

Building off What We Know: Improving adults' basic skills through instruction



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The State of Adult Skills in America



Many people think they know who needs adult education services.

Most of them don't know who actually needs assistance.



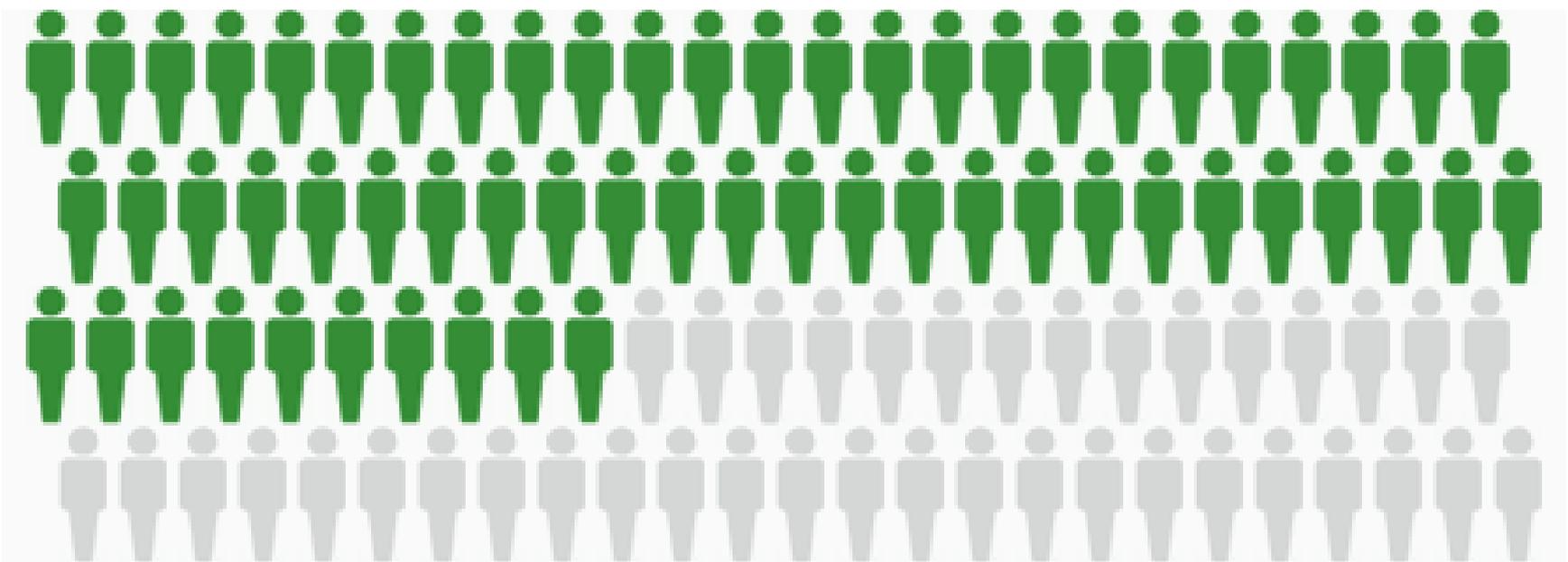
Results from the PIAAC

(OECD Survey of Adult Skills)

Assessed adults 16 to 65 years old in

- Literacy
- Numeracy
- Problem-solving in Technology-Rich Environments

Survey says...

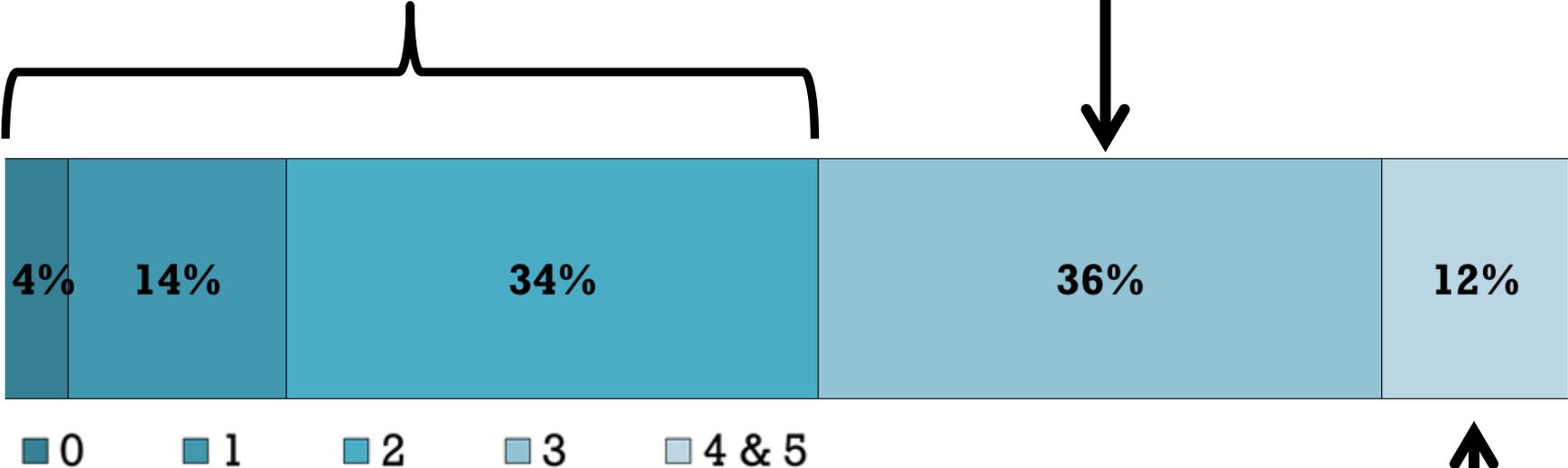


Approximately 60% are below average.

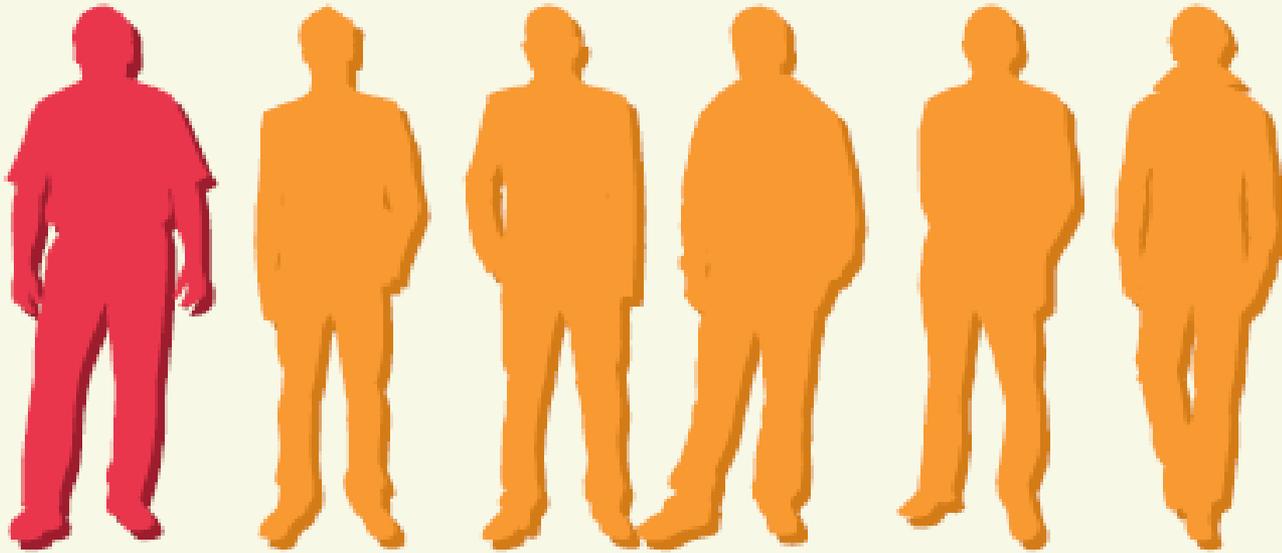
Literacy

52% are below average

Level 3 was considered "average"



Levels 4 & 5 were combined

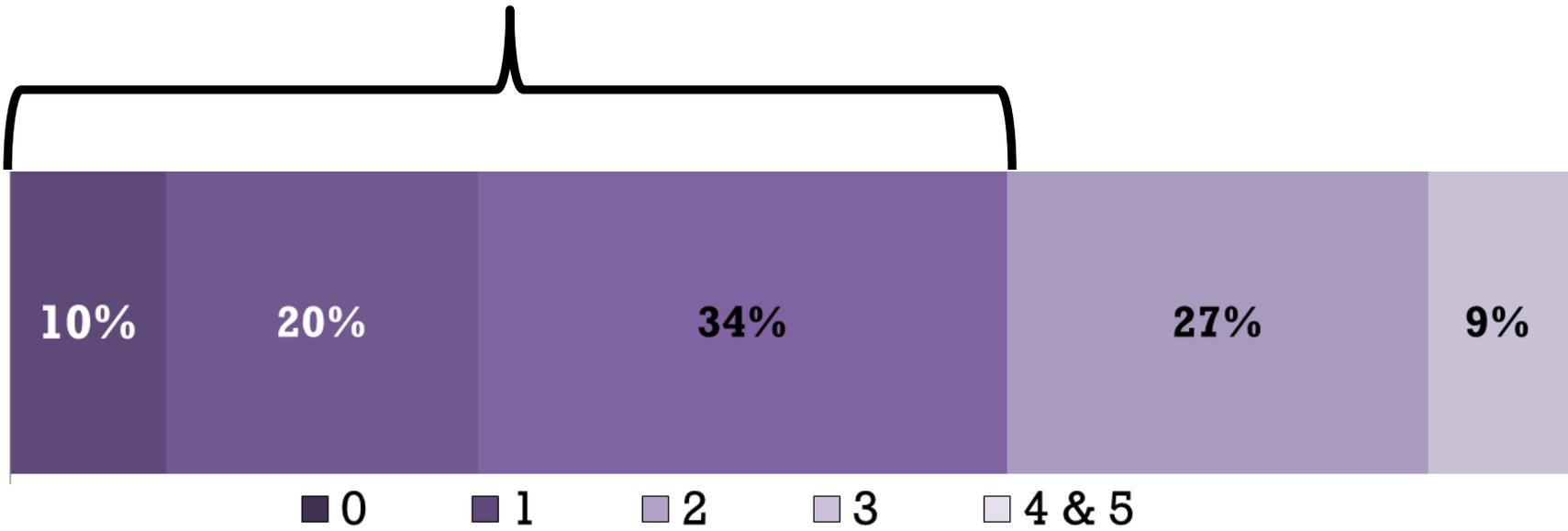


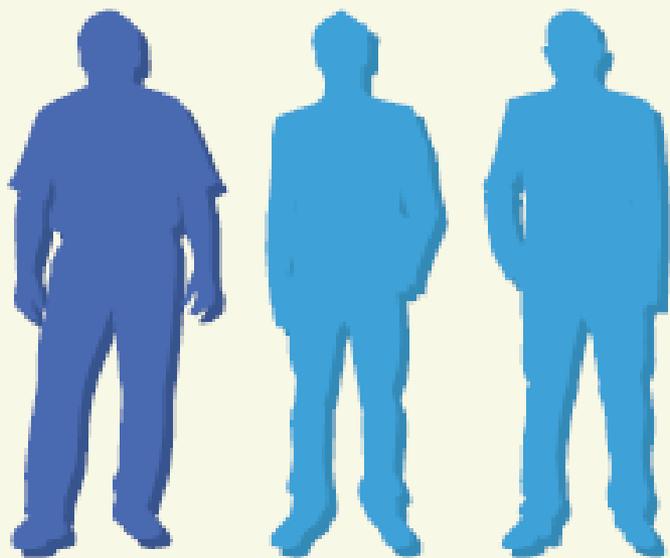
1 in 6 American Adults Have Less-Than-Basic Literacy

About 36 million U.S. adults have only basic vocabulary knowledge and struggle to draw even low-level inferences or do more than summarize or find main ideas in short texts.

Numeracy

64% are below average

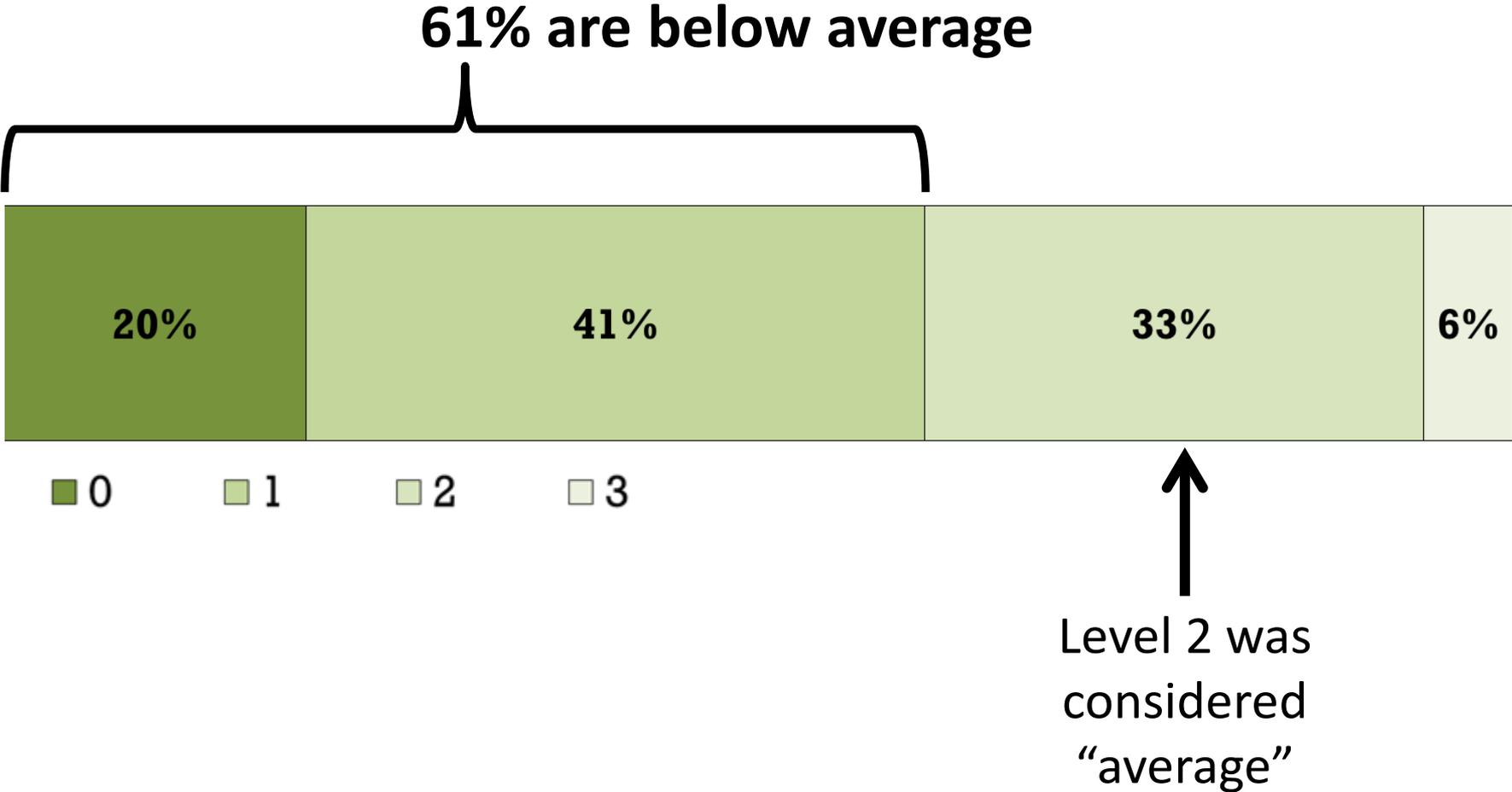


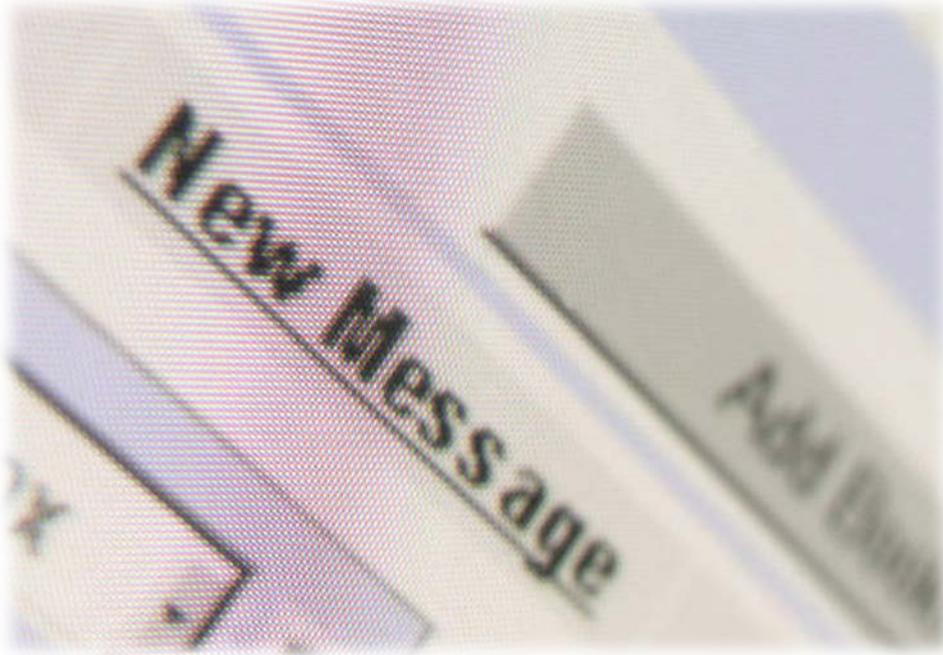


Nearly 1 in 3 Have Less-Than-Basic Numeracy Skills

About 58 million U.S. adults have difficulty solving anything beyond simple mathematical operations involving counting, sorting, and basic arithmetic.

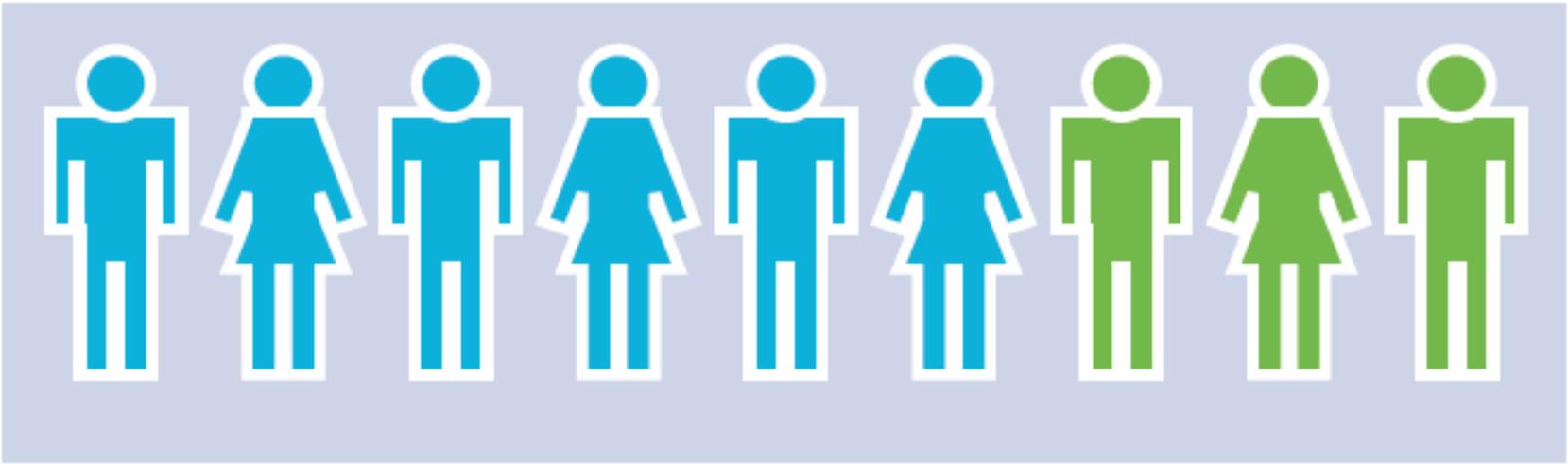
Problem-Solving in Technology-Rich Environments





Problem-Solving in Technology Rich Environments

**3 out of 10 adults have difficulty
sorting e-mails into folders.**



- **Nearly two-thirds are employed.**
- **Nearly two-thirds have at least a high school education.**
- **Most are American-born.**



Each age group performed similarly (i.e., the young were just as low-skilled as the old).



**So basically, many
American adults
could benefit from
building their basic
skills.**

**But, sadly, most of them don't have programs or
instructors to help them.**

Teaching Adults: Theory and Research

- ✓ Are **independent** and **self-directed** learners
- ✓ Have a rich **life experiences** to draw upon
- ✓ Want to learn **immediately relevant** things
- ✓ Want **applicable knowledge**
- ✓ Need the **relevance** to be apparent
- ✓ Have a wide array of **internal incentives**



Malcolm Knowles's Theory of Andragogy

Why Adults Learn (Lieb, 1991)

Social relationships (to make friends)

External expectations (to comply)

Social welfare (to improve the community)

Personal advancement (to improve status)

Escape/Stimulation (to avoid boredom)

Cognitive interest (to satisfy curiosity)

Strategies that Seem to Help All Learners



- **Interleaving and Delay:** Students learn best when they receive variety and take breaks.

**Cheap/free
research-based
strategies to
integrate!**

Strategies that Seem to Help All Learners



- **Interleaving and Delay**
- **Explanatory Questioning:** When students actively ask questions, they think more deeply.

**Cheap/free
research-based
strategies to
integrate!**

Strategies that Seem to Help All Learners



- **Interleaving and Delay**
- **Explanatory Questioning**
- **Frequent Quizzing:** Low-stake quizzes and opportunities to make mistakes allow for deeper learning.

**Cheap/free
research-based
strategies to
integrate!**

Strategies that Seem to Help All Learners



- **Interleaving and Delay**
- **Explanatory Questioning**
- **Frequent Quizzing**
- **Address beliefs, attributions, and mindsets:** This helps students believe that learning is possible and that their effort will pay off.

**Cheap/free
research-based
strategies to
integrate!**

What are education providers doing?

What We Know about Instruction: Improving Delivery

What Should Learning Look Like?

- ✓ Active
- ✓ Deep
- ✓ Social



And What Should Instruction Be?



- ✓ Personalized
- ✓ Contextualized
- ✓ Trial and error
- ✓ Practice

EDUCATION FOR LIFE AND WORK

Guide for Practitioners

STUDENTS AT THE CENTER
TEACHING AND LEARNING IN THE ERA OF THE COMMON CORE
A JOBS FOR THE FUTURE PROJECT

MOTIVATION, ENGAGEMENT, AND STUDENT VOICE

THE STUDENTS AT THE CENTER SERIES

By Eric Toshalis and Michael J. Nakkula

Using Technology to Support At-Risk Students' Learning

SEPTEMBER 2014

Shelley Goldman

Open Center for Security Policy in Education

ALLIANCE FOR EXCELLENT EDUCATION

IMPROVING ADULT LITERACY INSTRUCTION

Supporting LEARNING and MOTIVATION

NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES

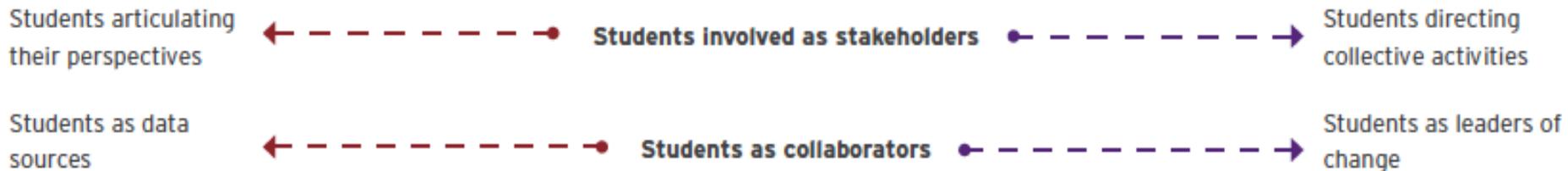
Fueling the Race to Postsecondary Success:

A 48-Institution Study of Prior Learning Assessment and Adult Student Outcomes

Executive Summary

CAEL
The Council for Adult & Experiential Learning

THE SPECTRUM OF STUDENT VOICE ORIENTED ACTIVITY from STUDENTS AT THE CENTER



Expression	Consultation	Participation	Partnership	Activism	Leadership
Volunteering opinions, creating art, celebrating, complaining, praising, objecting	Being asked for their opinion, providing feedback, serving on a focus group, completing a survey	Attending meetings or events in which decisions are made, frequent inclusion when issues are framed and actions planned	Formalized role in decision making, standard operations require (not just invite) student involvement, adults are trained in how to work collaboratively with youth partners	Identifying problems, generating solutions, organizing responses, agitating and/or educating for change both in and outside of school contexts	(Co-)Planning, making decisions and accepting significant responsibility for outcomes, (co-) guiding group processes, (co-) conducting activities

Most student voice activity in schools/ classrooms resides at this end of the spectrum.

The need for adults to share authority, demonstrate trust, protect against co-optation, learn from students, and handle disagreement **increases** from left to right.

Students' influence, responsibility, and decision-making roles **increase** from left to right.



Roles Outside the Classroom

Just as important as the classroom experience are the educational experiences students can have while studying and working outside of it.

And these experiences require technology and access.



Importance of 1-to-1 Computing

The Problem

The Internet has transformed our world, yet 1 in 4 households are without home access.

We're working to eliminate the digital divide by making affordable Internet, low-cost computers, and free digital literacy courses available to all unconnected U.S. residents.

[Learn about EveryoneOn](#)



Resources:

- [Education for Life and Work](#), National Academies Press (2012)
- [Fueling the Race to Postsecondary Success](#), Council of Adult and Experiential Learning (2010)
- [Improving Adult Literacy Instruction: Supporting Learning and Motivation](#), National Academies Press (2012)
- [Motivation, Engagement, and Student Voice](#), Jobs for the Future (2012)
- [Skills and Trajectories of Developmental Education Learners](#), Community College Review Special Issue (April 2013)
- [Using Technology to Support At-Risk Students' Learning](#), SCOPE and Alliance for Excellent Education (2014)

Citations for the Cognitive Science and Psychology Research to Support Instruction:

- Roediger III, H. L., & Pyc, M. A. (2012). Inexpensive techniques to improve education: Applying cognitive psychology to enhance educational practice. *Journal of Applied Research in Memory and Cognition*, 1(4), 242-248.
- Yeager, D. S., & Walton, G. M. (2011). [Social-psychological interventions in education They're not magic. Review of Educational Research](#), 81(2), 267-301.