

Resource Area For Teaching

Bridging the Engagement Gap with Hands-On Teaching

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Overview

The ongoing debate over the **achievement gap** in American schools has largely overlooked its underlying cause: the **engagement gap**.

Somewhere between kindergarten and the senior year of high school, many students lose their natural love of learning. Sadly, it is replaced by apathy and disaffection. As students struggle to connect with what they are being taught, they fall further behind and become more disconnected. The engagement gap has an even more profound negative impact on students who are coping with learning challenges.

Fortunately, simple and proven tools exist to close the engagement gap: **hands-on activities** rekindle a love of learning and connect abstract concepts to the real world -- while achieving desired educational outcomes.

Hands-on instruction has a long and successful legacy in the sciences and math (Basista and Matthews; Bredderman; Haury and Rillero), and shows promise for teaching social studies, history, English and other subject areas. By using hands-on instruction, educators are fostering the 21st century skills that students need to be successful: critical thinking, communication, collaboration, and creativity. Hands-on activities encourage a lifelong love of learning and motivate students to explore and discover new things (Bass, et al.).

About RAFT

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RAFT (Resource Area For Teaching) is a non-profit founded in 1994 to help educators inspire the joy and discovery of learning through hands-on teaching.

RAFT's products, services, and low-cost teaching supplies enrich and improve the education of over 825,000 young people each year.

While hands-on education is a proven best practice for engaging and motivating learners, educators are faced with many challenges to adopting this approach.

Learn what RAFT offers all types of educators for rekindling and maintaining student engagement. Read the stories of educators who are putting learning back into the hands of their students at www.raft.net.

Educators need personalized support and specialized resources to get students engaged in learning. Resource Area For Teaching (RAFT) provides Idea Sheets, Activity Kits, and materials that help educators in every subject area and grade level bridge the engagement gap with hands-on teaching.

The Engagement Gap and How it Impacts Achievement

For many years, educators have been keenly aware of the achievement gap affecting students of all ages and grade levels. Performance disparities in the United States not only have a profound impact on individual student development and success, but also on our education system and the future workforce. Studies compiled by the National Center for Educational Statistics (“Achievement Gaps”) highlight this epidemic (U.S. Department of Education).

One underlying cause of the achievement gap is frequently overlooked. “Charting the Path from Engagement to Achievement,” a report on the annual High School Survey of Student Engagement (HSSSE), “consistently indicated that another gap exists: the **engagement gap**” (Yazzie-Mintz 17).

*While there are several ways to define the engagement gap, its impact is clear: **students lose their desire to learn.***

Young learners enter kindergarten with a sense of wonder and excitement. Yet, high school students consistently report feeling disconnected from their schools, their teachers, their curriculum, and the knowledge they need to be successful in their lives and careers (Fredricks, et al, 2). Many of the students who participated in HSSSE felt they couldn’t connect with what they were being taught or apply that knowledge to the real world (Yazzie-Mintz 13-16).

We know that students need to be engaged to fully appreciate and learn what is being taught. The National Center for Education Evaluation and Regional Assistance has studied the engagement gap and how it impacts student achievement. “Student engagement measures have been shown to correlate positively with achievement and to reduce the drop-out rate. Engaged students are more likely to earn better grades and perform well on standardized tests” (Fredricks, et al, 2). Conversely, engaged students are better able to make an effort to comprehend complex ideas or master difficult skills throughout their education (Fredricks, et al, 2).

*Many educators feel they must choose between driving academic performance and nurturing student engagement. But there is good news: **it is possible to do both.** Teachers can achieve performance targets while also **restoring student engagement.***

Hands-on teaching is an extremely effective strategy for increasing performance and depth of knowledge and supports the 21st century skills that target learning and innovation abilities (the 4Cs): communication, creativity, collaboration, and critical thinking (Partnership for 21st Century Skills, 3-4). Well-designed hands-on activities focus learners on the world around them, spark their curiosity, and guide them through engaging experiences—all while achieving expected learning outcomes.

Benefits of Hands-on Teaching

- 1. Develops critical thinking skills.** By investigating the subject matter through hands-on activities, students learn both content and thinking strategies (Hmelo-Silver 236). Hands-on activities support problem-based approaches to learning by focusing on the experience and process of investigating, proposing and creating solutions. As a result, students learn how to gather information and solve problems.
- 2. Encourages communication and builds language skills.** Hands-on activities use real objects to support multiple modes of communication, linking visual learning to what is being said and discussed (Lee, Penfield, and Maerten-Rivera). Hands-on activities enable students to discuss, debate, verbalize and explain processes and concepts while working together. An observation of hands-on learning noted that students demonstrated strong communication tied to working in teams (Bass et al, 10 & 12).
- 3. Restores focus and sparks engagement.** With the right kind of planning and presentation, hands-on teaching can restore focus and spark engagement. An independent observation of teachers using hands-on learning noted that students were enthusiastic and generally stayed on-task during guided hands-on activities (Bass et al, 14).
- 4. Provides a path to success for disadvantaged students.** It has been demonstrated that students who are disadvantaged economically or academically gain the most from activity-based programs (Bredderman 39-41).

Every learner is provided with the same materials and guidance, and can interact with the lessons in the way that builds on their unique level of prior knowledge, past experiences and current abilities. Hands-on learning inspires all students to meet and exceed high standards for learning and participation, while engaging multiple senses (sight, sound, touch, etc.). The learner can interact with

the materials in a way that makes sense for them (e.g., students who tend to learn visually may connect with the colors and sights while tactile learners can appreciate being able to manipulate objects).

5. Teaches teamwork. Business leaders regularly complain that our education system fails to teach students the 21st-century skills they need for the work world, such as problem-solving, communication, and the ability to work well in teams (Casner-Lotto and Barrington). In the course of doing a hands-on project, students learn to work well with other team members who may have different socioeconomic backgrounds, different learning styles, and different cultures. As a result, students are better prepared to take their place in the business world.



Case in point: Dr. Anna Pollack, a fourth-grade teacher and former pediatrician, has noted that while using hands-on activities in her classroom, the kids discover that one person's weakness is another person's strength. Students are then able to learn from, and appreciate, the skills of their peers while developing their own skill-sets. *"With hands-on learning, kids can be successful wherever they're coming from"*.

6. Improves the teaching experience. The benefits for educators are also numerous. For example, professional development workshops that stress hands-on learning are significantly more successful in improving teacher confidence in math and science instruction (Basista and Mathews). Hands-on activities help teachers cut the time needed for remediation, improve classroom management by unifying students around a common organized activity, and foster a greater interpersonal and supportive emotional connection with students through sharing the process of learning with them (rather than one-way lecturing).

7. Makes teaching and learning fun (again). Finally, hands-on teaching is fun. Not just for students but for educators who are eager to go beyond merely presenting information and administering tests. Larry Laskowski, a middle school instructor, emphasizes this fact: *"Students want*

to have more fun. If it's fun, the experience stays with you.” Dr. Pollack shares Laskowski’s sentiment: “You don’t hear a lot of laughter without hands-on. I love this about hands-on. (The students) laugh. They enjoy learning.”

Maintaining Positive Results

Research shows that once educators incorporate hands-on teaching, they are more likely to continue using hands-on learning in their classrooms.

*In a 2011 survey of RAFT members, **89%** of teachers report that they are doing **more hands-on activities** in their classrooms and offering a **wider variety** of hands-on activities. **99%** report their students are more engaged in learning and **retain knowledge longer** as a result of their hands-on experience.*

In general, educators using hands-on activities reported an increase in student engagement, knowledge retention, and learner independence (Haury and Rillero). Teachers who see these results—more engagement and excitement to learn—want to keep that spark alive in their students.

Laskowski finds that as his students’ enthusiasm and excitement builds, they are motivated to share what they have made or worked on with family and friends. Laskowski purposefully selects hands-on activities that let students take their materials home. *“Kids who want something more still have access to those materials,”* he shares. *“They can still work on things at home, if they like. The option is there.”* Since discovering RAFT, Laskowski finds that he can do more with a limited budget and let the students take their projects home, knowing it will continue to make an impact and keep students engaged.

Conclusion

From study after national study, to the individual experiences of local teachers, we know that hands-on teaching has the power to level the learning field and restore motivation while developing the 21st century skills children need to become successful lifelong learners.

Hands-on teaching rekindles the **sense of wonder** and **love of learning** that young children inherently bring to the classroom. When **more teachers** are equipped to close the engagement gap—restoring motivation, connection, and the desire to learn—student performance will reach new heights and **the achievement gap will become a thing of the past.**

Bridging the engagement gap starts in individual classrooms, with instructors who are willing and able to increase student engagement and restore the love of learning—instructors like Laskowski and Pollack who are willing to try something different, giving their students the opportunities and tools they need to learn how to learn—by investigating, by questioning, by fueling their curiosity and need to know. Teacher and RAFT member Larry Laskowski said it best:

*“Hands-on teaching levels the learning field. A level field doesn't guarantee that everyone plays. **But I think anything you can do to give everyone a chance to succeed is worth doing.**”*

RAFT overcomes the barriers to hands-on education by developing innovative Idea Sheets, and prepackaged Activity Kits focused on important concepts in science, technology, engineering and math (STEM) as well as reading and art. RAFT also helps educators create their own hands-on activities and gain the knowledge and confidence to use them.

You can **transform the lives of students** starting with one classroom, one hands-on activity.

To learn more about closing the engagement gap and jump-starting education in America, visit **RAFT (Resource Area For Teaching)** at www.raft.net.

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