICAL FOOTPRINT

DRIVING QUESTION:

How can my family reduce our ecological footprint?

TASK 0 PROJECT LAUNCH

How is my family living right now?

0

TASK 1 RESOURCE AUDITS

What resources do we use and how much?

1

TASK 2 LIFE EFFICIENCY

How efficient is this life?

2

TASK 3 SUSTAINABLE ALTERNATIVES

What are more sustainable alternatives?

3

TASK 4 FAMILY PROPOSAL

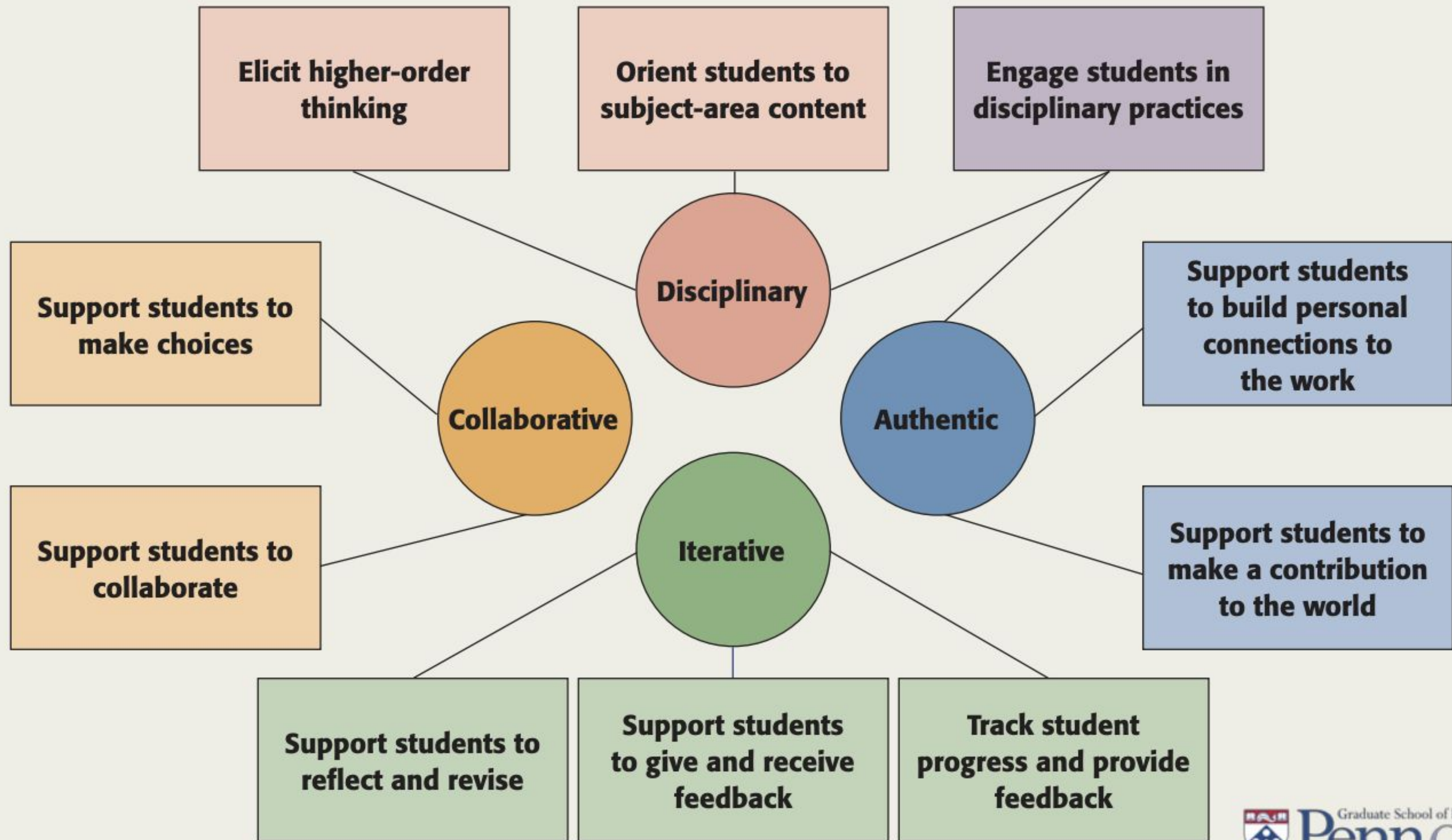
Which alternatives are realistic for my family?

4



FIGURE 1.

The Core Practices of Project-Based Teaching



Research Evidence: Four Studies

1. Knowledge in Action: A project-based approach to Advanced Placement courses
2. Multiple Literacies in PBL: An interdisciplinary approach to 3rd grade science, literacy and mathematics
3. Project PLACE: An interdisciplinary approach to 2nd grade social studies and literacy
4. Learning Through Performance: An NGSS aligned 6th grade science course with language and literacy scaffolds

New Research on Project-Based Learning

CORE FINDING:

Students in project-based learning classrooms from high poverty, large urban to rural school districts across the United States **significantly outperform** students in typical classrooms.



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New Research on Project-Based Learning

CORE FINDING:

Youth across racial, ethnic, and socioeconomic backgrounds benefit from challenging and authentic project-based learning.



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PBL Boosts Student Achievement in AP Courses

High school students who engaged in project-based learning outperformed their peers by **8 percentage points** on AP U.S. Government and Politics and AP Environmental Science exams.

PBL Boosts Achievement Science and SEL

Third graders in project-based learning classrooms scored **8 percentage points higher** than students in traditional classrooms on a state science test. These effects persisted for students **regardless of race, gender, or reading ability.**



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PBL Impact in Low-Income Communities

Second grade social studies students from **low-income** communities in 24 project-based learning classrooms gained the equivalent of **5-6 months more learning** than students in non-project-based classrooms.

Middle School English Learners Also Benefit

Sixth grade English language learners scored up to **28 percentage points higher** on a state measure of language proficiency in a project-based science course that emphasized group work.

SCALE

Stanford Center for Assessment, Learning, & Equity

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Implications for the Field

Rigorous PBL research showed consistent findings across grades, subjects and demographics:

- Strengthened student engagement
- Improved deeper learning including disciplinary content
- Boosted achievement across subject matter areas
- Reached students from all types of backgrounds



For More Information



LucasEdResearch.org

- 4 page research briefs
- 5 minute videos
- Links to OER curricula used in the research
- Context-setting white papers

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Breakout Rooms

Room A: Deeper Dive into the GLEF PBL Studies

with Kristin De Vivo & Deborah Peek-Brown

Room B: Getting Started with PBL in Schools and Districts

with Justin Wells and Natasha Thompson

Room C: Advanced Implementation of PBL in Schools and Districts

with Nathan Warner and Devin Krugman

(If you need assistance, come back into the main room and let us know.)

The background of the slide features a vibrant blue-to-purple gradient. Overlaid on this gradient are silhouettes of a diverse group of people in the lower half, their arms raised in celebration. In the upper half, several white, rectangular confetti pieces are scattered, appearing to float or fall. The overall mood is one of joy and achievement.

What We Heard and What Remains



Quick Feedback

One-Minute Survey: https://www.surveymonkey.com/r/Aurora_Webinar_5-20-21



Stay Connected

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